GROWTH AND INNOVATION IN OCEAN ECONOMY – GAPS AND PRIORITIES IN SEA BASIN OBSERVATION AND DATA

EMODNET MedSea CheckPoint

Annex 3 to the Second DAR:
Statistics of Availability indicators

Total number of pages: 81

Workpackage	11	Annex 3 to DAR2	
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1. Introduction

The Annex 3 is providing the analysis of availability indicators for all P02 characteristics by challenge.

In order to provide a visual indication of the input data availability for each P02 characteristics, a coloured table for each indicator has been produced for each Challenge. This assessment is done on the entire Mediterranean Sea metadatabase, not only for the selected input data sets chosen to make the Challenge products. The input data sources selected for each P02 characteristics in the Challenges are different and can have different availability indicators.

The eight availability indicators are classified on a basis of a color code with the following meaning:

- **Red: urgent actions are required to provide datasets and services fitting for use – totally inadequate**
- **Yellow: limited actions are required to provide datasets and services fitting for use – partly adequate**
- **Green: actions and services are fit for use and should be maintained – fully adequate**

The color code refers to selected values for each indicator, detailed in Table 3.0 below.

Name of indicator	Indicator values and meaning
AV-VI-1- Easily found	**"Red":** *"Cited in peer reviewed paper or grey literature but no info on how to access" or "Information retrieved upon specific request to the data source*
	"Yellow": *"Use of social network, community of practices sharing information, Portals of organization where no search is organized by an engine"*
	"Green": *"Use of open search engines, searching by the name of either the data provider or the characteristics" or "Search via a reference catalogue is possible"*
AV-VI-2-INSPIRE Catalogue service	**"Red":** *"Data sets are not referenced in a catalogue or are referenced in a non public catalogue"*
	"Yellow":*"The datasets are referenced in a public national catalogue, in an international catalogue service "*
	"Green": *"The datasets provide a full EU INSPIRE catalogue service "*
AV-AC-1- Policy visibility	**"Red":** *"There is no information at all on data policy adopted by data providers"*
	"Yellow": *"There is information, but details are available only on request"*
	"Green": *"There is detailed information provided to understand data policy"*

AV-AC-2- Delivery mechanism	**"Red":** *"No information was found on data delivery mechanisms" or "Order form/invoice is requested"* **"Yellow":** *"Online downloading services "* **"Green":** *"Online discovery and downloading services" or "Online discovery + downloading + viewing services (Advanced services)"*
AV-AC-3- Data Policy	**"Red":** *" Not or not well documented"* **"Yellow":** *"Restricted"* **"Green":** *"Unrestricted"*
AV-AC-4- Pricing	**"Red":** *"Not or not well documented" or "Commercial cost charge"* **"Yellow":** *"Distribution charge" or "Collection charge" or "Free of charge for academic institutions and uses"* **"Green":** *"Open and Free, No charge"*
AV-AC-5- Readiness	**"Red":** *"Format not or not well documented" or "Proprietary format and not well documented " or "Not proprietary format but content not clearly specified "* **"Yellow":** *"Proprietary format but content clearly specified "* **"Green":** *"Not proprietary format and content clearly specified (eg auto-descriptive eg ODV, NetCDF CF) or at least with appropriate documentation"*
AV-PE-1- Responsiveness	**"Red":** *"No information is found on response time" or "More than 1 week for release"* **"Yellow":** *"Less or equal to 1 week for release"* **"Green":** *"Online downloading (i.e. a few hours or less) for release"*

Table A3.0 Color code and indicator values

2. Overall availability scores statistics

Table A3.1 lists the P02 characteristic categories and the scores across the different data sets used by the Challenges. The colour inserted is the one representing the largest number of data sets, the most frequent colour. If two colours have the same number of input data sets then the "best" colour is chosen, i.e., the more "adequate" one. This is because if equal number of data sets are indicated with different scores, this might not be a real gap in the observing system adequacy but it could be due to communities not using available data sets.

DGMARE decided to have a "theme" classification of the P02 characteristic categories, and we have grouped the P02 in tables A3.1 and A3.2 following this subdivision.

Table A3.1 Overall assessment of the Availability indicators by P02 Characteristics. The score represents the most frequent colour among the different scores given by the different Challenges to different data sets. If two colours have the same number of input data sets then the "best" colour is chosen, i.e., the more "adequate" one.

P02 characteristics category	# of data sets	Easily found	INSPIRE catalog service	Visibility of Data policy	Data delivery	Data policy	Pricing	Readiness	Responsiveness
Bathymetry									
Bathymetry and Elevation	5	Green	Green	Green	Green	Green	Green	Green	Green
Terrestrial mapping	1	Green	Yellow	Green	Green	Green	Green	Green	Green
Geology									
Coastal geomorphology	2	Green	Green	Green	Green	Green	Green	Green	Green
Concentration of suspended particulate material in the water column	9	Green	Green	Green	Green	Green	Green	Green	Yellow
Depositional environment	1	Green	Green	Green	Green	Green	Green	Green	Green
Lithology	2	Green	Green	Green	Green	Green	Green	Green	Green
Sedimentary structure	1	Green	Yellow	Green	Green	Red	Red	Red	Yellow
Physics									
Horizontal velocity of the water column (currents)	17	Green	Yellow	Yellow	Green	Yellow	Green	Green	Green
Light extinction and diffusion coefficients	2	Green	Green	Green	Green	Green	Green	Green	Green
River flow and discharge	10	Green	Yellow	Green	Green	Green	Green	Green	Yellow
Salinity of the water column	6	Green	Yellow	Green	Green	Green	Green	Green	Green
Sea level	7	Green	Red	Green	Green	Green	Green	Green	Green
Spectral wave data parameters	1	Red	Red	Green	Yellow	Yellow	Red	Green	Red
Temperature of the water column	23	Green	Yellow	Red	Green	Green	Green	Green	Green
Wave direction	8	Green	Red	Red	Green	Yellow	Red	Green	Green
Wave height and period statistics	19	Green	Red	Red	Green	Yellow	Green	Green	Green
Wind strength and direction	11	Green	Yellow	Red	Green	Yellow	Green	Green	Green
Chemistry									
Dissolved oxygen parameters in the water colum	6	Green	Green	Green	Green	Green	Green	Green	Green
Dissolved total and organic nitrogen concentrations in the water column	5	Green	Green	Green	Green	Green	Green	Green	Yellow
Dissolved total or organic phosphorus concentration in the water column	6	Green	Green	Green	Green	Green	Green	Green	Yellow
Nitrate concentration parameters in the water column	9	Green	Yellow	Green	Green	Green	Green	Green	Green
Nutrient fluxes between the bed and the water column	2	Green	Green	Green	Green	Green	Green	Green	Green
Phosphate concentration parameters in the water column	8	Green	Green	Green	Green	Green	Green	Green	Green
Pollution events	1	Red	Red	Red	Yellow	Red	Red	Red	Red
Biology									
Bird behaviour	4	Green	Green	Green	Green	Green	Green	Green	Red

	Count	C1	C2	C3	C4	C5	C6	C7	C8
Bird counts	2	Red	Yellow	Green	Green	Green	Green	Green	Green
Bird reproduction	1	Red	Yellow	Green	Green	Green	Green	Red	Green
Cetacean abundance	1	Green	Green	Green	Green	Green	Green	Green	Green
Cetacean behaviour	3	Green	Green	Green	Green	Green	Green	Green	Red
Chlorophyll pigment concentrations in water bodies	4	Green	Green	Green	Green	Green	Green	Green	Green
Fauna abundance per unit area of the bed	4	Red	Yellow	Red	Green	Green	Green	Green	Green
Fish abundance in water bodies	3	Red	Yellow	Red	Green	Green	Green	Green	Green
Fish behaviour	1	Green	Green	Green	Yellow	Red	Green	Green	Red
Fish reproduction	1	Red	Yellow	Red	Green	Green	Green	Green	Green
Habitats									
Habitat characterisation	6	Green	Green	Green	Green	Green	Red	Green	Green
Habitat extent	17	Green	Green	Green	Yellow	Red	Green	Red	Green
Human activity									
Administrative units	31	Green	Green	Green	Green	Green	Green	Green	Green
Fish and shellfish catch statistics	6	Red	Red	Green	Yellow	Yellow	Green	Red	Green
Fishing by-catch	1	Red	Red	Green	Yellow	Yellow	Green	Red	Yellow
Horizontal platform movement	8	Red	Red	Yellow	Yellow	Yellow	Green	Green	Red
Man-made structures	1	Green	Yellow	Green	Green	Green	Green	Red	Green
Marine archaeology	1	Red	Yellow	Green	Green	Red	Red	Yellow	Green
Marine environment leisure usage	2	Red	Yellow	Red	Yellow	Yellow	Green	Green	Yellow
Transport activity	3	Green	Yellow	Green	Green	Green	Green	Red	Green
Other									
Air pressure	1	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow
Air temperature	1	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow
Atmospheic humidity	1	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow
not classified (Air density)	1	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow

Table A3.2 Availability indicators and a number of input data sets for P02 characteristics subdivided into "themes" that are: Bathymetry, Geology, Physics, Chemistry, Biology, Habitats, Human activities, others

Bathymetry

P02 characteristics	Easily found			INSPIRE catalogue			Visibility of Data policy			Data delivery			Data policy			Pricing			Readiness			Responsiveness		
Bathymetry and Elevation			5		1	4			5			5		1	4			5			5			5
Terrestrial mapping			1		1				1			1			1			1			1			1

Geology

P02 characteristics	Easily found			INSPIRE catalogue service			Visibility of Data policy			Data delivery			Data policy			Pricing			Readiness			Responsiveness		
Coastal geomorphology			2		1	1			2			2			2			2			2			2
Concentration of suspended particulate material in the water column			8		2	6			8			8			8			8			8		8	
Depositional environment			1			1			1			1			1			1			1			1
Lithology			2			2			2			2			2			2			2			2
Sedimentary structure			1		1				1			1	1			1			1				1	

Physics

P02 characteristics	Easily found			INSPIRE catalogue			Visibility of Data policy			Data delivery			Data policy			Pricing			Readiness			Responsiveness		
Horizontal velocity of the water column (currents)	3		14	4	12	1	10	2	5	3	2	12	3	8	6	3	2	12	1		16	2	2	13
Light extinction and diffusion coefficients			1			1			1			1			1			1			1			1
River flow and discharge	1		9		9	1		1	9			10			10			10	1		9	8		1
Salinity of the water column	1		5	1	2	3		1	5		1	5		1	5		1	5			6		1	4
Sea level	1		6	4	1	2		1	5		1	5	2	1	4		1	6			7		1	6
Spectral wave data parameters	1			1					1		1			1		1					1	1		
Temperature of the water column	3		20	8	12	3	11	1	11	5	1	17	4	5	14	3	1	19	2		21	3	1	15
Wave direction	2		6	5	3		5	3		2	2	4	1	6	1	4	1	3			8	2	1	5
Wave height and period statistics	7		11	15	3		9	7	2	4	6	8	7	7	4	6	8	4	4		14	3	6	9
Wind strength and direction	2		9	4	5	2	5	3	3	1	4	6	4	7		3	2	6	2		9	4	2	5

Chemistry

P02 characteristics	Easily found			INSPIRE catalogue			Visibility of Data policy			Data delivery			Data policy			Pricing			Readiness			Responsiveness		
Dissolved oxygen parameters in the water colum			6		3	3			6			6			6			6			6			5
Dissolved total and organic nitrogen concentrations in the water column			5			5			5			5			5			5			5		4	1
Dissolved total or organic phosphorus concentration in the water column	1		5		1	5		1	5			6			6			6		1	5		4	2
Nitrate concentration parameters in the water column	1		8		5	4	1	1	7			9			9			9			9		4	5

P02 characteristics	Easily found R	Y	G	INSPIRE catalogue R	Y	G	Visibility of Data policy R	Y	G	Data delivery R	Y	G	Data policy R	Y	G	Pricing R	Y	G	Readiness R	Y	G	Responsiveness R	Y	G
Nutrient fluxes between the bed and the water column			2			2			2			2			2			2			2			2
Phosphate concentration parameters in the water column			8		3	5			8			8			8			8			8		4	4
Pollution events	1			1			1			1			1				1		1			1		

Biology

P02 characteristics	Easily found R	Y	G	INSPIRE catalogue R	Y	G	Visibility of Data policy R	Y	G	Data delivery R	Y	G	Data policy R	Y	G	Pricing R	Y	G	Readiness R	Y	G	Responsiveness R	Y	G
Bird behaviour	1		3		1	3	1	1	2		2	2	2		2			4			4	2		1
Bird counts	2				2		1		1			2			2			2	1		1			2
Bird reproduction	1				1		1					1			1			1	1					1
Cetacean abundance			1			1			1			1			1			1			1			1
Cetacean behaviour			3		1	2		1	2		1	2	1		2			3	1		2	2		1
Chlorophyll pigment concentrations in water bodies			4			4			4			4		1	3			4			4			4
Fauna abundance per unit area of the bed	3		1		3	1	3		1			4			4			4	1		3			4
Fish abundance in water bodies	2		1		2	1	2		1			3			3			3			3		1	2
Fish behaviour			1			1			1		1		1					1			1	1		
Fish reproduction	1				1		1					1			1			1			1			1

Habitats

P02 characteristics	Easily found R	Y	G	INSPIRE catalogue R	Y	G	Visibility of Data policy R	Y	G	Data delivery R	Y	G	Data policy R	Y	G	Pricing R	Y	G	Readiness R	Y	G	Responsiveness R	Y	G
Habitat characterisation	1		6		3	3	2	2	2		2	4	3		3	4		2	1	1	4	3		3
Habitat extent	1		16	2	1	14		6	11		12	5	10	1	6			17		1	16	11		6

Human activity

P02 characteristics	Easily found R	Y	G	INSPIRE catalogue R	Y	G	Visibility of Data policy R	Y	G	Data delivery R	Y	G	Data policy R	Y	G	Pricing R	Y	G	Readiness R	Y	G	Responsiveness R	Y	G
Administrative units	1		30	3	8	20	4	3	24		8	23	6	4	21	3		28	7		24	15		16
Fish and shellfish catch statistics	6			6			2		4	4		2		4	2			6	6				6	4
Fishing by-catch	1			1			1		1	1			1					1	1				1	
Horizontal platform movement	8			8			2	6		1	7		2	6		1	1	6	1	2	5	7	1	
Man-made structures			1		1				1			1			1			1	1					1
Marine archaeology	1				1				1			1	1			1				1				1
Marine environment leisure usage	2			1	1		2				2			2				2	1		1	1	1	
Transport activity			3		2				3			3			3	1		2	3				1	2

Other

P02 characteristics	Easily found R	Y	G	INSPIRE catalogue R	Y	G	Visibility of Data policy R	Y	G	Data delivery R	Y	G	Data policy R	Y	G	Pricing R	Y	G	Readiness R	Y	G	Responsiveness R	Y	G
Air pressure	1			1				1			1			1			1				1		1	
Air temperature	1			1				1			1			1			1				1		1	
Atmospheic humidity	1			1				1			1			1			1				1		1	
not classified (Air density)	1			1				1			1			1			1				1		1	

3. Availability scores by Challenges

Availability indicator scores as a function of Challenges for all input data sets are shown in the 8 histograms below in terms of percentage of input data sets with respect to total data sets per Challenge.

Colors indicated the red, yellow and green scores. Grey means "unknown" score for the specific dataset.

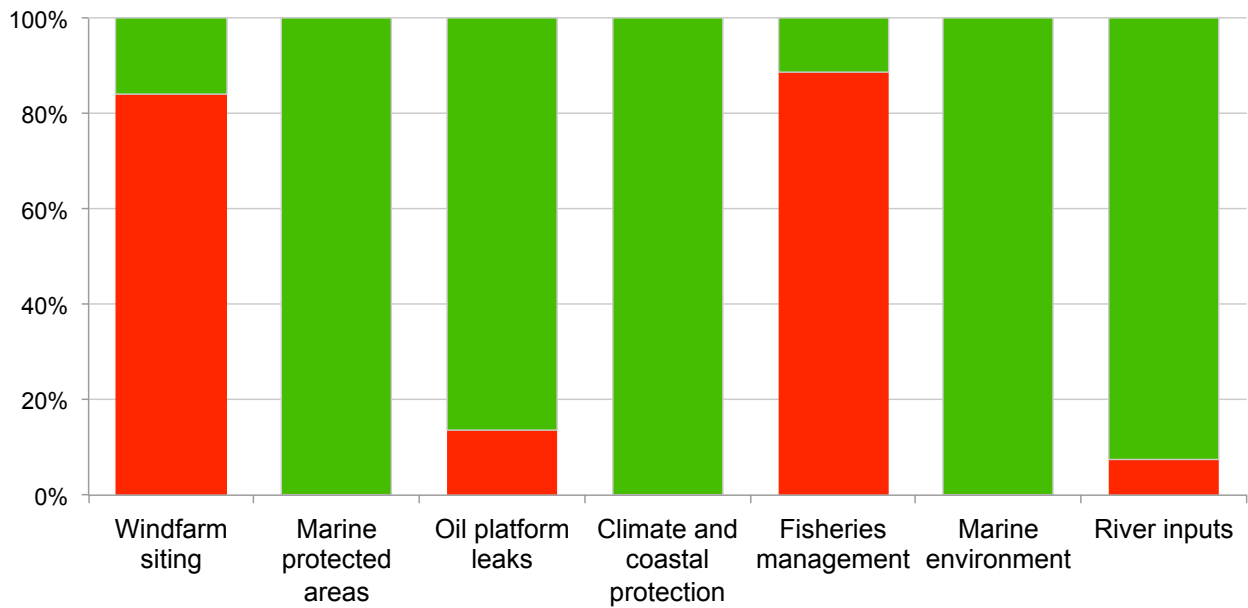**Table A3.3: AV-VI-1 Easily Found indicator scores for each Challenge**
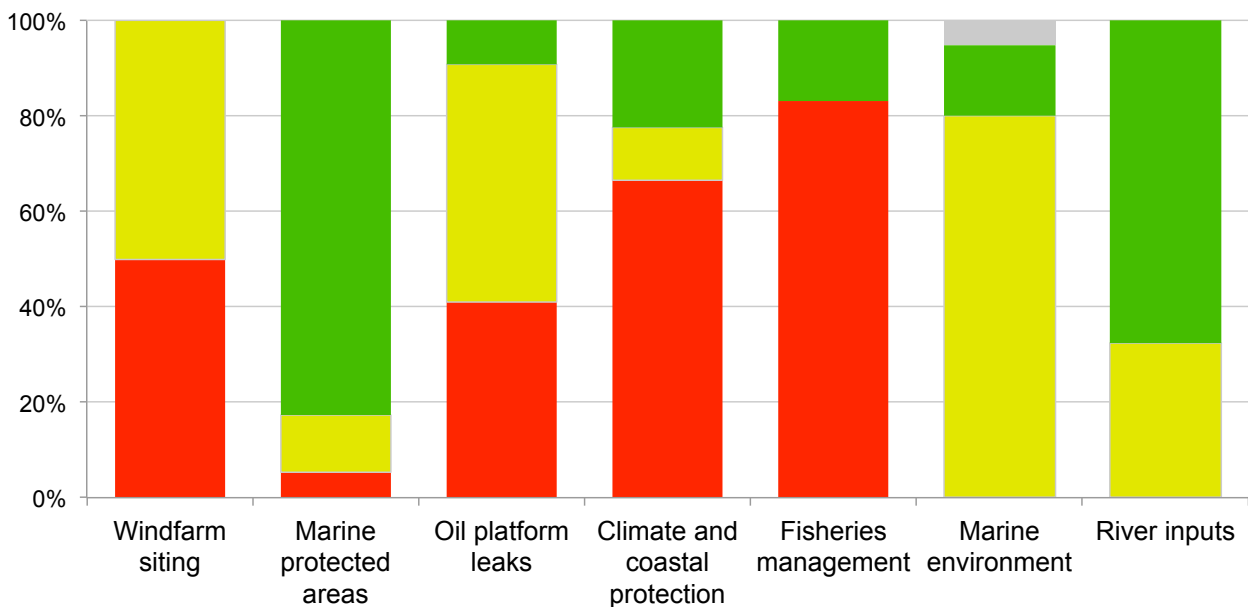

Table A3.4: AV-VI-2 INSPIRE Catalogue Service indicator scores for each Challenge

Table A3.5: AV-AC-1 Policy Visibility indicator scores for each Challenge
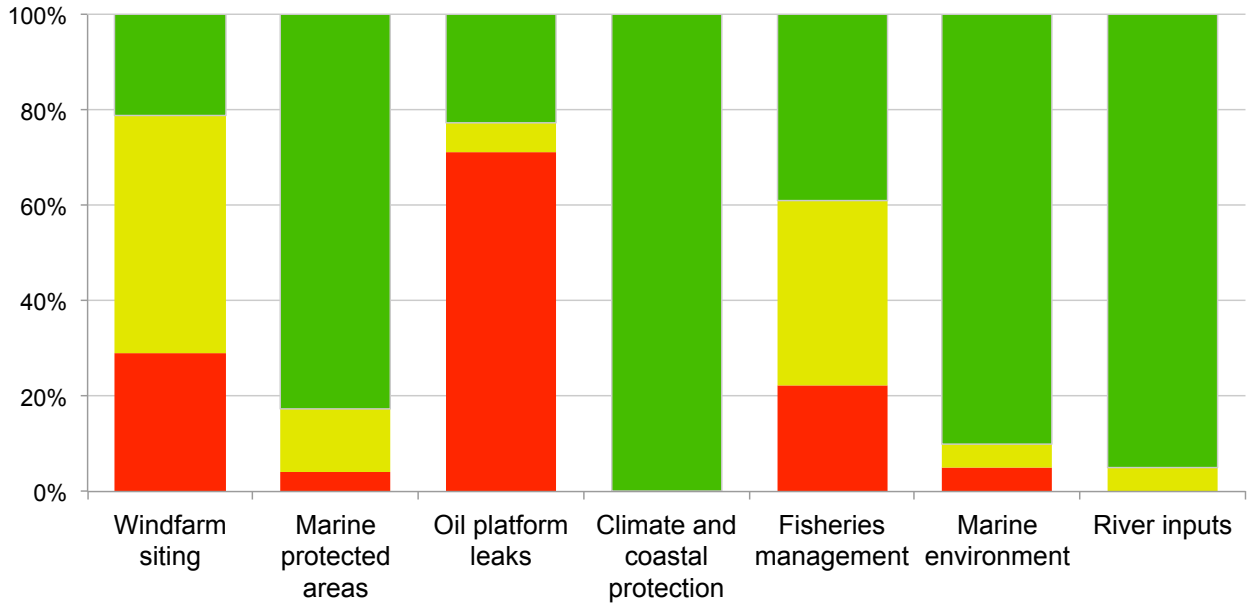
Table A3.6: AV-AC-2 Delivery Mechanism indicator scores for each Challenge
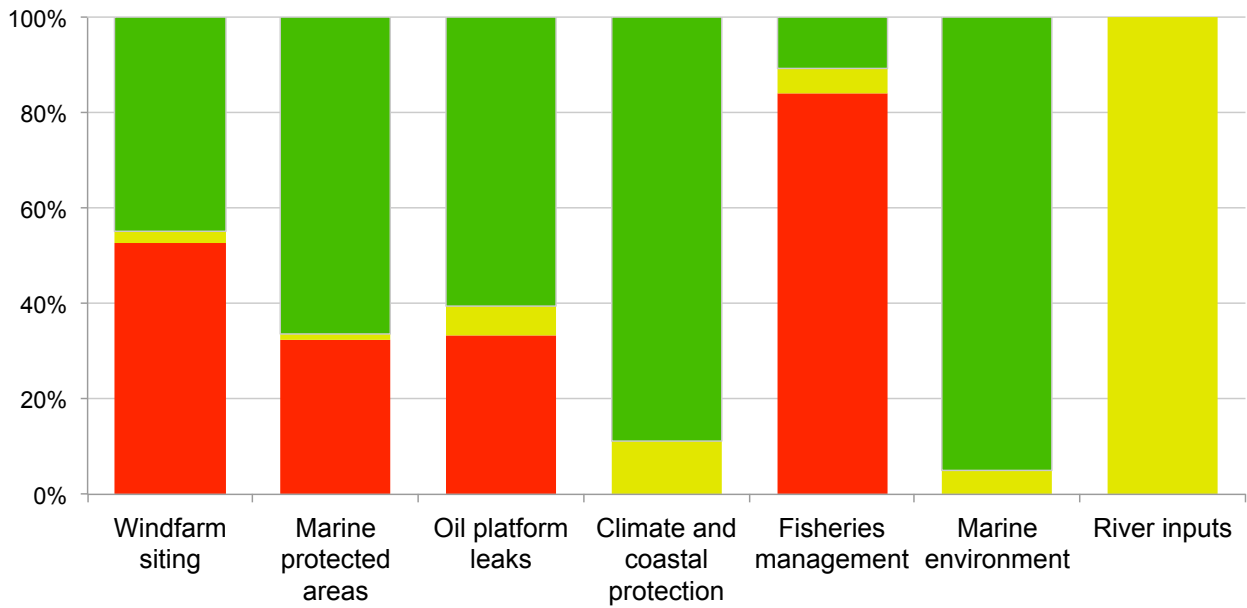
Table A3.7: AV-AC-3 Data Policy indicator scores for each Challenge
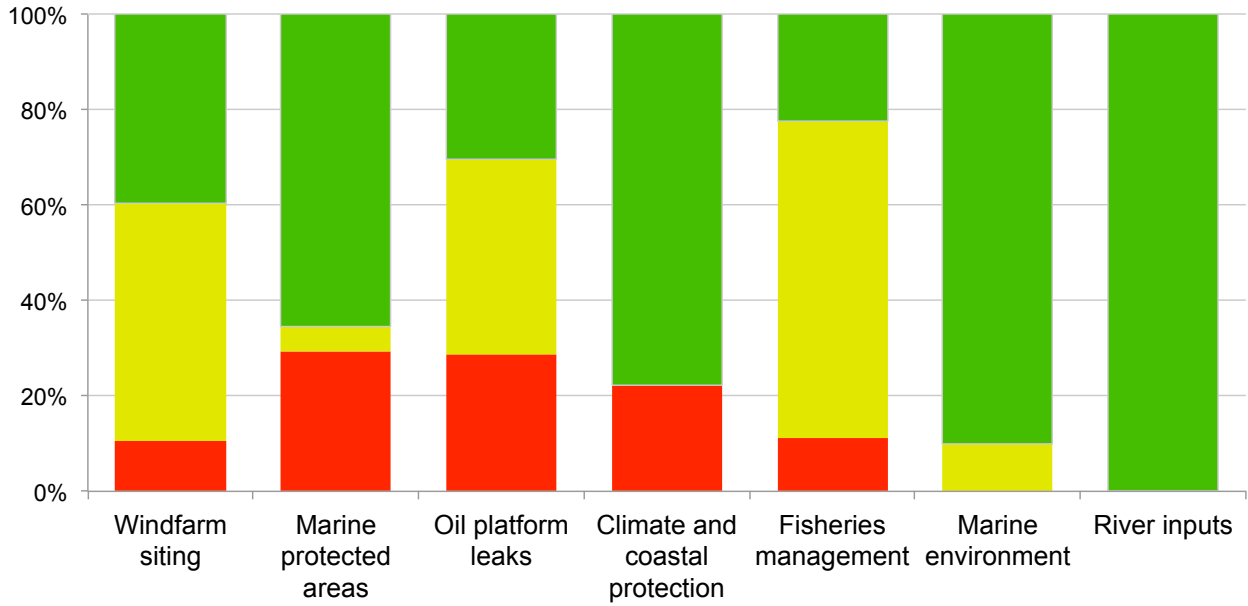
Table A3.8: AV-AC-4 Pricing indicator scores for each Challenge
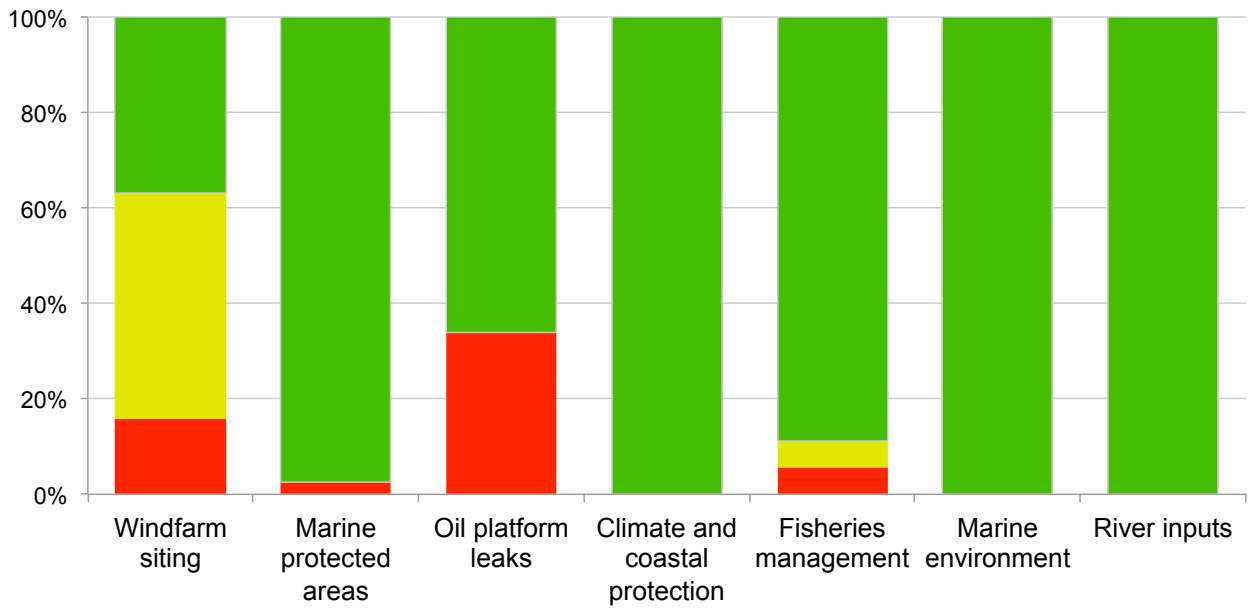
Table A3.9: AV-AC-5 Readiness indicator scores for each Challenge
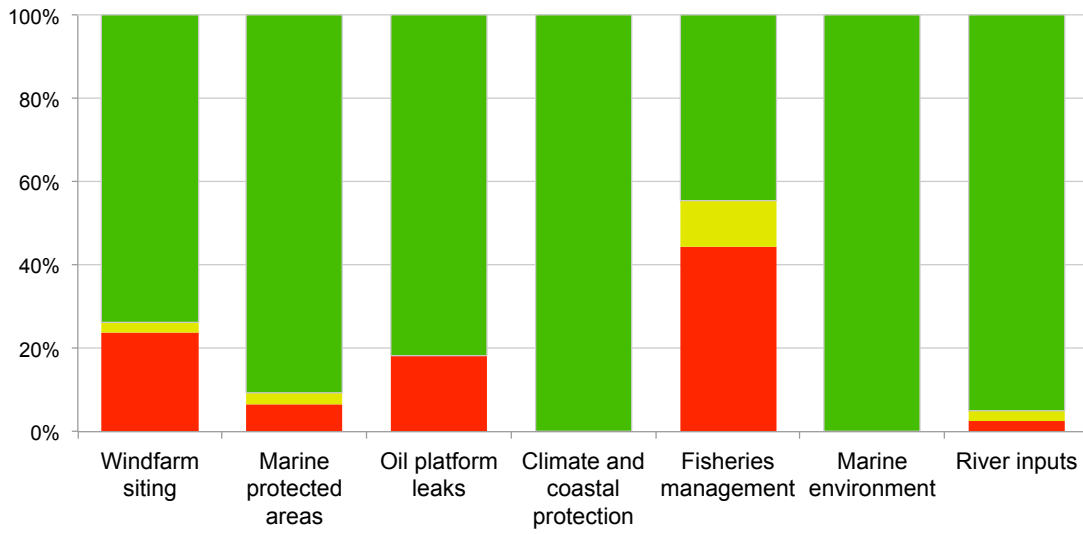
Table A3.10: AV-PE-1 Responsiveness indicator scores for each Challenge
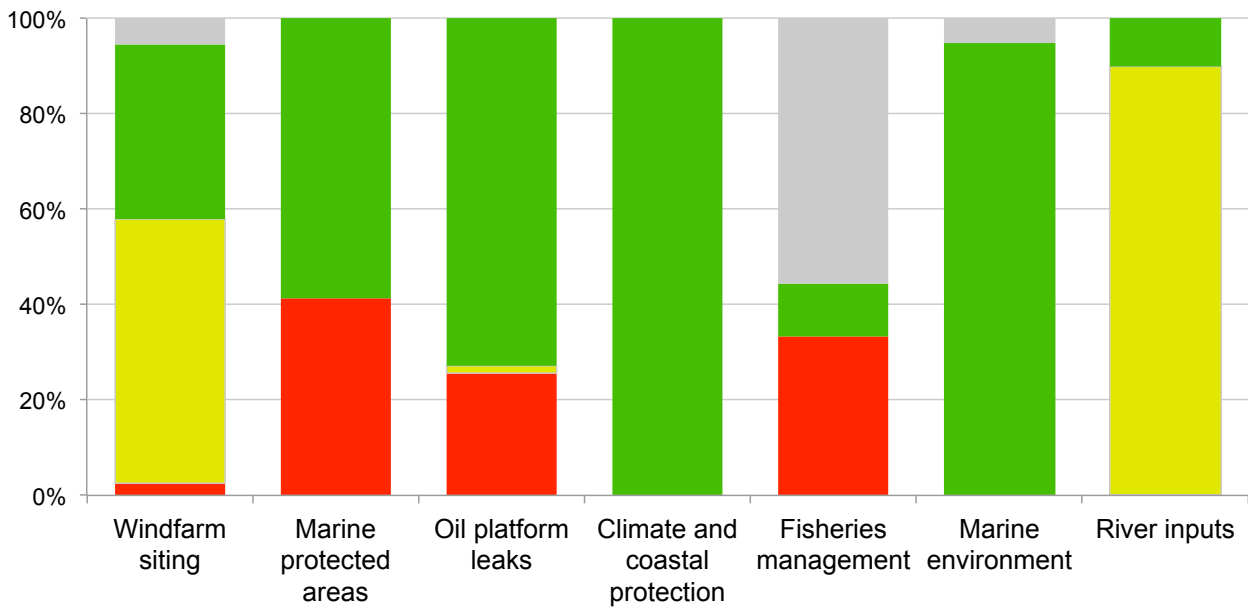
Table A3.11: Availability indicator scores as a function of Challenges (overview Table). Same content of Table A3.3-A3.10

Table A3.12: Availability indicators for each Challenge (percentage)
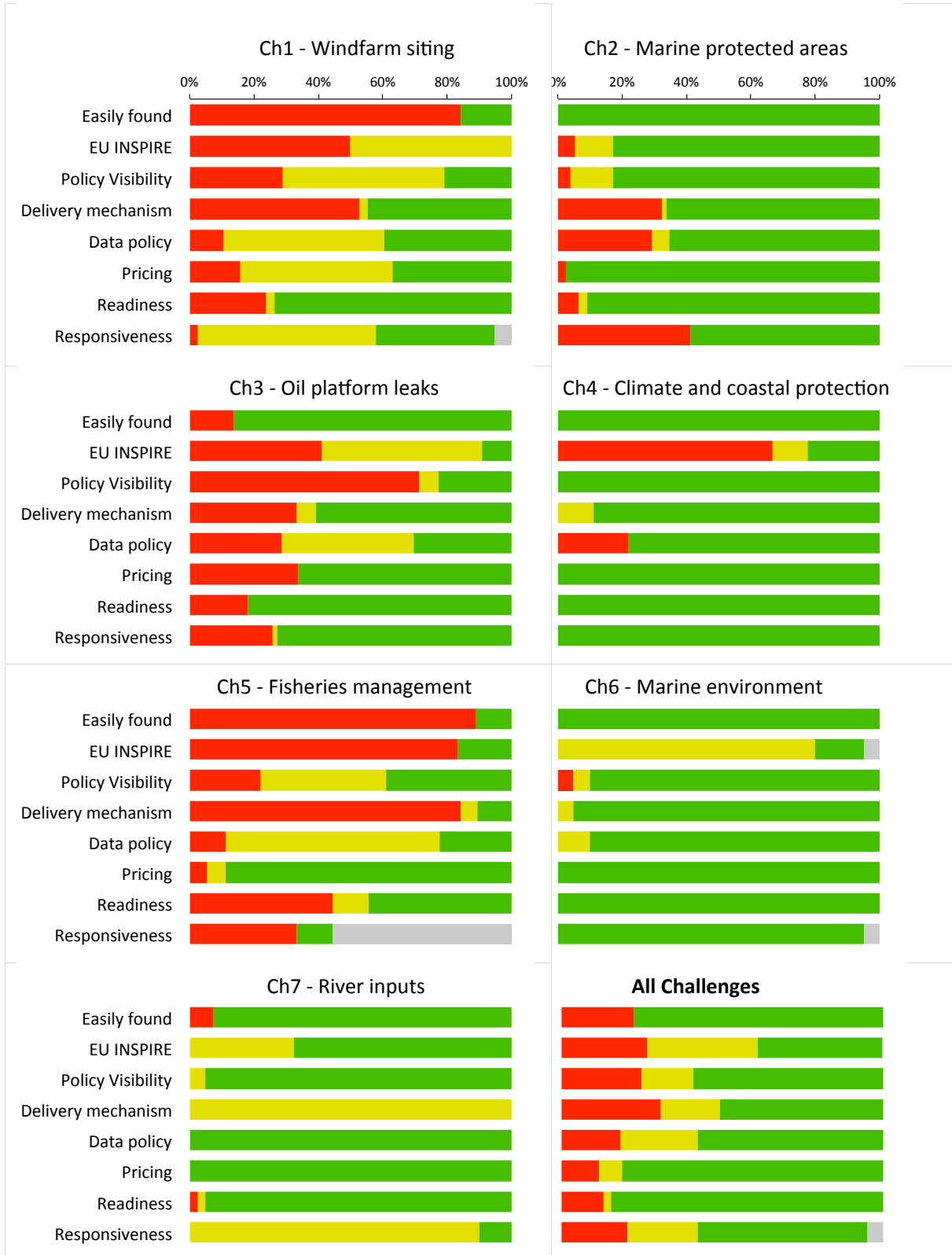
Tables A3.13 and A3.14 placed below present availability indicator scores across all challenges, all 266 data sets are taken into account .

Table A3.13: Overview of availability indicator scores across all challenges (data set counts)
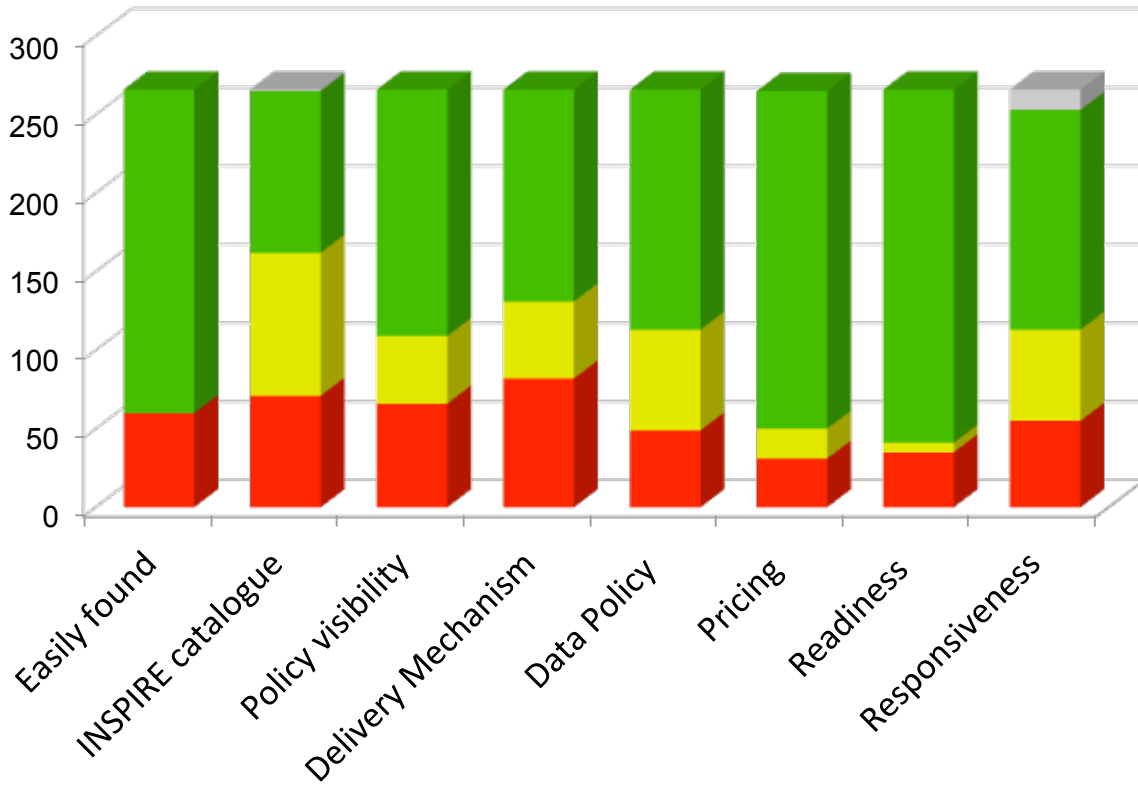
Table A3.14: Overview of availability indicator scores across all challenges (percentage)
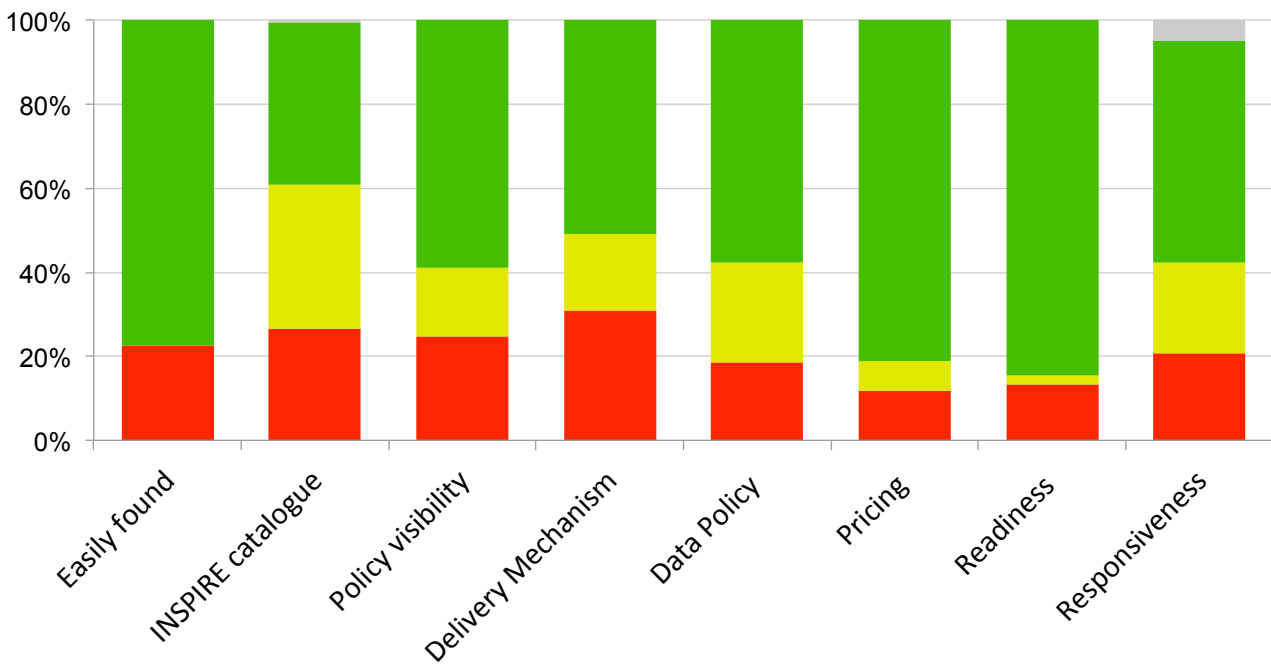
Table A3.15. Availability indicators of P02 Characteristics for Copernicus (15 data sets) and EMODnet (11 data sets) providers

Data set provider: Copernicus Marine environment monitoring service

P02 characteristics	Easily found	INSPIRE catalogue	Visibility of Data policy	Data delivery	Data policy	Pricing	Readiness	Responsiveness
Chlorophyll pigment concentrations in water bodies	4	4	4	4	1 | 3	4	4	4
Dissolved oxygen parameters in the water column	2	2	2	2	2	2	2	2
Horizontal velocity of the water column (currents)	4	4	4	4	4	4	4	4
Nutrient fluxes between the bed and the water column	2	2	2	2	2	2	2	2
Salinity of the water column	2	2	2	2	2	2	2	2
Temperature of the water column	2	2	2	2	2	2	2	2
Sea level	2	2	2	2	2		2	2

Data set provider: EMODnet

P02 characteristics	Easily found	INSPIRE catalogue	Visibility of Data policy	Data delivery	Data policy	Pricing	Readiness	Responsiveness
Bathymetry and Elevation	3	1 | 2	3	3	1 | 2	3	3	3
Depositional environment	3	3	3	3	3	3	3	1
Dissolved oxygen parameters in the water column	1	1	1	1	1	1	1	1
Habitat characterisation	2	1 | 1	1 | 1	1 | 1	1 | 1	1 | 1	2	1 | 1
Light extinction and diffusion coefficients	2	2	2	2	2	2	2	2
Nitrate concentration parameters in the water column	1	1	1	1	1	1	1	1
Phosphate concentration parameters in the water column	1	1	1	1	1	1	1	1

3. Detailed description of availability scores by Challenge

All input data sets are listed below, they are divided by Challenge, and provided with availability indicator scores.

Challenge 1: Wind farm siting

The table below presents availability indicators for all data sets related to Ch1 Wind farm siting (38 data sets, 27 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Air pressure	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Air temperature	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Category	Release timeliness	Format	Distribution charge	Accessible under moratorium	Data policy information	Services	Catalogue reference	Discoverability
Atmospheric humidity	Less or equal to 1 week for release	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Distribution charge	Accessible under moratorium	There is information, but details are available only on request	Manual process: Order form/invoice is requested	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Information retrieved upon specific request to the data source
Bathymetry and Elevation	Online downloading (i.e. a few hours or less) for release	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Open and Free. No charge	Unrestricted	There is detailed information provided to understand data policy	Online discovery + downloading + viewing services (Advanced services)	The datasets are referenced in a public national catalogue, in an international catalogue service	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalⓇ[a])
Bird behaviour		Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Open and Free. No charge	Unrestricted	There is no information at all on data policy adopted by data providers	Online discovery + downloading + viewing services (Advanced services)	The datasets are referenced in a public national catalogue, in an international catalogue service	Information retrieved upon specific request to the data source
Bird counts	Online downloading (i.e. a few hours or less) for release	Format not or not well documented	Open and Free. No charge	Unrestricted	There is detailed information provided to understand data policy	Online discovery + downloading + viewing services (Advanced services)	The datasets are referenced in a public national catalogue, in an international catalogue service	Information retrieved upon specific request to the data source
Bird counts	Online downloading (i.e. a few hours or less) for release	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Open and Free. No charge	Unrestricted	There is no information at all on data policy adopted by data providers	Online discovery + downloading + viewing services (Advanced services)	The datasets are referenced in a public national catalogue, in an international catalogue service	Information retrieved upon specific request to the data source

Bird reproduction	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not or not well documented	Online downloading (i.e. a few hours or less) for release
Fauna abundance per unit area of the bed	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not or not well documented	Online downloading (i.e. a few hours or less) for release
Fauna abundance per unit area of the bed	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Fauna abundance per unit area of the bed	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Fish abundance in water bodies	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discovery	Cataloguing	Services	Data policy	Access	Cost	Format	Timeliness
Fish abundance in water bodies	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Fish reproduction	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat characterisation	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalT'Ca)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is information, but details are available only on request	Unrestricted	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat characterisation	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is information, but details are available only on request	Restricted	Not or not well documented	Format not proprietary but content not clearly specified	No information is found on response time
Horizontal velocity of the water column (currents)	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
Horizontal velocity of the water column (currents)	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Man-made structures	Cited in peer reviewed paper or grey literature but no info on how to access	Private or limited access service	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Restricted	Not or not well documented	Format not or not well documented	
Marine archaeology	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Restricted	Commercial charge	Format proprietary but content clearly specified	Online downloading (i.e. a few hours or less) for release
Marine environment leisure usage	Cited in peer reviewed paper or grey literature but no info on how to access	The datasets are referenced in a public national catalogue, in an international catalogue service	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Salinity of the water column	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Information retrieval	Catalogue reference	Access process	Data policy information	Access restriction	Charge	Format	Release time
Sea level	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Sedimentary structure	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalI Ç[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Restricted	Commercial charge	Format not proprietary but content not clearly specified	Less or equal to 1 week for release
Spectral wave data parameters	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Temperature of the water column	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Transport activity	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalI Ç[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	Online downloading (i.e. a few hours or less) for release

Parameter	Discoverability	Catalogue reference	Access services	Data policy information	Access restriction	Cost	Format	Timeliness
Transport activity	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportallС^a)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	Online downloading (i.e. a few hours or less) for release
Transport activity	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Commercial charge	Format not proprietary but content not clearly specified	Less or equal to 1 week for release
Wave direction	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Wind speed and direction	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Wind strength and direction	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Non-classified (Air density)	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Distribution charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Uncertainties are evident for the Bird Behaviour, Bird counts, Bird Reproduction, Fauna Abundance, Fish Abundance, Fish Reproduction for which there is an advanced service but no information on data policy. The advanced services should indicate that data are viewing and downloading from portals and then policy visibility should be clear. The same uncertainty is for the Habitat characteristics, having advanced services or discovery and downloading services, but unclear information on data policy.

The uncertainty is probably rising from the fact that the information is found in portals providing metadata, and an indirect access to data, in some cases password protected.

Challenge 2: Marine Protected Areas

The table below presents availability indicators for all data sets related to Ch2 Marine Protected Areas (75 data sets, 19 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇ[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇ[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

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Dataset	Discovery	Catalogue	Access	Data policy	Use restrictions	Cost	Format	Response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

	Discovery	Catalogue service	Access services	Data policy	Use restrictions	Cost	Format	Response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is information, but details are available only on request	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

Dataset	Discovery method	Access service	Access process	Data policy	Access restriction	Cost	Format	Response time
Bathymetry and Elevation	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Bathymetry and Elevation	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Bird behaviour	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Bird behaviour	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Bird behaviour	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Theme	Discovery	Catalogue	Access method	Data policy	Restriction	Cost	Format	Response time
Cetacean abundance	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal©)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Cetacean behaviour	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal©)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Cetacean behaviour	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Cetacean behaviour	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not or not well documented	No information is found on response time
Chlorophyll pigment concentrations in water bodies	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal©)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Theme								
Chlorophyll pigment concentrations in water bodies	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalǪ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Chlorophyll pigment concentrations in water bodies	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalǪ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Coastal geomorphology	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalǪ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Depositional environment	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalǪ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved oxygen parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalǪ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Findability	Accessibility	Service type	Data policy	Access	Cost	Format	Response time
Dissolved oxygen parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalҪª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Fauna abundance per unit area of the bed	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Fish behaviour	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalҪª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat characterisation	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalҪª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat characterisation	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format proprietary but content clearly specified	Online downloading (i.e. a few hours or less) for release

Habitat extent	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat extent	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalՐÇᵃ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalՐÇᵃ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalՐÇᵃ)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format proprietary but content clearly specified	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat extent	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat extent	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Habitat extent	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Light extinction and diffusion coefficients	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Light extinction and diffusion coefficients	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nutrient fluxes between the bed and the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nutrient fluxes between the bed and the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Salinity of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Salinity of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)###The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Variable								
Wind strength and direction	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Wind strength and direction	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not or not well documented	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Accessible under moratorium	Not or not well documented	Format not or not well documented	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Accessible under moratorium	Not or not well documented	Format not or not well documented	No information is found on response time
Administrative units	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇa[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free, No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content.	Online downloading (i.e. a few hours or less) for release

The uncertainties here are in those characteristics having EU INSPIRE catalogue services (OGC compliant) but a order form or invoice request.

Also in this case the uncertainty is probably arising from the fact that the information is found in portals providing metadata, and then are completely ISO, OGC and INSPIRE compliant, but do not have a direct access to data, in some cases password protected.

Challenge 3: Oil platform leaks

The table below presents availability indicators for all data sets related to Challenge 3: Oil platform leaks (66 data sets, 11 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Not or not well documented	Format not or not well documented	No information is found on response time
Administrative units	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Administrative units	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	Online downloading (i.e. a few hours or less) for release

Category	Findability	Catalogue	Data delivery	Data policy	Accessibility	Cost	Format	Response time
Bathymetry and Elevation	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Bathymetry and Elevation	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free, No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Habitat characterisation	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Habitat characterisation	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time

	Discoverability	Catalogue referencing	Data services	Data policy	Accessibility	Cost	Format	Timeliness
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Cited in peer reviewed paper or grey literature but no info on how to access	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discovery	Catalogue	Services	Data policy info	Access	Cost	Format	Delivery
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discoverability	Catalogue	Data delivery	Data policy	Accessibility	Cost	Format	Response time
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Variable	Discoverability	Catalogue	Data delivery	Data policy	Accessibility	Cost	Format	Response time
Horizontal velocity of the water column (currents)	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Marine environment leisure usage	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not or not well documented	No information is found on response time
Pollution events	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Not or not well documented	Format not or not well documented	No information is found on response time
Temperature of the water column	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time
Temperature of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§ª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ§ª)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discovery	Cataloguing	Viewing/Download services	Data policy	Accessibility	Cost	Format	Release timeliness
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Variable	Discovery	Catalogue	Services	Data policy	Accessibility	Cost	Format	Timeliness
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Terrestrial mapping	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discovery	Catalogue	Data delivery	Data policy	Moratorium	Cost	Format	Response time
Wave direction	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Free of charge for academic institutions and uses	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is information, but details are available only on request	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time

Parameter	Discoverability	Catalogue reference	Services	Data policy	Accessibility	Cost	Format	Timeliness
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

	Discoverability	Catalogue reference	Data delivery mechanism	Data policy	Restrictions	Cost	Format	Timeliness
Wave height and period statistics	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Open and Free. No charge	Format not or not well documented	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is information, but details are available only on request	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is information, but details are available only on request	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Variable	Discoverability	Catalogue	Data delivery services	Data policy	Restrictions	Cost	Format	Response time
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	Online downloading (i.e. a few hours or less) for release
Wave height and period statistics	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery + downloading + viewing services (Advanced services)	There is information, but details are available only on request	Accessible under moratorium	Not or not well documented	Format not or not well documented	Online downloading (i.e. a few hours or less) for release
Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Not or not well documented	Not or not well documented	Format not or not well documented	No information is found on response time

Parameter	Discoverability	Catalogue	Services	Data policy	Accessibility	Cost	Format	Timeliness
Wind strength and direction	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Not or not well documented	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	No information is found on response time
Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Not or not well documented	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Wind strength and direction	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

In this challenge a lot of data sources are providing physical nowcast and forecast data especially a sub-regional level. However, most of them are not referenced in well known catalogues (e.g. Copernicus).

Challenge 4: Climate and Coastal protection

The table below presents availability indicators for all data sets related to Challenge 4: Climate and coastal protection (69 data sets, 3 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Coastal geomorphology	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free, No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Sea level	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Sea level	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Sea level	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Sea level	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Sea level	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery and downloading services	There is detailed information provided to understand data policy	Restricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Sea level	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery and downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalÇ[a])	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

The main uncertainty in this challenge is linked to data sets that are not referenced in a public catalogue.

Challenge 5: Fisheries management

The table below presents availability indicators for all data sets related to Ch5 Fisheries management (18 data sets, 5 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free, No charge	Format not or not well documented	More than 1 week for release
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Accessible under moratorium	Open and Free, No charge	Format not or not well documented	
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not or not well documented	
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Online downloading services	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free, No charge	Format not or not well documented	
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free, No charge	Format not or not well documented	

Category								
Fish and shellfish catch statistics	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free, No charge	Format not or not well documented	More than 1 week for release
Fishing by-catch	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Proprietary format and not well documented	More than 1 week for release
Habitat extent	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Free of charge for academic institutions and uses	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	
Horizontal platform movement	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	No information was found on data delivery mechanisms	There is no information at all on data policy adopted by data providers	Restricted	Not or not well documented	Format proprietary but content clearly specified	No information is found on response time
Horizontal platform movement	Cited in peer reviewed paper or grey literature but no info on how to access	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is no information at all on data policy adopted by data providers	Restricted	Distribution charge	Format not or not well documented	More than 1 week for release
Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	More than 1 week for release

Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format proprietary but content clearly specified	
Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	
Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	
Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	
Horizontal platform movement	Information retrieved upon specific request to the data source	Data sets are not referenced in a catalogue or are referenced in a non public catalogue	Manual process: Order form/invoice is requested	There is information, but details are available only on request	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	

Lithology	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Lithology	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

This challenge is the most critical in terms of access to data. Most of them are under 'moratorium' conditions, and a manual access is requested after order.

The table below presents availability indicators for all data sets related to Ch6 Marine environment (20 data sets, 6 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Chlorophyll pigment concentrations in water bodies	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Accessible under moratorium	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved oxygen parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved oxygen parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discovery	Catalogue	Services	Data policy	Access	Cost	Format	Timeliness
Dissolved oxygen parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved oxygen parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nitrate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nitrate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Search	Catalogue	Services	Data policy	Access	Charge	Format	Release
Nitrate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nitrate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is no information at all on data policy adopted by data providers	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Nitrate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics		Online downloading services	There is information, but details are available only on request	Accessible under moratorium	Free of charge for academic institutions and uses	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	
Phosphate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Phosphate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Phosphate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Phosphate concentration parameters in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Salinity of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Parameter	Discoverability	Referencing	Services	Data policy	Access restriction	Cost	Format	Timeliness
Salinity of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Salinity of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

Temperature of the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online discovery + downloading + viewing services (Advanced services)	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release

The uncertainty here is only on nitrate concentration parameters in the water column for which there is an advanced service but no information on data policy by data providers. This is an information that is not directly provided in many portals.

Challenge 7: River inputs

The table below presents availability indicators for all data sets related to Ch6 River inputs (40 data sets, 7 P02 characteristics categories, see tables 7.1 and A1.1).

Category - P02 - Category of characteristics	Availability / Visibility / Easily found	Availability / Visibility / EU catalogue service	Availability / Accessibility / Data delivery mechanisms	Availability / Accessibility / Visibility of data policy	Availability / Accessibility / Data Policy	Availability / Accessibility / Pricing	Availability / Accessibility / Readiness	Availability / Performance / Responsiveness
Concentration of suspended particulate material in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Concentration of suspended particulate material in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Variable	Search	Catalogue	Service	Data policy	Access	Cost	Format	Timeliness
Concentration of suspended particulate material in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Concentration of suspended particulate material in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total and organic nitrogen concentrations in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ ça)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total and organic nitrogen concentrations in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГ ça)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Dataset	Search / Discovery	Catalogue service	Online downloading services	Data policy	Access	Cost	Format	Release time
Dissolved total and organic nitrogen concentrations in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total and organic nitrogen concentrations in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total and organic nitrogen concentrations in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved total or organic phosphorus concentration in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГÇ^a)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Discovery	Cataloguing	Access	Data policy	Usage	Price	Format	Timeliness
Dissolved total or organic phosphorus concentration in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total or organic phosphorus concentration in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total or organic phosphorus concentration in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalГçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Dissolved total or organic phosphorus concentration in the water column	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Dissolved total or organic phosphorus concentration in the water column	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue	Online downloading services	There is information, but details are available only on request	Unrestricted	Open and Free. No charge	Format proprietary but content clearly specified	Online downloading (i.e. a few hours or less) for release

	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal…[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Fish abundance in water bodies	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal…[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Nitrate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal…[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Nitrate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal…[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Nitrate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal…[a])	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Search	Catalogue	Access service	Data policy	Use constraints	Cost	Format	Timeliness
Nitrate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Nitrate concentration parameters in the water column	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is information, but details are available only on request	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
Phosphate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Phosphate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓçª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

Parameter	Discovery	Catalogue	Access services	Data policy		Pricing	Format	Timeliness
Phosphate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
Phosphate concentration parameters in the water column	Search via reference catalogue (e.g. MyOcean, GEOSS GeoportalΓÇª)	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are provided through an EU Inspire catalogue service (OGC)	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Online downloading (i.e. a few hours or less) for release
River flow and discharge	Information retrieved upon specific request to the data source	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is information, but details are available only on request	Unrestricted	Open and Free. No charge	Format not proprietary but content not clearly specified	Less or equal to 1 week for release

River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. autodescriptive like ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release
River flow and discharge	Use of open search engines, searching by name either the data provider or the characteristics	The datasets are referenced in a public national catalogue, in an international catalogue service	Online downloading services	There is detailed information provided to understand data policy	Unrestricted	Open and Free. No charge	Format not proprietary and content clearly specified (e.g. ODV, NetCDF CF) or at least with appropriate document describing the content	Less or equal to 1 week for release

The uncertainties here are related to a low responsiveness, and a lack of online discovery and viewing services.