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Key stages and progress up to 2019

Accompanying the

**Report from the Commission to the European Parliament and the Council
on the implementation of the Marine Strategy Framework Directive (Directive
2008/56/EC)**

{COM(2020) 259 final} - {SWD(2020) 61 final} - {SWD(2020) 62 final}

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1. ESTABLISHING INITIAL ASSESSMENTS OF MARINE WATERS, CHARACTERISTICS FOR GOOD ENVIRONMENTAL STATUS AND ENVIRONMENTAL TARGETS

1.1. Legal requirement

The Marine Strategy Framework Directive (MSFD)¹ required Member States to make an **initial assessment** of their marine waters, in accordance with Article 8(1), to determine a set of characteristics for **good environmental status (GES)** for their marine waters, in accordance with Article 9(1), and to establish of a comprehensive set of **environmental targets and associated indicators**, in accordance with Article 10(1). These obligations do not apply to land-locked states. Annex I of the directive listed 11 qualitative descriptors which form the basis for determining GES. Annex III provided indicative lists of characteristics, pressures and impacts, which are relevant to the marine waters, are a basis for the initial assessment and are to be taken into account in determining GES and setting targets.

Commission Decision 2010/477/EU, adopted in accordance with MSFD Article 9(3), provided criteria and methodological standards to ensure consistency in the determinations of GES and to allow for comparison between marine regions or subregions of the extent to which GES is being achieved. This Decision was eventually repealed in 2017 and replaced by Commission Decision (EU) 2017/848², which laid down clearer and more comparable criteria and methodological standards on GES.

By 15 October 2012, Member States had to notify to the Commission the initial assessment of their marine waters, a set of characteristics for GES and their environmental targets, in accordance with Articles 9(2) and 10(2), respectively.

By 15 October 2018, Member States had to review and update the initial assessment, determination of GES and set of environmental targets, in accordance with Article 17 of the directive. These reviews and updates had to take into account, to the extent possible, a revised MSFD Annex III, as amended by the Commission Directive (EU) 2017/845³, and the criteria and methodological standards on GES and specifications and standardised methods for monitoring and assessment in the revised Commission Decision (EU) 2017/848.

Article 19(2) of the directive requires Member States to publish and open for consultation a summary of their assessment of marine waters, the determination of GES and their environmental targets (and the related updates). Article 19(3) of the directive requires Member States to provide the Commission and the European Environment

¹ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy, OJ L 164, 25.6.2008

² Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU, OJ L 125, 18.5.2017

³ Commission Directive (EU) 2017/845 of 17 May 2017 amending Directive 2008/56/EC of the European Parliament and of the Council as regards the indicative lists of elements to be taken into account for the preparation of marine strategies, OJ L 125, 18.5.2017

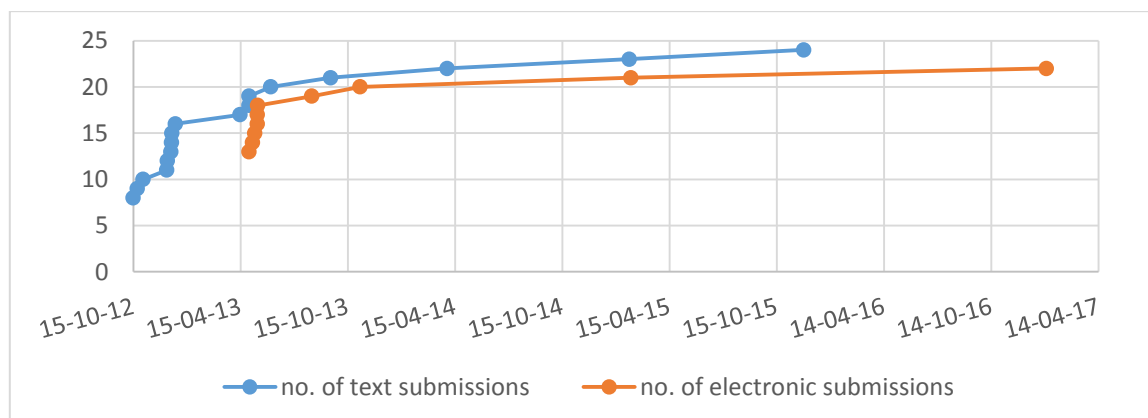
Agency with access to the data and information resulting from the initial assessments in accordance with the INSPIRE Directive⁴.

1.2. Implementation process during the first MSFD cycle

Article 25 of the MSFD allows for reporting formats to be set through comitology. This option has not been pushed in favour of setting reporting structures through the Common Implementation Strategy. Often, Member States submit text-based reports, structured according to their national needs, but sometimes following a structure agreed through discussions with the Commission. In addition to these text-based reports, the Commission developed and agreed with Member States a set of electronic reports, intended to provide structured information that would facilitate the comparison and use of the information at regional and European levels⁵.

In the first cycle of implementation of the MSFD, Member States reported the elements required under Articles 8, 9 and 10 between August 2012 and November 2015 (Figure 1). By 15 October 2012, the notification deadline for these articles, eight Member States had reported to the Commission⁶. By July 2013, only three coastal Member States had not yet submitted their reports (Croatia, Malta, Poland), whereas Portugal and the United Kingdom were missing reports for parts of their waters (Azores and Madeira for Portugal, and Gibraltar for the UK).

Twenty-two Member States provided electronic reports in addition to their national text-based reports (Portugal provided only text-based reports). The agreed deadline for the submission of full⁷ electronic reports was 15 April 2013, following a check on the completeness of draft reports. Poland was the last to provide these electronic reports, in January 2017 (Figure 1).



⁴ Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

⁵ These discussions take place in the Working Group on Data, Information and Knowledge Exchange (WG DIKE) with subsequent agreement by the Marine Strategy Coordination Group (MSCG) of the Common Implementation Strategy. WG DIKE is a subgroup of MSCG (<https://circabc.europa.eu/ui/group/326ae5ac-0419-4167-83ca-e3c210534a69/library/a849cccd-ac38-49b0-acef-30e5df66eaa1/details>).

⁶ In this report, the United Kingdom has been counted as an EU Member State since this review covers the period 2008-2019.

⁷ In agreement with Member States, a set of priority fields were to be submitted by 15 October 2012, and the remaining information was to be submitted by 15 April 2013.

Figure 1. Cumulative number of Member States that submitted reports under articles 8, 9 and 10 across time. The deadline for the text reports and priority fields in the electronic reports was 15 October 2012 while the deadline for complete electronic reporting was on 30 April 2013. The day of reporting of a Member State is considered the last day uploading files in ReportNet. Spatial files are not considered. UK is counted twice since Gibraltar is treated as an independent submission.

Twenty of the twenty-three coastal Member States were assessed in the European Commission report of 2014⁸. Malta, Croatia and the missing parts for Bulgaria, Portugal and the UK were assessed in the Commission report of 2017⁹ on the Member States' monitoring programmes. Finally, the assessment of Poland was published in the Commission report of 2018¹⁰, together with an assessment of the Member States' programmes of measures.

For a number of Member States, the Commission recommended that Member States review and improve their GES definitions and targets, giving Member States the possibility to undertake these revisions already at the stage of the next reporting step (namely the reporting of the monitoring programmes in 2014). By end of 2015, overall, 14 Member States had responded formally to the Commission's recommendations; of these, six Member States¹¹ had updated their GES definitions and/or targets via new submissions about the first monitoring programmes (Article 11). Later, between 2016 and 2017, seven Member States¹² adopted further updates of GES definitions and/or targets.

As a support and follow-up of this implementation process, the Commission organised the Healthy Oceans – Productive Ecosystems (HOPE) Conference on 3-4 March 2014. Over 450 participants (including representatives from Member States, the Regional Sea Conventions, academia, industry, NGOs and other stakeholders) discussed the progress made from the adoption of the MSFD, the findings of the 2014 Commission report, and the priorities to effectively protect the marine environment in the future.

With regard to the national public consultation processes required under Article 19(2), the European Commission received the following information from Member States related to the assessments, definitions and targets fixed under articles 8, 9 and 10 of the MSFD¹³ (Table 1).

<i>Member State</i>	<i>Public consultation timing</i>	<i>Link to national website(s)</i>
Belgium	01/04/2012 - 30/05/2012	Yes
Bulgaria	From April 2012	No
Croatia	19/05/2014 - 18/06/2014	Yes

⁸ COM(2014) 97 and SWD(2014) 49. The report from Bulgaria arrived before the finalisation of the assessment; due to the shortness of time, it was assessed only in relation to Article 9 (GES) and 10 (targets).

⁹ SWD(2017) 1.

¹⁰ SWD(2018) 393.

¹¹ Bulgaria, Cyprus, Ireland (only targets), Italy, Portugal and Romania.

¹² Finland, France, Greece, Ireland, Slovenia, Spain and United Kingdom (for Gibraltar).

¹³ More details and links to national websites available at: http://ec.europa.eu/environment/marine/public-consultation/index_en.htm

Cyprus	15/05/2012 - 15/06/2012	Yes
Denmark	04/06/2012 - 27/08/2012	Yes
Estonia	Spring 2012	Yes
Finland	16/04/2012 - 15/05/2012	Yes
France	16/07/2012 - 16/10/2012	Yes
Germany	14/10/2011 - 16/04/2012	Yes
Greece	13/08/2012 - 30/09/2012	Yes
Ireland	Not indicated	No
Italy	End of first semester 2012	No
Latvia	Not indicated	No
Lithuania	12 March - 12 June 2012	Yes
Malta	Not indicated	No
Netherlands	25/05/2012 - 05/07/2012	Yes
Poland	01/03/2013 - 21/03/2013 and 30/03/2015 - 20/04/2015	Yes
Portugal	08/09/2012 - 08/10/2012	Yes
Romania	First semester 2012	Yes
Slovenia	21/06/2012 - 22/07/2012	Yes
Spain	01/06/2012 - 15/07/2012	Yes
Sweden	19/03/2012 - 16/04/2012	Yes
United Kingdom	27/03/2012 - 18/06/2012	Yes

Table 1. Information about the public consultations by Member States following their initial assessment of marine waters, GES determinations and the establishment of environmental targets.

In 2012, WG DIKE and MSCG agreed that Member States could fulfil their obligations under Article 19(3), as regards the publication of data and information resulting from the initial assessment, by pointing to published reports or to data sets accessible via a web link. The corresponding metadata could be entered manually or reported as web links. Deadline for submission was 15 April 2013.

1.3. Main conclusions about the initial assessment of marine waters

1.3.1. Assessment methodology

To assess whether the information reported by Member States is a complete, adequate, consistent and coherent framework as required by the Directive, the Commission considered, in particular for Article 8, whether:

- all three parts of Article 8(1) (essential features and characteristics; pressures and impacts; economic and social assessment) were reported;
- all relevant descriptors in all marine waters were reported;
- the assessments led to conclusions on the current status of marine waters, and identified the anthropogenic pressures preventing the achievement of GES;
- the assessments and their conclusions were coherent with those of other Member States in the same marine region or subregion;
- the initial assessment reflected the scientific knowledge available in the fields covered by the Directive and enabled the setting of a baseline for future reference.

Meeting the above-mentioned criteria led to an “adequate evaluation”, whereas failing to meet one or several of them led to an evaluation as “partially adequate” or “inadequate”. Table 2 provides a summary of the assessments for Article 8 per Member State and per region.

1.3.2. Regional level

In the Baltic Sea region, all Member States provided an initial assessment for descriptors¹⁴ D1, D2, D3, D5, D6, D8 and D9; four Member States for D4 (DK, EE, LT, LV), five Member States for D7 (DE, DK, FI, PL, SE), all except LV for D10, two Member States for D11 (DE, LT) with the remaining country assessments being either very limited or not reported (DK, EE, FI, LV, PL, SE).

In the north-east Atlantic Ocean region all Member States provided an initial assessment for all descriptors, except for D11, where five Member States (DE, ES, FR, IE, UK) provided detailed assessments, with the remaining country assessments being either very limited or not reported (BE, DK, NL, PT, SE).

In the Mediterranean Sea region, all Member States provided an initial assessment for descriptors D1, D2, D3, D5, D6, D7 and D8; all Member States except HR for D4; all Member States except IT for D9; all Member States except HR for D10; and all Member States except EL and IT for D11.

In the Black Sea region, both EU Member States provided an initial assessment for all descriptors.

1.3.3. EU level

The initial assessment in 2012 was the first major MSFD reporting exercise for Member States. It necessitated the gathering, organisation and interpretation of information on Member State’s marine waters, often for the first time, for the very wide range of topics required by the directive. It provided an opportunity for Member States to better understand the features and characteristics of their marine waters and to provide a first assessment of 1) the current environmental status of their marine waters, 2) the pressures and impacts on the marine environment and 3) an economic and social analysis of the uses of the marine waters and of the cost of degradation of the marine environment.

These assessments were structured by the 11 descriptors in MSFD Annex I, the characteristics, pressures and impacts in Annex III and the criteria and methodological standards in the 2010 GES Decision. They were further supported by the Commission's Staff Working Document on the relationship between the initial assessment of marine waters and the criteria for GES (SEC(2011) 1255) and by several guidance documents¹⁵:

- Economic and social analysis for the initial assessment for the MSFD (2010) [GD01](#)
- Common Understanding of MSFD Art. 8, 9 and 10 (2011) [GD02](#)

¹⁴ The determination of good environmental status is structured around 11 descriptors specified in Annex I of the MSFD: D1 biological diversity, D2 non-indigenous species, D3 fish and shellfish, D4 food s, D5 eutrophication, D6 sea-floor integrity, D7 hydrographical conditions, D8 contaminants, D9 contaminants in seafood, D10 marine litter, and D11 energy including underwater noise.

¹⁵ All of them available at <https://circabc.europa.eu/w/browse/1dfbd5c7-5177-4828-9d60-ca1340879afc>.

- Approach to reporting for the MSFD [Art. 8-9-10] (2012) [GD03a](#)
- MSFD Reporting Sheets for Art. 8, 9 and 10 (2012) [GD03b](#)
- MSFD 2012 reporting guidance (2012) [GD03c](#)
- Guidance for 2012 MSFD reporting, using the MSFD database tool (2012) [GD04](#)

The quality of reporting in 2012 varied widely from country to country, and within individual Member States, from one descriptor to another. Despite ongoing activity on the state of the marine environment in each of the Regional Sea Conventions, and the necessity through Article 5(2) to cooperate within their region, the majority of Member States prepared their initial assessments in isolation from each other, and only occasionally drew upon the results of their Regional Sea Conventions. Member States additionally drew upon assessment results from other EU policies, notably Birds Directive¹⁶ (D1), Habitats Directive¹⁷ (D1, D6), Common Fisheries Policy¹⁸ (D3) and Water Framework Directive¹⁹ (D5, D8).

A comprehensive assessment

The MSFD requires an assessment of the state of EU marine waters which is holistic and integrates socioeconomic considerations, to provide a very broad overview of the marine environment in Europe. The first assessment by Member States in 2012 allowed a better understanding of the pressures from human activities and their impacts on marine ecosystems. In particular, biodiversity, non-indigenous species, marine litter and underwater noise were addressed more systematically than ever before.

Overall, the first phase of the MSFD brought the EU one step closer to implementation of the ecosystem approach with regard to the management of human activities impacting our seas, a concept at the heart of the Directive. Valuable lessons were learnt at the EU level, in Member States and in Regional Sea Conventions alike.

Adequacy

Despite these positive aspects, there were inadequacies in Member States' submissions, with even the best-performing Member States still needing to address specific shortcomings (Figure 2).

The initial assessment was intended to provide the evidence base on which the forward implementation of the Directive could rely. Yet, the Member State reports often gave only a fragmented overview of the state of the marine environment, not always reflecting the available knowledge in its entirety. The presence of data gaps was highlighted by many Member States, yet only a few Member States put forward a strategy on how to close the existing data gaps, for instance through future plans for monitoring at national or regional level. Finally, Member States did not use the initial assessment to establish a

¹⁶ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7).

¹⁷ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

¹⁸ Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354, 28.12.2013, p. 22).

¹⁹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

clear baseline from which to assess progress with the Directive and improvements in environmental status. This was considered a missed opportunity that makes it difficult, and in some cases impossible, to assess the distance between the current state of the marine environment and a GES, bearing in mind that the determination of GES under Article 9 itself was mostly very qualitative and lacked sufficient specification to enable adequate assessment of whether it has been achieved.

		D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11
<i>Baltic Sea</i>	FI	PA	PA	NA	PA	PA	PA	NA	A	PA	NA	PA
	EE	PA	PA	NA	PA	PA	NA	NA	PA	A	NA	PA
	LV	PA	NA	PA	PA	PA	NA	NR	PA	PA	NR	NR
	LT	PA	A	NA	PA	PA	PA	NA	PA	A	NA	PA
	PL	PA	PA	A	PA	A	NA/PA	PA	PA	PA	PA	NR
	DE	PA	A	PA	PA	PA	PA	PA	A	PA	A	A
	DK	PA	PA	PA	PA	A	A	NA	A	PA	PA	NA
	SE	PA	PA	PA	PA	A	PA	NA	PA	PA	PA	NR
<i>North-East Atlantic Ocean</i>	SE	PA	PA	A	PA	PA	PA	NA	PA	PA	PA	NR
	DK	PA	PA	PA	PA	A	A	NA	A	PA	PA	NA
	DE	PA	A	PA	PA	PA	PA	PA	A	PA	A	A
	NL	A	PA	A	PA	PA	PA	A	PA	A	PA	NA
	BE	PA	PA	PA	PA	PA	PA	PA	PA	NA	A	NA
	UK	A	A	PA	A	PA	PA	PA	A	PA	A	A
	IE	PA	A	A	PA	A	PA	PA	A	NA	A	A
	FR	PA	A	A	PA	PA	PA	A	PA	PA	A	A
	ES	A	PA	A	A	A	A	PA	A	A	A	A
	PT	A	A	PA	A	PA	A	PA	PA	PA	A	NR
<i>Mediterranean Sea</i>	UK	PA	NA	PA	PA	NA	PA	PA	PA	NA	NA	PA
	ES	A	PA	A	A	PA	A	PA	A	A	A	A
	FR	PA	PA	A	PA	PA	PA	A	PA	PA	A	A
	IT	PA	PA	PA	PA	PA	PA	A	NA	NR	PA	NR
	MT	PA	A	A	PA	PA	PA	NA	PA	NA	A	NA
	HR	PA	PA	PA	NR	PA	NA/PA	NA	PA	A	NR	NA
	SI	PA	PA	PA	PA	A	PA	NA	NA	PA	A	A
	EL	NA	PA	A	NA	A	PA	PA	PA	PA	A	NR
	CY	PA	PA	PA	PA	A	A	NA	PA	NA	NA	NA
<i>Black Sea</i>	BG	A	PA	A	PA	PA	A	NA	PA	PA	NA	NA
	RO	NA	PA	PA	NA	PA	NA	NA	PA	NR	NR	NR

Table 2: Conclusions from the assessment of Article 8 (initial assessment) per descriptor, country and region. Green (A) = adequate; orange (PA) = partially adequate; red (NA) = not adequate, grey (NR) = not reported. 27% of the assessments were considered appropriate and 54% partially appropriate.

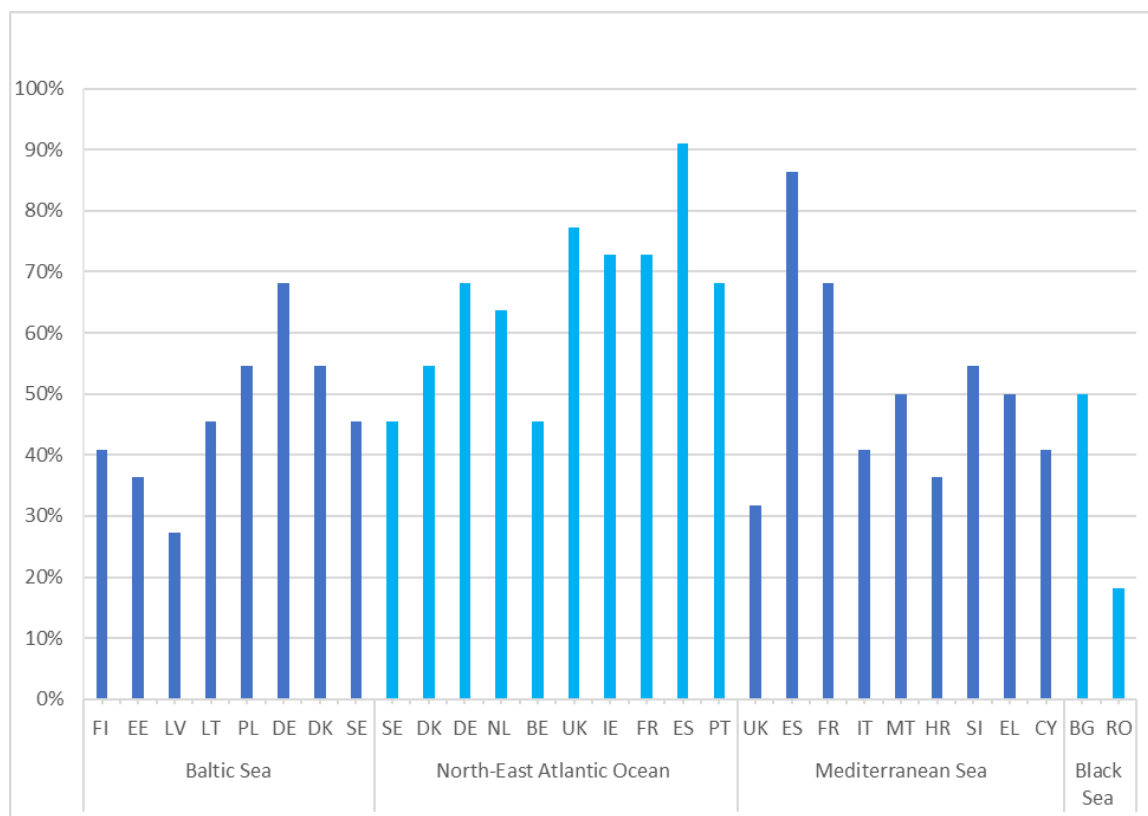


Figure 2: Summary of the overall adequacy scores per Member State for articles 8 (expressed as a percentage of the total possible score) of the 2012 reports. Member States are grouped per marine region, hence SE, DK, DE, FR and ES appear twice.

Coherence

Regional cooperation through the Regional Sea Conventions protecting the EU's marine waters is well-developed. Significant commitments were made by all Regional Sea Conventions to implement the ecosystem approach and support MSFD implementation. Unfortunately, Member States' use of the results of regional cooperation within their marine strategies varies. Sometimes, the relevant work developed under Regional Sea Conventions came too late, but even when it was on time, it was not always been used in national reports.

Comparability of the reporting of Member States was low and made coordinated action and analysis difficult during the 1st cycle of implementation. The Commission considered that, unless the situation improved significantly in the 2nd cycle, it will be challenging not only to achieve GES by 2020, but even to know how far we are from meeting the objective. This may also deprive economic operators of a level-playing field across the EU and its marine regions.

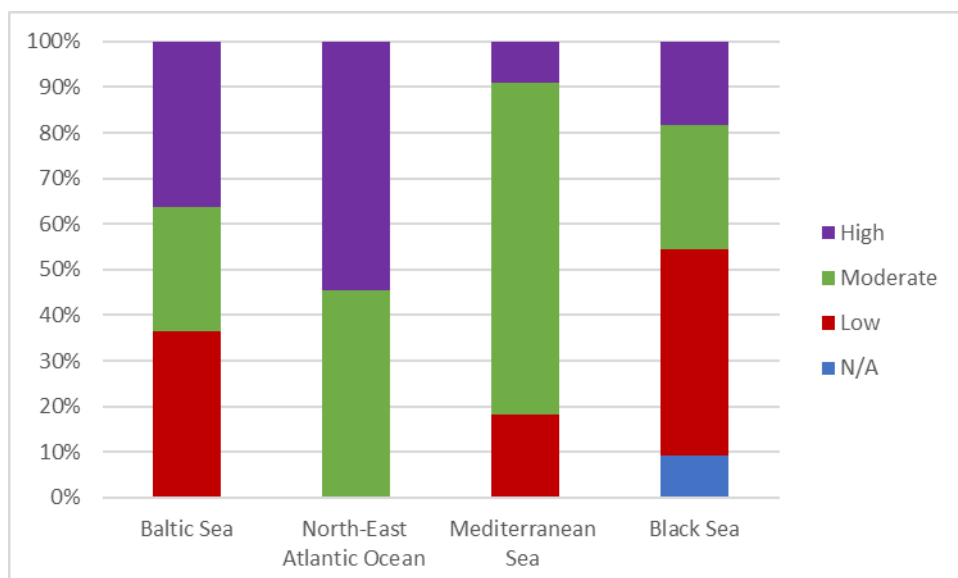


Figure 3: Summary of the level of coherence achieved within each marine region (expressed as a percentage of the total possible score) for the 2012 reporting of Articles 8.

1.3.4. Key recommendations

The most common recommendations of the Commission assessments were for Member States to:

- Capitalise on the positive aspects of implementation so far, and work towards overcoming the weaknesses identified, particularly when preparing the monitoring programmes and programmes of measures;
- use the monitoring programmes to address the shortcomings and knowledge gaps identified in the initial assessment;
- significantly improve the quality and coherence of their initial assessments (in conjunction with improved their determinations of GES and environmental targets) to ensure that the second round of implementation yields greater benefits.
- systematically use assessments carried out for other relevant EU legislation or under Regional Sea Conventions, with preparatory work starting immediately;
- develop action plans, coordinated at (sub-)regional level, to rectify the shortcomings identified at the latest by 2018.

The following recommendation applied to Articles 8, 9 and 10:

- put regional cooperation at the heart of MSFD implementation, and influence national implementation processes, rather than the other way around. At the regional level, the Commission and the Member States should cooperate with other Contracting Parties in the context of the Regional Sea Conventions, to stimulate further coordination at regional or sub-regional level. Member States should then use the results systematically in national implementation processes.

In terms of implementation at the EU level, the following key conclusions were reached:

- revise, strengthen and improve the GES Decision 2010/477/EU, aiming at a clearer, simpler, more concise, more coherent and comparable set of GES criteria and methodological standards;
- review Annex III of the MSFD, and if necessary revise, and develop specific guidance to ensure a more coherent and consistent approach for assessments in the next implementation cycle.

These two recommendations were fulfilled through adoption of the revised Commission Decision (EU) 2017/848, the repeal of Decision 2010/477/EU, and adoption of a revised MSFD Annex III via Commission Directive (EU) 2017/845.

1.3.5. Main conclusions about access to data

An analysis of the reporting under Article 19(3)²⁰ showed that, as of 15 April 2013, 16 Member States had reported metadata related to the underlying evidence of their initial assessments. Table 3 gives an overview of the submitted information. The requirements of Article 19(3) has four elements:

- The need to comply with the INSPIRE Directive 2007/2/EC – Only two Member States made the attempt to follow the standards of the INSPIRE Directive. In general, there was a wide variety of metadata formats and sources. Data sources were interpreted as scientific publications, European regulations and directives, Regional Sea Convention reports, Member State reports, etc.
- Identification of the data and information resulting from the initial assessment (e.g. a list of the data sets and information sources) – The identification of data sources was, with very few exceptions, incomplete.
- The need to indicate where the data and information could be accessed (e.g. internet sites where the data and information can be viewed) – Most of the web links pointed to text-based information (descriptions). The few links that pointed to external data sources were not sufficiently precise to locate or download the relevant data sets.
- The provision of permission (use rights) to use the data and information – Member States did not refer to this aspect in their reporting, but no restrictions of use were found in the reported information.

The information from this reporting exercise was insufficient to build a common or harmonised data set or to compare data from different countries. However, in the last six years major developments in the publication and aggregation of marine data have been made by individual Member States, Regional Sea Conventions and EMODnet²¹, among others.

In time for the second MSFD cycle, the MSFD Technical Group on Data prepared detailed recommendations for the publication of datasets under MSFD Article 19(3)

²⁰ Summarised in the document [DIKE_8/2013/08](#).

²¹ The European Marine Observation and Data Network, <http://www.emodnet.eu/>

(guidance document [GD15](#)²²) including a step-wise approach, worked examples, guidance for the reporting, connections with the INSPIRE Directive and a first exploration of the role of international organisations. This document and the discussions within the working groups will support the publication of more coherent and harmonised data sets resulting from Article 8 assessments.

Country	No information reported	Web links to external catalogues (more queries required)	Web links to paper based reports or assessments	Reference to paper based reports or assessments	EN language used	Attempt to comply with the INSPIRE Directive
Belgium				X	X	
Bulgaria	X					
Croatia	X					
Cyprus				X	X	
Denmark			X	X	X	
Estonia	X					
Finland			X	X	X	
France				X		
Germany		X	X	X		
Greece				X	X	
Ireland			X	X	X	
Italy		X	X	X	X	
Latvia				X		
Lithuania			X	X		
Malta	X					
Netherlands			X	X	X	
Poland	X					
Portugal	X					
Romania		X	X		X	X
Slovenia			X	X		
Spain		X	X	X		X
Sweden			X			
United Kingdom		X	X	X		

Table 3. Analysis of the information reported under Article 19(3) about access to the data and information resulting from the initial assessments, in accordance with the INSPIRE Directive.

1.4. Main conclusions about GES determinations and environmental targets

1.4.1. Assessment methodology

To assess whether the information reported by Member States is a complete, adequate, consistent and coherent framework as required by the Directive, the Commission considered, in particular for articles 9 and 10, whether:

- all relevant descriptors and all marine waters were covered by Member States' reports for all relevant provisions;

²²

<https://circabc.europa.eu/ui/group/326ae5ac-0419-4167-83ca-e3c210534a69/library/4ebc2b29-7f7d-4359-98b3-0aac3023fed7/details>

- the determination of GES was specific and quantified, making it possible to assess progress towards its realisation;
- GES definitions in the same marine region or subregion were coherent with each other;
- the environmental targets reflected the findings of the initial assessment and the GES definition, to enable Member States to realistically achieve GES by 2020.

Meeting the above-mentioned criteria led to an “adequate evaluation”, whereas failing to meet one or several of them led to an evaluation as “partially adequate” or “inadequate” (Table 4 and Table 5).

1.4.2. Conclusions at regional level

In the north-east Atlantic Ocean region (Table 4 and Table 5), all Member States defined GES for all descriptors; however, four Member States (out of ten in the region) did not define environmental targets for a number of descriptors: two Member States (IE, PT) for the biodiversity descriptors (D1, 4 and 6); two (DK, PT) for Descriptor 7; two (IE, SE) for Descriptor 11 and one Member State (PT) for Descriptors 2 and 5.

In the Baltic Sea region, three Member States (EE, LT, LV) did not define GES for Descriptors 7, 10 and 11 and one of these Member States (LV) also did not define GES for Descriptors 4 and 8. Four Member States (out of seven in the region) did not define environmental targets for a number of descriptors: three Member States (DK, LT, LV) did not define targets for D7, three (LT, LV, SE) did not define targets for D11, two (LT, LV) did not define targets for D10 and LV also did not define targets for D4 and D8. Descriptors 7, 10 and 11 are the descriptors for which there were most gaps.

In the Mediterranean Sea, all Member States have defined GES for all descriptors, except two Member States (CY, MT) which have not defined GES for Descriptor 4. Six Member States out of nine did not define environmental targets for a number of descriptors: two Member States (CY, MT) did not define targets for D2 and D4, another (FR) did not define targets for D5, three Member States (CY, FR, IT) did not define targets for D7, three (FR, IT, MT) did not define targets for D9 and three (CY, EL, IT) did not define targets for D11. The UK reported no targets for all descriptors.

In the Black Sea region, none of the two EU Member States defined GES for D7, D9, D10 and D11. Consequently, the two countries did not set environmental targets for these descriptors (except D9 for which BG set targets without having defined a GES).

1.4.3. Conclusions at EU level

Adequacy

Most Member States reported their GES definitions for all descriptors and some set ambitious benchmarks through their definitions. An adequate determination of GES under Article 9 is particularly important, as it sets the level of ambition which Member States commit to achieve by 2020. Nevertheless, a majority of countries failed to go beyond the general GES description set out in the Directive and the GES Decision 2010/477/EU. For instance, many did not include explanatory elements that would illustrate the concept and provide added value, ambition and clearly defined goals. GES was also often not been set in a measurable way, making it impossible to assess in

practice to what extent it is achieved. High qualitative ambitions in GES determination, when they exist, often remain of an aspirational kind.

The same conclusions can be drawn in relation to the environmental targets set according to Article 10 of the MSFD. Member States set a wide variety of targets, which differ greatly in their level of ambition and specificity. Most importantly, the environmental targets set were in some cases not sufficient to achieve GES.

The Committee of the Regions²³ expressed its concern for the lack of ambition, vagueness and inconsistency of the targets set by the Member States. The Committee called to all parties involved (including local and regional authorities) to propose and implement a range of diverse and ambitious measures to achieve the objectives of the MSFD.

		D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11
Baltic Sea	FI	NA	NA	A	PA	PA	PA	NA	NA	PA	PA	NA
	EE	PA	PA	NA	NA	PA	PA	NR	PA	PA	NR	NR
	LV	NA	PA	PA	NR	PA	NA	NR	NR	PA	NR	NR
	LT	NA	PA	NA	NA	NA	NA	NR	PA	PA	NR	NR
	PL	PA	PA	PA	PA	PA	NA	NA	PA	PA	PA	PA
	DE	NA	PA	A	NA	PA	NA	PA	PA	PA	NA	PA
	DK	PA	NA	NA	PA	NA	NA	NA	NA	NA	PA	NA
	SE	PA	PA	PA	A	PA	PA	NA	PA	PA	PA	PA
North-East Atlantic Ocean	SE	PA	PA	PA	A	PA	PA	NA	PA	PA	PA	PA
	DK	PA	NA	NA	PA	NA	NA	NA	NA	NA	PA	NA
	DE	NA	PA	A	NA	PA	NA	PA	PA	PA	NA	PA
	NL	NA	NA	NA	NA	NA	NA	NA	NA	PA	NA	NA
	BE	PA	PA	PA	PA	PA	PA	PA	PA	PA	NA	PA
	UK	PA	PA	PA	PA	PA	NA	PA	PA	PA	PA	A
	IE	NA	PA	PA	PA	PA	NA	PA	PA	NA	PA	PA
	FR	PA	NA	NA	A	PA	PA	A	A	A	A	A
	ES	A	PA	NA	NA	PA	PA	PA	PA	A	NA	NA
	PT	NA+	NA+	NA+	NA+	NA+	NA+	NA+	NA+	PA+	NA+	NA+
Mediterranean Sea	UK	PA	PA	NR	NA	NA	NA	NA	PA	NR	NA	A
	ES	A	PA	NA	NA	PA	PA	PA	PA	A	NA	NA
	FR	PA	NA	NA	A	PA	PA	A	A	A	A	A
	IT	PA	PA	PA	NA	PA+	PA	PA	PA+	PA+	NA+	NA+
	MT	PA	NA	NA	NR	NA	NA	NA	PA	PA	NA	NA
	HR	PA	NA	PA	PA	PA	NA	NA	NA	NA	NA	NA
	SI	PA	NA	PA	NA	PA	NA	NA	PA	PA	PA	PA
	EL	PA	NA	NA	PA	A	NA	NA	PA	PA	NA	PA
	CY	NA+	NA+	PA+	NR+	NA+	NA+	PA+	NA+	PA+	NA+	NA
Black Sea	BG	PA+	PA	PA	NR+	PA+	NA+	PA	NA+	NR+	NR+	NR
	RO	NA+	NA+	NA+	NR+	NA	NR+	NR+	NA+	NR+	NR+	NR+

Table 4. Conclusions from the assessment of Article 9 (GES definitions) per descriptor, country and region. Green (A) = adequate; orange (PA) = partially adequate; red (NA) = not adequate, grey (NR) = not reported. 8% of the assessments were considered adequate and 46% partially adequate. The sign “+” indicates that the Member State submitted an updated GES determination by 2017 which was taken into account in subsequent assessments.

Consistency

²³ CoR 112th plenary session of 3-4 June 2015 - Opinion “Better protecting the marine environment” 3 June 2015 adopted by unanimity.

Another general concern is the lack of consistency in Member States' implementation. In particular the logical link between the initial assessment (the point of departure), the determination of GES (the final objective) and the targets (the effort needed to reach the objective, starting from the point of departure) was not always present or clear. Some Member States did not distinguish clearly between the determination of GES and the targets themselves, or did not take into account their initial assessment in developing targets, turning a comprehensive, holistic process into a series of unrelated reporting exercises.

Coherence

Member States' use of the results of regional cooperation within their marine strategies (as required by Article 3(5)b and 5(2) MSFD) varies and this has resulted in a lack of coherence across the EU, and also within the same marine region or subregion. While coherence varies widely across the EU and is high in some regions and for some descriptors, overall levels of coherence are moderate to low. Member States in the north-east Atlantic Ocean region showed the highest level of coherence (nevertheless with significant room for improvement) while coherence was lowest in the Mediterranean Sea region and in the Black Sea region (although the latter could only be partially assessed).

Thus, there was no shared EU understanding of what constitutes GES, even at a (sub)regional level. There are 23 different GES determinations across the EU, and therefore no common or comparable goals.

The Commission observed during the first cycle of implementation that much more progress needed to be made to avoid an insufficient, inefficient, piecemeal and unnecessarily costly approach to the protection of the marine environment.

		D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11
<i>Baltic Sea</i>	FI	PA	PA	PA	A	A	PA	NA	PA	PA	NA	PA
	EE	NA	NA	NA	NA	PA	NA	NA	NA	NA	NA	NA
	LV	NA	NA	PA	NA	PA	NA	NR	NR	PA	NR	NR
	LT	NA	NA	A	NA	NA	NA	NR	NA	NA	NR	NR
	PL	PA	PA	PA	PA	PA	NA	NA	PA	PA	PA	NA
	DE	PA	NA	NA	PA	PA	PA	NA	PA	PA	PA	PA
	DK	PA	NA	NA	PA	PA	PA	NR	PA	PA	NA	PA
	SE	NA	PA	PA	NA	PA	PA	NA	PA	NA	PA	NR
<i>North-East Atlantic Ocean</i>	SE	NA	PA	PA	NA	PA	PA	NA	PA	NA	PA	NR
	DK	PA	NA	NA	PA	PA	PA	NR	PA	PA	NA	PA
	DE	PA	NA	NA	PA	PA	PA	NA	PA	PA	PA	PA
	NL	PA	NA	A	PA	PA	PA	A	PA	PA	PA	NA
	BE	A	NA	NA	PA	PA	A	A	A	PA	PA	PA
	UK	A	NA	A	A	A	A	A	PA	PA	PA	A
	IE	NR+	PA	PA	NR+	A	NR+	PA	PA	PA	NA	NR+
	FR	NA	NA	NA	NA	NA	NA	NA	NA	PA	PA	PA
	ES	PA	PA	PA	PA	PA	PA	A	PA	PA	PA	NA
	PT	NR+	NR+	PA	NR+	NR	NR+	NR+	NA+	NA+	NA+	NA+
<i>Mediterranean Sea</i>	UK	PA	NA	NR	PA	NR	PA	NA	NR	NR	NR	NR
	ES	PA	PA	PA	PA	PA	PA	A	PA	PA	PA	NA
	FR	PA	NA	NA	PA	NR	PA	NR	PA	NR	PA	PA
	IT	NA+	NA+	NA	NA+	NA+	NA+	NR+	NA+	NR+	PA+	NR+
	MT	PA	NA	NA	NA	NA	NA	NA	PA	NR	NA	NA
	HR	PA	PA	PA	PA	PA	PA	NA	NA	NA	PA	A
	SI	PA	PA	NA	NA	A	NA	NA	PA	PA	PA	NA
	EL	NA	NA	NA	NA	PA	NA	NA	NA	PA	NA	NA

	CY	NA+	NR	NA+	NR+	PA+	NA+	NR	NA	NA+	NR+	NR
<i>Black Sea</i>	BG	PA+	NA	PA+	NR+	A+	PA+	NA+	NA+	NA+	NR+	NR
	RO	PA+	NR+	NA+	NR+	NA+	NR+	NR	PA	NR+	NR+	NR+

Table 5. Conclusions from the assessment of Article 10 (environmental targets) per descriptor, country and region. Green (A) = adequate; orange (PA) = partially adequate; red (NA) = not adequate, grey (NR) = not reported. 7% of the assessments were considered adequate and 42% partially adequate. The sign “+” indicates that the Member State submitted updated targets by 2017 which were taken into account in subsequent assessments.

1.4.4. Key recommendations

The most common recommendations of the Commission assessments were for Member States to:

- Systematically use standards stemming from EU legislation (such as the Common Fisheries Policy, the Water Framework Directive, the Habitats Directive, Maritime Spatial Planning²⁴ and Integrated Coastal Management) as minimum requirements. If such standards do not exist, Member States should use region-specific common indicators developed by the relevant Regional Sea Conventions.
- Review and, where possible, update their GES and environmental targets in preparation for the monitoring and measures programmes, to allow for a consistent approach within and among regions and between the different provisions.
- In addition, where the Commission found shortcomings, Member States should, as soon as possible and by 2018 at the latest, significantly improve the quality and coherence of their determinations of GES and their environmental targets, to ensure that the second round of implementation yields greater benefits.

1.5. Kick off of the second MSFD cycle of implementation

1.5.1. State of play

Article 17 of the directive required Member States to review and update the initial assessment of their marine waters, determination of GES and set of environmental targets by 15 October 2018. Article 5 of Commission Decision (EU) 2017/848 laid down a timeline requiring Member States to establish or (where it was not possible) to justify the absence of threshold values, lists of criteria elements and methodological standards also by that same date.

These two legal requirements were not fulfilled either due to late reporting or to lack of details stemming from the 2017 Commission Decision or justification for not providing those. So far, the second cycle of the MSFD brings longer delays than the first cycle. As of 15/10/2019, one year after the deadline, less than half (10) of the coastal Member States have submitted their electronic reports, and 14 have provided paper-based reports (Table 6). A preliminary analysis of the information received in electronic format (with the overall assessment of status per descriptor and criteria) is provided in SWD(2020) 61.

²⁴ Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning (OJ L 257, 28.8.2014, p. 135).

The electronic reporting received from Member States under Article 17 will be made publicly available through the WISE Marine portal²⁵.

Report type	Reported by the 15 October 2018 deadline	Reported by 15 October 2019	Not yet reported
Text report	BE, NL	DE, DK, EE, EL, ES, FI, FR, IT, LV, PL, RO, SE	BG, CY, HR, IE, LT, MT, PT, SI, UK
Electronic report	NL	BE, DE, DK, EE, ES, FI, LV, PL, SE	BG, CY, EL, FR, HR, IE, IT, LT, MT, PT, RO, SI, UK

Table 6. Reporting situation under Article 17, which requires the updates of Articles 8, 9 and 10, thus, starting the 2nd cycle of implementation of the directive.

The process for updating Articles 8, 9 and 10 in 2018 benefitted from three important developments since the reporting in 2012:

- Significant progress in regional or subregional cooperation: Through the enhanced activities of the Regional Sea Conventions, there was significant development of indicators and integrated assessments to assess the state of the marine environment in MSFD-compatible ways; three Regional Sea Conventions prepared quality status reports in time for use by Member States in their 2018 reporting. In addition, EU funding supported projects between Bulgaria and Romania which fostered cooperation on MSFD implementation, and similarly projects for cooperation in the Macaronesia subregion between Portugal and Spain. The following section details all the projects funded to support the implementation of the directive during its first cycle.
- Adoption of the revised GES Decision and Annex III: These instruments aimed to provide a much clearer basis for the determination of GES and assessment of the extent to which it has been achieved. They were adopted in 2017 and it was acknowledged that Member States would not be able to fully reflect their requirements in their 2018 reporting; nevertheless, they are expected to provide a more structured and more clearly specified determination of GES that can underpin future assessments.
- Simplification of the 2018 electronic reporting: The reporting requirements were significantly simplified and aligned with the 2017 GES Decision to ensure that the extent to which GES has been achieved could be more clearly reported. The reporting by Member States has been coupled with developments in the WISE-Marine portal to disseminate the MSFD reported information so that the outputs of the MSFD process become more visible. This includes map-based products that demonstrate the status of the marine environment for each descriptor and geographical area reported by Member States. At the time of publication of this Article 20 report, these products were under review by the Member States ahead of their release to the public and stakeholders.

²⁵ <https://water.europa.eu/marine>

1.5.2. A note on timelines and deadlines within the MSFD

An overview after the first MSFD cycle of implementation suggests that the timelines set in the legal act are not always clear or operational. There is ambiguity in the baseline used to define deadlines for reporting under different articles. For example the dates for finalising each stage of the first cycle are clearly laid out in Article 5(2), and Article 17(2) requires each stage to be reviewed every six years after their initial establishment. Whilst this 6-year update could be directly linked to the timelines in Article 5(2), Article 17(3) requires the updated strategies to be sent to the Commission within three months of their publication for the public consultation required under Article 19(2). The publication dates are determined by each country's national consultation process, and maybe a year or more before the reports are due to be finalised. Article 17(3) therefore introduces a flexible timing for when reports are to be submitted to the Commission, which is not linked to the dates specified in Article 5(2) and indeed can require the reports to be submitted well before the end of the 6-year review period. A similar issue of timing arises for the Article 18 interim report on the programmes of measures. Such flexibility in the legally-defined reporting deadlines provides considerable uncertainty in the planning processes of both Member States and the Commission. Until now, the Common Implementation Strategy has successfully overcome this issue by agreeing operational fixed deadlines for reporting. For example, the dates applied for submission of reports to the Commission were 15 October 2018 for Article 17 and 31 December 2018 for Article 18.

1.5.3. Overview of EU projects specifically designed to support MSFD implementation

Different EU funding sources, such as research, LIFE or structural funds, can be used to enhance our knowledge from and management of the EU marine environment. Some funding was channelled from the European Maritime and Fisheries Fund ([EMFF](#)) and the LIFE regulation specifically to help Member States achieve GES and implement the MSFD. The specific calls were:

- 2018 [call for proposals](#): Marine Strategy Framework Directive – Second Cycle: Implementation of the new GES Decision and Programmes of Measures (EMFF).
- 2016 [call for proposals](#): Implementation of the Second Cycle of the Marine Strategy Framework Directive: achieving coherent, coordinated and consistent updates of the determinations of GES, initial assessments and environmental targets (EMFF).
- 2014 [call for proposals](#): Best Practices for actions plans to develop integrated, regional monitoring programmes, coordinated programmes of measures and addressing data and knowledge gaps in coastal and marine waters (EMFF).
- 2012 [call for proposals](#): Open call for proposals PP/ENV/SEA 2012 in the framework of the Pilot Project "New Knowledge for an integrated management of human activities in the sea" – addressed to enhance the environmental monitoring for the MSFD (LIFE).

<i>Year of the call</i>	<i>Name of the project</i>	<i>Full title</i>	<i>Regions</i>	<i>Descriptions</i>
2018	Helcom Action	Actions to evaluate and identify effective measures to reach GES in the Baltic Sea marine region	Baltic Sea	

2018	RAGES	Risk-based Approaches to Good Environmental Status	Ireland, France, Spain and Portugal	D2, D11
2018	INDICIT II	Implementation of the indicator “Impacts of marine litter on sea turtles and biota” in RSC and MSFD areas	Mediterranean and NE Atlantic	D10
2018	CeNoBS	Support MSFD implementation in the Black Sea through establishing a regional monitoring system of cetaceans (D1) and noise monitoring (D11) for achieving GES	Black Sea	D1, D11
2018	QUIETMED II	Joint programme for GES assessment on D11-noise in the Mediterranean Marine Region	Mediterranean Sea	D11
2018	MISTIC SEAS III	Developing a coordinated approach for assessing D4 via its linkages with D1 and other relevant descriptors in the Macaronesian sub-region	Macaronesia	D1, D3, D4
2016	INDICIT	Implementation of the indicator "Impacts of marine litter on sea turtles and biota" in RSC and MSFD areas	Mediterranean and NE Atlantic	D10
2016	MEDCIS	Support Mediterranean Member States towards coherent and Coordinated Implementation of the second phase of the MSFD	West Mediterranean and Adriatic	D6, D10, D11
2016	SPICE	Implementation and development of key components for the assessment of Status, Pressures and Impacts, and Social and Economic evaluation in the Baltic Sea marine region	Baltic Sea including the Kattegat	
2016	JMP EUNOSAT	Joint Monitoring Programme of the EUtrophication of the North-Sea with SATellite data	Greater North Sea	D5
2016	MISTIC SEAS II	Applying a subregional coherent and coordinated approach to the monitoring and assessment of marine biodiversity in Macaronesia for the second cycle of the MSFD	Macaronesian subregion	D1
2016	IDEM	Implementation of the MSFD to the Deep Mediterranean Sea	Mediterranean Sea	All
2016	QUIETMED	Joint programme on Noise (D11) for the implementation of the Second Cycle of the MSFD in the Mediterranean Sea	Mediterranean Sea	D11
2014	Ecaphra	Applying an Ecosystem Approach to (sub)Regional Habitat Assessment	OSPAR	D1, D4, D6
2014	Baltic Boost	Baltic Sea project to boost regional coherence of marine strategies through improved data flow, assessments and knowledge base for development of measures	Baltic Sea	
2014	Mistic Sea	Macaronesia Islands Standard Indicators and Criteria: Reaching Common Grounds on Monitoring Marine Biodiversity in Macaronesia	Macaronesia	
2014	ActionMed	Action Plans for Integrated Regional Monitoring Programmes, Coordinated Programmes of Measures and Addressing Data and Knowledge Gaps in Mediterranean Sea cetaceans (D1) and noise monitoring (D11) for achieving GES	Mediterranean Sea	D1, D11
2012	BALSAM	Baltic Sea Pilot Project: Testing new concepts for integrated environmental monitoring of the Baltic Sea	Baltic Sea	
2012	IRIS-SES	Integrated Regional monitoring Implementation Strategy in the South European Seas	Mediterranean and Black Sea	
2012	JMP NS/CS	Towards a Joint monitoring programme for the North Sea and the Celtic Sea	North Sea and Celtic Sea	

Table 7. Summary of the main projects funded by the EU between 2012 and 2019 to support Member States in the implementation of the MSFD.

2. MONITORING THE MARINE ENVIRONMENT

2.1. Legal requirement

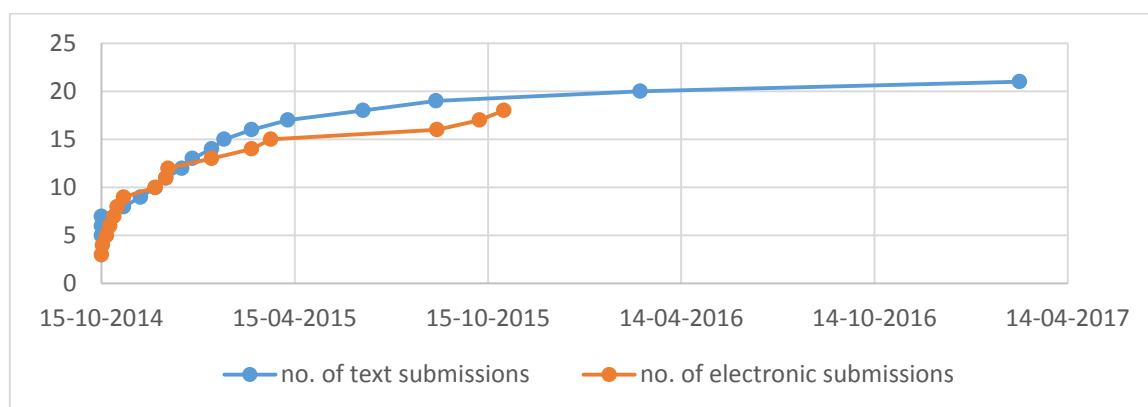
Article 11(1) and Annex V of the MSFD require Member States to establish and implement monitoring programmes to assess (i) the environmental status of their marine waters, (ii) the progress towards the achievement of environmental targets, and (iii) the impact of the programmes of measures. Articles 5(2), 6, 11(1) and 11(3) insist on the necessity to ensure regional coherence and coordination; the MSFD monitoring programmes should be compatible with the monitoring laid down by other Union legislation or international agreements; they should tackle transboundary impacts and features; they should make use of existing institutional structures such as Regional Sea Conventions; and they should facilitate the regional comparability of monitoring results.

The monitoring programmes had to be established by 15 July 2014 and reported by 15 October 2014. They were guided by the indicative lists of characteristics, pressures and impacts set out in Annex III of MSFD and by the 2010 GES Decision. A review and update of the monitoring programmes, due by July 2020, shall take into account the Annex III as amended by the Commission Directive (EU) 2017/845 and the specifications and standardised methods for monitoring and assessment in the revised Commission Decision (EU) 2017/848.

Article 19(2) of the MSFD requires Member States to publish and make available for comment a summary of their monitoring programmes and Article 19(3) requires Member States to provide access and use rights to the data from the monitoring programmes to the European Commission and European Environmental Agency.

2.2. Implementation process

In 2014, 15 Member States reported to the Commission their monitoring programmes within 90 days of the reporting deadline of 15th October 2014; 4 Member States between 90 and 180 days and the last 4 Member States even later (Greece reaching more than two years delay). 18 Member States provided electronic reporting sheets as well as their text-based reports (Figure 4). Four Member States²⁶ provided further updates of their monitoring programmes a long time after their original submission (around one year later).



²⁶ ES, RO, SI and UK. All of the UK reporting related to Gibraltar took place in March 2016.

Figure 4. Cumulative number of Member States that submitted reports under Article 11, starting by the deadline on 15 October 2014. Spatial files are not considered. UK is counted twice since Gibraltar is treated as an independent submission.

The monitoring programmes of 20 out of the 23 coastal Member States were assessed by the Commission in January 2017²⁷, while EL, MT, PL and Gibraltar (UK) were reported and finalised at a later stage and their assessment was published in August 2018. In some cases²⁸, the lack of standardised structure and comparability between the reported information from Member States prevented the assessment of key pieces of information, like the purpose of monitoring or its spatial scope. The evaluation of regional coherence was also suboptimal due to the lack of consistency (within the reporting of individual Member States) and of comparability (among Member States).

Regarding Article 19(2), the European Commission received the following information from Member States with regard to the public consultation processes of the national MSFD monitoring programmes²⁹ (Table 8).

<i>Member State</i>	<i>Public consultation timing</i>	<i>Link to national website(s)</i>
Belgium	15/04/2014 - 15/06/2014	Yes
Bulgaria	03/09/2014 - 03/11/2014	Yes
Croatia	13/06/2014 - 11/07/2014	Yes
Cyprus	12/09/2014 - 12/10/2014	Yes
Denmark	13/05/2014 - 06/08/2014	Yes
France	22/08/2014 - 21/11/2014	Yes
Estonia	11/09/2014 - 26/09/2014	Yes
Finland	07/04/2014 - 23/05/2014	Yes
Germany	15/10/2013 - 14/04/2014	Yes
Greece	15/07/2015 - 27/07/2015	Yes
Ireland	24/07/2014 - 12/09/2014	Yes
Italy	09/06/2014 - 11/07/2014	Yes
Latvia	02/12/2013 - 30/09/2014	Yes
Lithuania	04/02/2014 - 16/06/2014	Yes
Malta	Not indicated	Yes
Netherlands	07/03/2014 - 17/04/2014	Yes
Poland	03/06/2014 - 24/06/2014	Yes
Portugal	01/08/2014 - 15/09/2014	Yes
Romania	29/08/2014 - 29/09/2014	Yes
Slovenia	01/08/2014 - 30/09/2014	Yes
Spain	18/07/2014 - 30/09/2014	Yes
Sweden	04/03/2014 - 24/04/2014	Yes
UK	08/01/2014 - 02/04/2014	Yes

Table 8. Information about the public consultations by Member States related to their marine monitoring programmes.

²⁷ COM(2017) 3: Report from the Commission to the European Parliament and the Council assessing Member States' monitoring programmes under the Marine Strategy Framework Directive.

²⁸ Notably IT, LV and PT.

²⁹ More details and links to national websites available at: http://ec.europa.eu/environment/marine/public-consultation/index_en.htm

In the 2017 and 2018 assessment reports, the Commission offered Member State-specific guidance, the main conclusions of the assessment of monitoring programmes, the outcomes per descriptor, the achievements observed and the aspects to be improved. 12 Member States responded to the Commission recommendations by providing written justification or additional information related to the main gaps and challenges observed in their monitoring programmes. Most of these responses did not fully address the Commission recommendations but demonstrated additional efforts by Member States. The main issue seems to be the late implementation of the monitoring activities.

After the 2017 Commission assessment of the monitoring programmes, the European Parliament expressed its concern about the lack of adequacy of the monitoring programmes to monitor marine litter and micro-litter and to assess its impact on marine wildlife³⁰. MEPs encouraged the Commission to take further actions to avoid marine waste. The Commission has followed appropriate steps through the amendment of the Waste Framework Directive³¹, the new Port Reception Facilities Directive³², the development of a plastics strategy³³ and the Single Use Plastics Directive³⁴. Some MEPs advocated for more specific legal provisions to describe monitoring programmes and more control by the Commission over the MSFD implementation.

Given the novelty and density of the monitoring activities required under the MSFD, and based on the information received, it is expected that the monitoring programmes put in place by Member States will significantly improve in the second cycle of implementation. In addition, the establishment and reporting of the monitoring programmes was prior to the revision of the GES Decision³⁵ and to the establishment of the first programmes of measures. The former should improve the harmonisation and comparability of the monitoring programmes while the latter should facilitate their completeness and adequacy.

2.3. Main conclusions from the assessment of monitoring programmes

2.3.1. Assessment methodology

Member States reported between 8 (SI) and 62 (DK) monitoring programmes and sub-programmes per country³⁶, most of them covering all MSFD descriptors. The Commission assessed the Member States' marine monitoring networks in terms of:

- Coverage, i.e. the extent to which monitoring programmes reported by the Member States address the monitoring needs to measure progress towards (a) the achievement of GES and (b) targets;

³⁰ EP Committee on the Environment, Public Health and Food Safety meeting 24 April 2017, agenda item 5: Exchange of views with the Commission on the Report assessing Member States' monitoring programmes under the Marine Strategy Framework Directive (COM(2017)0003).

³¹ Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

³² Directive (EU) 2019/883 on port reception facilities for the delivery of waste from ships.

³³ COM(2018) 28: A European Strategy for Plastics in a Circular Economy.

³⁴ Directive (EU) 2019/904 on the reduction of the impact of certain plastic products on the environment.

³⁵ Commission Decision (EU) 2017/848.

³⁶ Member States belonging to several regions would reach a higher total if summing up all the sub-programmes for the different regions, which has not been done here since they tend to be overlapping (instead, only the individually highest figure per Member State has been taken into account).

- Regional coherence, i.e. the comparability of the elements monitored and the manner in which they were monitored.

The analysis of coverage was based on the information provided by the Member States, which included both general and programme-specific information. In the general questions, Member States self-assessed the adequacy of their monitoring programmes to measure progress towards achieving GES. The programme-specific questions provided descriptive information on the elements and parameters monitored as well as spatial coverage and frequency of monitoring activities. All these characteristics were analysed per descriptor. In order to summarise the information at country level and provide a EU overview, Member States' monitoring programmes were assessed as mostly, partly or not appropriate, depending on the proportion of monitoring programmes covering the needs to measure either (a) the progress towards GES or (b) the targets.

The Commission also looked at regional coherence assessment, to highlight potential similarities and discrepancies between Member States' monitoring programmes at descriptor-level and to indicate in which areas more regional cooperation would be necessary. The comparability analysis included the elements (e.g. species, habitats, substances, hydrographic characteristics, types of litter and noise, etc.) and parameters monitored (e.g. abundance, distribution, concentration, etc.), the spatial scope (e.g. only on the coast, in defined geographic areas, etc.) and the temporal frequency of the monitoring (e.g. yearly, 3-monthly, etc.).

2.3.2. Conclusions at EU level

The most common purpose of the monitoring programmes was to assess the environmental state of marine waters (the biodiversity descriptors and GES definitions) (72%), followed by the monitoring of pressures (41%) and human activities (18%) (together representing the pressures descriptors). Only 12% of the monitoring programmes focus on the effectiveness of measures to mitigate pressures and their impacts, which is partly explained by the fact that Member States did not have operational MSFD measures before 2016.

MSFD monitoring activities cover a wide geographical area, from inland waters to marine areas beyond the jurisdiction of the Member State. The highest proportion (68%) of monitoring programmes apply to coastal waters, while this proportion decreases with the distance to the coast.

The descriptors for which the highest number of Member States stated they had the applicable monitoring programmes in place by 2014 (the MSFD's required date for having monitoring programmes in place) were, as regards GES, contaminants in seafood (D9; 16 Member States), eutrophication (D5; 15 Member States) and commercial fish (D3; 14 countries). Even by 2018, when the second assessment of the status of marine waters was due, only 13 Member States³⁷ anticipated having their monitoring programmes in place for at least 10 descriptors. This delay in establishing the monitoring programmes is expected to seriously affect the data available for assessing GES and progress with environmental targets as required for the 2018 assessment. Overall, 17

³⁷ BE, BG, CY, DE, DK, EE, FI, FR, HR, IT, NL, RO and UK (for Gibraltar).

Member States³⁸ reported they would have their monitoring in place for all descriptors by 2020 – this is the year by when Member States are required to achieve GES at the latest.

Overall, the monitoring programmes reported by Member States in 2014-2016 only partially covered monitoring needs to measure progress towards achieving GES and targets (see Table 9). On the basis of the technical assessment, six Member States' monitoring programmes were considered as mostly appropriate to meet the requirements of the MSFD, fifteen others as partially appropriate and three Member States' monitoring programmes as not appropriate³⁹. Consequently, monitoring the progress towards achieving GES remains a challenge for Member States.

			D1, 4 Birds	D1, 4 Mammals	D1, 4 Fish	D1, 4 Water column	D1, 4, 6 Seabed	D2 NIS	D3 Commercial fish	D5 Eutrophication	D7 Hydro. changes	D8 Contaminants	D9 Seafood contaminants	D10 Marine litter	D11 Energy/Noise	Conclusion
Baltic Sea	FI	GES	C	C	C	C	C	PC	C	C	C	C	C	PC	PC	MA
		Targets	PC	PC	PC	PC	PC	PC	C	PC	PC	C	C	PC	C	
	EE	GES	C	C	C	C	C	PC	PC	C	NR ₂	PC	C	NR ₂	NR ₂	PA
		Targets	C	C	C	C	C	PC	PC	C	PC	C	C	PC	PC	
	LV	GES	NR ₂	NR ₂	NR ₁	NR ₂	PC	PC	PC	PC	PC	NR ₂	NR ₂	PC	NR ₂	NA
		Targets	NR ₂	NR ₂	NR ₁	NR ₂	PC	PC	PC	PC	PC	NR ₂	NR ₂	PC	NR ₂	
	LT	GES	PC	NR ₂	NR ₁	PC	PC	PC	PC	C	C	NR ₂	PC	C	NR ₂	PA
		Targets	PC	NR ₂	NR ₁	PC	PC	PC	PC	C	C	NR ₂	PC	C	NR ₂	
	PL	GES	PC	NC	C	PC	PC	PC	PC	C	PC	PC	C	PC	PC	PA
		Targets	PC	NC	C	PC	PC	PC	PC	C	PC	PC	C	PC	PC	
	DE	GES	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	NR ₁	PC	NR ₁	PA
		Targets	PC	PC	PC	PC	PC	PC	C	C	PC	PC	NR ₁	PC	NR ₁	
North-East Atlantic Ocean	DK	GES	PC	PC	PC	PC	PC	PC	PC	PC	PC	C	C	PC	PC	PA
		Targets	PC	PC	PC	PC	PC	PC	PC	PC	NR ₂	C	C	PC	NC	
	SE	GES	PC	PC	PC	PC	PC	PC	C	C	C	PC	PC	PC	NR ₁	PA
		Targets	NR ₂	NR ₂	C	NR ₂	PC	PC	C	C	PC	C	PC	C	NR ₂	
	NL	GES	PC	PC	PC	PC	PC	PC	C	C	PC	C	C	PC	C	MA
		Targets	C	C	C	C	C	C	C	C	PC	C	C	C	C	
	BE	GES	PC	PC	PC	NC	PC	PC	PC	PC	PC	C	C	C	PC	PA
		Targets	PC	PC	PC	NC	PC	PC	PC	PC	PC	C	C	C	PC	
	UK	GES	PC	PC	PC	PC	PC	NC	C	C	C	C	C	PC	C	PA
		Targets	PC	PC	PC	PC	PC	NC	C	C	PC	C	C	C	C	
	IE	GES	NC	PC	PC	PC	PC	NC	PC	C	NC	PC	C	PC	PC	PA
		Targets	NR ₂	NR ₂	C	NR ₂	C	NC	C	C	PC	PC	C	C	C	
Mediterranean Sea	PT	GES	PC	PC	PC	PC	PC	PC	C	NR ₁	NR ₁	NC	NC	C	NC	NA
		Targets	PC	PC	PC	PC	PC	PC	C	NR ₁	NR ₁	NC	NC	PC	C	
	FR	GES	PC	PC	PC	PC	PC	NC	C	C	PC	C	PC	C	C	PA
		Targets	PC	PC	PC	PC	PC	NC	PC	PC	PC	PC	C	C	C	
	ES	GES	C	C	C	C	C	C	C	C	C	C	C	PC	PC	MA
		Targets	PC	PC	PC	PC	PC	PC	C	C	C	C	PC	C	PC	
	UK	GES	C	C	C	C	C	C	NC	PC	PC	C	C	PC	PC	MA
		Targets	C	C	C	C	C	C	NC	NC	PC	C	C	PC	PC	
	IT	GES	PC	PC	PC	PC	PC	PC	C	PC	C	PC	PC	C	C	PA
		Targets	PC	PC	PC	PC	PC	PC	PC	PC	C	PC	PC	C	PC	

³⁸ All coastal Member States except EL, IT, LT, LV, PT, SE (for the Atlantic) and SI.

³⁹ The UK being counted twice, as the appropriateness score for the North-east Atlantic differs from the Mediterranean one. For remaining Member States appearing in several regions the score is the same, and the regions therefore not separated.

	MT	GES	C	PC	PC	C	C	PC	C	C	C	PC	C	PC	PC	MA
		Targets	PC	PC	C	C	PC	PC	C	C	C	PC	NC	PC	PC	
	SI	GES	NR ₁	NR ₁	NR ₁	PC	PC	NR ₁	PC	PC	PC	PC	NR ₁	PC	NR ₁	NA
		Targets	NR ₁	NR ₁	NR ₁	NC	NC	NR ₁	NC	PC	NC	NC	NR ₁	PC	NR ₁	
	HR	GES	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	C	PC	PC	PA
		Targets	PC	PC	PC	PC	PC	PC	PC	PC	NC	PC	PC	PC	PC	
	EL	GES	C	C	NC	C	C	PC	PC	PC	NC	PC	NC	PC	PC	PA
		Targets	NC	PC	NC	PC	PC	PC	PC	NC	NC	NC	NC	PC	PC	
	CY	GES	PC	PC	PC	PC	PC	NC	C	C	PC	PC	C	PC	NC	PA
		Targets	NR ₂	NR ₂	PC	PC	NC	NR ₂	C	PC	NR ₂	PC	PC	C	NR ₂	
<i>Black Sea</i>	BG	GES	C	C	PC	C	C	PC	PC	C	C	C	C	C	NR ₂	MA
		Targets	C	C	PC	C	C	PC	PC	PC	PC	PC	C	C	NR ₂	
	RO	GES	NR ₂	C	NR ₂	C	C	NR ₂	C	C	NR ₂	C	C	NR ₂	NR ₂	PA
		Targets	NR ₂	PC	NR ₂	PC	PC	NR ₂	PC	C	NR ₂	C	C	PC	NR ₂	

Table 9. Overview of the assessment of the reported monitoring programmes per country, region and descriptor. Green (C) = covered; orange (PC) = partially covered; red (NC) = not covered; dark grey (NR₁) = no monitoring programme reported; light grey (NR₂) = GES or targets not defined. In the conclusions' column: green (MA) = mostly appropriate; orange (PA) = partially appropriate; red (NA) = not appropriate.

Overall, the main gaps in the monitoring programmes relate to lack of knowledge (notably for non-indigenous species, hydrographical changes, marine litter and underwater noise) or lack of methodological standards (e.g. for contaminants, seabed habitats and water column habitats).

The monitoring programmes were considered sufficient, for the purposes of assessing progress towards GES, in 50% or more of the Member States only for contaminants in seafood (D9), eutrophication (D5) and commercial fish (D3) (Figure 5).

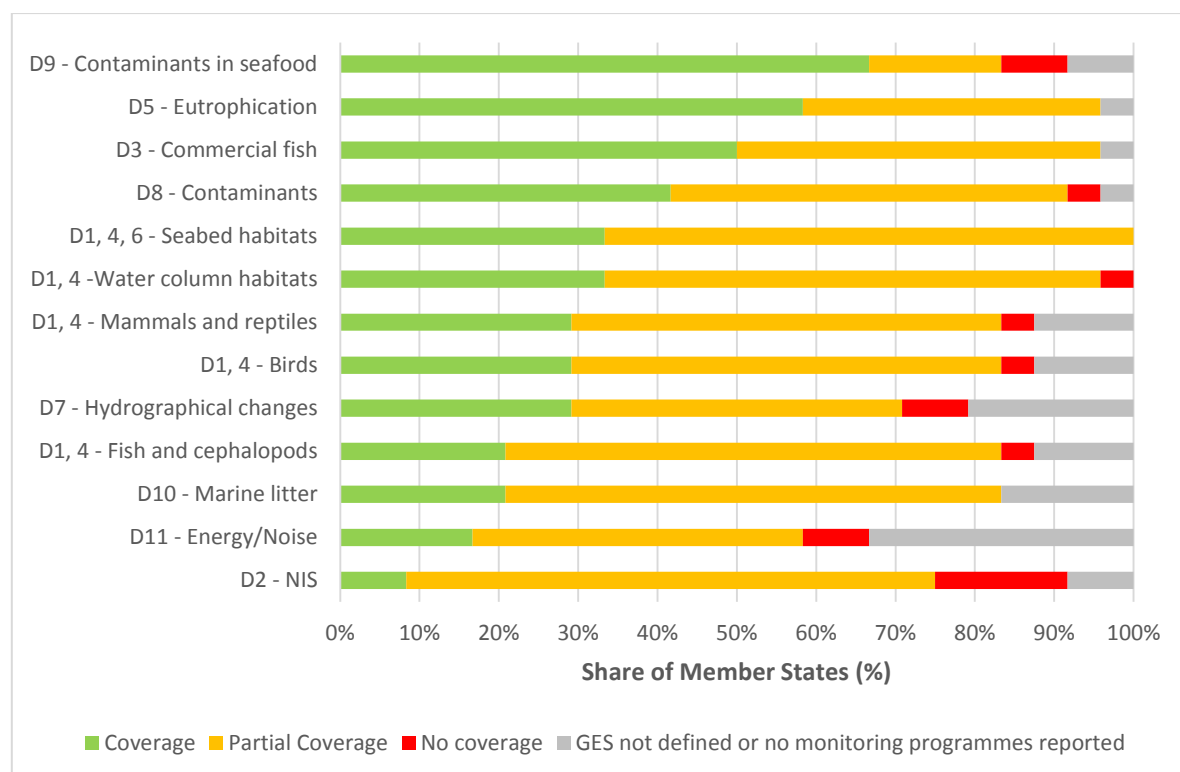


Figure 5. Indication of the coverage of GES per descriptor by the monitoring programmes, based on the Commission's technical assessment.

A recent in-depth analysis of the biodiversity monitoring programmes⁴⁰ showed more detailed insights on the information reported by Member States and their key issues. The lack of consistency on the reported information is mainly due to a different understanding by the Member States of the questions in the reporting sheets. The reported information did not fully succeed in providing a spatial overview of the current monitoring status of biodiversity. However, the revision and refinement of the reporting sheets and guidance document will improve the monitoring updates due in 2020.

2.3.3. Regional coherence

The Commission assessment revealed a moderate to high degree of coherence across the Member States of the Baltic Sea, North-East Atlantic Ocean and Black Sea regions. In these regions, the assessment shows high levels of coherence at least for some aspects of the programmes, such as the spatial scope or the elements monitored. Member States in the North-East Atlantic Ocean have created monitoring programmes at regional level for all descriptors, although they are not yet consistent. Overall, monitoring across a region, including non-EU States, appears more harmonised in the case of the Baltic Sea and the North-East Atlantic Ocean. Regional coherence is medium to low in the Mediterranean Sea region, where more consistent monitoring is recommended for a number of descriptors, such as non-indigenous species (D2) and underwater noise (D11).

Descriptor	D1,4 Birds	D1,4 Mammals	D1,4 Fish	D1,4 Water column	D1,4,6 Seabed	D2	D3	D5	D7	D8	D9	D10	D11
Baltic Sea region	M	H	M	H	M	H	M	H	M	M	M	L	M
NE Atlantic Ocean region	M	H	M	M	M	M	H	H	M	H	H	H	M
Mediterranean Sea region	M	M	H	M	M	L	H	M	M	M	H	H	M
Black Sea region	H	H	M	H	H	H	H	H	H	M	M	M	H

Table 10: Assessment of coherence of the monitoring programmes of EU Member States at regional level. Green (H) = high coherence, orange (M) = medium, red (L) = low.

Member States have based their MSFD monitoring programmes extensively on existing monitoring undertaken for other EU policies. With some minor variations across regions, Member States link most of their monitoring programmes to the Water Framework Directive (more than 160 references), the Habitats Directive (more than 103 references) and the Common Fisheries Policy Regulation (more than 85 references), followed by the Urban Wastewater Treatment Directive⁴¹, Bathing Water Directive⁴² and Nitrates

⁴⁰ Palialexis, A., V. Kousteni and F. Somma, 2019, *In-depth assessment of the Member States' reporting for the Marine Strategy's biodiversity monitoring*, Publications Office of the European Union, Luxembourg, doi:10.2760/051785.

⁴¹ Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40).

⁴² Directive 2006/7/EC concerning the management of bathing water quality.

Directive⁴³ among others. In some cases, Member States have developed monitor activities beyond the requirements of these directives. The only topics that were exclusively monitored by the MSFD and not explicitly addressed by other EU legislation were marine litter (D10) and underwater energy including noise (D11).

Member States have also extensively made use of standards agreed in the framework of Regional Sea Conventions. HELCOM is mentioned by all Baltic Member States for seven of the thirteen descriptors' categories shown in Table 10, and by some Member States for another two categories. The use of OSPAR monitoring is prominent in all descriptors with a few exceptions for D3, D7 and D11. All Mediterranean Member States declare that they have used standards or guidelines agreed in the Barcelona Convention as general guidance for the design of their monitoring programmes, although the links point to different descriptors and do not specify common methodologies. Some Mediterranean Member States also refer to additional Regional Sea Conventions' standards. Bulgaria and Romania both refer to standards agreed in the Bucharest Convention for eight of the thirteen descriptor categories, and they also point individually to work done under the Regional Sea Conventions for the other five categories, although links are not always explicit. In general, providing references to the Regional Sea Conventions does not imply that the Regional Sea Conventions standards or monitoring guidelines are necessarily followed.

Further coordination among Member States at regional and sub-regional level is necessary to characterise the pressures and impacts of transboundary nature (for instance those related to mobile species, non-indigenous species and underwater noise), to deliver consistent and comparable data (for example in terms of methodological standards or spatial scope), and to potentially save resources through more effective monitoring across disciplines and among Member States.

2.3.4. Key recommendations

Some key recommendations to improve the efficiency of the national monitoring programmes are:

- Progress urgently on the establishment of monitoring networks to meet the requirements of the MSFD and to allow progress on the achievement of GES to be assessed.
- Ensure that programmes effectively monitor the status of the EU's marine waters and the associated environmental targets set by Member States. This is particularly the case for descriptors that are not (or only partially) covered by existing legislation, like non-indigenous species, marine litter, underwater noise and some biodiversity descriptors.
- Ensure a full and timely monitoring coverage of the environmental targets established according to Article 10 of the MSFD.
- Use the monitoring programmes to measure the effectiveness of the programmes of measures, especially once both programmes are established (from the second cycle of implementation of the Directive).

⁴³ Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC).

- Improve the analysis of risks so that priorities for monitoring are identified on a technical and scientific basis.
- Seek further coherence and coordination of monitoring programmes at regional or sub-regional level, notably through Regional Sea Conventions, including common approaches to data collection and assessment methods.

2.3.5. Availability of marine data in EU waters

Thanks to recent scientific and technical developments, EU benefits from the expansion of multiple initiatives to monitor or coordinate the monitoring of its marine waters beyond the existing legislative commitments, as well as to gather available data (e.g. EMODnet, CMEMS⁴⁴, EOOS⁴⁵). EMODnet is a fast-growing platform that provides free access to interoperable data products covering bathymetry, geology, seabed habitats, chemistry, biology, physics and human activities. It also offers services (e.g. data ingestion portal) and assesses the quality or adequacy of the available data (e.g. checkpoints). The Copernicus Marine Service (CMEMS) provides free access to ocean products (oceanographic variables, including forecasts), ocean and climate indicators covering the past quarter of a century, and ocean state reports. The information is based on observations (both satellite and *in situ*) and models. The European Ocean Observation System (EOOS) aims to establish a new framework to better coordinate and integrate the disparate components of the current EU ocean observing programmes, aiming to provide a common strategy and long-term sustainability to ocean observations across Europe.

Importantly, one of the objectives of the Common Fisheries Policy is the collection of scientific data (Article 2.4). Member States shall collect biological, environmental, technical, and socio-economic data that enable the assessment of the state of exploited marine biological resources and the level of fishing and the impact that fishing activities have on the marine biological resources and on the marine ecosystems. Fisheries data are used by scientific bodies for assessing fish stocks and advising on fishing opportunities. These data shall be used for monitoring under MSFD Descriptor 3. Data to assess the level of fishing (i.e. fishing effort) and the impact of fishing activities (i.e. incidental bycatch) are necessary for assessments required under other fisheries-related descriptors of the MSFD, such as Descriptors 1 and 6.

The MSFD monitoring programmes should aim to obtain the maximum profit from these initiatives, either making use of new available information developed and funded under external programmes or promoting the use of MSFD monitoring data for other international programmes and commitments. This will not only advance the common marine knowledge-base but also ensure the maximum consistency and minimum cost of data collection in EU waters. The MSFD Common Implementation Strategy follows most of these data collection initiatives and tries to establish bridges, but so far there is no common agreed approach on how to make use of them. The marine data flows (the origin and purpose of data and information) are not always well known by all the interested authorities and the data collection is not always aligned with the policy needs. The topic of marine data flows and governance is being investigated by the MSFD Technical Group on Data.

⁴⁴ The Copernicus Marine Environment Monitoring Service, <http://marine.copernicus.eu/>

⁴⁵ The European Ocean Observing System, <http://www.eoos-ocean.eu/>

But MSFD requirements do not stop at the data collection or monitoring step. For MSFD purposes, observed or modelled data are needed to produce assessments of the status of marine biodiversity and ecosystems, and the pressures and impacts upon them. The passage from raw data to assessments of the extent to which GES is being achieved requires (i) dedicated experts' work, usually performed by national agencies or institutes, (ii) (sub-)regional coordination, and (iii) governmental acceptance and reporting, including the aggregation of information per topic and per marine reporting unit. All these steps finally feed the requirements described in the Commission Decision (EU) 2017/848 to provide reports per descriptor on the extent to which GES has been achieved.

3. SETTING UP AND IMPLEMENTING PROGRAMMES OF MEASURES

3.1. Legal requirement

Article 5(2)(b) of the MSFD requires Member States to develop, as part of their marine strategies a programme of measures. Article 13(1) of the Directive requires that the measures in these programmes are identified to achieve or maintain GES in respect of each marine region or subregion. Member States also have to consider the implications of these measures beyond national waters (Article 13(6)). Article 13(2) requires that the programme takes into account relevant measures under other union legislation, such as the Water Framework Directive, the Urban Wastewater Treatment Directive, the Bathing Water Directive, the Environmental Quality Directive⁴⁶, and international agreements.

The programmes of measures also have to give due consideration to sustainable development, be cost-effective and technically feasible, and be accompanied by an impact assessment for new measures to be introduced (Article 13(3)). Article 13(4) requires the inclusion of spatial protection measures, while Article 13(7) requires the programme of measures to contribute to achieving the targets set under Article 10. Where the management of human activities at Union or international level is likely to have a significant impact on the marine environment, Member States are required to address the relevant authority or international organisation accordingly to consider what measures may be necessary to achieve the objectives of the MSFD (Article 13(5)).

Member States also had to report on exceptions, if any, in accordance with Article 14 of the Directive, listing the reasons for not achieving GES or their targets.

Article 15 of the MSFD allows Member States to raise an issue at EU level, which they believe cannot be tackled by national measures, or which is linked to another EU policy or international agreement. The issue should have an impact on the status of their marine waters. The procedure even provides for a possibility for Member States to make recommendations for measures to EU institutions, which can then be translated into legislative proposals if considered appropriate by the Commission. A guidance document to apply this article was developed within the Common Implementation Strategy ([GD11](#)⁴⁷).

⁴⁶ Directive 2008/105/EC on environmental quality standards in the field of water policy.

⁴⁷ <https://circabc.europa.eu/ui/group/326ae5ac-0419-4167-83ca-e3c210534a69/library/1139bfb2-8d5d-4f46-b0df-24d52a8b27e5/details>

The programmes of measures were due to be notified to the Commission by the end of March 2016 and had to be operational by the end of 2016 at the latest. The programmes of measures were guided by the indicative lists of characteristics, pressures and impacts set out in Annex III of MSFD and by the 2010 GES decision⁴⁸. The next reporting update, due in 2022, shall take into account the Annex III as amended by the Commission Directive (EU) 2017/845 and the specifications and standardised methods for monitoring and assessment in the revised Commission Decision (EU) 2017/848.

In addition to that, Article 18 of the Directive requests the Member States to submit interim reports describing progress in the implementation of their programmes of measures. Such short report should be provided three years after the publication of a programme of measures. The deadlines for submitting the interim reports in Article 18 should be calculated on the base date on which the initial elements of the marine national strategies should have been established. Late reporting in one step should not justify late reporting in subsequent reporting steps. Taking into consideration that the publication date of programmes for the purpose of the public consultation predates the deadline for official establishment of national programmes of measures by 2015 as stipulated in Article 5(b)(i), then the three-year deadline laid down in Article 18 suggests the obligation to submit interim reports by 2018 at the latest. In the Common Implementation Strategy, it was suggested to harmonise the reporting obligations and fix the cut-off date for reporting under Article 18 of 31 December 2018. Article 18 provides the opportunity to Member States and the Commission to take stock of the efforts put in place and advancement in the operationalisation of the directive.

Article 19(2) of the MSFD requires Member States to publish and make available for comment a summary of their programmes of measures.

3.2. Implementation process

Member States reported the elements required under Articles 13 and 14 between January 2015⁴⁹ and July 2018 (last electronic files submitted by Slovenia). 7 Member States⁵⁰ reported their programmes of measures on time (i.e. by 31 March 2016), 3 Member States⁵¹ reported up to 6 months after the deadline, and the remaining 13 Member States⁵² reported even later than that (Figure 6). 20 Member States provided electronic reporting sheets. Five Member States updated their reports more than one year after the deadline.

⁴⁸ Decision 2010/477/EU has since been repealed and is no longer in force.

⁴⁹ A very early reporting by Portugal submitting monitoring programmes together with programmes of measures.

⁵⁰ Belgium, Finland, Germany, Portugal, Sweden, the Netherlands and United Kingdom (excluding Gibraltar).

⁵¹ France, Ireland and Spain.

⁵² Bulgaria, Croatia, Cyprus, Denmark, Estonia, Greece, Italy, Latvia, Lithuania, Malta, Poland, Romania and Slovenia.

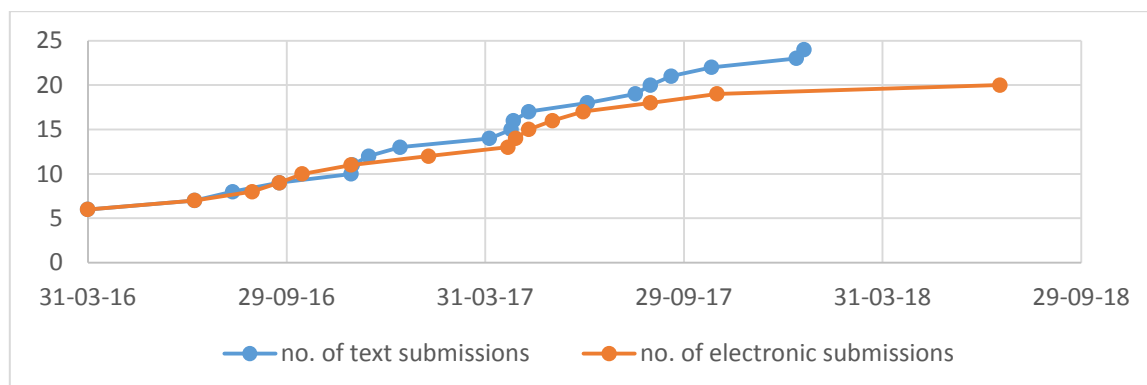


Figure 6. Cumulative number of Member States that submitted reports under articles 13 and 14 across time. The deadline was 31 March 2016. The day of reporting of a Member State is considered the last day uploading files in ReportNet. UK is counted twice since Gibraltar is treated as an independent submission.

The programme of measures of 16 out of the 23 coastal Member States were evaluated in the Commission assessment published of 31 July 2018⁵³, while the assessment for Croatia, Denmark, Estonia, Greece, Lithuania, Romania and Slovenia were published in April 2019⁵⁴ as they did not report in time to make it in the first assessment report. The evaluation checked the coverage of Member States' measures in relation to (i) the pressures and activities reported, and (ii) the GES definitions and environmental targets. The key conclusions and recommendations of the assessment have been shared with Member States and discussed in all working groups of the Common Implementation Strategy, including in *ad-hoc* regional workshops during 6-7 May 2019. The Commission offered summary findings and recommendations per descriptor and Member State, as well as general conclusions per country in the form of strengths and weaknesses. 18 Member States⁵⁵ had responded to the Commission's recommendations by 15 October 2019 by providing written justification or additional information related to the main gaps and challenges observed in their programmes.

The Commission received one official Article 15 request from Portugal in July 2015 concerning a bottom-trawling ban in Portuguese marine waters (more precisely, it concerned the extension of the ban to EU and third-country vessels in two new marine protected areas, Great Meteor and Madeira-Tore). After several exchanges to clarify the scope of the Article 15 request, Portugal was requested to provide additional information (including the scientific advice received from ICES) to allow for any further follow-up actions⁵⁶. Portugal decided to develop such measures first as part of the management plan of the two marine protected areas, as proposed in Portugal's programme of measures, and

⁵³ COM(2018) 562: Report assessing Member States' programmes of measures under the Marine Strategy Framework Directive; together with SWD(2018) 393.

⁵⁴ SWD(2019) 510: Marine Strategy Framework Directive – assessment of programmes of measures for Denmark, Estonia, Greece, Croatia, Lithuania, Romania and Slovenia.

⁵⁵ Belgium, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal, Romania, Spain, Sweden and the United Kingdom. Greece has asked for an extension to prepare their reply.

⁵⁶ The EU policy line to protect vulnerable marine ecosystems in NEAFC, the relevant Regional Fisheries Management Organisation in this case, is to close areas to any gears in contact with the bottom of the sea in accordance with UNGA Resolution 61/105. This means no distinction would be made between bottom-trawling and other bottom contacting fishing gears (e.g. bottom longlines). Any deviation from this international practice would need sound scientific evidence, preferably from ICES. The Commission did not receive such scientific evidence.

to seek ICES advice on their sufficiency in the context of this management plan. The Commission understands from Portugal that work on the establishment of the management plans of the two marine protected areas is still on-going.

Other Member States in the past indicated their intention of using Article 15 (for instance during MSCG meetings or by making reference to Article 15 when they reported their programmes of measures (e.g. Slovenia)), but only Portugal has so far sent an official Article 15 request.

Regarding Article 19(2), the Commission received the following information from Member States with regard to the public consultation processes for the national MSFD programmes of measures⁵⁷ (Table 11).

<i>Member State</i>	<i>Public Consultation Timing</i>	<i>Link to national website(s)</i>
Belgium	13/05/2015 - 13/07/2015	Yes
Bulgaria	02/03/2016 - 30/04/2016	Yes
Croatia	Not indicated	No
Cyprus	18/01/2016 - 22/02/2016	Yes
Denmark	06/02/2017- 15/03/2017	Yes
Estonia	Not indicated	Yes
Finland	15/01/2015 - 31/03/2015	Yes
France	19/12/2014 - 18/06/2015	Yes
Germany	01/04/2015 - 01/10/2015	Yes
Greece	03/04/2017 - 06/06/2017	Yes
Ireland	27/11/2015 - 29/01/2016	Yes
Italy	30/09/2016 - 31/10/2016	No
Latvia	Not indicated	No
Lithuania	Not indicated	Yes
Malta	08/05/2015 - 19/06/2015	Yes
Netherlands	23/12/2014 - 22/06/2015	Yes
Poland	8 and 29/03/2016	No
Portugal	20/10/2014 - 03/11/2014 –Azores 01/08/2014 - 26/09/2014 –PT	Yes
Romania	Not indicated	No
Slovenia	14/10/2016 – 14/11/2016	Yes
Spain	23/12/2015 - 09/04/2016	Yes
Sweden	01/02/2015 - 30/04/2015	Yes
United Kingdom	30/01/2015 - 24/04/2015	Yes

Table 11. Information about the public consultations by Member States about their programmes of measures.

⁵⁷ More details and links to national websites available at: http://ec.europa.eu/environment/marine/public-consultation/index_en.htm

3.3. Main conclusions from assessment of the programmes of measures

3.3.1. Conclusions at EU level⁵⁸

Member States relied heavily on existing regulatory frameworks to provide the measures for their MSFD marine strategies. Such measures were classified as “existing measures”. The programmes of measures usually drew upon EU environmental or other legislation, such as the Waste Framework Directive, the Water Framework Directive, the Birds Directive, the Habitats Directive, the Urban Waste Water Treatment Directive, and the Common Fisheries Policy. Many of the reported measures respond also to existing international commitments, such as those under the International Maritime Organisation and initiatives taken under the Regional Sea Conventions⁵⁹. In its assessment, the Commission noted that Member States took measures specifically agreed with neighbours within an EU marine region, notably through the relevant Regional Sea Conventions, or within a sub-region. Still, the number of cases with (sub)regional coordination of action were limited.

Member States reported a total of 4653 measures in their programmes. The descriptors with the highest shares of **existing measures** were contaminants (D8) and contaminants in seafood (D9) with approximately 86% of the measures reported being existing measures for each of the two descriptors. This was followed by the measures tackling hydrographical changes (D7) at about 82%, followed by measures addressing non-indigenous species (D2) and the biodiversity of birds (D1, 4, 6) both having 76% of the measures already in place prior to the drafting of the programme.

Around 34 % of the measures have however been defined as ‘**new**’ measures, meaning they were put into place specifically for the purposes of the Directive. The descriptors registering a higher proportion of new measures were underwater noise (D11) at 39% and marine litter (D10) at 31%. Some of the biodiversity descriptor themes also have a relatively high share of new measures reported, with 29% for both water column habitats and fish respectively. This pattern is somehow expected, given that for each of these descriptors there are established legal frameworks (EU legislation, international agreements as well as actions taken regionally via the Regional Sea Conventions), in the context of which there is a wealth of measures that Member States have tapped into in order to design their programme of measures.

For example, Member States addressed contaminants (D8) and contaminants in seafood (D9) through measures stemming from the Water Framework Directive, the Urban Wastewater Treatment Directive, the Floods Directive⁶⁰, the Nitrates Directive, as well as international agreements such as the International Maritime Organisation’s (IMO) International Convention for the Prevention of Pollution from Ships (MARPOL). Measures for commercial fish and shellfish (D3), on the other hand, drew from the Common Fisheries Policy and Regional Fisheries Management Organisations, while for

⁵⁸ This information updates COM(2018) 562, SWD(2018) 393 and SWD(2019) 510.

⁵⁹ Four Regional Sea Conventions cover EU marine waters: (1) The Convention on the Protection of the Marine Environment in the Baltic Sea Area (Helsinki Convention); (2) The Convention for the Protection of the Marine Environment of the North-east Atlantic (Oslo-Paris Convention); (3) The Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean; (4) The Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention). The Union is a contracting party to the first three.

⁶⁰ Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks. OJ L 288, p. 27.

eutrophication (D5) the programmes of measures drew largely from the Water Framework Directive, as well as regional actions taken via the Regional Sea Conventions (e.g. the HELCOM Baltic Sea Action Plan).

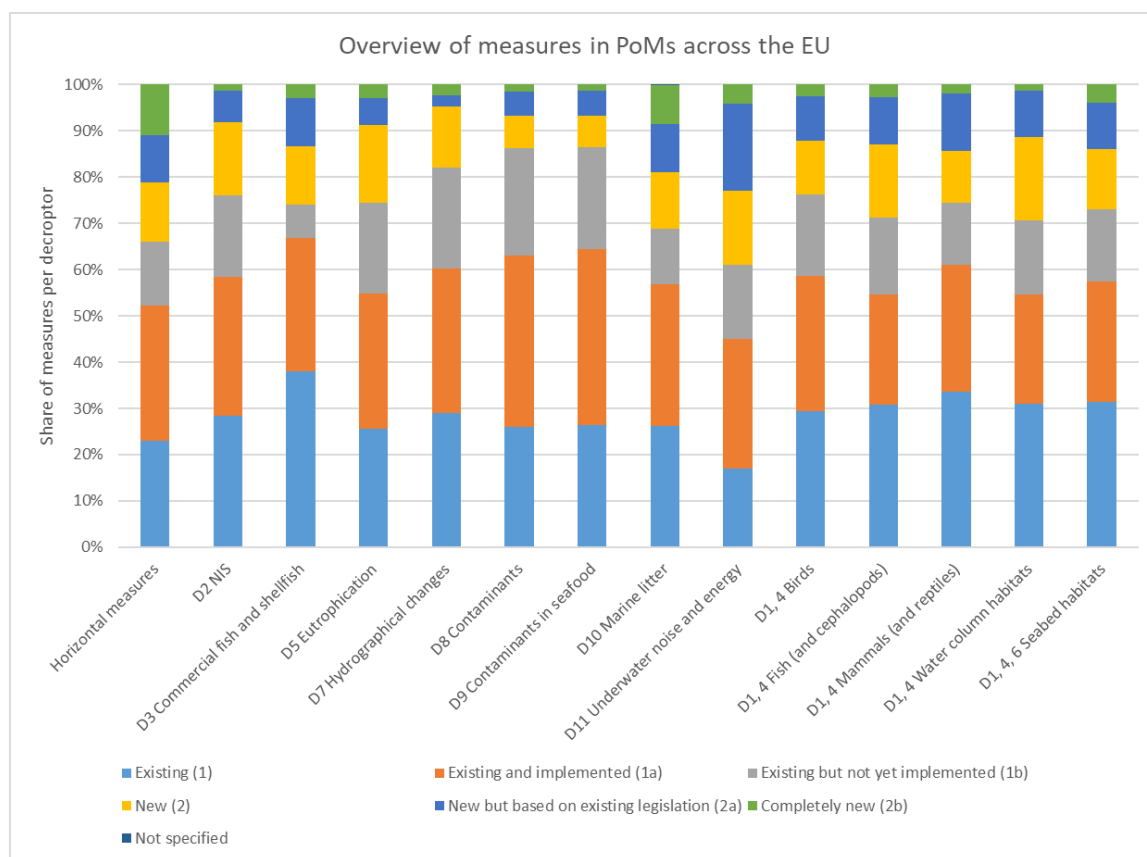


Figure 7. Overview of programmes of measures across the EU.

A number of Member States also introduced a number of **‘horizontal measures’** intended to cover all of the Directive’s descriptors. 33% of these were also new measures. These were mostly related to governance, coordination, and research measures which apply across all descriptors. For example, they reported measures setting up national coordination mechanisms between ministries and competent authorities dealing with marine, water and nature topics, to facilitate the coordination of measures undertaken.

The Commission assessment of the measures also noted that the measures could be further categorised into **‘direct’ and ‘indirect’** measures (79% and 21% respectively), with Member States reporting a mix of both. Direct measures are those likely to contribute to a reduction of pressures on the marine environment in a direct manner by, for example, implementing technical solutions or establishing licencing procedures or legal restrictions limiting certain activities. These are technical or regulatory measures, which are likely to have more immediate effects on pressures on the marine environment. Indirect measures on the other hand are likely to contribute to the reduction of pressures in only an indirect manner by, for example, increasing awareness levels among stakeholders and the public or gathering more knowledge (research) that eventually may lead to more specific actions. These are of non-technical and regulatory nature and are likely to have secondary effects on reducing pressures on the marine environment in the longer term.

			D1, 4 Birds	D1, 4 Mammals	D1, 4 Fish	D1, 4 Water column	D1, 4, 6 Seabed	D2 NIS	D3 Commercial fish	D5 Eutrophication	D7 Hydro. changes	D8 Contaminants	D9 Seafood contaminants	D10 Marine litter	D11 Energy/Noise
<i>Baltic Sea</i>	FI	Pressures	A	PA	PA	PA	A	PA	A	A	A	A	A	A	PA
		GES/Targets	A	A	A	PA	PA	PA	A	A	A	A	A	PA	PA
	EE	Pressures	NA	PA	PA	PA	NA	PA	PA	A	PA	A	A	A	A
		GES/Targets	NA	A	PA	PA	PA	PA	A	A	nc	PA	A	PA	PA
	LV	Pressures	PA	PA	PA	PA	PA	PA	A	A	NA	A	A	A	PA
		GES/Targets	PA	PA	PA	PA	PA	NA	A	A	NA	A	A	A	NA
	LT	Pressures	PA	PA	PA	PA	NA	PA	PA	A	NA	A	A	A	PA
		GES/Targets	PA	nc	NA	PA	NA	A	PA	A	nc	PA	PA	nc	nc
	PL	Pressures	A	PA	A	PA	A	A	PA	PA	PA	A	A	A	PA
		GES/Targets	A	PA	A	PA	A	A	PA	PA	PA	A	A	PA	PA
	DE	Pressures	A	A	A	PA	PA	A	A	A	A	A	A	A	A
		GES/Targets	A	A	A	PA	PA	A	A	A	A	A	A	A	PA
<i>North-East Atlantic Ocean</i>	DK	Pressures	PA	PA	PA	PA	PA	PA	A	A	A	A	A	A	A
		GES/Targets	PA	PA	PA	A	PA	A	A	PA	A	A	A	PA	A
	SE	Pressures	A	PA	A	A	PA	PA	A	PA	A	PA	PA	PA	PA
		GES/Targets	PA	A	A	nc	PA	PA	PA	A	A	A	A	A	PA
	DK	Pressures	PA	PA	PA	PA	PA	PA	A	A	A	A	A	A	A
		GES/Targets	PA	PA	PA	A	PA	A	A	PA	A	A	A	PA	A
	DE	Pressures	A	A	A	PA	PA	A	A	A	A	A	A	A	A
		GES/Targets	A	A	A	PA	PA	A	A	A	A	A	A	A	PA
	NL	Pressures	A	A	A	PA	A	A	A	A	A	A	A	A	A
		GES/Targets	A	A	A	PA	A	A	A	A	A	A	A	A	A
	BE	Pressures	A	PA	A	PA	PA	PA	PA	PA	PA	A	PA	A	PA
		GES/Targets	PA	PA	PA	PA	A	PA	A	PA	PA	A	PA	PA	PA
	UK	Pressures	A	A	A	PA	PA	A	A	PA	A	A	A	A	PA
		GES/Targets	A	PA	A	PA	PA	PA	A	A	PA	A	A	A	PA
	IE	Pressures	A	A	A	PA	PA	A	PA	A	A	A	A	A	A
		GES/Targets	A	A	A	PA	PA	A	A	A	A	A	A	PA	A
	FR	Pressures	A	A	A	PA	PA	A	A	PA	A	A	A	A	A
		GES/Targets	A	A	A	PA	A	A	A	PA	PA	PA	A	A	A
	ES	Pressures	A	A	A	A	PA	A	A	PA	A	A	A	A	PA
		GES/Targets	A	A	A	A	A	A	A	A	A	A	A	A	A
	PT	Pressures	PA	PA	PA	PA	NA	NA	A	PA	NA	PA	PA	PA	PA
		GES/Targets	PA	PA	PA	PA	PA	PA	PA	PA	NA	PA	PA	PA	PA
<i>Mediterranean Sea</i>	UK	Pressures	A	PA	PA	PA	PA	PA	PA	PA	PA	A	A	PA	PA
		GES/Targets	A	PA	PA	PA	PA	A	PA	PA	PA	PA	A	A	PA
	ES	Pressures	A	A	A	A	PA	A	PA	PA	PA	A	A	A	PA
		GES/Targets	A	A	A	A	A	A	A	A	A	A	A	A	A
	FR	Pressures	A	A	A	PA	PA	PA	PA	PA	PA	A	A	A	A
		GES/Targets	A	A	A	PA	A	PA	PA	PA	PA	PA	A	PA	A
	IT	Pressures	A	A	A	PA	PA	A	A	A	A	PA	A	PA	A
		GES/Targets	A	A	PA	PA	PA	A	PA	A	PA	PA	A	A	PA
	MT	Pressures	A	PA	A	PA	PA	A	A	A	A	A	A	A	PA
		GES/Targets	A	A	PA	A	PA	A	A	A	A	PA	A	A	PA
	SI	Pressures	PA	PA	PA	PA	A	PA	A	PA	A	A	A	A	A
		GES/Targets	PA	A	PA	PA	PA	A	A	A	A	A	A	A	A
	HR	Pressures	A	PA	A	A	PA	PA	PA	A	A	A	A	PA	NA
		GES/Targets	PA	PA	A	A	PA	A	A	A	PA	PA	A	PA	PA
	EL	Pressures	NA	NA	NA	NA	PA	PA	A	A	PA	PA	A	A	A
		GES/Targets	nc	PA	PA	NA	PA	A	A	A	A	PA	A	A	A
	CY	Pressures	PA	PA	A	PA	PA	PA	PA	A	PA	A	A	PA	PA

		GES/Targets	PA	PA	PA	PA	PA	A	PA	A	A	A	A	PA	NA
Black Sea	BG	Pressures	PA	PA	A	PA	PA	A	A	PA	A	A	PA	A	PA
		GES/Targets	A	PA	PA	PA	PA	PA	PA	nc	A	A	PA	PA	PA
	RO	Pressures	PA	A	A	PA	PA	A	A	PA	A	A	A	A	PA
		GES/Targets	PA	A	PA	PA	PA	A	PA	nc	A	A	A	A	PA

Table 12. Results from the assessment of the programmes of measures that takes into account if the measures address the key pressures as well as the reported GES and environmental targets. Green (A) = topic addressed; orange (PA) = partially addressed; red (NA) = not addressed, grey (nc) = no conclusion (it cannot be assessed based on the reported information).

		D1, 4 Birds	D1, 4 Mammals	D1, 4 Fish	D1, 4 Water column	D1, 4, 6 Seabed	D2 NIS	D3 Commercial fish	D5 Eutrophication	D7 Hydro. changes	D8 Contaminants	D9 Seafood contaminants	D10 Marine litter	D11 Energy/Noise
Baltic Sea	FI	A	PA	PA	PA	A	PA	A	A	A	A	A	A	PA
	EE	NA	PA	PA	PA	NA	PA	PA	A	PA	A	A	A	A
	LV	PA	PA	PA	PA	PA	PA	A	A	NA	A	A	A	PA
	LT	PA	PA	PA	PA	NA	PA	PA	A	NA	A	A	A	PA
	PL	A	PA	PA	A	PA	PA	PA	PA	A	A	A	PA	A
	DE	A	A	A	PA	PA	A	A	A	A	A	A	A	A
	DK	PA	PA	PA	PA	PA	PA	A	A	A	A	A	A	A
	SE	A	PA	A	A	PA	PA	A	PA	A	PA	PA	PA	PA
North-East Atlantic Ocean	SE	A	PA	A	A	PA	PA	A	PA	A	PA	PA	PA	PA
	DK	PA	PA	PA	PA	PA	PA	A	A	A	A	A	A	A
	DE	A	A	A	PA	PA	A	A	A	A	A	A	A	A
	NL	A	A	A	PA	A	A	A	A	A	A	A	A	A
	BE	A	PA	A	PA	PA	PA	PA	PA	PA	A	PA	A	PA
	UK	A	A	A	PA	PA	A	A	PA	A	A	A	A	PA
	IE	A	A	A	PA	PA	A	PA	A	A	A	A	A	A
	FR	A	A	A	PA	PA	A	A	PA	A	A	A	A	A
	ES	A	A	A	A	PA	A	A	PA	A	A	A	A	PA
Mediterranean Sea	PT	PA	PA	PA	PA	NA	NA	A	PA	NA	PA	PA	PA	PA
	UK	A	PA	PA	PA	PA	PA	PA	PA	PA	A	A	PA	PA
	ES	A	A	A	A	PA	A	PA	PA	PA	A	A	A	PA
	FR	A	A	A	PA	PA	PA	PA	PA	PA	A	A	A	A
	IT	A	A	A	PA	PA	A	A	A	A	PA	A	PA	A
	MT	A	PA	A	PA	PA	A	A	A	A	A	A	A	PA
	HR	A	PA	A	A	PA	PA	PA	A	A	A	A	PA	NA
	SI	PA	PA	PA	PA	A	PA	A	PA	A	A	A	A	A
	EL	NA	NA	NA	NA	PA	PA	A	A	PA	PA	A	A	A
Black Sea	CY	PA	PA	A	PA	PA	PA	PA	A	PA	A	A	PA	PA
	BG	PA	PA	A	PA	PA	A	A	PA	A	A	PA	A	PA
	RO	PA	A	A	PA	PA	A	A	PA	A	A	A	A	PA

Table 13. Conclusions from the assessment of the programmes of measures per country, region and descriptor. Green (A) = topic addressed; orange (PA) = partially addressed; red (NA) = not addressed.

Table 12 and Table 13 show the overall conclusion of the assessment of measures per descriptor, country and region. This assessment is based on how the Member States' programmes of measures address key pressures on their marine waters identified in their Article 8 assessment, to achieve their Article 10 environmental targets and ultimately to reach GES as defined through Article 9. In their programmes of measures, Member

States have at least partially addressed a number of pressures: the introduction of non-indigenous species, commercial fisheries, nutrient input, pressures on seabed habitats, hydrographical changes, contaminants and marine litter. Figure 8 shows how many of the pressures Member States reported in their Article 8 assessments that have been appropriately addressed by their measures.

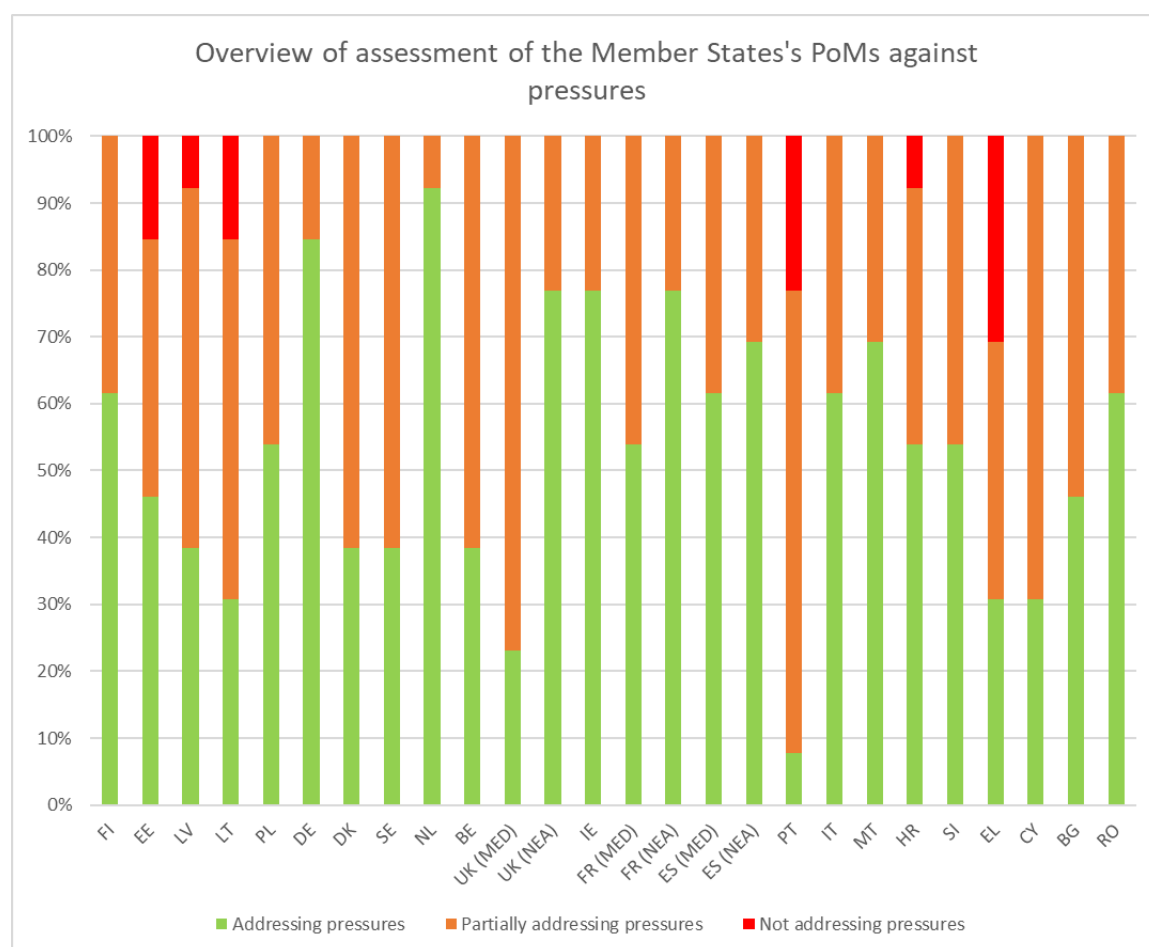


Figure 8. Appropriateness of Member State measures against pressures (Member States are presented in geographical order per marine region).

The Commission also assessed the **likelihood of implementation** of these programmes of measures, notably new measures. This assessment looked at factors such as cost and resource allocations, timeline of implementation of new measures, and identification of the body responsible for the implementation of the measures. ‘Highly likely’ implies that new measures are planned in detail and that operational aspects are fully considered. ‘Likely’ implies that most, but not all aspects (costs, timelines of new measures and responsible bodies) are sufficiently considered. Sometimes there is not enough information to reach a conclusion. The conclusions have been summarised in Table 14⁶¹).

⁶¹ In the national reports assessing the Member States’ programmes of measures, a scale ranging from ‘likely’, to ‘unlikely’ and to ‘no conclusion’ was applied to score the likelihood of implementation of new measures. Once all coastal Member States had reported and the regional analysis were performed, the scoring system was adapted to distinguish between those Member States where implementation of new measures was ‘highly likely’ and those where it was ‘likely’. The information provided in the programmes of measures was subsequently re-evaluated and some scores were changed for the following Member States: BE, DE, DK, EE, ES, FI, FR, IT, SE, and UK. Scores were not changed in the respective Member State reports.

<i>Highly likely</i>	Belgium, Denmark, Estonia, Finland, France, Germany, Italy, Spain, Sweden, United Kingdom
<i>Likely</i>	Bulgaria, Croatia, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia
<i>No conclusion</i>	Cyprus, Greece, Ireland

Table 14. Overview of the assessment of likelihood of implementation of the national programmes of measures.

3.3.2. Spatial protection measures

EU situation

In 2015, the Commission published a report on the progress made by Member States in establishing marine protected areas⁶², as required by Article 21 of the MSFD. In contrast to other provisions in the Directive that request submission of reports on a regular basis, Article 21 does not foresee any new report, which would provide updated information on the marine protected areas. The evolution of marine protected areas is a dynamic process and would need further attention in the subsequent reporting cycles.

Between 2012 and 2016, the overall coverage of marine protected areas in European seas almost doubled, rising from 5.9% to 10.8%, thereby fulfilling the Aichi Target 11⁶³ coverage goal long before the 2020 deadline. The 10% coverage was also broadly met at a regional scale in all four European marine regions. Despite the very good trends, more efforts are needed at a sub-regional level (1 out of 4 North-east Atlantic sub-regions and 3 out of 4 Mediterranean sub-regions have coverages far below 10%) and in offshore (deep sea) areas, so that protection efforts can be considered evenly spread throughout European waters⁶⁴. The sub-region with the highest proportion of marine protected areas is the Greater North Sea with 27.1 %, while the sub-region with the lowest coverage is the Ionian Sea and the Central Mediterranean Sea with 2.9 %.

Approximately 50% of the marine protected areas are under 30 km² and a very high proportion of these is smaller than 5 km²⁶⁵. Conservation of single features or vulnerable habitats may qualify for small Marine protected areas, but it is also important that Europe establishes further larger sites capable of guaranteeing ecosystem functioning and widespread spill-over effects to recover fish stocks.

While the typical multi-use marine protected areas of the EU have proven effective to shifting societal attitudes towards the sustainable use of marine resources and to reach international commitments, no-take zones are by far the most effective type of protection to restore both the biomass of fish assemblages and the resilience of ecosystems. Some studies claim that commercial trawling is occurring in 59% of EU's marine protected areas⁶⁶ and that just 1.8% of EU marine waters may be protected with a management

⁶² COM(2015) 481, Report from the Commission to the European Parliament and the Council on the progress in establishing marine protected areas. This report builds on the work done by the European Environment Agency.

⁶³ Aichi Biodiversity Targets: UNEP/CBD/COP/DEC/X/2, Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at Its Tenth Meeting, Nagoya.

⁶⁴ <https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/marine-protected-areas>

⁶⁵ Agnesi et al. (2018). Spatial analysis of marine protected area networks in Europe's seas II, Volume B.

⁶⁶ [Dureuil et al. \(2018\)](#). Elevated trawling inside protected areas undermines conservation outcomes in a global fishing hot spot.

plan in place⁶⁷. Along with a good planning and enforcement, having adequate staff and financial resources is a crucial factor to guarantee the ecological and economic benefits of protected areas⁶⁸. In practice, information about management effectiveness is scarce, scattered and, so far, has not been properly captured through MSFD reporting. Further efforts and information would be needed, for instance, to examine actual protection or to apply broad protection categories.

Spatial protection measures in the programmes of measures

As part of their MSFD programmes of measures, Member States reported on the spatial protection measures they had or were putting in place, including marine protected areas⁶⁹.

Member States reported 246 spatial measures; 66% of them as existing measures, 31 % as new and only 3% as completely new measures. Most of the reported measures (either existing or new) mainly fulfil Member States' obligations under the Birds and Habitats Directives.

At least 17 Member States⁷⁰ aimed with their spatial measures to designate new protected sites (and thus expand the networks) while 20 Member States aimed to improve their management through the establishment of management plans or conservation measures. Most Member States added spatially-explicit limitations of human activities within the protected sites, those being mostly fishing practices (amongst others activities). This kind of protection measures tend to be limited in target (species, habitats) and space.

Many of the completely new spatial measures were classified as indirect, but they may have a great impact in the protection of marine ecosystems, such as mapping activities (e.g. habitats maps, noise maps, cumulative impact maps), prepare/update management guidance, awareness raising campaigns, monitor compliance, or studies on the impact of fishing gear and alternative technologies.

MSFD Art.13(4) states that spatial protection measures should contribute to **coherent and representative networks of marine protected areas**, adequately covering the diversity of the constituent ecosystems. Ecological coherence is increasingly used to describe the ultimate goal in the design, establishment, and assessment of networks of protected areas. Five key principles are commonly included in ecological coherence assessment methodologies: representativity, replication, connectivity, adequacy and management. The Commission report of 2015 concluded that there was no EU-wide

⁶⁷ [WWF \(2019\)](#). Protecting our ocean: Europe's challenges to meet the 2020 deadlines.

⁶⁸ [Gill et al. \(2017\)](#). Capacity shortfalls hinder the performance of marine protected areas globally.

⁶⁹ The European Parliament issued two opinions that among other things featured marine protected areas: OPINION of the Committee on the Environment, Public Health and Food Safety for the Committee on Regional Development on the implementation of EU macro-regional strategies (2017/2040(INI)) calling for enhancing the marine NATURA 2000 network, and a coherent and representative network of marine protected areas under the MSFD by 2020; and OPINION of the Committee on the Environment, Public Health and Food Safety for the Committee on Regional Development on an EU strategy for the Adriatic and Ionian region (2014/2214(INI)) calling for a minimum objective of 10% surface coverage by 2020 of the Adriatic and Ionian Seas by marine protected areas, in accordance with relevant international commitments and in support of achieving good environmental status in the Union's marine environment by 2020, in accordance with the MSFD. Presently available information indicate that coverage of marine protected areas in the Adriatic and Ionian Seas remains below 6 and 3 % respectively, far below the target.

⁷⁰ BG, CY, DK, EE, EL, ES, FI, FR, IE, IT, LV, MT, PL, PT, RO, SE, UK.

method to assess the coherence and representativity of European networks of marine protected areas, while recognising the initiatives of some Regional Sea Conventions. The Commission services just published the results of a new study⁷¹ that proposes a methodology to analyse ecological coherence and management effectiveness in networks of marine protected areas and other area-based conservation measures. It can be a starting point to assess coherence and representativity under MSFD, although there is a long way to agree and apply the proposed methodologies across Europe. In addition, the information reported in the programmes of measures is insufficient to run this kind of analysis.

Although 22 Member States declared that their spatial measures contributed to coherent and representative networks of marine protected areas, in half of the cases the information reported is too ambiguous to evaluate it. The achievement of ecological coherent networks would be facilitated by following some common principles and holistic approach at (sub)regional scale, such as (i) common regional GES determinations and targets and (ii) coordinated and effective management measures. It is estimated that at least 15 Member States may pursue regional ecological coherence through their measures. In addition, improved and harmonised reporting systems about marine protected areas across Europe and monitoring geared to adaptive management processes are essential for the attainment of coherence.

3.3.3. *Exceptions*

Thirteen⁷² of the Member States report **exceptions**, as provided for by Article 14 of the Directive. Not all Member States who indicated that they consider GES will not be achieved by 2020 have opted to report exceptions. Exceptions were not always used consistently, even within the same region. Some Member States for example, applied exceptions for several descriptors. Others did not report an exception even when there are uncertainties about whether and when GES will be achieved. In this latter case, the justification often provided was that data and knowledge gaps did not justify them to report an exception during the first implementation cycle of the MSFD. In the technical assessments supporting the Commission report, these exceptions were examined individually on whether they were considered to be justified from a technical perspective.

⁷¹ COHENET “Achieving coherent networks of marine protected areas: analysis of the situation in the Mediterranean Sea” (2018-2019) assessed how much the current marine protected areas other area-based conservation measures satisfy the requirements of the MSFD and provided a set of recommendations to increase their coherence as a network. The final products are published in https://ec.europa.eu/environment/marine/publications/index_en.htm.

⁷² Cyprus, Denmark, Estonia, Finland, Latvia, Lithuania, Malta, the Netherlands, Poland, Romania, Slovenia, Sweden and United Kingdom.

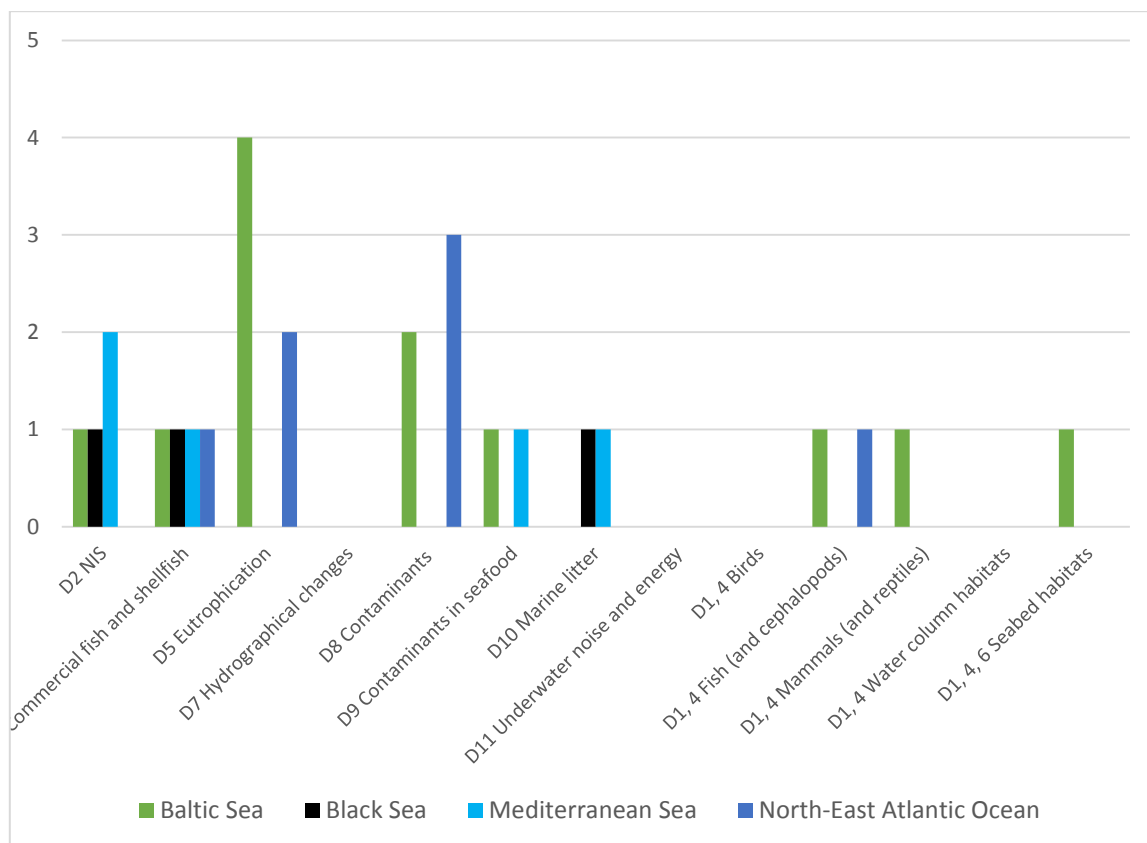


Figure 9. Number of exceptions applied in each marine region per descriptor.

3.3.4. Progress in the implementation of the programmes of measures

As of 4 November 2019, 17 Member States⁷³ have reported under Art. 18 on the progress in the implementation of their first MSFD programmes of measures. The reporting was focused on “new” measures, i.e. those put in place specifically for the purpose of the MSFD, which account for around 25% of the whole programmes of measures⁷⁴.

The degree of implementation of the measures is extremely variable amongst Member States (Figure 10). It stems from the reporting that 16% of the “new” measures are already implemented, and that implementation has started without delay for 56% of the measures.

Implementation has started but is delayed for 15% of the measures, has not started for 11%, and 1% of the measures has been withdrawn. The main reasons for these implementation shortcomings are financing, national implementation mechanisms and technical issues (notably lack of proper monitoring data) (Figure 11).

⁷³ Bulgaria, Cyprus, Greece, Italy, Malta and Portugal had not reported yet.

⁷⁴ United Kingdom had not reported any new measure.

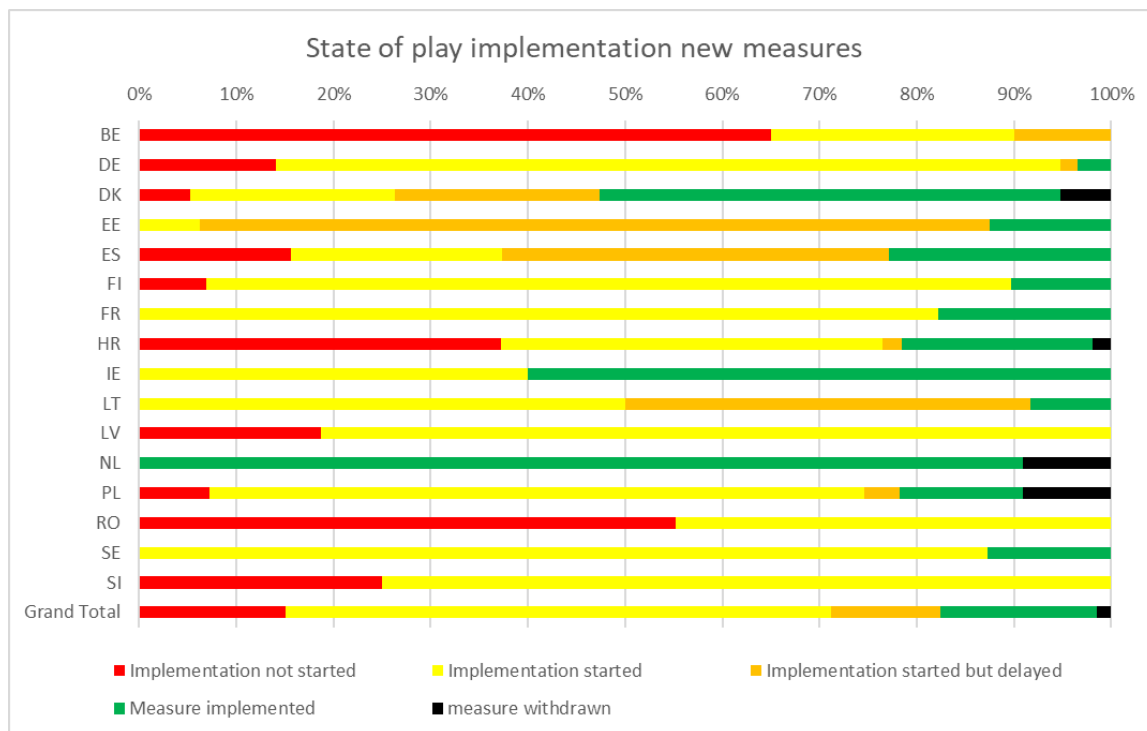


Figure 10. Degree of implementation of the “new” measures within the national MSFD programmes of measures. This is a summary of the still ongoing reporting by Member States under Article 18.

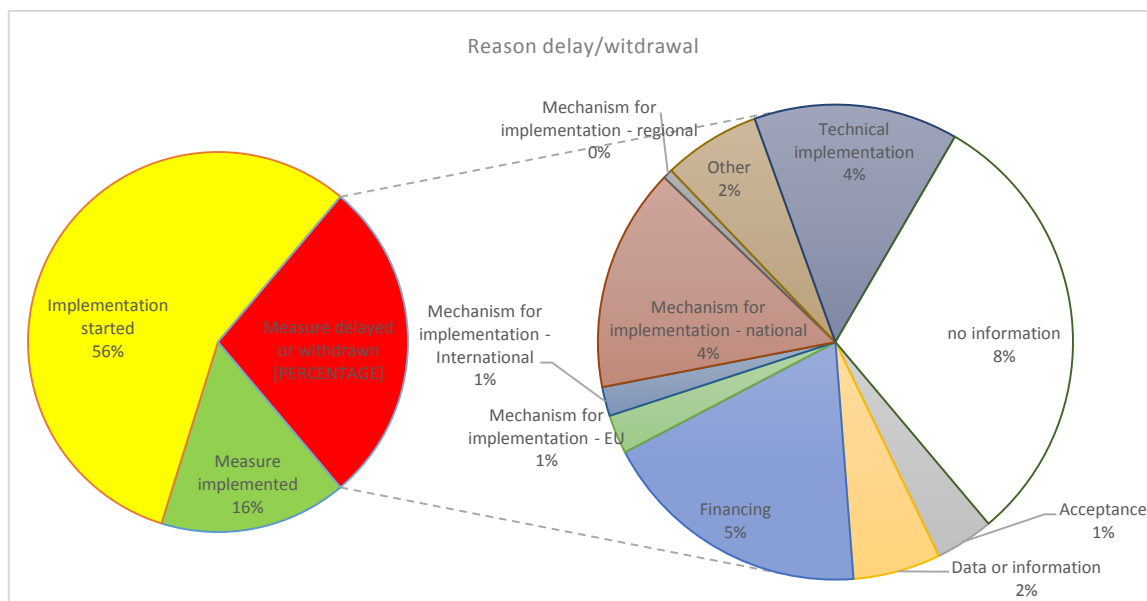


Figure 11. Overall degree of implementation of the “new” measures and main reasons for delay or withdrawal of measures.

3.3.5. Key recommendations

The Commission report and its annexes makes a number of general and specific recommendations to Member States, thereby guiding them on modifications that it

considered necessary in their programmes of measures. Among these recommendations, Member States are asked to:

- identify and implement measures sub-regionally or regionally;
- to provide timelines for the implementation of these measures and match them with funding;
- to better link the measures with other parts of their strategy such as target-setting and monitoring;
- to quantify the effects of these measures on reducing pressures on the marine environment and their contribution to improving the state of the seas and oceans;
- to cover all pressures and to ensure that the measures cover an appropriate geographic scale.