

1.6.2.1 EU request to provide guidance on the practical methodology for delivering an MSFD GES assessment on D3 for an MSFD region/subregion

Advice summary

ICES advises that the good environmental status (GES) assessment for the Marine Strategy Framework Directive (MSFD) Descriptor D3 should be based on criteria D3C1 (level of pressure of fishing activity) and D3C2 (reproductive capacity of the stock). The assessment should be based only on those stocks that have primary indicators (MSY reference points).

ICES advises that the aggregation of the assessment results of criteria D3C1 and D3C2 within a stock should be done using a conditional method, such that only if both criteria are met will GES be achieved for that stock.

ICES advises that assessments of GES for D3 at an MSFD regional or subregional level should be based on the proportion of both criteria for each stock within a region or subregion achieving GES status. For widely distributed stocks that straddle more than one MSFD region or subregion, the overall stock criteria should be included in each region or subregion when assessing GES. Agreed limits for each of these criteria to define GES is outside the ICES remit and should be decided at the policy level.

ICES advises that “commercial fish and shellfish” relevant for assessing GES are those stocks considered important to any EU Member State and those recorded in national lists under the EU Data Collection Framework. The total landings of these stocks should represent a very high proportion of the landings (e.g. >90%) in weight by that EU Member State.

ICES notes that there is no agreed approach to the use of secondary indicators in the assessment of GES. ICES advises that assessment of GES should, therefore, be based only on those stocks that have primary indicators until an approach for secondary indicators has been agreed.

Request

Guidance on the practical methodology for delivering an MSFD GES assessment on D3 for an MSFD region/subregion, including what should be considered a commercial fish and shellfish, how to treat wide ranging stocks, how to account for multiple stocks in one area?

Elaboration on the advice

For the purpose of this advice, ICES has used the terminology proposed by the European Commission for the revision of the decision (e.g. D3C1 instead of C3.1).

Assessment of GES for stocks

Previous ICES advice (ICES, 2014a, 2014b, 2015) developed a common approach for the assessment of D3, most of which is considered still valid, involving four distinct steps.

Step 1 – Prepare a list of commercially exploited fish and shellfish stocks in the relevant marine region, to be used for the assessment of Descriptor 3, and provide the rationale for the selection of stocks.

Step 2 – Catalogue and document the available information for each of the stocks selected for the Descriptor 3 assessment.

Step 3 – Evaluate the stock status against the three GES criteria mentioned in EC Decision 2010/477/EU (EU, 2010), i.e. criterion 3.1 (level of pressure of the fishing activity), criterion 3.2 (reproductive capacity of the stock), and criterion 3.3 (population age and size distribution) by stock and species-functional group (i.e. pelagic, demersal/benthic, shellfish, elasmobranch, deep-water).

Step 4 – Determine the overall status and identify issues, problems, gaps, and links to other MSFD descriptors (e.g. D1 – Biodiversity and D4 – Foodwebs), together with any additional monitoring needs.

Step 1: ICES (2014a) recommends that:

1. *The Member States' lists of commercial stocks should first be derived at the MSFD regional (subregional in the case of the Northeast Atlantic) level by including stocks that are assessed at the international level.*
2. *In addition to the internationally assessed stocks, there may be several fish and shellfish stocks that are important for small-scale/local coastal fisheries on a regional or national scale. Member States should identify these stocks and add them to their national list.*
3. *It should be ensured that the list set up in accordance with point 1 and 2 covers a very high proportion of the landings (e.g. >90%) in weight.*
4. *The selection of stocks based on the ranking of the landings by weight (or commercial value) should be applied using the longest available time-series in order to also include depleted stocks that in the past had much larger landings. Extirpated species should not be included but would be covered under Descriptor 1.*

Step 2: ICES (2014a) recommends that:

For the selection of commercial fish and shellfish stocks in the relevant marine (sub)region, assign each stock to one of the six ICES stock categories and collate either the MSY reference points or the MSY proxies for undertaking the Descriptor 3 assessment. For stocks in Category 6, evaluate whether each stock should be assessed under Descriptor 3 or more appropriately, under the biodiversity Descriptor D1 when the level of catch has historically been low. If low catches are likely to be due to low stock abundance, the stock should be considered under Descriptor 3.

ICES recommends a quality check of the data at this step. This check should include sampling methodology.

Step 3: ICES (2016a) advises that Criterion D3C3 should not be considered for the assessment of GES. Hence, the GES assessment should be based only on criteria D3C1 and D3C2 (Figure 1.6.2.1.1). ICES furthermore advises that in the absence of an agreed approach to the use of secondary indicators for assessing GES, the assessment should be based only on those stocks that have primary indicators until an approach for secondary indicators has been agreed.

Step 4: The assessment of each stock is an aggregation of the results of criteria D3C1 and D3C2 using a conditional method, such that only if both criteria are met will GES be achieved for that stock. This method uses decisions based on pre-set rules. These rules may be simple (e.g. one-out all-out) or sequential, where if one criterion is met, then a further criterion is considered. Conditional methods allow for the inclusion of reviews within decision-making; thus, if conditions outside the agreed limits are encountered, the causes are taken into consideration. For example, if a poor condition in one criterion is encountered, the subsequent aggregation stage might still be regarded as being within acceptable limits.

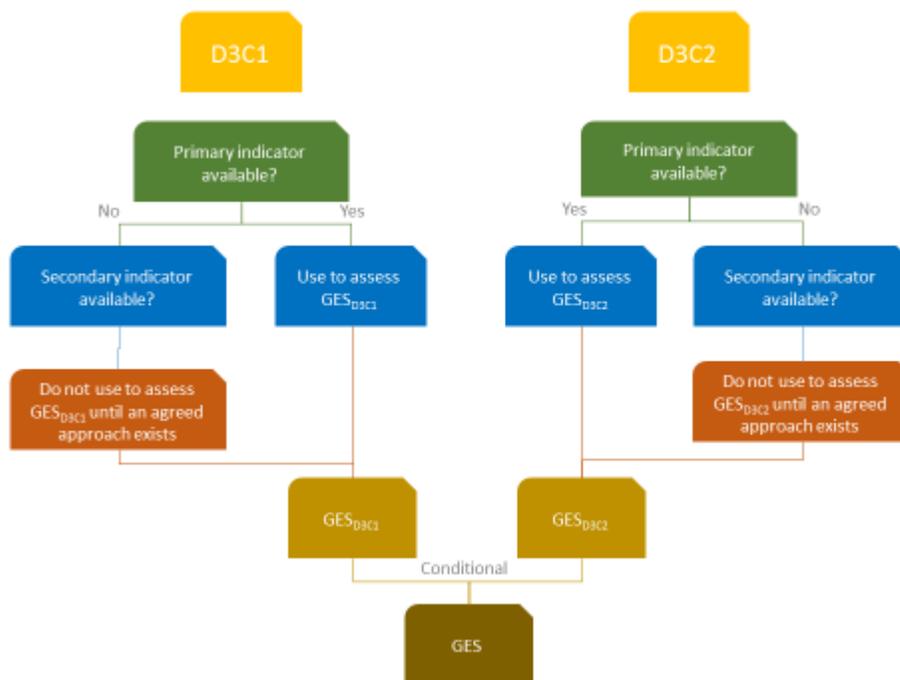


Figure 1.6.2.1.1 Flowchart showing the use of indicators (currently MSY indicators) to produce GES assessment for stocks. ICES considers that no secondary indicators can currently be used to assess GES.

Assessment of GES for regions/subregions

ICES (2014a) recommended a criteria approach to assessing GES for MSFD regions and subregions. The regional/subregional assessment of GES (for each criteria D3C1 and D3C2) should report, using primary indicators (Table 1.6.2.1.1):

- the proportion of stocks at GES for criteria D3C1 and D3C2 individually;
- the proportion of landings at GES for criteria D3C1 and D3C2 individually;
- the proportion of stocks at GES for the aggregated criteria (GES_{stock});
- the number of stocks with no information.

For an overall regional/subregional assessment, ICES recommends a proportional method of aggregation of the criteria. The final GES assessment would be based on the combined criteria (see the yellow bar in Table 1.6.2.1.1), with the decision of “at GES” or “sub-GES” determined by whether the proportion passed an agreed GES limit for both criteria.

The proportional method specifies a combined indicator as the proportion of assessments (i.e. at indicator level) that are within agreed limits. The combined indicator is evaluated against an agreed percentage or percentages or an agreed proportion or proportions. The setting of percentages or proportions can be informed by examining the properties (e.g. uncertainty) of the data.

The agreed limits for each of these criteria to define GES is outside the ICES remit and the rule(s) to combine these criteria to derive an overall MSFD region/subregional assessment of GES should be decided at the policy level.

Table 1.6.2.1.1 Example of a regional GES assessment for Descriptor 3.

Stock	D3C1	D3C2	GES _{stock}
	Primary indicators	Primary indicators	
1	G	R	R
2	G	G	G
3	G	-	?
4	-	-	?
5	R	-	R
6	G	-	?
7	G	G	G
8	-	-	?
9	-	-	?
10	-	-	?
Proportion of stocks at GES	5 out of 6	2 out of 3	2 out of 4
Proportion of agreed limits for GES	Policy to determine	Policy to determine	
Proportion of landings	X out of xxx tonnes	Y out of xxx tonnes	
Unknown	4 out of 10	7 out of 10	

ICES advises that GES is assessed at the unit of stock rather than species in a region. The rationale is that the assessment unit is the stock. Stocks can be combined as spatial components if necessary.

Basis of the advice

The advice is based on the report of the Workshop on guidance on the practical methodology for delivering an MSFD GES assessment on D3 for an MSFD region/subregion (WKGESFish) (ICES, 2016b) and advice previously provided by ICES in response to requests on MSFD descriptors (ICES, 2014a, 2014b, 2015).

Sources and references

EU. 2010. COMMISSION DECISION of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters (notified under document C(2010) 5956). 2010/477/EU. Official Journal of the European Union, L 232/14.

ICES. 2014a. EU request on draft recommendations for the assessment of MSFD Descriptor 3. *In* Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 1, Section 1.6.2.1.

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ICES. 2015. EU request on revisions to Marine Strategy Framework Directive manuals for Descriptors 3, 4, and 6. *In* Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 1, Section 1.6.2.1.

ICES. 2016a. EU request to provide guidance on operational methods for the evaluation of the MSFD criterion D3C3. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.6.2.2.

ICES. 2016b. Report of the Workshop on guidance on the practical methodology for delivering an MSFD GES assessment on D3 for an MSFD region/subregion (WKGESFish), 18–19 March 2016, ICES Headquarters, Copenhagen, Denmark. ICES CM 2016/ACOM:45, in prep.