



**Compilation of reviewed EU marine
environmental status assessment
Deliverable 5.1**





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EXECUTIVE SUMMARY / ABSTRACT

The main objective of WP5 is to identify, develop and promote tools and methods to assess environmental status across the Mediterranean Sea and the Black Sea basins with emphasis on non-EU countries, in accordance with the principles and objectives of the Marine Strategy Framework Directive (MSFD), 2008/56/EC.

Within Task 5.1, dedicated to the identification of MSFD Assessment elements in EU case study areas, Subtask 5.1.1 on “Review and analysis of the approaches used for MSFD environmental status assessments in EU case study areas” includes two deliverables (D5.1 & D5.2). In Deliverable 5.1, approaches (=methodologies) taken from the available MSFD Initial Assessments (IAs), not only in the Mediterranean Sea and Black Sea EU countries but also in selected northern EU countries, have been reviewed and compiled into a table.

This compilation includes a qualitative database with information at three different levels:

1. Coverage of Descriptors
2. Strategic approach per Descriptors,
3. Assessment Strategy at criteria and indicator level.

The compilation table is provided within this deliverable in an embedded Excel file to facilitate its use by other partners in further steps, not only within PERSEUS, but also by those outside PERSEUS potentially interested in these findings. Emerging issues based on outcomes of the analysis are highlighted.

Important Note: All the information gathered in this Deliverable aims to serve as an overview for scientific purpose and it is based on review of EU countries MSFD draft reports on Articles 8, 9 and 10.

SCOPE

To review and compile existing information from marine environmental assessments for their set-up and organization in order to identify the assessment elements linked to the different MSFD descriptors.



REVIEW OF COMPILED EU MARINE ENVIRONMENTAL STATUS ASSESSMENT

WP5 Task 5.1. Identification of MSFD Assessment elements in EU case study areas

Subtask 5.1.1. Review and analysis of the approaches used for MSFD environmental status assessments in the EU study areas

Deliverable 5.1 is part of the Subtask 5.1.1, regarding the review and analysis of the approaches used for MSFD environmental status assessments by the EU Member States. This subtask has analyzed the existing marine environmental assessments for their set-up and organization in order to identify the assessment elements linked to the different MSFD descriptors.

This Deliverable 5.1 includes an embedded Excel file (page n. 8) with a compilation of the information collected from reviewing the content of the existing marine environmental assessment strategies. Information available from EU countries in the Mediterranean Sea and Black Sea regions has been considered. This compilation table is the basis for the analysis to be performed in Subtask 5.1.1. Furthermore, selected IAs documents from northern countries and environmental assessments in different Regional Sea Conventions have been also considered in the compilation to get a better overview of the process followed in different regions.

Brief conclusions on the outcome of the analysis are included at the end of this document, while the detailed analysis results and final conclusions will be included in Deliverable 5.2, identifying eventually converging/diverging strategies and highlighting their commonalities and/or differences across different EU countries in the Mediterranean Sea and Black Sea basins.

Compilation of available marine environmental assessments

The Initial Assessments (IAs) draft documents were used to review, extract and compile the information needed in Subtask 5.1.1. Website links to draft IAs documents from EU countries are provided in the following link:

http://ec.europa.eu/environment/marine/public-consultation/index_en.htm

Final IAs documents will be gradually available in the following link:

http://cdr.eionet.europa.eu/recent_etc?RA_ID=608



The compilation of information has been based on MSFD Descriptors/Descriptor groups for Good Environmental Status:

Biology

- (1) Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.
- (2) Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.
- (3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
- (4) All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.
- (6) Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.
- (7) Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.

Contamination

- (5) Human-induced eutrophication is minimized, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.
- (8) Concentrations of contaminants are at levels not giving rise to pollution effects.
- (9) Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.

Disturbances

- (10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.
- (11) Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.

The strategy

Each available assessment is reviewed for its elements in relation to the MSFD descriptors. The aim of this compilation is to provide a database to be used in further steps within Task5.1, e.g. for identifying approaches used in the different countries, and also across different regions.



The review strategy includes 3 levels of information:

1st level - Coverage of MSFD Descriptors

The basic approaches are grouped according to the MSFD descriptors/descriptor groups. This first level approach provides an overview about the existing material.

For each of the three MSFD Descriptor groups the same questions are answered:

- Has the Descriptor group (Biology/Contamination/Disturbance) been considered in the assessment strategy?
- Have the 11 MSFD Descriptors been used for organization of the assessment?

2nd level - Strategic approach for MSFD Descriptors and descriptor groups

Single Descriptors are analyzed for the approach used in the different assessment strategies. The basic approaches for each descriptor are described very shortly, in few key words, in order to allow recognizing differences between the assessment strategies at this level.

As a common basic guidance for the review of 2nd Level information, the following information has been addressed:

- Data availability and sources
- Assessment criteria and methodology sources
- Gaps and needs (they might be already included in the previous information)

In general, the following points/questions have been considered to be included in the compilation:

- Describe briefly using short sentences and keywords
- Do not focus on assessment results. Focus on criteria and methodology instead
- Is it a quantitative or qualitative approach?
- Is it an integrative or non-integrative approach?
- Are proposals for indicators included?
- Include specific gaps when necessary (e.g., Descriptor 8 – Gaps: 8.2.1)

3rd level - Assessment strategy at Indicator level

The review at this level deals with the coverage of the Criteria and indicators described in the MSFD COM DEC 2010/477/EU. Detailed information on methodologies used for the IAs is provided at indicator level.



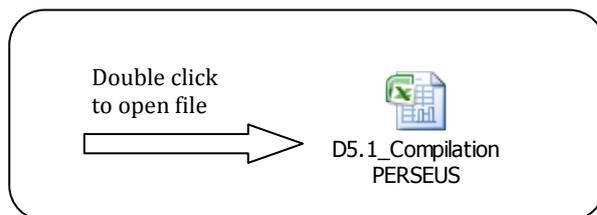
[Excel file](#)

The Excel file is set up in two different tables; the first one includes 1st and 2nd level information and the second one only 3rd level information. Tables are organized by countries (columns) and descriptors (rows).

Depending on availability, information from the following countries and Regional Sea Conventions has been included at different levels:

- Mediterranean Sea: France, Spain, Greece and Cyprus
- Black Sea: Romania
- Atlantic and Northern regions: Belgium, Germany and U.K.
- Regional Sea Conventions: OSPAR, Black Sea Commission

Find below the embedded Excel file containing the compiled information:



[General remarks](#)

The overall analysis of the compiled information highlights the following:

- Available information from IAs draft documents is heterogeneous, complex and incomplete.
- Depending on the descriptor considered, methodological approaches can range from relevant International and EU frameworks down to national sources. Countries are using combinations of different methodologies on each descriptor, and so, harmonization efforts will be necessary.
- There is a frequent lack of data and knowledge that affect most of the descriptors, indicating that further development is needed, including further criteria/indicators development and reference/threshold levels establishment.
- Enhanced interaction and coordination is needed between countries and Regional Sea Conventions in the Mediterranean Sea and Black Sea regions.
- Some inputs to the MSFD implementation strategy are: descriptors further development, review of indicators and establishment of appropriate monitoring programs.

