

Our Oceans, Seas and Coasts

Achieve Good Environmental Status

The main goal of the [Marine Directive](#) is to achieve Good Environmental Status of EU marine waters by 2020. The Directive defines Good Environmental Status (GES) as:

“The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive” Article 3

GES means that the different uses made of the marine resources are conducted at a sustainable level, ensuring their continuity for future generations.

In addition, GES means that:

- Ecosystems, including their hydro-morphological (i.e. the structure and evolution of the water resources), physical and chemical conditions, are fully functioning and resilient to human-induced environmental change;
- The decline of biodiversity caused by human activities is prevented and biodiversity is protected;
- Human activities introducing substances and energy into the marine environment do not cause pollution effects. Noise from human activities is compatible with the marine environment and its ecosystems.



To help Member States interpret what GES means in practice, the Directive sets out, in Annex I, eleven qualitative descriptors which describe what the environment will look like when GES has been achieved.

- **Descriptor 1.** Biodiversity is maintained
- **Descriptor 2.** Non-indigenous species do not adversely alter the ecosystem
- **Descriptor 3.** The population of commercial fish species is healthy
- **Descriptor 4.** Elements of food webs ensure long-term abundance and reproduction
- **Descriptor 5.** Eutrophication is minimised
- **Descriptor 6.** The sea floor integrity ensures functioning of the ecosystem
- **Descriptor 7.** Permanent alteration of hydrographical conditions does not adversely affect the ecosystem
- **Descriptor 8.** Concentrations of contaminants give no effects
- **Descriptor 9.** Contaminants in seafood are below safe levels
- **Descriptor 10.** Marine litter does not cause harm
- **Descriptor 11.** Introduction of energy (including underwater noise) does not adversely affect the ecosystem

As these descriptors cover broad topics, the European Commission produced in 2010 a set of detailed criteria and indicators to help Member States determine what each descriptor means in practice and measure progress.

Commission Decision on criteria and methodological standards

The [Commission Decision](#) on criteria and methodological standards on good environmental status (GES) of marine waters, adopted on 1 September 2010, contains a number of criteria and associated indicators for assessing good environmental status, in relation to the 11 descriptors of good environmental status laid down in Annex I of the Marine Directive. The criteria build on existing obligations and developments within the EU legislation, covering further relevant elements of the marine environment, not yet addressed in the acting policies. The Decision is a major stepping stone to establish precise objectives for the achievement of GES within the implementation of the MSFD.

However, there is a need to distinguish between criteria that are fully developed and operational and others that require further refinement. The Decision will require a timely revision, in view of the need to develop additional scientific understanding for assessing good environmental status in a coherent and holistic manner. It addresses mostly methodological standards that are available under other Community legislation and further development of methodological standards is required, in close coordination with the establishment of monitoring programmes.

What are criteria and indicators?

Criteria and indicators are distinctive technical features, which help make the descriptors more concrete and quantifiable.

For instance, Descriptor 3 should be assessed using the following criteria and indicators:

In the Commission Decision	In practice
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<ul style="list-style-type: none"> • Criteria 1: the level of pressure of fishing activity <ul style="list-style-type: none"> • Indicator: fishing mortality • Criteria 2: the reproductive capacity of the stock <ul style="list-style-type: none"> • Indicator: spawning stock biomass • Criteria 3: the population age and size distribution <ul style="list-style-type: none"> • Indicator: high proportion of old, large individuals 	<p>Fishing, and other human activities affecting populations of commercially exploited fish and shellfish, should not push these populations beyond their maximum sustainable yield, defined by the European Environment Agency as “the largest yield that can be obtained which does not deplete or damage natural resources irreparably and which leaves the environment in good order for future generations”.</p>
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Based on these descriptors and the follow-up criteria, Member States have to determine by **2012** the characteristics of what GES means for their own marine waters and set targets accordingly.

You will find an illustrative example of the relations between GES Descriptors, criteria and indicators [here](#).

Challenges ahead: The need for scientific support

A major challenge in the implementation of the Marine Directive is to attain the necessary scientific knowledge of the elements that define the state of the marine environment and a substantial need to develop additional scientific understanding to underpin the Decision and to secure a successful revision. For a number of criteria and indicators the need for further development and additional scientific information has been identified. Increasing scientific knowledge on the marine environment and its processes is required to adequately achieve the Directive's goal.

This knowledge needs to be developed, in particular, through the [EU Strategy for Marine and Maritime Research](#) (COM (2008) 534) in the framework of the IMP.

One of the major outcomes of the [EUROMARES Conference](#) (Gijón, 18-19 May 2010) was the need for a long-term structure partnership between marine research and marine environment policy. (The Commissioner proposed in his [speech](#) during the Maritime Days a permanent research structure).



[Find out more about research needs and projects on the marine environment.](#)