

MARINE STRATEGY FRAMEWORK DIRECTIVE MSFD Workshop

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From Good Ecological Status (WFD) to
Good Environmental Status (MSFD)



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Structure of the presentation

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MSFD goal

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



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MSFD – overview

- The MSFD aims at the implementation of an ecosystem-based approach to the management of activities having an impact on the marine environment.
 - The key deliverable from the implementation of the MSFD will be a range of “Marine Strategies” for each MS.
 - The Marine Strategy will be developed in three steps:
 - In 2012 - report on the environmental status of the marine waters, descriptions of the GES and of an associated set of environmental targets and indicators.
 - 2014 - adoption of national monitoring programmes
 - By 2015 at the latest, PoM designed to achieve GES
- The PoMs should entry into operation by 2016.



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Marine Strategies (1)

The strategy will be developed following the plan of action:

(a) preparation:

- (i) 15 July 2012 - an IA of the current environmental status of the waters concerned and the environmental impact of human activities (Article 8);
- (ii) a determination, to be established by 15 July 2012 of GES for the waters concerned, (Article 9(1))
- (iii) establishment, by 15 July 20 12, of a series of environmental targets and associated indicators, (Article 10(1))
- (iv) establishment and implementation, by 15 July 2014, of a monitoring programme for ongoing assessment and regular updating of targets, (Article 11(1)).



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Marine Strategies (2)

(b) programme of measures:

- (i) development, by 2015 at the latest, of a programme of measures designed to achieve or maintain GES (Article 13(1), (2) and (3))
- (ii) entry into operation of the programme provided for in point (i), by 2016 at the latest, (Article 13(10)).



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GES means that....

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.



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MSFD vs WFD / GEnS vs GES

GEnS

“The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the **use of the marine environment is at a level that is sustainable**, thus safeguarding the potential for **uses and activities** by current and future generations”

GES

“the status of a body of surface water, so classified in accordance with WFD Annex V”

(Annex V sets out detailed Descriptors for all water Body types for different taxa, chemistry, etc.)



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MSFD – GEnS (1)

The Marine Strategy Framework Directive obliges member states to achieve Good Environmental Status (GEnS) on a regional Seas basis by 2020 (EC, 2008a).

Targets for GEnS for each of **11 descriptors of environmental status** should have been set by each member state by July 2012, and **programmes of measures** to achieve these targets are to be **put in place by 2015**.

The directive mandates that existing regional seas agreements be used to implement these environmental objectives.

The descriptors of GEnS are further refined in the commission decision on descriptor (EC, 2010).



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MSFD – GEnS (2)

The MSFD clear presents a more complete and articulated framework and approach in terms of GEnS descriptors, criteria and indicators.

According to EC (2010) Good Environmental Status (GEnS) requires that **all relevant human activities are carried out in coherence with the requirement of protecting and preserving the marine environment**.

The application of criteria for GEnS needs should consider:

- to target assessment and monitoring and
- to prioritise action in relation to the impacts and threats to marine ecosystems.

The regular update of the determination of the GEnS needs to carry out through the main management approach – the adaptive management on the basis of the ecosystem - based approach.



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GES descriptors (1)

MSFD 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



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GES descriptors (2)

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

In 2010, EC established a set of detailed criteria and indicators to determine what each descriptor means in practice and measure progress.



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MSFD – GEnS (3)

The EC Decision (EC 2010) provides that in a number of cases, it can be appropriate 2 steps screening:

- to apply as a first step some selected criteria and related indicators for an **overall screening of the environmental state at a broader scale**, and then
- identify **specific areas and situations**, where the necessary assessment would involve all criteria and indicators developed by the working groups (JRC 2012)

Achieving GEnS for MS for the majority of descriptors, will require an integrated regional approach, which can represent a major political challenge.



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GES example: Contaminants (1)

GES description on concentrations of contaminants (PRESSURE):

- Environmental concentrations of contaminants are below Environmental Quality Standards (EQSs) derived under the Water Framework Directive.

Environmental targets:

- Concentrations of naturally occurring pollutants (as heavy metals) should be close to background reference levels.
- Concentrations of synthetic pollutants should be close to zero.



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GES example – contaminants (2)

GES description on biological effects of contaminants (IMPACTS):

- The effects of contaminants on selected biological processes and taxonomic groups, where a cause/effect relationship has been established, are kept within agreed levels.

Environmental targets:

- The intensity of biological or ecological effects due to contaminants is below the toxicologically-based standards.



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Summarizing Contaminants

- The approach: the levels established by the WFD (EQSs).
- The target is based on a quantitative description.
- There is a gap in the biological effects of contaminants (insufficient knowledge to define targets).

Open questions:

- Can there be an agreement at (sub-) regional level on development of supplementary EQSs?
- Can there be an agreement at (sub-) regional level on biological effects of contaminants?
- Can associated indicators be developed (at the appropriate level)?



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Thank you!



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