Itämeren hyvä ekologinen tila: Miten direktiivit sitä säätelevät?

Good ecological status of the Baltic Sea: How are EU Directives regulating it

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Sisältö/ contents

Muuttuva vesiensuojelupolitiikka

Hyvän tilan määrittely

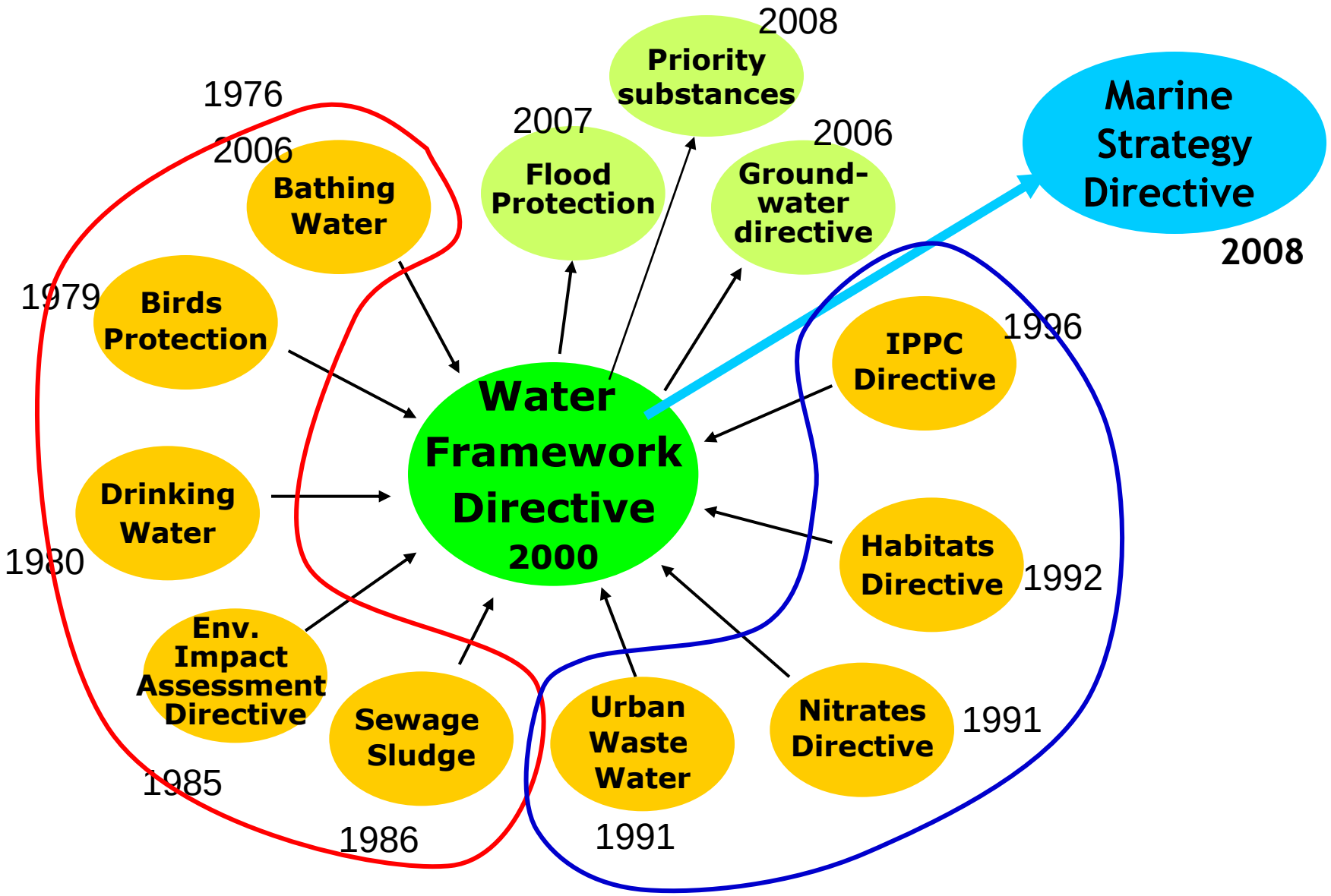
- EU:n vesipuitedirektiivissä
- EU:n meristrategiadirektiivissä

Changing EU Water policy

Good ecological/ environmental status in

- *WFD and MSFD*

EU water legislation



Defining ‘good ecological status’

WFD:
§ Good surface water status all over EU in 2015

MSFD:
§ Good environmental status by 2020

How to define ‘good’ ecological/ environmental quality?

How to ensure the <u>same level of ambition</u> in the protection and restoration of inland and marine waters all over EU?

..and how to obtain **<u>comparable ecological quality standards</u> in the EU?**

Definitions of good environmental status

Water Framework Directive

- ***"Ecological status: expression of the quality of the structure and functioning of aquatic ecosystems***
- ***Chemical status: concentrations of specific pollutants not exceeding specified levels"***
- **Normative definitions:** ***biological quality elements show low levels of distortion, and deviate only slightly from undisturbed conditions…***

Marine Strategy Directive

- ***… ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions,***
- ***.. 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….***

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Reference conditions and targets for environmental status

- WFD: type specific reference conditions for biological quality elements;
- Not the target for restoration but show the direction of improvement required;
- Few ‘pristine’ areas in coastal waters;
- Mostly set by expert judgement, in combination with modelling/ hindcasting;
- Variability of approaches, Uncertainty;
- Good status is the target defined as a 'slight' deviation from the reference conditions;

MSFD: Good Environmental Status

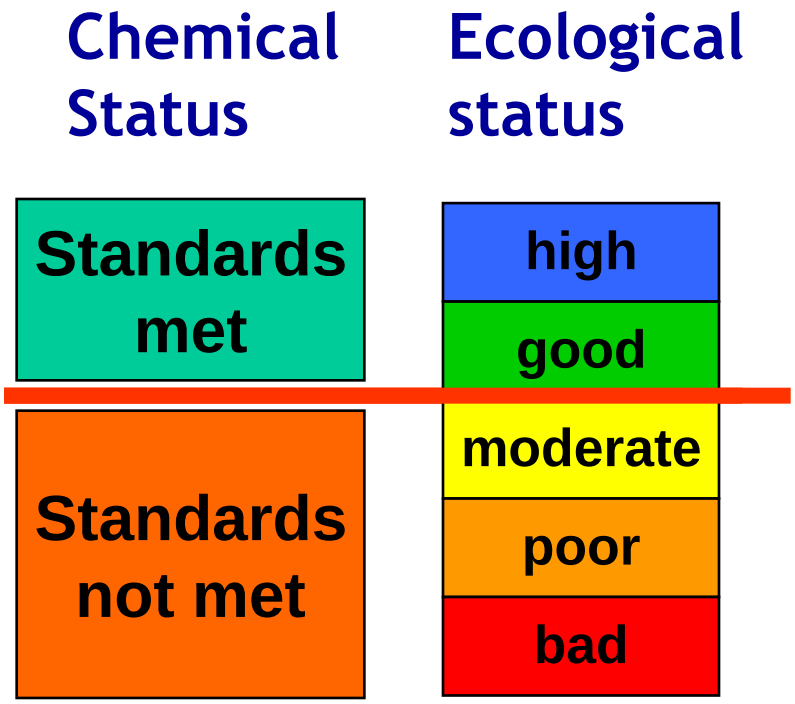
- No 'reference conditions‘
- Set of environmental targets […*to guide progress towards achieving good environmental status*…], and to […*take into account the continuing application of relevant existing environmental targets … in respect of the same waters*…] as defined by GES descriptors (Annex 1)
- Comparability with WFD 'good ecological status' in the coastal areas where both apply required
- Different targets for open sea
- Division in marine sub-regions
- Ecosystem approach required for management

WFD: Classification and normative definitions for good ecological status

- WFD ecological status is based on biological and physico-chemical monitoring results;
- WFD normative definitions: general description of high, good, and moderate status (not in MSFD);
- Conceptualize how biological components such as species composition, diversity, abundance, biomass, etc. change as response to degradation;
- Descriptors can be translated into specific quantitative metrics (e.g. various diversity indices or biomass metrics, or proportion of sensitive vs. non-sensitive species); link to pressures

Definition of surface water status in WFD

- **Chemical status**
  - concentrations of chemicals meet environmental quality standards
- **Ecological Status**
  - quality of the structure and functioning of aquatic ecosystems
  - based on biological quality indicators



Determined by poorer of chemical and ecological status

MSFD: Good Environmental Status, GES-definitions

- Ensimmäinen vaihe meriympäristön hyvän tilan (Good Environmental Status, GES) määrittely EU tasolla v. 2010
- Vertailukelpoisuus todennettava eri merialueiden välillä (Komitologia-käsittely, heinäkuussa 2010, art. 9)
- Komission päätös määrittelyksi ja kriteereiksi MSD liitteen 1 'hyvä ympäristön tila ' kuvaajille heinäkuussa 2010

Laadulliset hyvän ympäristön tilaa kuvaavat tekijät (Art. 9, Liite 1; GES kuvaajat)

1. Pidetään yllä biologista monimuotoisuutta. ...
2. Ihmisen toiminnan välityksellä leviävien tulokaslajien määrät ….
3. Kaikkien kaupallisesti hyödynnettävien kalojen ….
4. Meren ravintoverkkojen normaali toiminta….
5. Ihmisen aiheuttama rehevöityminen, …on minimoitu.
6. Merenpohjan koskemattomuus … ei kohdistu haitallisia vaikutuksia.
7. Hydrografisten olosuhteiden pysyvät muutokset ….
8. Epäpuhtauksien pitoisuudet ….
9. Kalojen ja muiden meren antimien… epäpuhtaustasot eivät ylitä…
10. Roskaantuminen ei aiheuta haittaa…
11. Energian mereen johtaminen, vedenalainen melu, ei haittaa...

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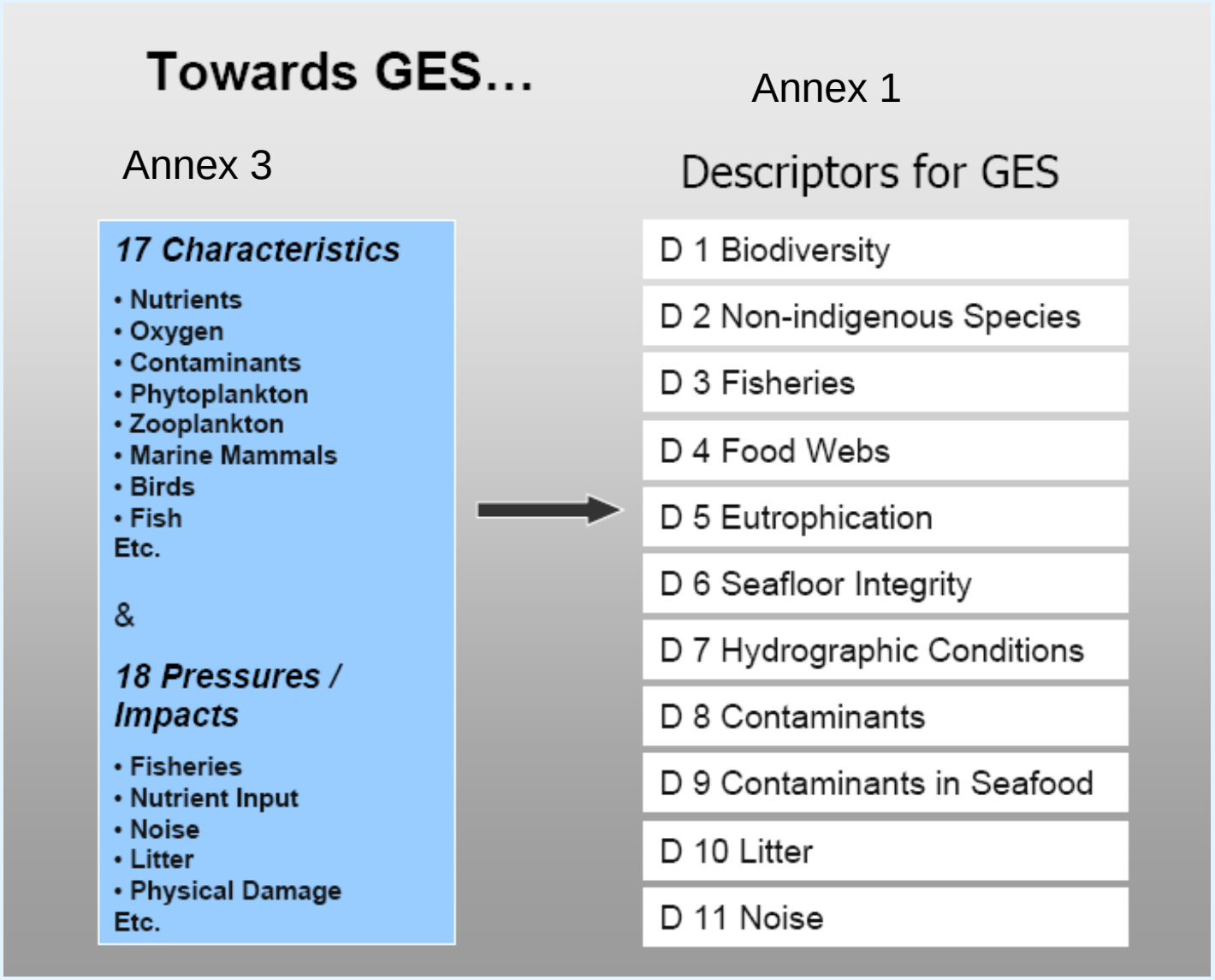
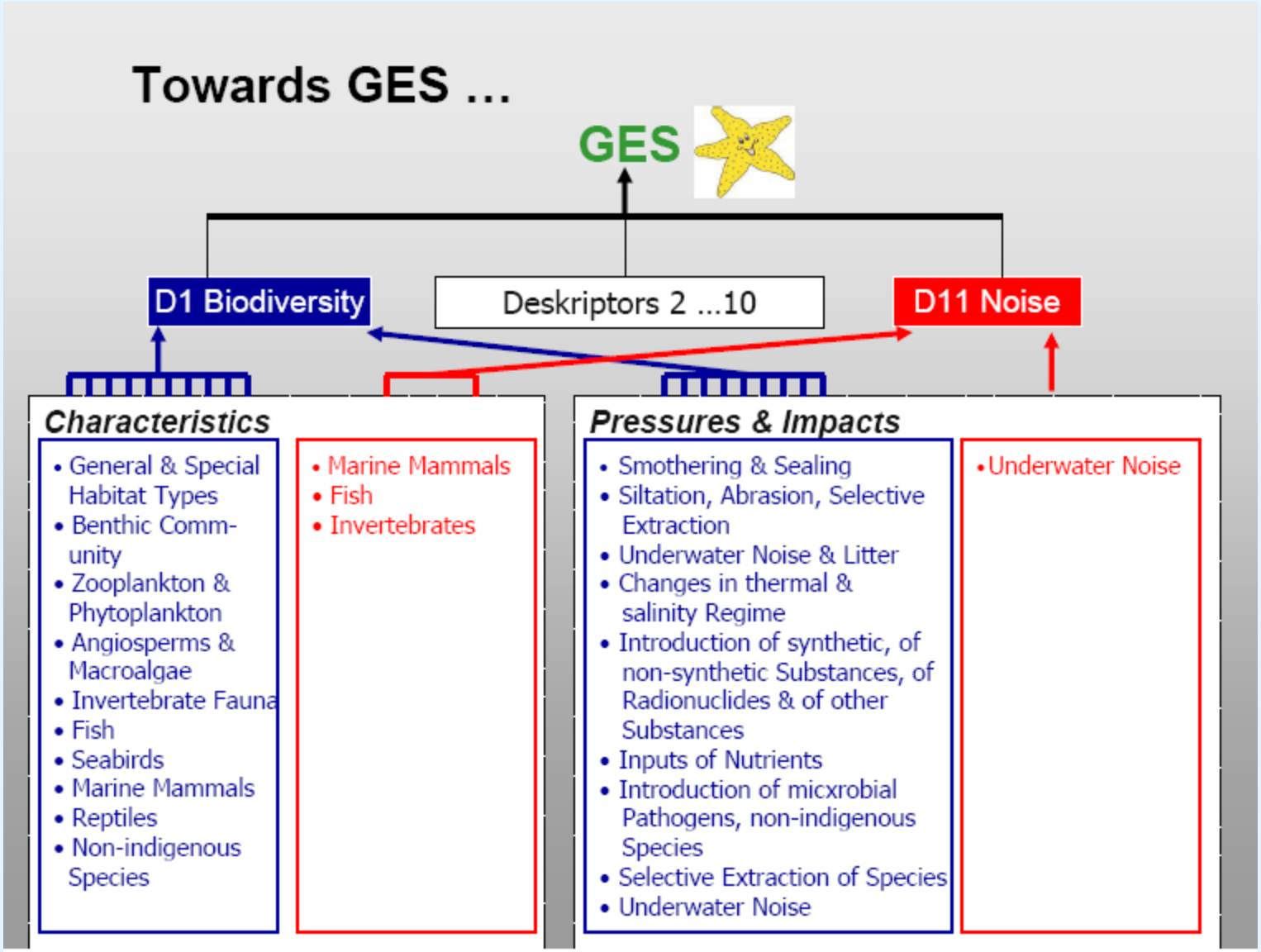


From U.Claussen,UBA (presentation for EU marine directors in Dec. 2009)



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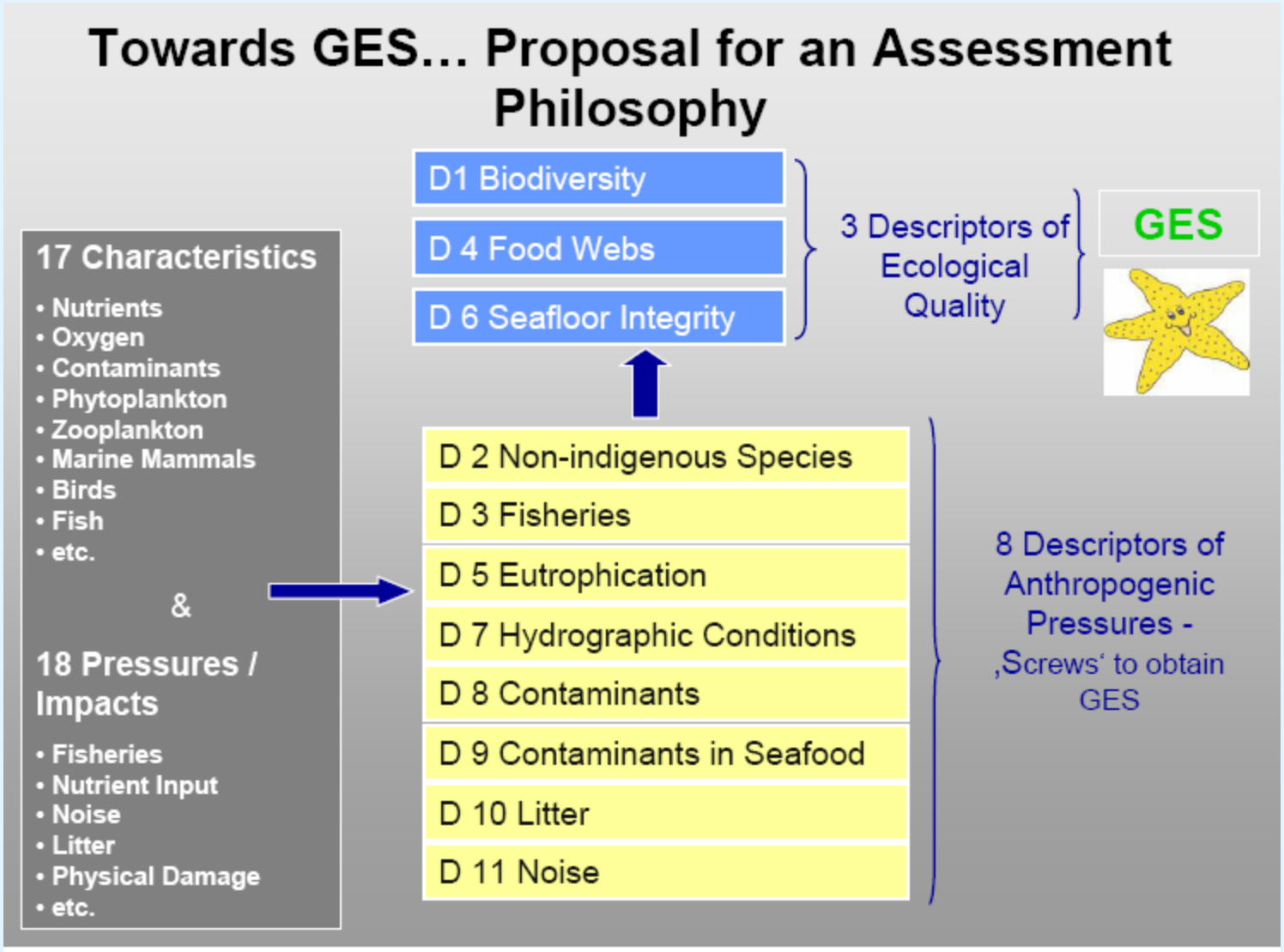

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Independent expert group reports on GES for 11 Descriptors

Desciptors				
D.1. Biodiversity	**D.2. Non-indigenous sp**	**D.3. Commersial fish**	**D.4. Food webs**	**D.5. Eutrophication**
Habitat diversity:	***Trends (*):***	***Sustainability of exploitation:***	***Energy flow:***	***Pressure:***
1.1 Abundance, extent and distribution of dufferent habitat types	.2.1. Abundance of NIS / IAS and proportion of NIS to native species (improved reporting system)	3.1. Fishing mortality related to a reference value	4.1. Ratio production of pelagic / demersal fish	5.1. Nutrient (phosphorus and nitrogen) load
1.2 Community structure	***Biopollution Index BPI:***	3.2. Trends in catches / biomass	4.2. Ratio macrobenthic invertebrates / demersal fish production	5.2 Nutrient concentrations
1.3 Habitat quality (Habitat composition and relative proportions (seabed)), intactness of habitats	2.2. - abundance of NIS/IAS - distribution of NIS/IAS, - effects of NIS/IAS at communities, habitats and on ecosystem functioneing	***Reproductive capacity***:	4.3. Ration zooplankton productin required / zooplankton production	***Direct effects:***
Species diversity:		3.3.Spawning Stock Biomass (SSB) related to a reference value	4.4. Ratio benthic productin required / bentic production	5.3 primary production
1.4 Species richness, eveness		3.2. Trends in catches / biomass	4.5. Predator performance (*) (e.g. seal population size and reproduction or seabird breeding population size and breeding success)	5.4. Chlorophyll a

… D.11.

ETC…

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Current Status of MSFD GES work

EUROPEAN COMMISSION
DIRECTORATE-GENERAL
ENVIRONMENT

Brussels, 18 March 2010

Elements for the Commission decision on criteria on good environmental status under Article 9(3) MSFD

1. GENERAL CONSIDERATIONS

(1) The application of criteria will be carried out keeping in mind the need to prioritise assessment and action in relation to the risks to marine ecosystems. To support efficient management, the application of criteria is to be targeted at the most serious environmental concerns.

(2) There is a diversity of environmental conditions and human activities and it may not always be ecologically relevant to apply all criteria in all places. Diversity exists across regions and even within marine regions and sub-regions. In addition, in a number of cases, it will be appropriate to apply as a first step selected criteria for an overall assessment of the environmental situation from a broader perspective and then

- **Currently commission decision under preparation based on experts reports & MS feed back & Com opinion**
- **Final commission decision by 15 July 2010**
- **Desciptors & Criteria**
- **Initial assessment of marine waters and determination of GES in 2012**
- **Further work for indicators and normative criteria and standards will be needed**

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Kiitos!