

Questionnaire: DG MARE Study to support Impact Assessment on Marine Knowledge 2020

Purpose

The purpose of this questionnaire is to collect information from the MSFD Competent Authorities regarding efforts needed until 2020 for the acquisition, collection, management and dissemination of data to meet the requirements of the Marine Strategy Framework Directive.

Your participation and contribution is very important and will be highly appreciated.

Practical information

Please send the filled-out questionnaire to jtey@cowi.dk. If you fill out the questionnaire by hand, please scan it and use the same email address.

We would appreciate if you could return the questionnaire to us by 18 October 2012.

If you have any questions, don't hesitate to contact Ms Malene Sand Jespersen (msj@cowi.dk and +45 5640 1239) or Ms Julia Teysen (jtey@cowi.dk and +45 5640 4266) by email or phone.

Question 1: Mapping of existing marine data and costs of using it for reporting under the MSFD

Aim: To get an overview of the available data and potential costs of using the data for reporting under the Marine Strategy Framework Directive

Request: Please fill out the following table

Criteria		Data available and can be used for the MSFD at no cost	Data available, but using it for the MSFD will cause costs	Please estimate the cost of assembling and using the data for reporting under the MSFD (please estimate cost both in man-hours and in euros)
Descriptor 1	Species distribution			
	- Distributional range			
	- Distributional pattern within the latter, where appropriate			
	- Area covered by the species (for sensible/benthic species)			
	Population size			
	- Population abundance and/or biomass, as appropriate			
	Population condition			
	- Population demographic characteristics			
	- Population genetic structure, where appropriate			
	Habitat distribution			
	- Distributional range			
	- Distributional pattern			

	Habitat extent			
	- Habitat area			
	- Habitat volume, where relevant			
	Habitant condition			
	- Condition of the typical species and communities			
	- Relative abundance and/or biomass, as appropriate			
	- physical, hydrological and chemical conditions			
	Ecosystem structure			
	- Composition and relative proportions of ecosystem components			
Descriptor 2	Abundance and state characteristics of non-indigenous species, in particular invasive species			
	- Trends in abundance, temporal occurrence and spatial distribution			
	Environmental impact of invasive non-indigenous species			
	- Ratio between invasive non-indigenous species and native species			
	- Impacts of non-indigenous invasive species at the level of species, habitats and ecosystems, where feasible			
Descriptor 3	Level of pressure of the fishing activity			
	- Fish mortality			
	- Ratio between catch and biomass index			

	Reproductive capacity of the stock			
	- Spawning Stock Biomass			
	- Biomass indices			
	Population age and size distribution			
	- Proportion of fish larger than the mean size of first sexual maturation			
	- Mean maximum length across all species found in research surveys			
	- 95% percentile of the fish length distribution observed in research vessel surveys			
	- Size at first sexual maturation, which may reflect the extent of undesirable genetic effects of exploitation			
Descriptor 4	Productivity of key species or trophic groups			
	- Performance of key predator species using their production per unit biomass			
	Proportion of selected species at the top of the food webs			
	- Large fish (by weight)			
	Abundance/distribution of key trophic groups/species			
	- Abundance trends of functionally important selected groups/species			
	- Groups with fast turnover rates that will respond quickly to ecosystem change and are useful as early warning indicators			
	- Groups/species that are targeted by human activities or			

	that are indirectly affected by them			
	- Habitat-defining groups/species			
	- Groups/species at the top of the food web			
	- Long-distance anadromous and catadromous migrating species			
	- Groups/species that are tightly linked to specific groups/species at another trophic level			
Descriptor 5	Nutrients levels			
	- Nutrients concentration in the water column			
	- Nutrients ratios (silica, nitrogen and phosphorus), where appropriate			
	Different effects of nutrients enrichment			
	- Chlorophyll concentration in the water column			
	- Water transparency related to increase in suspended algae, where relevant			
	- Abundance of opportunistic macroalgae			
	- Species shift in floristic composition such as diatom to flagellate ratio, benthic to pelagic shifts, as well as bloom events of nuisance/toxic algal blooms caused by human activities			
	Indirect effects of nutrient enrichment			
	- Abundance of perennial seaweeds and seagrasses adversely impacted by decrease in water transparency			
	- Dissolved oxygen			

Descriptor 6	Physical damage, having regard to substrate characteristics			
	- Type, abundance, biomass and areal extent of relevant biogenic substrate			
	- Extent of the seabed significantly affected by human activities for the different substrate types			
	- Presence of particularly sensitive and/or tolerant species			
	- Multi-metric indexes assessing benthic community condition and functionality			
	- Proportions of biomass or number of individuals in the macrobenthos above some specified length/size			
	- Parameters describing the characteristics of the size spectrum of the benthic community			
Descriptor 7	Spatial characterisation of permanent alterations			
	- Extent of area affected by permanent alterations			
	Impact of permanent hydrographical changes			
	- Spatial extent of habitats affected by the permanent alteration			
	- Changes in habitats, in particular the functions provided, due to altered hydrographical conditions			
Descriptor 8	Concentration of contaminants as defined in Directive 2000/60/EC and Directive 2008/105/EC			
	- Concentration of the contaminants mentioned above, measured in the relevant matrix in a way that ensures comparability with the assessments under Directive 2000/60/EC			

	Effects of contaminants			
	- Level of pollution effects on the ecosystem components concerned			
	- Occurrence, origin, extent of significant acute pollution events and their impact on biota physically affected by this pollution			
Descriptor 9	Levels, numbers and frequency of contaminants			
	- Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels			
	- Frequency of regulatory levels being exceeded			
Descriptor 10	Characteristics of litter in the marine and coastal environment			
	- Trends in the amount of litter washed ashore and/or deposited on coastlines			
	- Trends in the amount of litter in the water column and deposited on the seafloor			
	- Trends in the amount, distribution and, where possible, composition of micro-particles			
	Impacts of litter on marine life			
	- Trends in the amount and composition of litter ingested by marine animals			
Descriptor or 11	Distribution in time and place of loud, low and mid frequency impulsive sounds			
	- Proportion of days and their distribution within a calendar year over areas of a determined surface, as well as their spatial distribution, in which anthropogenic sound sources			

	exceed levels that are likely to entail significant impact on marine animals measured as Sound Exposure Level at one meter, measured over the frequency band 10 Hz to 10 kHz			
	Continuous low frequency sound			
	- Trends in the ambient noise level within the 1/3 octave bands 63 and 125 Hz measured by observation stations and/or with the use of models if appropriate			

Question 2: Mapping of data gaps and related costs

Aim: To get an overview of the data gaps related to the MSFD and the costs of closing these gaps

Request: Please fill out the following table

Criteria		No data available	Please estimate the monetary costs of collecting data on each of the criteria (i.e. costs for new monitoring and survey programmes that are necessary due to the MSFD)	Please estimate man-hours needed to collect data on each of the criteria
Descriptor 1	Species distribution			
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	- Distributional pattern within the latter, where appropriate			
	- Area covered by the species (for sensible/benthic species)			
	Population size			

	- Population abundance and/or biomass, as appropriate			
	Population condition			
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	Habitat distribution			
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	Habitat extent			
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	Habitant condition			
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	- Abundance of opportunistic macroalgae			
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	Distribution in time and place of loud, low and mid frequency impulsive sounds			
Descriptor 11	- Proportion of days and their distribution within a calendar year over areas of a determined surface, as well as their spatial distribution, in which anthropogenic sound sources exceed levels that are likely to entail significant impact on marine animals measured as Sound Exposure Level at one meter, measured over the frequency band 10 Hz to 10 kHz			
	Continuous low frequency sound			
	- Trends in the ambient noise level within the 1/3 octave bands 63 and 125 Hz measured by observation stations and/or with the use of models if appropriate			

Question 3: Costs for management of marine data

Aim: To collect information on costs to the Member States related to the management of marine data for the Marine Strategy Framework Directive

Request: please fill out the following table

Data management costs	Costs Man-months	Costs Euros
National coordination of data collection and management		

International coordination of data collection and management		
Assembly of existing data		
Ensuring of compatability		
Database costs		

Question 4: Costs for dissemination of marine data

Aim: To collect information on costs to the Member States related to the dissemination of marine data (including enabling access to the Commission and the European Environment Agency)

Request: please fill out the following table

Data dissemination costs	Costs Man-months	Costs Euros
Preparation of data reports for MSFD		
Data access for Commission and EEA		
Dissemination of data to 3rd parties		

