

WATER FRAMEWORK DIRECTIVE AND PROPOSAL FOR MARINE STRATEGY DIRECTIVE

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INTRODUCTION

When Europeans were asked to list the five main environmental issues they are worried about nearly half of the respondents (47%) were worried about water pollution (1). This demand by European citizens is one of the main reasons why the commission decided to make water protection one of the priorities in its work establishing the new European water policy. This was developed in an open consultation process involving different interested parties. During its development its motto was: Getting Europe's water cleaner and getting the citizen involved (1, 2). EU Water framework directive (2000/60/EC) (WFD) and Marine Strategy Directive (MSD) are two main policies for protection of surface and ground water environmental status.

WATER FRAMEWORK DIRECTIVE

The EU Water framework directive was adopted in 2000. WFD addresses surface inland waters, transitional, coastal waters and ground water, but seas and oceans are excluded.

WFD is now operational tool setting the objectives for surface inland water, ground water, transitional and coastal waters protection in the future. It provides the major driver for achieving sustainable management of water in the European community, within a common approach and with common objectives, principles and basic measures

Water Framework Directive key elements are:

- To expand the scope of water protection to surface inland waters, transitional and coastal waters and groundwater,
- To maintain "high status" of waters where it exists, prevent any deterioration in the existing status and to achieve at least "good status" for all waters. The main objective of the WFD is the general protection of aquatic ecosystems with achieving a good ecological and chemical status for all natural waters. The good ecological status is defined by biological community and hydrological and physical-chemical characteristics that support such community.
- To base the water management on natural geographical and hydrological unit, like river basin unit, instead of administrative or political ones. For all waters within one unit an integrated monitoring and management system will be established.
- To provide for sufficient supply of good quality surface water and groundwater as need for sustainable, balanced and equitable water use
- To rationalise and update the old Community legislation related to water protection.

The main objective of the EU Water Framework Directive (Directive 2000/60/EC, WFD) is achieving a good ecological status for all natural water bodies by the end of the 2015. In order to assess ecological status, each European country has to develop an ecological status classification system by using biological elements. The determination of the ecological status has to be done type-specifically and in comparison to reference conditions.

The good ecological status is defined by biological community, hydrological and physical-chemical characteristics. Because of the ecological variability allover the European community there are no prescribed limit values at European level for ecological status, but good ecological status is understood as status in which we can expect biological community that shows only slight changes in respect to undisturbed conditions.

MARINE STRATEGY DIRECTIVE PROPOSAL

The Marine Strategy Directive (3) was proposed to European Council in October 2005 and is aimed at protecting Europe's seas and oceans and ensuring that human activities in these seas and oceans are carried out in a sustainable manner so that we and future generations can enjoy and benefit from biologically diverse and dynamic oceans and seas. Transitional and coastal waters are excluded from MSD, since they are covered by EU Water Framework Directive.

While some progress has been noted in reversing trends in contamination from land-based point sources, the reviews of the extent of human pressures on the marine environment identify a number of ongoing threats, including fisheries and aquaculture, shipping, agriculture, oil and gas extraction and offshore installations, underwater noise generation, litter pollution, unsustainable coastal developments and climate related change.

Strategic goals of the MSD are:

- To protect and restore the function and structure of marine ecosystems in order to achieve and maintain good environmental status of these ecosystems applying the ecosystem-based approach to management, which places the emphasis on maintaining the health of ecosystems alongside human activities.
- To phase out pollution in the marine environment so as to ensure that there are no significant impacts or risk to human and/or on ecosystem health and/or on uses of the sea by progressive reduction of discharges, emissions and losses of substances hazardous to the marine environment with the goal to reach concentrations of such substances in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.
- To control the use of marine services and other activities in marine areas that may have a negative impact on status of the marine environment to levels that are sustainable and do not compromise uses and activities of future generations nor the capacity of marine ecosystems to respond to changes
- To apply the principles of good governance both within Europe and globally

MSD proposes implementation of ecosystem approach to management of human activities in the marine environment, where ecosystem approach is defined as 'the comprehensive integrated management of human activities based on best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of the marine ecosystems, thereby achieving sustainable use of the ecosystem goods and services and maintenance of ecosystem integrity'.

Table 1: Time table for implementation and achievement of goals for WFD and DMS

WFD		MSD	
IMPLEMENTATION	GOALS	GOALS	IMPLEMENTATION
Directive entered into force	2000	2001	
		2002	
Transposition of directive in national legislation	2003	2003	
Assessment of current status, analyse preliminary gaps	2004	2004	
		2005	
Establish monitoring programmes	2006	2006	
		2007	
		2008	Directive enters into force
Develop river basin management plans	2009	2009	
		2010	
		2011	Transposition of directive in national legislation
Make operational programmes of measures	2012	2012	Assessment of current environmental status.
		2013	Selection of environmental objectives for MR
		2014	Operational programme for assessment and monitoring
Meet environmental objectives	Achievement of good ecological status	2015	Finalised programme of measures
		2016	Establishment of first Regional Marine Strategies (RMS)
		2017	
		2018	Programme of measures operational
		2019	Member states interim report
		2020	
		2021	Achievement of good environmental status
		First review of RMS, review every 6 years
First management cycle ends	2025	Subsequent reviews every 6 years

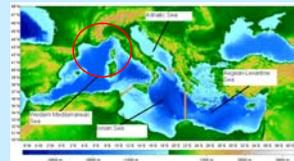


Photo: M. Peterlin



Picture 2: Rtič Ronck

DEFINITIONS: 'Environmental status' in DMS means the overall expression of the state of the environment in a Marine Region taking into account the structure, function and processes of the constituent marine ecosystems, together with natural physiographic, geographic and climatic factors, as well as physical and chemical conditions including those resulting from human activities in the region.



Picture 1: Marine regions (MR) in Mediterranean

DMS addresses the following pressures to the marine environment: loss of marine habitats, pressures from fisheries and mariculture, emissions of hazardous substances (including synthetic and non-synthetic compounds, radionuclides, nutrients and marine litter), impacts of shipping (accidental discharges, accidents and alien species introduction) and underwater noise generation. Physical and chemical features are: bathymetric features, annual and seasonal temperature regime, predominant currents and estimated recycling / replacement times, salinity including trends and gradients across the region. Other quality elements are presented in Table 2.



Picture 1: Shipping - high hazardous potential

Table 2: Quality elements for environmental characterisation of the marine region, except physical and chemical features

I. BIOLOGICAL ELEMENTS	
Habitat types	The predominant habitat type(s) with a description of the characteristic physical and chemical features—depth, temperature regime, currents, salinity, structure and substrate of the bed; Identification and mapping of special habitat types especially those recognised or identified under EU legislation (habitats and birds directives) or international conventions as being of special scientific or biodiversity interest; Other special areas which by virtue of their characteristics, location, or strategic importance merit a particular reference. This may include areas subject to intense or specific pressures or areas which merit a specific protection regime.
Biological Elements	(I) A description of the biological communities associated with the predominant habitats - information of the typical phytoplankton and zooplankton communities including the typical species, seasonal and geographical variability and estimates of primary and secondary productivity. (II) Information on the invertebrate bottom fauna including species composition, biomass, productivity and annual/seasonal variability. (III) Information on the structure of fish populations including the abundance, distribution and age/size structure. A description of the population dynamics, natural and actual range and status of all species of marine mammal occurring in the region/sub-region. For species covered by EU legislation (habitats directive) or international agreements, a description of the main threats and protection/management measures in place should also be provided; A description of the population dynamics, natural and actual range and status of all species of seabirds occurring in the region/sub-region. For species covered by EU legislation (birds directive) or international agreements, a description of the main threats and protection/management measures in place shall also be provided; A description of the population dynamics, natural and actual range and status of all other species occurring in the region/sub-region which are the subject of EU legislation or international agreements including a description of the main threats and protection/management measures in place.
Other Features	An inventory of the occurrence, abundance and distribution of non-indigenous, exotic species which are present in the region/sub-region. A description of incidences of nutrient enrichment—inputs, nutrient cycling (currents and sediment/water interactions), spatial distribution, consequences; A description of the general state of chemical pollution including problem chemicals, sediment contamination, hot spots, health issues. Any other features, characteristics typical/peculiar to the region/sub-region

CONCLUSIONS

Water Framework Directive and proposed Marine strategy directive are placing management of water quality in the EU on a new and more comprehensive footing by applying efforts to find equilibrium between human demands and good environmental status. MSD supports implementation of other legislation, intended for the marine environment protection, especially Convention on Biological Diversity (5), United Nations Convention on the Law of the Seas (6) and legislation specific for Mediterranean region (7, 8) and other relevant EU legislation like Habitat (9) and Bird (10) Directives.

WFD and DMS are also setting up a challenge for scientific community, which is expected to fill-in the gaps in knowledge about ecosystems and their responses to human activities. An increased focus on the protection of the marine environment promotes basic research on the structure and functioning of marine ecosystems as well as applied research on the development of tools for monitoring, detection (of algae bloom, oil spills...), which will be encouraged in the EU's Seventh Research Framework programme.

REFERENCES

- (1) Internet consultation, link:
- (2) Internet consultation: Thematic Strategy on the Protection and conservation of the Marine Environment. Link:
- (3) COM(2005) 505 final: DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Framework for Community Action in the field of Marine Environmental Policy (Marine Strategy Directive) (SEC(2005) 1290)
- (4) COM(2005)504 final: COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT: Thematic Strategy on the Protection and Conservation of the Marine Environment. (SEC(2005)1290)
- (5) CBD/COP7: Convention on Biological Diversity, Kuala Lumpur, Malaysia, 9-27 February 2004
- (6) United Nations Convention on the Law of the Sea, Montego Bay, December 1982; approved by Council Decision 98/292/EC
- (7) Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, 1995; approved by Council Decision 71/585/EEC amended by Decision 99/802/EC
- (8) Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, Athens, May 1980; approved by Council Decision 83/101/EEC
- (9) Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora
- (10) Council Directive 79/409/EEC on the conservation of wild birds