"On the EU, Marine Strategy Framework Directives"

Participant from Turkey Ayse Gazihan Akoglu



Institute of Marine Science Middle East Technical University



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Lecturers

- > Argyro Zenetos
- > Claudette Spiteri
- Colpan Polat Beken
- > Evangelos Papathanassiou, HCMR
- Gianna Casazza
- > Irene Makarenko, BSC
- Kalliopi Pagou
- > Maria Kapari
- > Michael Angelidis, JRC
- Nikolaos Zampoukas
- Nomiki Simboura
- Panos Panayotidis
- Vassiliki Vassilopoulou

Participants

- Armenia
- Azerbaijan
- Bulgaria
- > Georgia
- > Greece
- > Romania
- > Turkey
- > Ukraine

This presentation is a review of the lectures to practice the implementation of MSFD in Turkey (just a brain storm) Participants from Turkey; Patricia Ramey-Balci (TUBITAK-MAM) Ayse Gazihan Akoglu (IMS-MAM)

Outline of the presentation

- Marine Strategy Framework Directive (MSFD) and, Good Environmental Status (GES)
- A brain storm study for the implementation of MSFD in Turkey
- 1. Step; Initial assessment:
 - Analysis of essential features/characteristics, (Annex III, tab.I)
 - > **Pressures** and **impacts**, (*Annex III, tab.II*), on marine waters
 - Economic and social analysis of their use and cost of degradation

The Marine Strategy Directive EU's legal instrument for the protection of the Mediterranean seas

Directive 2008/56/EC

- The *"Marine Strategy Framework Directive"* (MSFD) adopted in 2008 as a comphrensive strategy needed for;
 - To protect and conserve of the marine environment
 - To design and implement coherent management plans in each region
 - To monitor their application

Marine Strategy Framework Directive (MSFD)

Directive 2008/56/EC

<u>GOAL:</u> achieve <u>Good Environmental Status</u> by the year <u>2020</u>

Good Environmental Status is 'the environmental status of marine waters where these provide <u>ecologically diverse and dynamic oceans</u> and seas which are clean, healthy and productive...'

interpreted as follows:

structure, functions and processes of marine ecosystems have to be considered, marine species and habitats must be protected and human-induced decline of biodiversity must be prevented

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

Initial assessment:

2

3

4

5

6

analysis of essential features/**characteristics**, (*Annex III, tab.I*) **pressures** and **impacts**, (*Annex III, tab.II*), on marine waters **economic** and **social** analysis of their use and cost of degradation

Determine **Good Environmental Status** (indicative list of elements: Annex I, and Annex III)

Establishment of Environmental Targets and indicators

Monitoring programmes: compatible with existing provisions,

methods consistent across the Marine Region (comparability)

Programmes of Measures to be taken

Entry into operation of programmes

Initial assessment:

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- Determination of sub-regions predominant habitat types
 - Topography; Turkish coasts have unique topographical features



* Continental shelf length is an important factor with the circulation dynamics of the region affecting the distribution of land based pollutants in hot spots

- Determination of sub-regions predominant habitat types
 - Salinity; Significant differences in salinity



* Physical characteristics such as salinity may have an effect on the determination of predominant habitat types, especially vertical salinity gradients in these regions may indicate the strength of stratification which could manipulate vertical oxygen distribution

• Determination of sub-regions – predominant habitat types

- Chlorophyll a; Significant differences in standing crop



* Chlorophyll a is a good indicator of the food availability for higher trophic levels which could be important in determination of predominant habitat types

• Determination of sub-regions – predominant habitat types



Moderate salinity Temporal stratification Low-High chlorophyll a Narrower continental shelf length Higher salinity Temporal stratification Low chlorophyll a

• Determination of sub-regions – predominant habitat types

Analysis of essential features/characteristics for each sub-region (according to predominant habitat type)

Annex III, Table I

Characteristics

Physical and chemical

- •Topography, bathymetry
- Nutrients, O2

Habitat types

• Predominant seabed and water column habitat types

Biological features

- Phytoplankton, Zooplankton
- benthic flora and fauna
- Fish populations
- Marine mammals
- Birds

Others

• Contaminants in sediment and biota

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Programmes of Measures to be taken

Entry into operation of programmes

1st step; Initial assessment; Most dominant Pressures

Domestic and industrial discharges Maritime transport Fishing Invasive species Fishing Nutrification (Rivers)



1st step; Initial assessment; Pressures

Pressure analysis for each subregion (according to predominant habitat type)

Annex III, Table II

<u>Pressures / Impacts</u> of Human Activities

- smothering, sealing
- physical damage
- underwater noise
- litter
- nutrients input
- introduction of non-indigenous species
- fishery

1st step; Initial assessment; Impacts



Initial assessment:

2

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- Determine **Good Environmental Status** (indicative list of elements: Annex I, and Annex III)
- Establishment of **Environmental Targets** and **indicators**
- **Monitoring programmes:** compatible with existing provisions,
- methods consistent across the Marine Region (comparability)
- **Programmes of Measures** to be taken
- Entry into operation of programmes

1st step; Initial assessment;

Economic and social analysis of the use of these waters and the cost of the degradation of the marine environment.



Initial assessment:

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- Determine **Good Environmental Status** (indicative list of elements: Annex I, and Annex III)
- Establishment of Environmental Targets and indicators
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Thank you for your attention...



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