



**The Mediterranean Environment  
and the Work of the United Nations  
Barcelona Convention:**

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**Transboundary diagnostic analysis and emerging issues**

**Mohamad Kayyal**

MED POL Programme Management Officer  
Mediterranean Action Plan  
Barcelona Convention Secretariat

# First Conference of the Parties, Geneva 1979



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Mediterranean Action Plan (UNEP/MAP)  
Barcelona Convention



# MAP/Barcelona Convention: the Parties



Albania



Algeria



Bosnia  
Herzegovina



Croatia



Cyprus



Egypt



France



Greece



Israel



Italy



Lebanon



Libya



Malta



Monaco



Montenegro



Morocco



Slovenia



Spain



Syria



Tunisia

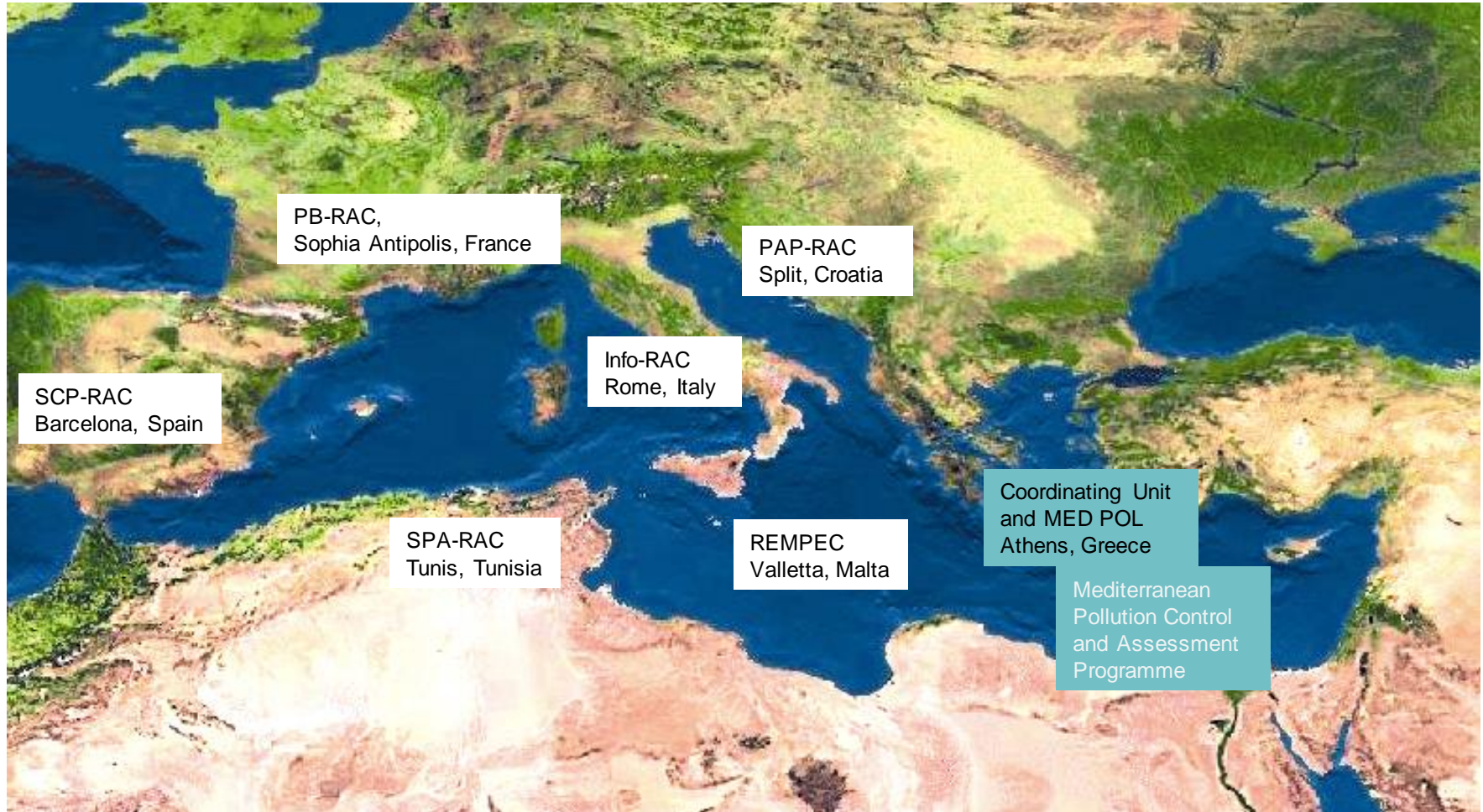


Turkey



The European  
Union

# UNEP/MAP Coordinating Unit and Components

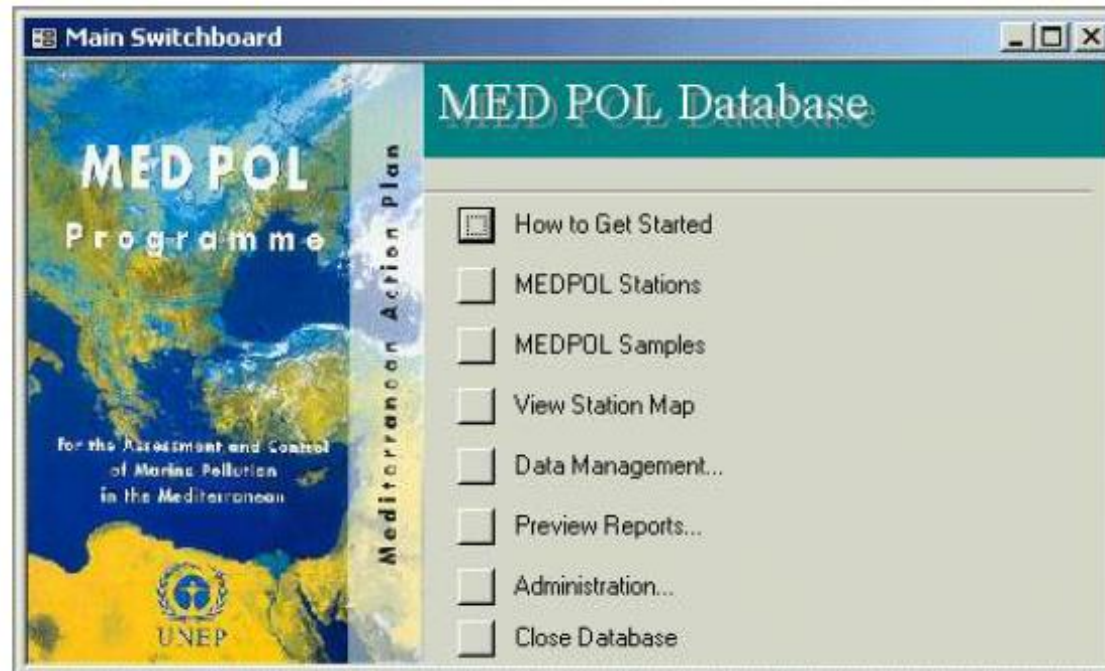


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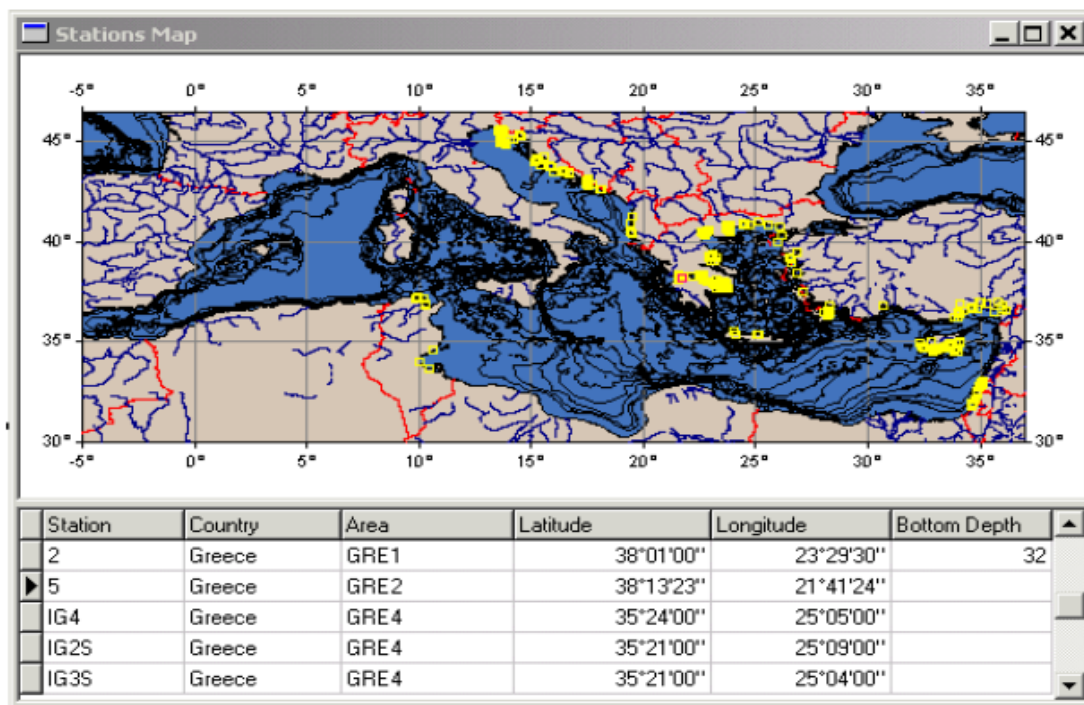
# MED POL: Regional pollution data management

- Mediterranean Sea Pollution Programme, Phase I, II, III and IV (since 80')
  - Monitoring and Assessment (harmonized) at regional scale
  - Originally: marine pollution including loads (effluent pollution)



# Land-based sources (LBS) Protocol: MED POL

- Transboundary issues (in marine waters rather than continental waters)
- Land-sea continuous: river loads (data management)
- River monitoring followed up by CPs national programmes on continental waters



# MED POL: 10% River (mouth) monitoring (LOADS)

- Data dictionaries / Modules

Table 1.1. List of the *MED POL Database* tables

Table name	Category
Stations	Monitoring data
Samples	Monitoring data
Sample Details	Monitoring data
Analyses	Monitoring data
Data	Monitoring data
Compliance Monitoring	Monitoring data
Areas	Monitoring program
Programme: Station Parameters	Monitoring program
Dictionary: Analysis Methods	Dictionaries
Dictionary: Biota Groups	Dictionaries
Dictionary: Countries	Dictionaries
Dictionary: CRM Codes	Dictionaries
Dictionary: Effluent Sources	Dictionaries
Dictionary: Individual Species	Dictionaries
Dictionary: Industrial Activity Groups	Dictionaries
Dictionary: Institutes	Dictionaries
Dictionary: Matrix Codes	Dictionaries
Dictionary: Monitoring Frequencies	Dictionaries
Dictionary: Parameter Groups	Dictionaries
Dictionary: Pollution Parameters	Dictionaries
Dictionary: Quality Codes	Dictionaries
Dictionary: Sample Parameters	Dictionaries
Dictionary: Station Types	Dictionaries
Dictionary: Tissue Types	Dictionaries
Format List	Formats
Format: ATM_DRY	Formats
Format: ATM_WET	Formats
Format: BIOMONITORING	Formats
Format: BIOTA_OC	Formats
Format: BIOTA_TM	Formats
Format: CRM	Formats
Format: LOADS	Formats
Format: Sea_Water	Formats
Format: SED_OC	Formats
Format: SED_TM	Formats
QA: CRM Analysis	Quality assurance data
QA: Laboratory Certification	Quality assurance data
Parameter Aliases	System
Switchboard items	System

10% of data:  
Effluents  
pollution  
(WWTP)

**Discontinued  
Regionally  
(1990')**

# Ecosystem Approach – late 90’: UNEP/MAP/IMAP



## INTEGRATED MONITORING AND ASSESSMENT PROGRAMME OF THE MEDITERRANEAN SEA AND COAST AND RELATED ASSESSMENT CRITERIA (IMAP)

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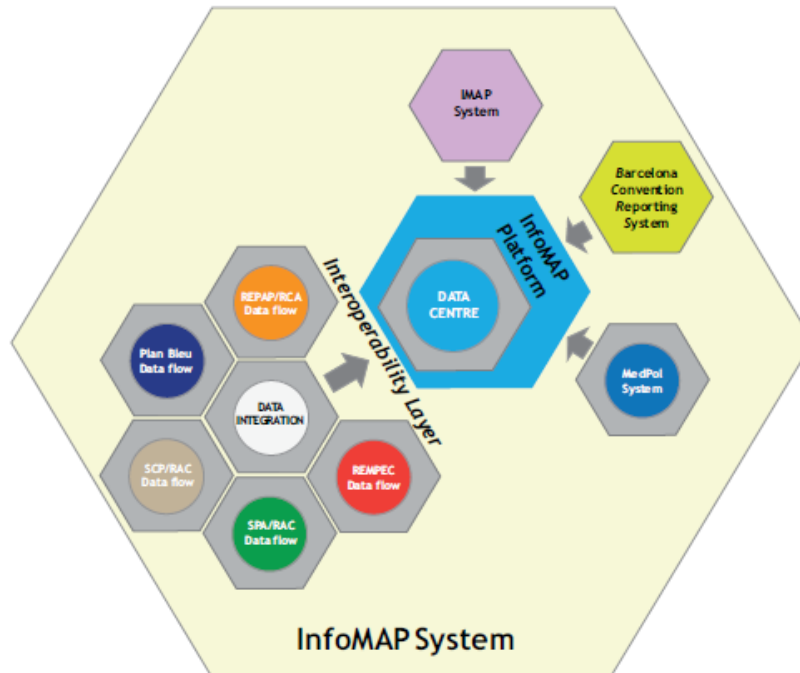
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# InfoMAP system (in development): EcAp

- EcAp: Ecosystem Approach (Marine Environment)
- Ecological Objectives (EOs) and Common Indicators (CIs)
- Good Environmental Status (GES)



MED POL  
+  
IMAP (EcAp)  
+  
Reporting  
System

### EO 5 Eutrophication

Common Indicator 13: Concentration of key nutrients in water column (EO5);

Common Indicator 14: Chlorophyll-a concentration in water column (EO5)

### EO 9 Pollution

Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)

Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)

Common Indicator 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution (EO9);

Common Indicator 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9);

Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards (EO9)

### EO 10 Marine litter

Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10);

Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);

Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10)

### EO 11 Energy including underwater noise

Candidate Indicator 26: Proportion of days and geographical distribution where loud, low, and mid-frequency impulsive sounds exceed levels that are likely to entail significant impact on marine animal

Candidate Indicator 27: Levels of continuous low frequency sounds with the use of models as appropriate

### EO 1 Biodiversity

Common Indicator 1: Habitat distributional range (EO1) to also consider habitat extent as a relevant attribute

Common Indicator 2: Condition of the habitat's typical species and communities (EO1)

Common Indicator 3: Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)

Common Indicator 4: Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)

Common indicator 5: Population demographic characteristics (EO1, e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)

### EO 2 Non-indigenous species

Common Indicator 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (EO2, in relation to the main vectors and pathways of spreading of such species)

### EO 3 Harvest of commercially exploited fish and shellfish

Common Indicator 7: Spawning stock Biomass (EO3);

Common Indicator 8: Total landings (EO3);

Common Indicator 9: Fishing Mortality (EO3);

Common Indicator 10: Fishing effort (EO3);

Common Indicator 11: Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)

Common Indicator 12: Bycatch of vulnerable and non-target species (EO1 and EO3)

### EO 4 Marine food webs

### EO 6 Sea-floor integrity

### EO7 Hydrography

Common Indicator 15:

Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent

### EO 8 Coastal ecosystems and landscapes

Common Indicator 16: Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8);

Candidate Indicator 25: Land use change (EO8)

11%  
Multiple  
Indicators  
(no river  
monitoring)

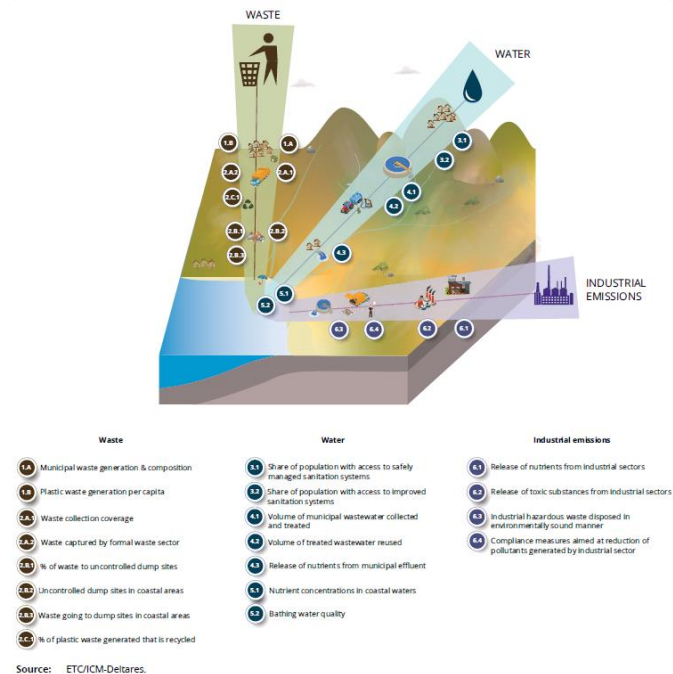


# Joint Assessments: UNEP/MAP - EEA

- Pollution (waste Waters and Industrial) indicators (EEA-UNEP/MAP Report, Technical assessment of progress towards a cleaner Mediterranean. Monitoring and reporting results for Horizon 2020 regional initiative, EEA Report No 08/2020) –
- **River basins/Catchment areas**



Figure 1.1 Source-to-sea schematic with H2020 indicators for each thematic area





# TDA/GEF - Transboundary Diagnostic Analysis

## Integrated, Causal Chain Analysis (CCA)

1997



2005



2023!



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# Summary

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- More integration between the Water Convention and the Barcelona Convention would be beneficial, such as the European policy (ca. EU WFD + EU MSFD)
- River monitoring has been progressively discontinued for regional data management (MED POL) and followed up only by national monitoring programmes, including emerging issues (i.e. marine litter)
- Mediterranean data and assessments for continental waters exist but these are not being reported to the Barcelona Convention directly, both for EU and non-EU Contracting parties
- A new platform (of platforms) for integrated data management, the InfoMAP system, is currently under development for regional data management
- Continental waters (rivers, groundwaters, wetlands,...) are assessed, along the marine environment, through Joint publications/ programmes, regional partnerships and GEF projects by UNEP/MAP in the Mediterranean region.



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# Contact

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United Nations Environment Programme  
Coordinating Unit for the Mediterranean Action Plan  
Vassileos Konstantinou 48  
Athens 11635  
Greece

[www.unepmap.org](http://www.unepmap.org)



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