

MAMA E.M.

THE MAIN TOOLS

PARAMETERS

INSTRUMENTS

METHODOLOGIES FOR DATA COLLECTION

TRANSMISSION

QUALITY CONTROL

DISSEMINATION IN NEAR REAL TIME

Rome June 3-6, 2003



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WP2 MAMA-OBS

design scientifically proven and cost effective real time coastal data acquisition systems, fully integrated to the basin scale system

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WP2 MAMA-OBS

Initial analysis of the questionnaire results

**12 countries
20 Institutions
43 entries**

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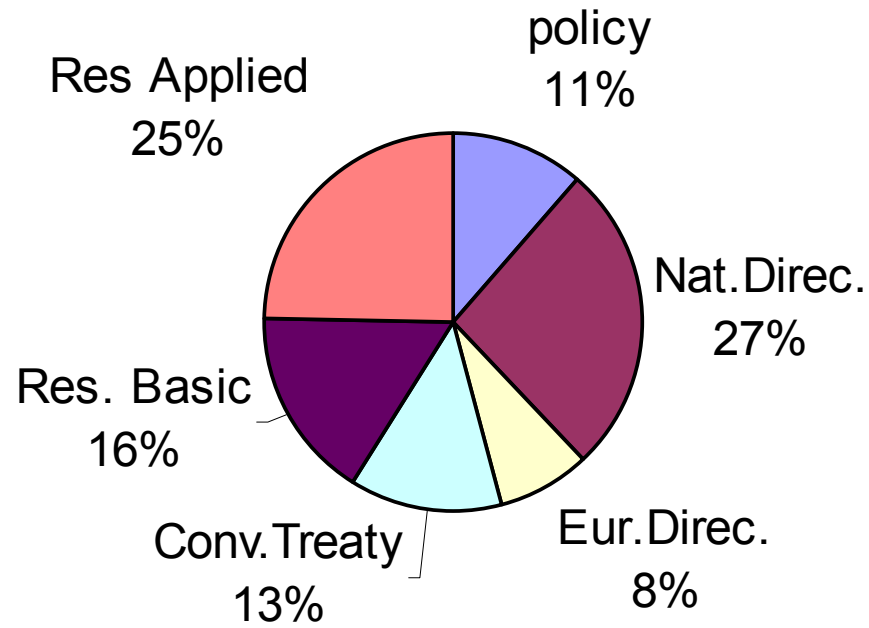
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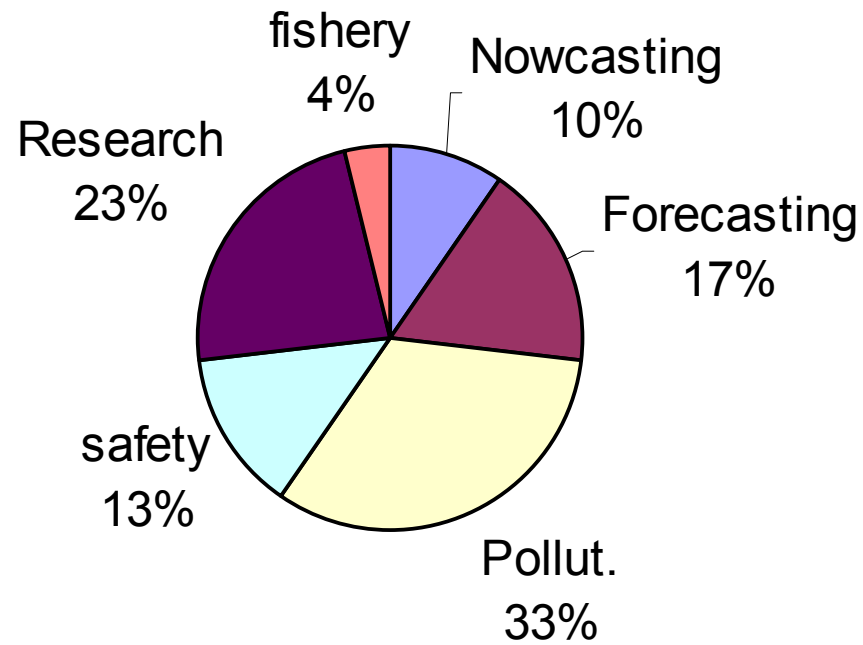
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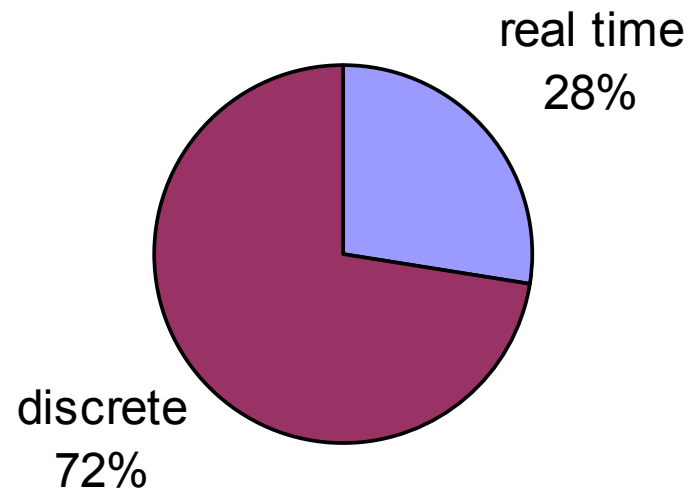
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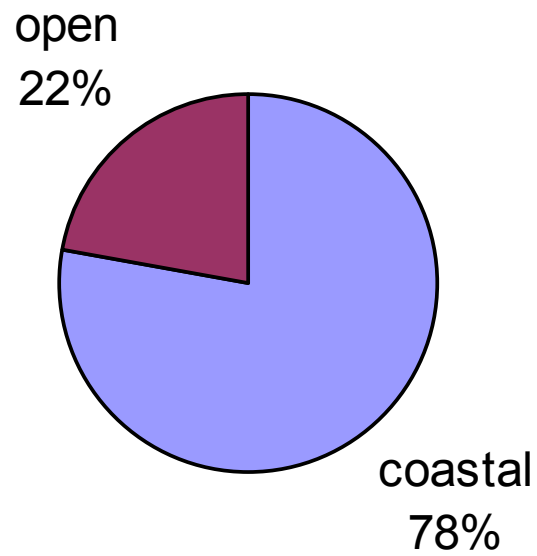
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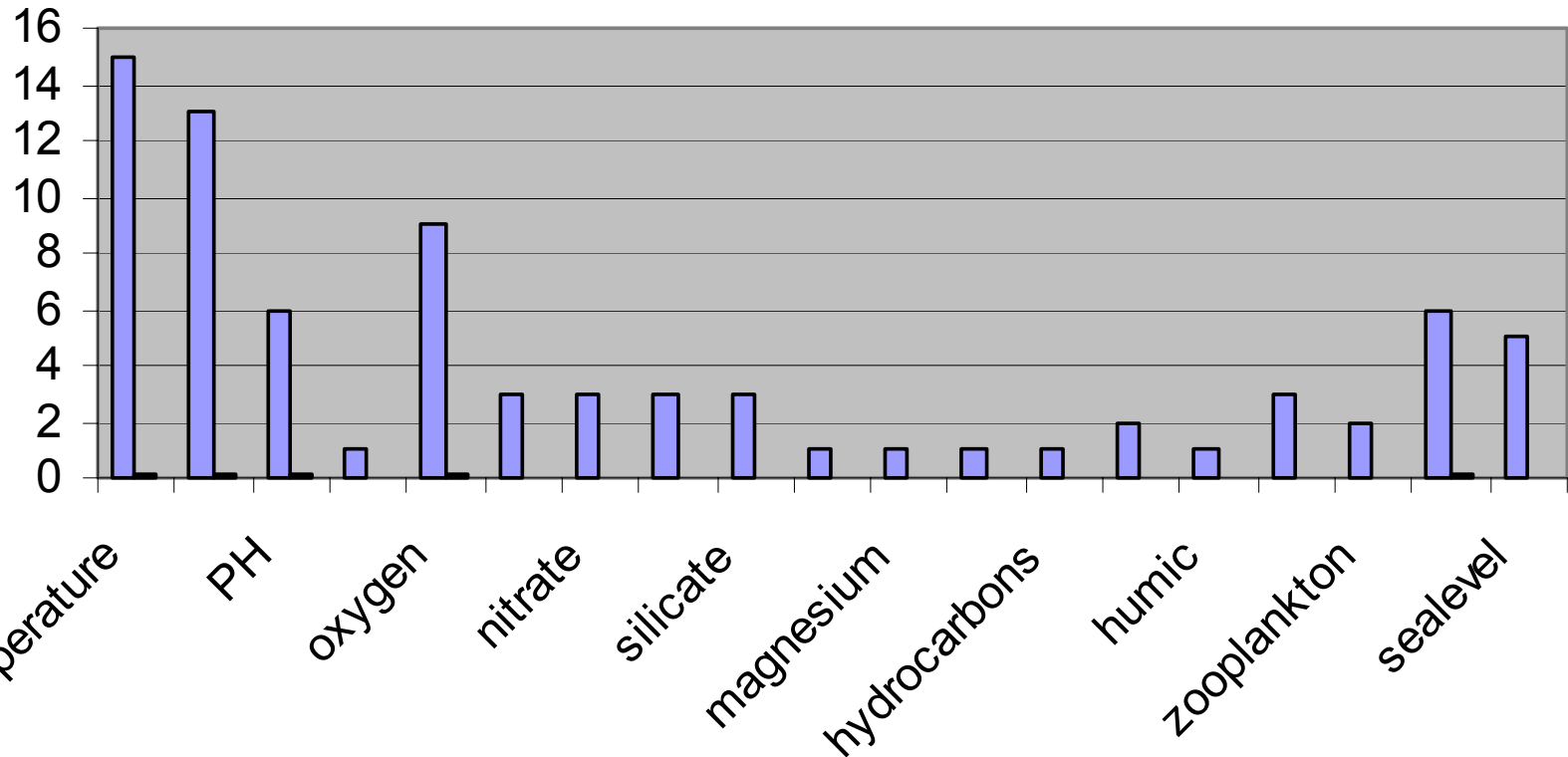
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T, S, pH, Alkalinity, O₂, NO₂, NO₃, P, Si, Ca, Mg, Br, hydrocarbons, CO₂, humic, phytoplankton, zoo, chlorophyll, sealevel

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Data requested by Conventions &
(1 data availability.doc)

Data requested by Directives
(2 directives.doc)

Selection (following JMP) (3)

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MAMA OBS

Data requested by Conventions
(1 data availability.doc)

Data requested by Directives &
(2 directives.doc)

Selection (following JMP) (3)

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76/464/EEC
+ Daughter Dir.

Organohalogenated compounds,
organophosphoric compounds,
Hg and compounds, Cd and
compounds, hydrocarbons, Zn,
Cu, Ni, Cr, Pb, Se, As, An, Mb, Titanium,
HCH, carbon tetrachloride, DDT, PCP,
aldrin, dieldrin, endrin, isodrin, HCB,
HCBD, DCE, TRI, TCE, TCB

79/923/EEC

salinity, oxygen, pH, temperature,
colour, suspended material,
hydrocarbons, faecal coliforms
organohalogenated substances, Ag, As,
Cd, Cr, Cu, Hg, Ni, Pb, Zn, Saxitoxin

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91/271/EEC

BOD, COD, suspended solids, total P,
total N

91/676/EEC

NO₃

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Data requested by Conventions
(1 data availability.doc)

Data requested by Directives
(2 directives.doc)

Selection (following JMP) (3) ❧

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Hydrographic and Hydrochemical

? temperature	13
? salinity	11
? density structure	11
? oxygen	10
? hydrogen sulphide	0
? pH	7
? alkalinity	2
? nutrients:	
phosphate,	6
total phosphorus,	3
ammonia,	2
nitrate,	6
nitrite,	5
total nitrogen	3
silicate	3

Heavy Metals, Petroleum Hydrocarbons, Chlorinated Hydrocarbons

? heavy metals (Hg, Cd, Zn, Cu and Pb)	4
? total tin and organic tin	1
? petroleum hydrocarbons (PHCs)	4
? chlorinated hydrocarbons (e.g. DDTs, PCBs, lindane)	2

Biological determinands

? Phytoplankton primary production	1
? Phytoplankton chlorophyll-a and phaeopigments	3
? Phytoplankton (species composition, counting, biomass)	2
? Zooplankton (species composition, abundance and biomass)	3
? Soft bottom macrozoobenthos (as above)	1
? Micro-organisms (bacteria).	2

Over

20

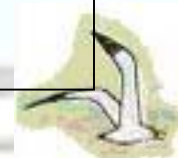
Institutes



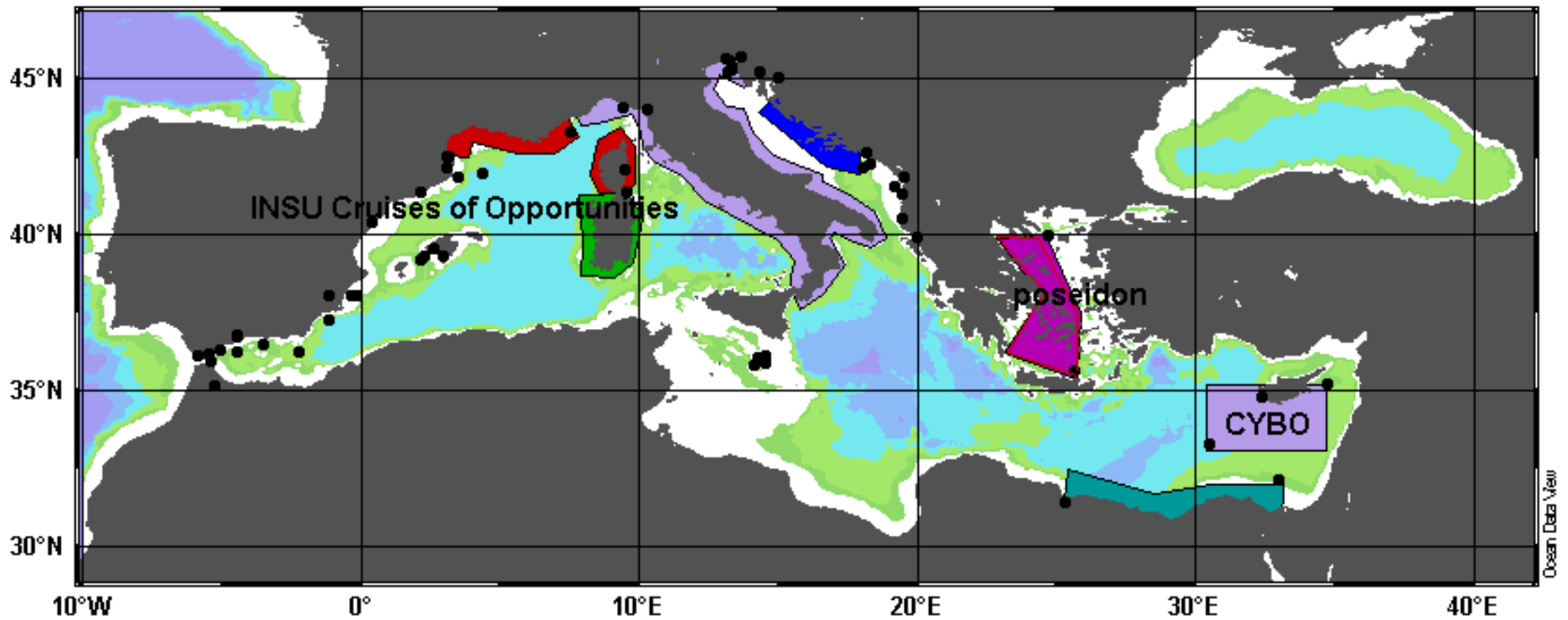
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Rank		Nitrite	5
Temperature	13	Heavy Metals	4
Salinity	11	Petr. Hydroc.	4
Oxygen	10	tot P	3
pH	7	tot N	3
Phosphate	6	phyt./phapig.	3
Nitrate	6	zoo.	3

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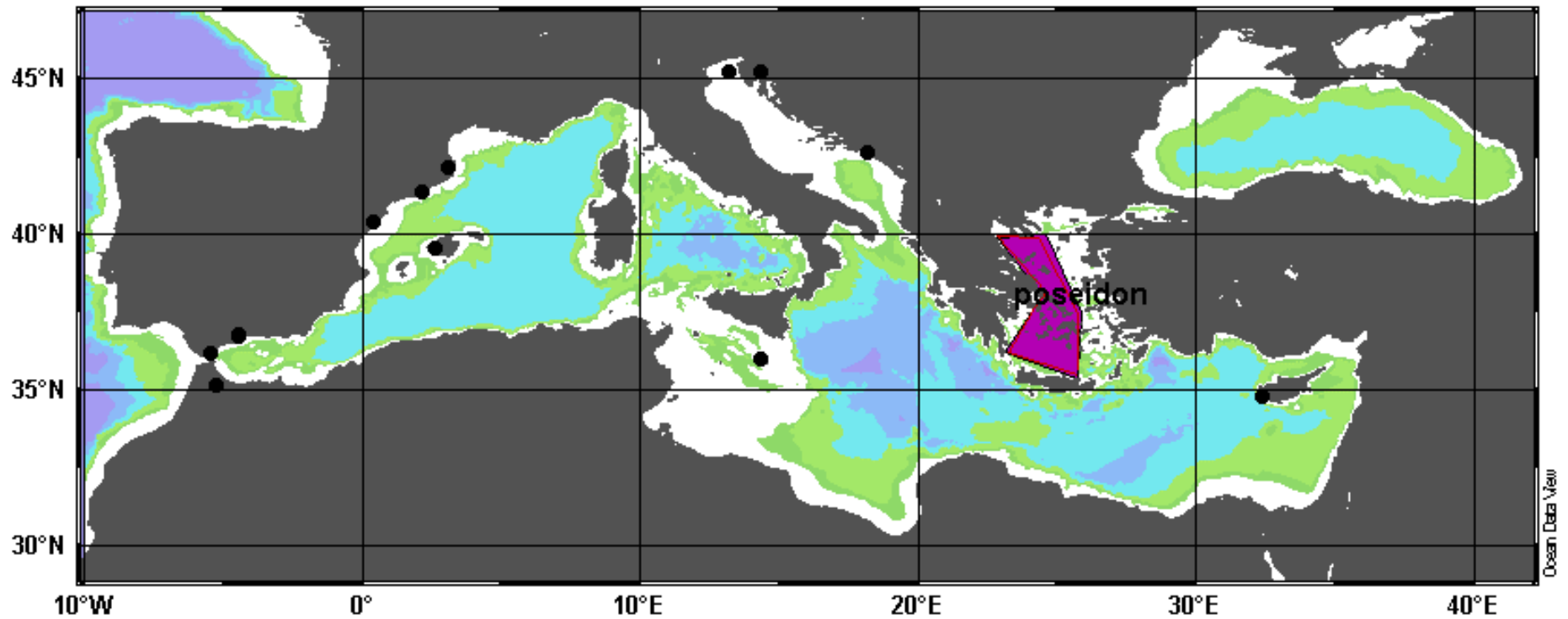


All 43 entries

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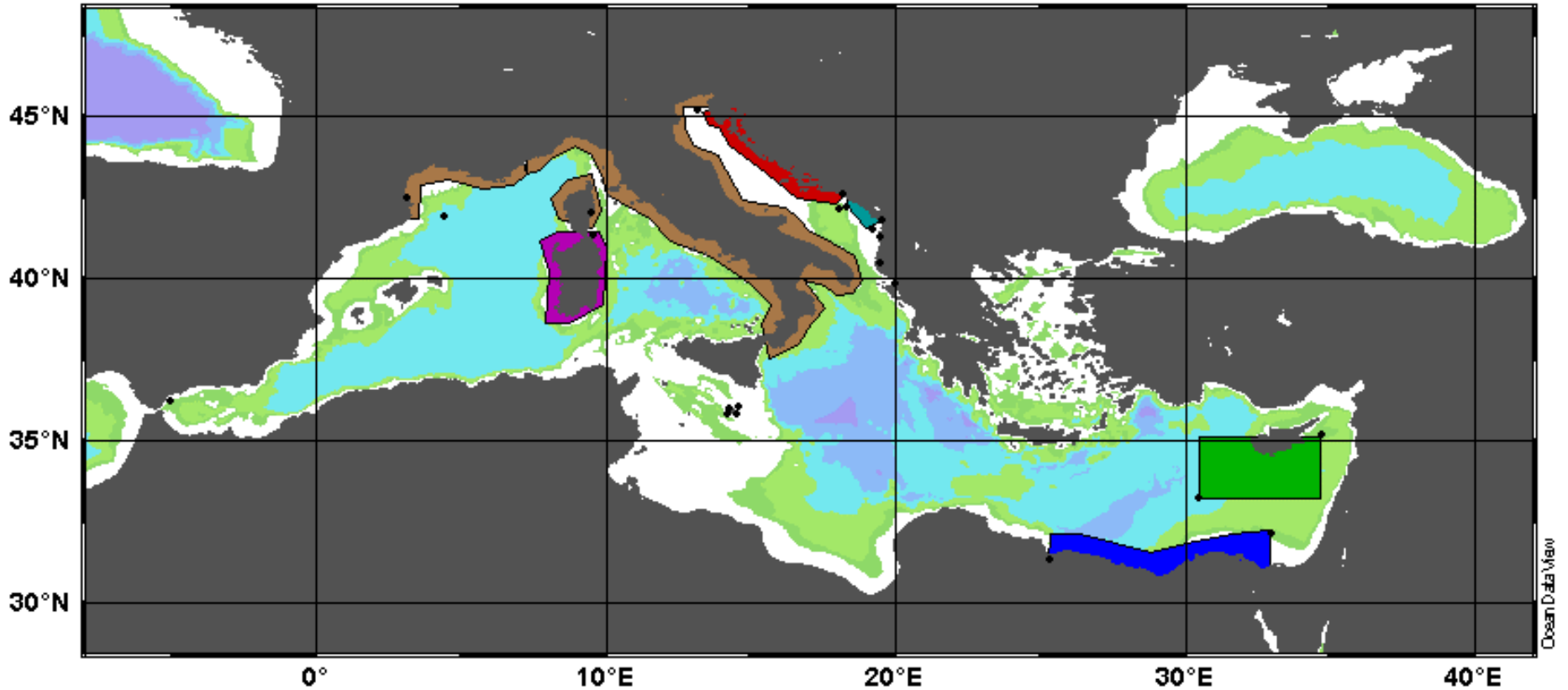


Sea level

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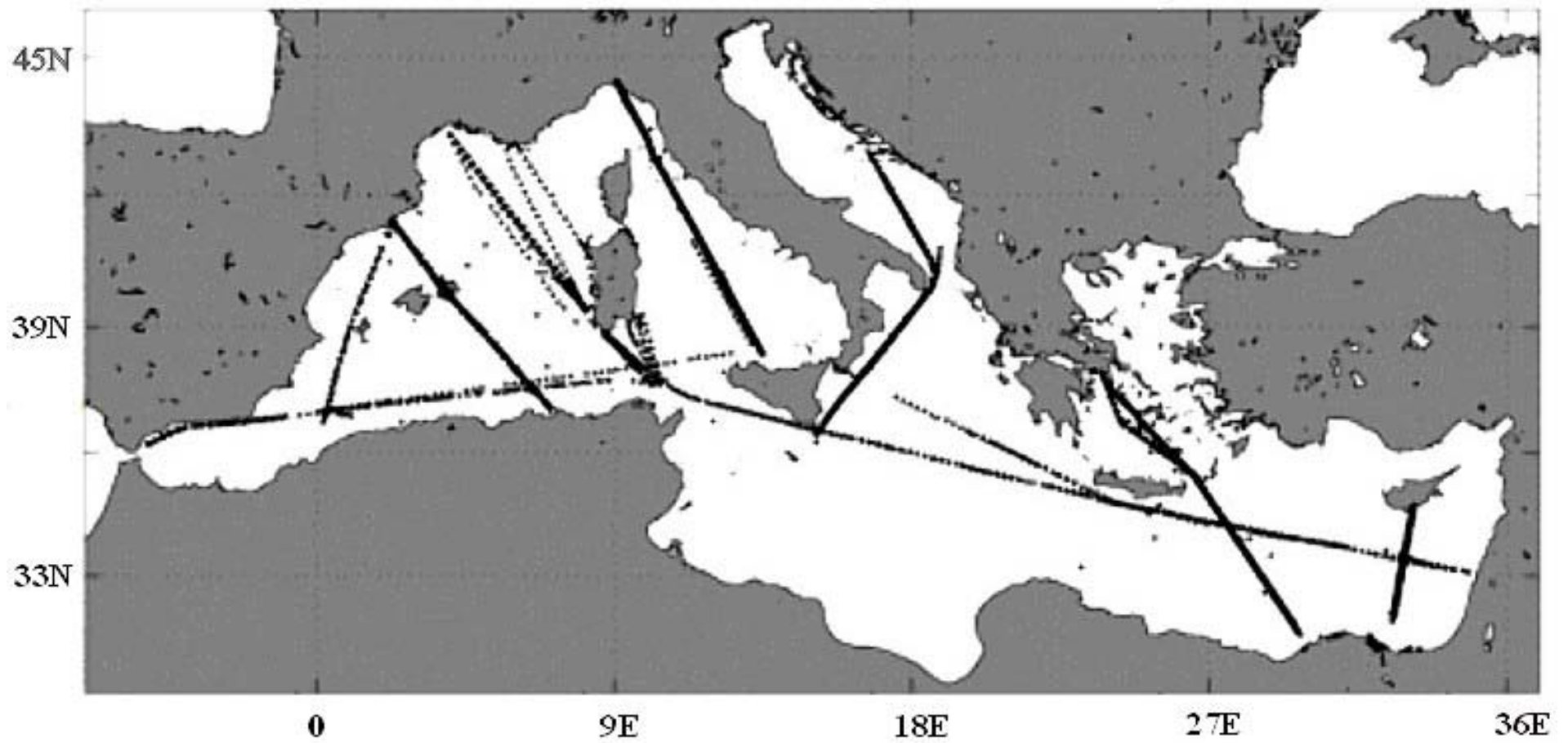


Multiparametric measurements

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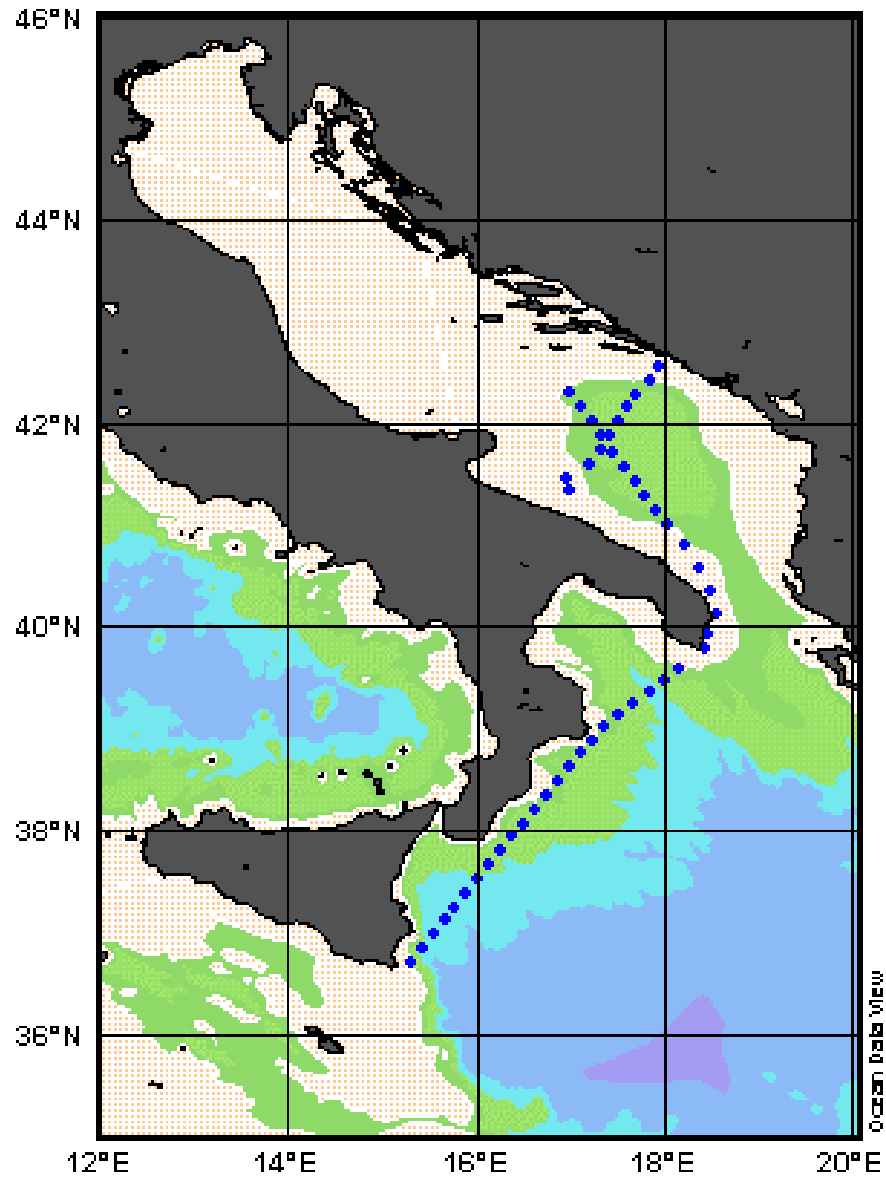
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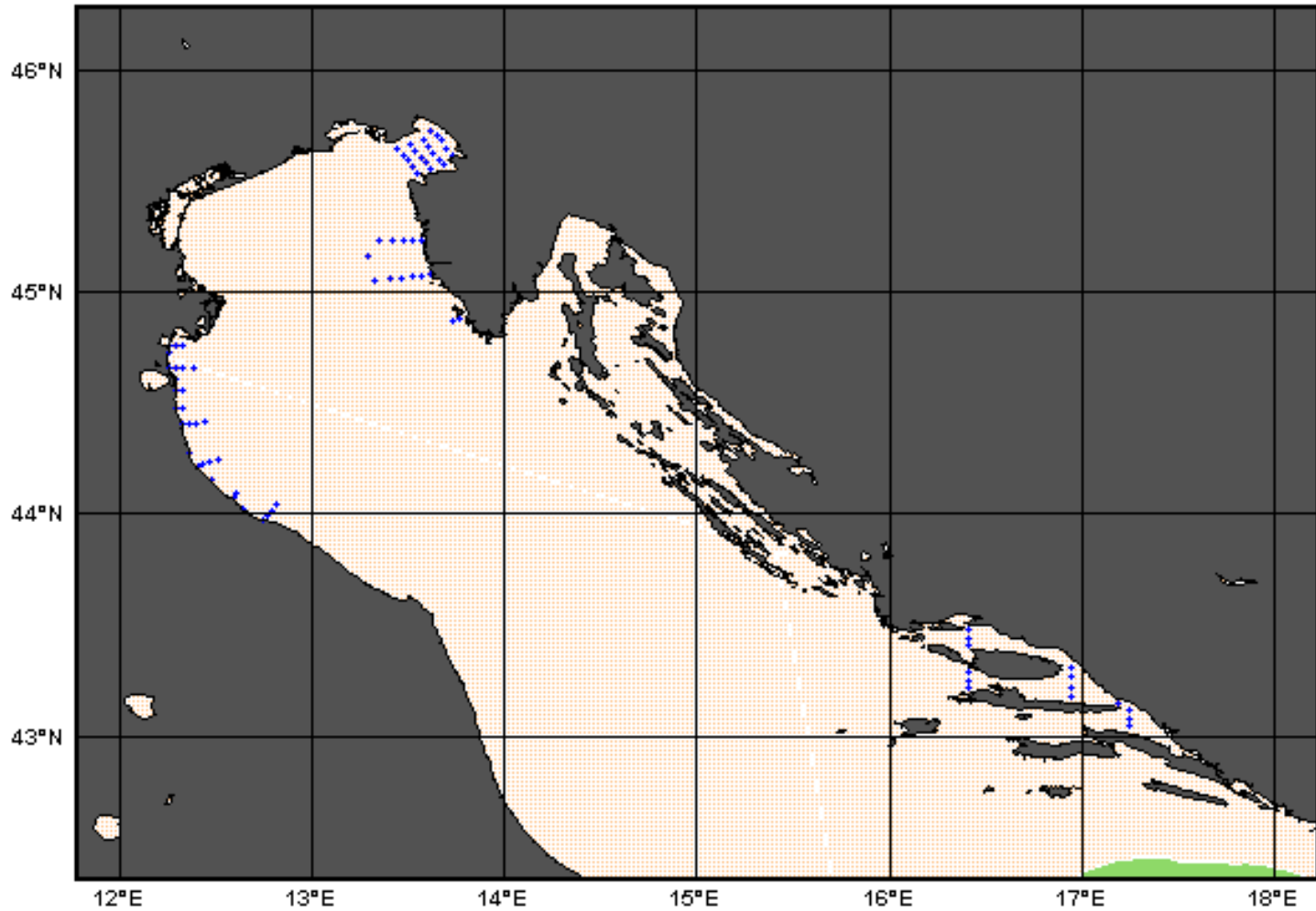
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- The monitoring programmes are not coherent:
 - among them
 - for the aspects considered
 - for the spatial and temporal scales considered

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- The IAEA-MEL/MESL has prepared guidelines for sampling, analysis and the QA/QC of chemical data. Standard reference methods have been adopted wherever possible. When standard methods are not available, techniques (for example, remote-sensing) have been indicated only after testing their ability to produce comparable data of satisfactory quality.

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MAMA OBS - MAP

- Intercalibration exercises with standard samples are organised at regular intervals and the use of Certified Reference Materials (CRMs), Standard Reference Materials (SRMs) and Laboratory Reference Materials (LRMs) is encouraged.

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MAMA OBS - MAP

- The IAEA-MEL/MESL helps individual institutes/laboratories to set up and maintain continuous internal QA/QC schemes. When requested, it also provides institutes/laboratories with technical assistance, in the form of visits by experts, to repair and upgrade analytical equipment.

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MAMA OBS - MAP

- A similar QA/QC programme also exists for microbiological measurements in seawater and shellfish. This programme is implemented by the WHO from its Project Office within MEDU in Athens.

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MAMA OBS - E.U.

- Methodologies and QC procedures are integral part of the European Directives (appendices).

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MAMA OBS - MED

- The recent project MEDAR/Medatlas has been beneficial for all Mediterranean countries. QC procedures/methodologies have been implemented in most of the scientific institutions.
- MedAtlas is becoming a *standard* at global level

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Conclusions

It is necessary to improve:

- **communications**
- **data & information management**

Define common priorities

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Thank You

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