

**IAEA Environment Laboratories collaboration
with
UNEP Regional Seas Conventions and Action Plans**

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DEPARTMENT OF NUCLEAR SCIENCES AND APPLICATIONS
ENVIRONMENT LABORATORIES MONACO**



**17th Global Meeting for the Regional Seas Conventions and Action Plans
Istanbul, Turkey, 20-22 October 2015**

Environment Laboratories: the only environment laboratories in the UN system

The Environment Laboratories provide Member States with

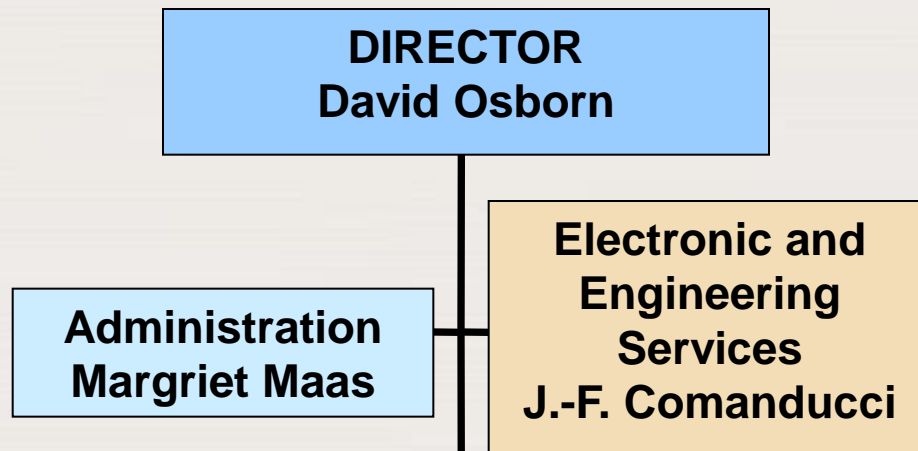
- *Research & Developments*
- *Applications of nuclear & isotopic techniques*
- *Transfer of knowledge and Capacity building (IAEA Technical Cooperation Programme)*
- *Strategic partnerships to deliver the UN programmes on sustainable development of the ocean*



Since 1974, IAEA EL collaborate with UNEP Regional Seas to strengthen Member States capacity to analyse contaminants in Regional marine pollution monitoring programmes

IAEA-NAEL ORGANIZATIONAL STRUCTURE

in Monaco and Seibersdorf



**RADIOMETRICS
LABORATORY
(RML)**

Iolanda Osvath

**RADIOECOLOGY
LABORATORY
(REL)**

**Juan Carlos
Miquel**

**MARINE
ENVIRONMENTAL
STUDIES
LABORATORY
(MESL)**

Michail Angelidis

**TERRESTRIAL
ENVIRONMENT
LABORATORY
(TEL)**

Manfred Gröning

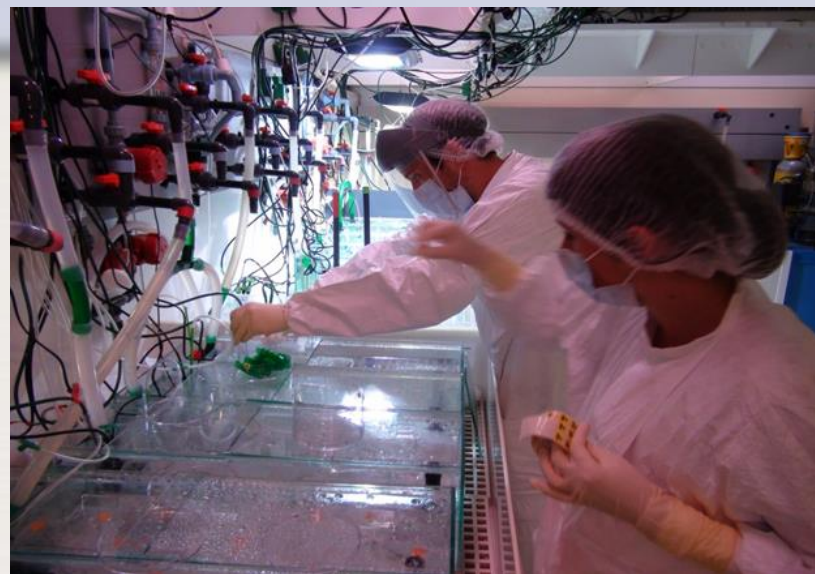


Radio-Chemical Analytical Facilities

Underground lab (35-m water-equivalent depth)



Radio-Experimental Facilities



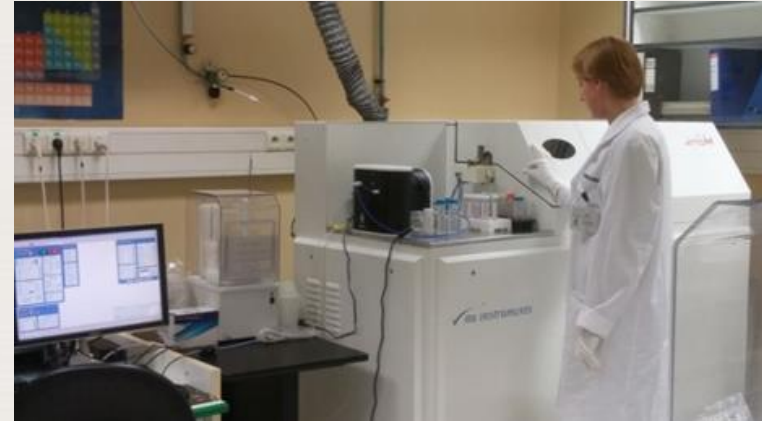
Method development for the analysis of contaminants



Radionuclides



**Chlorinated pesticides
Petroleum
hydrocarbons
POPs**



Trace elements



HABs biotoxins



Production and provision of Reference Materials for laboratory performance support



110+ reference materials (RM) available for radionuclides, stable isotopes, trace elements and organic compounds



UNEP Regional Seas – IAEA/NAEL collaboration

HELCOM

UNEP/MAP

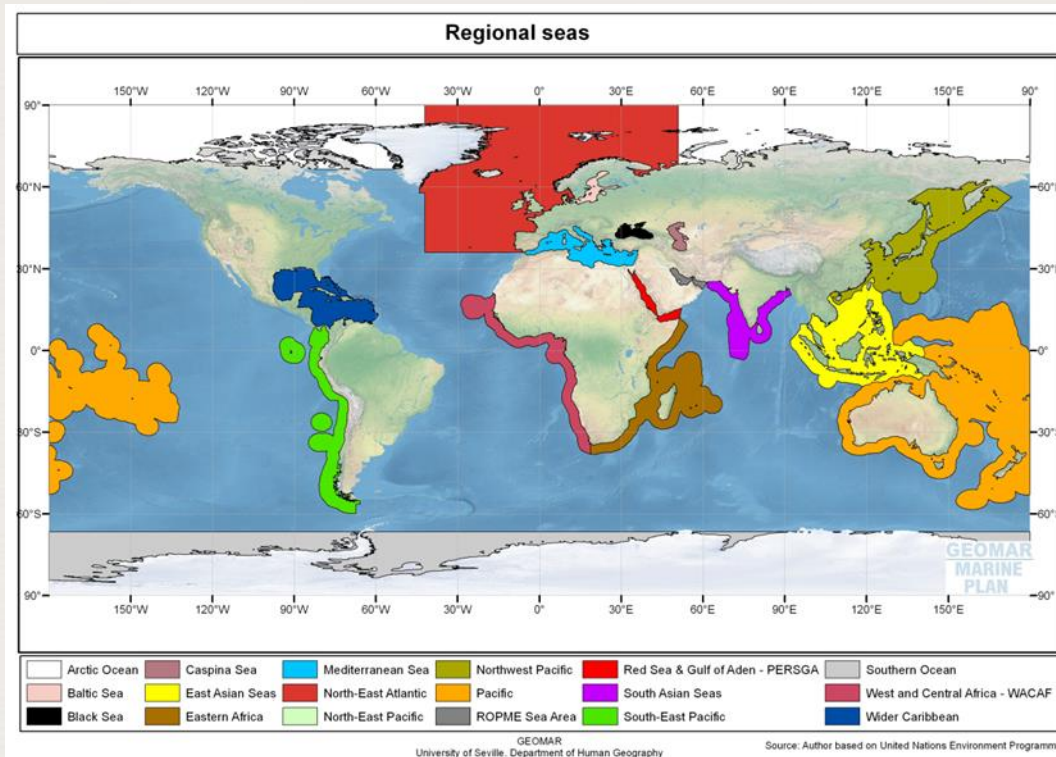
BSC

OSPAR

ROPME

PERSGA

SPREP



Caribbean

IAEA TC Projects

Caspian



UNEP/MAP – MED POL (since 1974)

- ❖ 55 Training Courses on trace elements and organic contaminants
- ❖ 320 scientists trained
- ❖ 17 Mediterranean countries

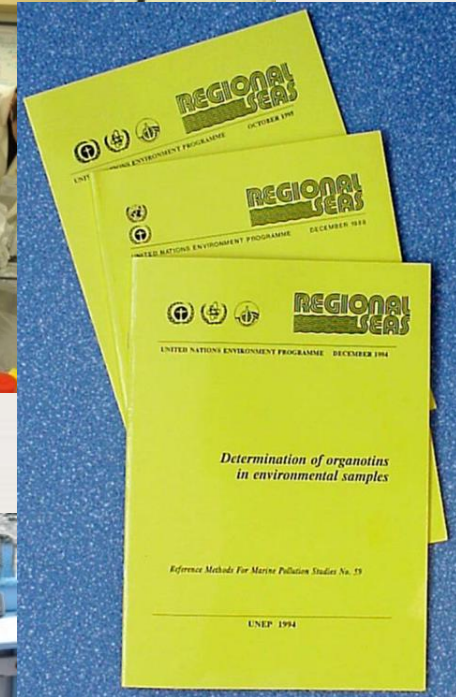
63 Recommended Methods developed for the analysis of contaminants marine samples (UNEP – IAEA – IOC/UNESCO)

30 world-wide ILCs and 25 Mediterranean Regional Proficiency Tests organised

On-going collaboration with IAEA

A Letter of Agreement signed (2015)

- 2 Proficiency Tests (83 labs contacted)
- 2 Training Courses (12 scientists)



Regional Organisation for the Protection of the Marine Environment (ROPME) (since 1994)

- ❖ 5 Training Courses (Petroleum Hydrocarbons, Chlorinated hydrocarbons and Sterols). 75 scientists from the Gulf countries)
- ❖ 3 Proficiency Tests (Trace elements, organic contaminants, radionuclides)
- ❖ Analysis of sediments to assess pollution levels and historical trends in the Gulf



On-going collaboration with IAEA:

- ❖ Analysis of sediment and oysters for the 2014 Mussel Watch Programme.
 - Radionuclides
 - Trace elements
 - Petroleum Hydrocarbons, pesticides, PCBs
 - HABs related biotoxins



Oslo Paris Convention (OSPAR) (since 1998)

❖ Pts and ILCs

OSPAR RSC (Radioactive Substances Committee) laboratories participate in annual PTs and collaborate in the production and certification of RMs of marine origin.

Marine environmental radioactivity data is hosted in the IAEA's on-line database MARiS (<http://maris.iaea.org>)

Recent collaboration with IAEA (2012-today)

- **3 PTs for radionuclides in seawater**
- **15 laboratories from 11 OSPAR Contracting Parties**
- **A new PT is currently underway (2015)**



Helsinki Convention (HELCOM) (since 1986)

❖ PTs and ILCs

HELCOM MORS (Monitoring of Radioactive Substances in the Baltic Sea) laboratories participate in annual PTs and collaborate in the production and certification of RMs of marine origin.

Marine environmental radioactivity data is hosted in the IAEA's on-line database MARiS (<http://maris.iaea.org>)

On-going collaboration with IAEA (2012-today)

- **3 PTs for radionuclides in seawater**
- **7 laboratories from 6 HELCOM Contracting Parties**
- **A new PT is currently underway (2015)**



Black Sea Convention (since 1998)

- ❖ Analysis of contaminants / Marine Environmental Assessments
- ❖ PTs
- ❖ Training Courses



On-going collaboration with IAEA:

- ❖ A Practical Arrangement is under signature (2015) on assistance for monitoring pollution and strengthening data quality assurance
- ❖ 2 Proficiency Tests are on-going (2015) for trace elements and organic contaminants. 6 laboratories from all Black Sea countries contacted for each PT



Regional Organization for the conservation of the environment of the Red Sea and the Gulf of Aden (PERSGA) (2015)

On-going collaboration with IAEA:

- ❖ **A Practical Arrangement was signed (2015) to provide capacity building and assistance on monitoring pollution and ocean acidification**



Secretariat of the Pacific Regional Environmental Programme (SPREP) (2015)

On-going collaboration with IAEA:

- ❖ **A Practical Arrangement was signed (2015) for cooperation on Ocean Acidification, Climate Change, Coastal Pollution and Improvement of Analytical Quality**



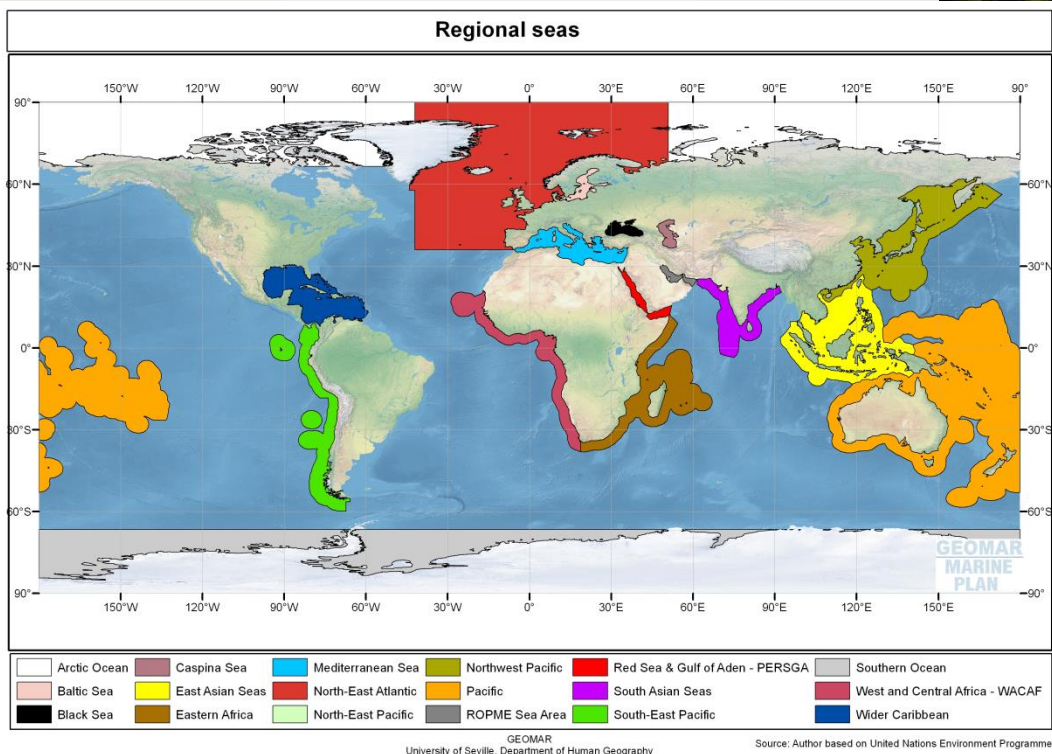
The future

IAEA Environmental Laboratories can provide assistance to more Regional Seas Convention and Action Plans

- ✓ Capacity Building (analysis of radionuclides, trace elements, organic contaminants, HABs biotoxins)
- ✓ Strengthening Data Quality Assurance (PTs, ILCs, provision of Reference Materials)
- ✓ Development of analytical methods
- ✓ Studying pollution processes and identifying pollution sources using stable isotopes
- ✓ Studying climate change processes using radionuclides and stable isotopes



Looking forward to continuing and strengthening our fruitful cooperation for the benefit of Member States



Thank you!



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Dept. of Nuclear Sciences and Applications

Department of Nuclear Sciences & Applications
Environment Laboratories
Monaco & Seibersdorf