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

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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.
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
PERSGA

ROPME
SPREP

Caribbean
IAEA TC Projects
Caspian
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
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)
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)

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)
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

On-going collaboration with IAEA:

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