Pan-European and Pan-Regional Monitoring Exercises

Bridging the gaps by working together
Restrictions for an EU-wide monitoring approach

Addressing issues of “contamination” and “pollution” from a local to a regional to a European level.

• **Approach 1 – Modelling based on existing information**
  – Emerging or less investigated compounds may require quick and fast reactions!
  – Information gaps: Emerging – not monitored – no data – not emerged

• **Approach 2 – Fresh monitoring data of known quality**
  – For monitoring a 16 x 16 km² grid of soil (LUCAS) we need to analyse 20000 – 30000 samples!
  – Lengthy standardisation procedures for analytical methods;
  – Need to duplicate measurement capacities in labs;
  – Data in a European context are NATIONAL data;
  – Why the JRC?
Objective:
To produce representative, evidence-based and independent data on the occurrence and fate of less-investigated and new chemical substances in the environmental media following a non-probabilistic approach.

Characteristics:
- Concern-driven approach
- Integrative assessment
- Synchronisation and coordination of existing capacities
- Pan-regional assessments
- Non-probabilistic approach
- Multi-methods and -parameter
- Spatial (and temporal context)

Work plan (2008 – 2011)
- Surface Water ✓
- Groundwater ✓
- Effluents and sewage sludge ❌
- Compost and biowaste ❌
- Coastal waters □
- Refuse-derived fuels (RDF) □

Substance classes
- Pesticides
- Candidate priority substances
- Pharmaceuticals
- Personal care products
- Engineered nano-materials
- Trace elements
- …
The tool for pan-European assessments

Competence centres

Synchronised sampling

Reporting

Dispatch logistics

Environmental
Chemicals
Priority Substances
REACH, Ecotoxicology
Emerging pollutants,
Multi-matrix,
Extremely low concentrations

Topic selection

Sampling stations

National programs
Next on the agenda

- International Workshops:
  - *Integrated spatial assessment*
  - *Emerging pollutants under the Water Framework Directive*

- Increase measurement capabilities and link to existing Centres of Excellence → CA NORMAN

- Integrative assessment, chemometrics

- Strategy for emerging environmental risks (*engineered nanomaterials, siloxanes, etc.*)

- REACH: Assess effectiveness of measures

- Logistics to go beyond Europe – Pan-regional? (*Mediterranean, emerging economies, etc*)

- Role within the CIS WFD
MAPLE primary objective is to support Commission activities invoking the use of environmental monitoring data regarding the occurrence and levels of pollutants in all media and natural resources with the aim to:

- Provide policy options when environmental measurements are needed
- Explore the feasibility of a monitoring concept
- Ensure comparability of monitoring data in space and time
- Anticipate upcoming issues by horizon scanning pan-regional monitoring activities

To this end, MAPLE maintains a series of cutting-edge analytical and bio-analytical measurement and monitoring capabilities. Striving for integrated approach based on monitoring and modeling, MAPLE actively supports other JRC Actions and activities.