

Possible cooperation in the framework of CLRTAP and EU REACH

Elena Mantseva

Meteorological Synthesizing Centre-East of EMEP



International Activities Concerning Hazardous Chemicals

- 1979 - UNECE Convention on Long-Range Transboundary Air Pollution (**CLRTAP**):
- 1998 - Protocol on Persistent Organic Pollutants (**Protocol on POPs**),
 - 1998 - Protocol on Heavy Metals (**Protocol on HMs**),.....
- 1991 - Arctic Monitoring and Assessment Programme (**AMAP**),
- 1992 - Convention for the Protection of the Marine Environment of the North-East Atlantic (**OSPAR**),
- 1992 - Convention on the Protection of the Marine Environment of the Baltic Sea Area (**HELCOM**),
- 1998 - Rotterdam Convention on Prior Informed Consent (**PIC**) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,
- 1998 - OECD co-operative action programme for testing and assessing High Production Volume chemicals (**OECD HPVC programme**),

International Activities Concerning Hazardous Chemicals

- 2001 – UNEP Stockholm Convention on Persistent Organic Pollutants (**Stockholm Convention on POPs**),
- 2002 - UNECE Globally Harmonized System of Classification and Labelling of Chemicals (**GHS**),
- 2002 - Johannesburg World Summit on Sustainable Development,
- 2006 - Strategic Approach to International Chemical Management (**SAICM**),

2006 - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (**REACH**),...

Main Aspects of REACH

New EU chemicals regulation entered into force
on 1st June 2007

Aim and scope (Art.1):

- implements the precautionary principle;
- ensures a high level of protection of human health and the environment while enhancing competitiveness of the EU industry;
- requires the industry to prove that their substances do not adversely affect human health or the environment before they are allowed on the market!

Main Aspects of REACH

- **Registration** requires manufacturers and importers of chemicals to obtain **relevant information** on their substances (*Title II*).
- **Substance evaluation** is performed by the authorities to investigate chemicals with perceived risks (*Title VI*).
- **Authorisation** of **Substances of Very High Concern (SVHC)** is required (*Title VII, Annex XIV*).
- **Restrictions** act as a safety net to manage Community wide risks that are otherwise not adequately controlled (*Title VIII, Annex XVII*)
-

REACH will stimulate international activities on hazardous chemicals

1. **Thousands of chemicals** already on the EU market as well as all “new” substances will be covered.
2. **EU-manufacturers/importers** will **have to pay for** and submit extensive **testing** of their chemicals for impacts on health and the environment:
 - more systematical identification of hazards and risks of chemicals.
 - scientific methodologies and modeling tools involved into assessment;
 - substantial amount of data on chemicals.
3. **Non-EU-producers** placing their products on the EU market will **have to comply with REACH requirements** as well:
 - economic instruments to shift to safer alternatives and technologies;
 - possible effect on development of a similar regulation system in their countries.

Common objective of CLRTAP and REACH

Substances of very high concern (SVHC):

- substances that possess potential for long-range transport (LRTP);
- persistent, bioaccumulative and toxic (PBT) substances;
- very persistent and very bioaccumulative (vPvB) substances;
-

From PBTs/vPvB to POPs

Cooperation!

REACH

+ potential for long-range transboundary atmospheric transport or potential for environmental transport;

CLRTAP

control production, use, emissions, disposal, etc on hemispheric and global levels

New POP-candidates

Basis for cooperation between CLRTAP and REACH

CLRTAP

Openness

Collaboration with relevant experts and organizations to share the Convention's experiences and useful scientific and technical information is recommended (*ECE/EB.AIR/91*).

REACH

Technical and scientific support for **cooperation between the Community, its Member States, and international organisations** is provided by European Chemicals Agency (ECHA)" (*Art. 77 REACH*).

Representatives of international organisations **may be invited to participate as observers in the work of the ECHA** (*Art. 107 REACH*)



Possible ways of cooperation between CLRTAP and REACH

- I. Share information on chemicals.
- II. Exchange developed methodologies for the emission inventories, monitoring, modelling and risk assessment.
- III. Harmonise a procedure for evaluation of new POPs/PBT substances.
- IV. Assist non-EU countries (e.g. EECCA countries) to comply with CLRTAP and REACH requirements.

REACH for CLRTAP

Information on chemicals accumulated under REACH

I. Registration (*Art. 10, 12, 14 REACH*):

For industries: **"No data, no market"**
(*Art. 5 REACH*)

REACH for CLRTAP

Information on chemicals accumulated under REACH

For example, **PBT and vPvB assessment** (*Annex I REACH*):

Step 1: Comparison with the Criteria and/or other scientific evidence:

- **monitoring data**;
- information indicating **potential for long-range transport (LRTP)**.

Step 2: **Emission data**:

- estimation of the amounts of the substance released to the different environmental compartments **during all activities and all identified uses**,
- ...

REACH for CLRTAP

Information on chemicals accumulated under REACH

For example, **environmental exposure assessment** (air, soil, water, sediment) (*Annex I REACH*):

- ✓ Release (**emission**) **estimation**:
 - at all relevant life-cycle stages of substances;
 - from point sources and from diffuse sources;
 - to all environmental compartments;
 - at local and regional level.
- ✓ Estimation of **environmental fate** and behaviour (partitioning, (bio)degradation),
- ✓ Regional and local **predicted environmental concentrations** (PEC).

REACH for CLRTAP

Information on chemicals accumulated under REACH

"Information may be disclosed to an international organisation in accordance with an agreement.." (*Art. 120 REACH*)

International organizations for REACH

Information on chemicals

"Available information from assessments carried out under other international and national programmes shall be included"
(Annex I REACH)

International organizations for REACH

Information on chemicals

CLRTAP,
Stockholm
Convention,
AMAP,
OSPAR,
HELCOM,
.....

- physicochemical properties;
- toxicological and ecotoxicological data;
- data on emissions and releases to different environmental compartments;
- measurement data in different environmental compartments and humans;
- results of passive sampling campaigns (e.g. GAPS, Lancaster University, RECETOX);
- modelling estimates of environmental pollution,
-

CLRTAP for REACH

Information on emissions accumulated under CLRTAP

Assistance to EU and non-EU countries in implementation of REACH: **Emission estimation**

- Atmospheric emission inventory guidebook;
- Officially reported emission data:
 - Large point sources,
 - Source categories,

SO₂, NO_x, NMVOC, CH₄, CO, NH₃

Pb, Cd, Hg, As, Cr, Cu, Ni, Se, Zn and other HMs

PCDD/Fs, PAHs, HCB, PCBs, HCH and other POPs

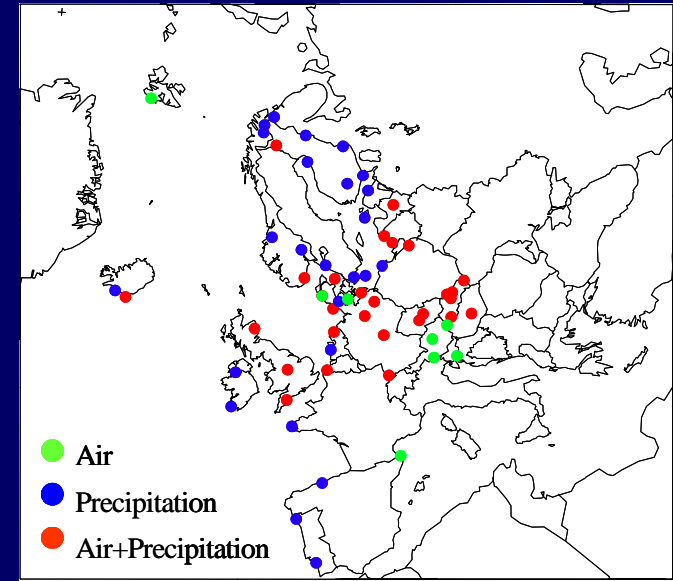


CLRTAP for REACH

Information on monitoring accumulated under CLRTAP

Assistance to EU and non-EU countries in implementation of REACH: **Measured data in environmental compartments and time trends.**

- Guidance for observing and measuring various atmospheric pollutants ...;
- EMEP monitoring network;
- National measurement campaigns (Czech Republic, Poland, Germany, UK);
- Passive sampling campaigns;...



64 measurements sites for HMs (lead and cadmium) in air and precipitation, EMEP network in 2005¹⁸

Information on modelling accumulated under CLRTAP

Assistance to EU and non-EU countries in implementation of REACH:

- Environmental distribution;
- Estimation of environmental fate and behaviour;
- Regional and local predicted environmental concentrations.

➤ Multimedia box models:

ClimoChem (Switzerland), G-CIEMS (Japan),
EVN-BETR (UK), SimpleBox (Netherlands), etc

➤ Spatially resolved multimedia dispersion models:

ADEPT (Netherlands), DEHM-POP (Denmark),
ADOM-POP (Germany), HYSPLIT 4 (USA),
CAN/POPs (Canada), EMEP/MSCE-POP, etc

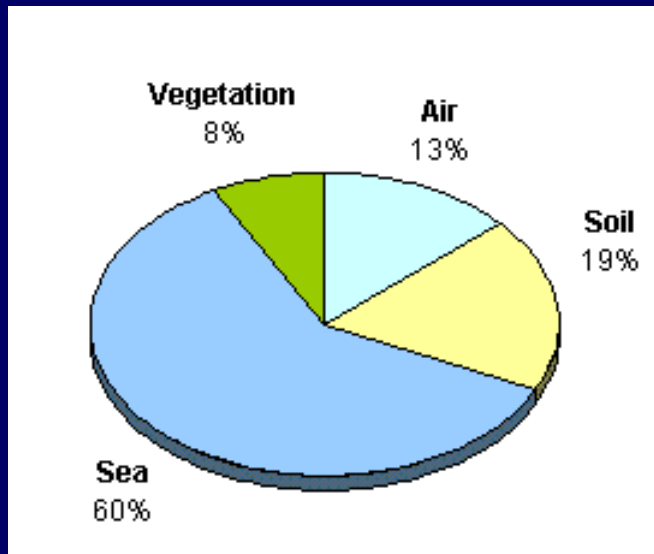
CLRTAP for REACH

Information on modelling under CLRTAP

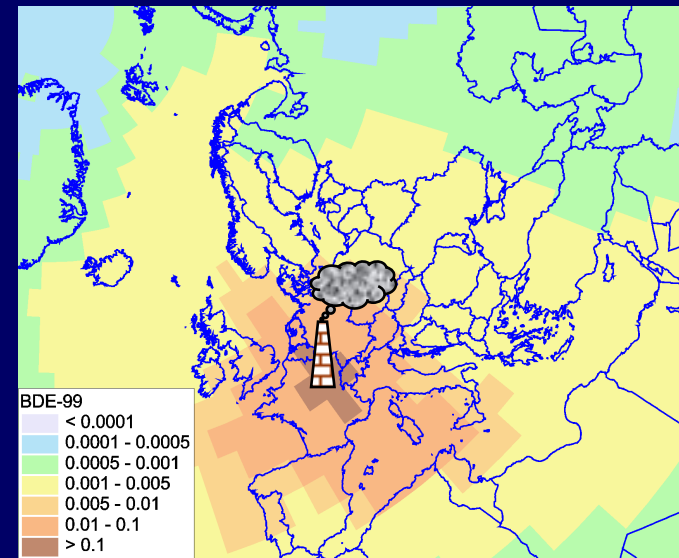
Assistance to EU and non-EU countries in implementation of REACH:

Environmental distribution

Regional environmental concentrations



HCB, 2004



BDE-99 air concentration, conventional point source

EMEP multicompartment transport model
(regional and hemispheric version)

CLRTAP for REACH

Evaluation of new POPs/PBT substances

- I. Use models to estimate half-life in the different environmental media, overall persistence (Pov) and LRTP and to rank substances by their LRTP and Pov:
 1. OECD Pov and LRTP Screening Tool and multimedia box models **at a screening level.**

EMEP model assessment of LRTP and Pov for new POP-candidates: PentaBDE, Endosulfan, Dicofol, Hexachlorobutadiene, Chlordecone, Pentachlorobenzene, and Polychlorinated Naphthalenes (www.msceast.org).

- II. Elaborate a procedure to evaluate new POP- candidates on the basis of priority PBT/vPvB or substances of “equivalent concern” identified in the framework of REACH.

CLRTAP for REACH

Assistance to non-EU countries in implementation of REACH

For example, to countries of **Eastern Europe, the Caucasus and Central Asia (EECCA countries)**

Inform non-EU countries about new EU regulation REACH and cooperation between CLRTAP and REACH:

TFHTAP could be a starting point to facilitate cooperation between REACH, Parties to CLRTAP and other non-EU countries!

Conclusions

Possible ways of cooperation in the framework of implementation of **CLRTAP** and EU regulation **REACH**:

- I. Sharing of information on chemicals.
- II. Exchange of developed methodologies for the emission inventories, monitoring, modelling and risk assessment.
- III. Elaboration and harmonisation of a procedure for evaluation of new POPs/PBT substances.
- IV. Assistance to non-EU countries (e.g. EECCA countries) in complying with CLRTAP and REACH requirements.

Thank you for your patience!