



## Status of the Work of the TF HM and Tasks for the Future

Katja Kraus  
Federal Environment Agency  
Chair of the TFHM



### Overview

- Where are we at the present ?
  - The revised Protocol on Heavy Metals
- Tasks still open
- Need for further measures and further work?
  - Saltsjöbaden Workshop
- Workshop in Norway in 2014

## Where are we at the present?

- Revised HM Protocol (Pb, Cd, Hg)
  - ✓ Decision 2012/5 : new Protocol text
  - ✓ Decision 2012/6: Annex III (in force on 9 Jan 2014)
  - ✓ Decision 2012/7: Guidance doc on BAT HM
- Minamata Convention on Mercury
  - ✓ Signed in Minamata 9 Oct 2013
- EU mercury strategy
- US mercury strategy
- East –European strategies/programmes on BAT

## The revised Heavy Metals Protocol 2012

- Focus on amendments on increase of ratifications (e.i. flexibility regarding existing installations)
- Expedited procedure as in GP and POP-P
- Extension of source category 5 (Annex II): production of silico- ferro-manganese alloys
- Requirements regarding PM in line with GP
- Hg ELVs for Waste Incineration and Chlor-Alkali
- Annex III: new Guidance Document on BAT HM

### Basic Obligations of the revised HM Protocol (Article 3)

1. Reduce total annual emissions (compared to reference year)
2. According to the timescale of annex IV:
  1. Apply BAT taking into consideration Annex III (and adopted guidance document) for new sources
  2. Apply ELVs of Annex V or a different emission reduction strategy with equivalent reduction
  3. Apply BAT for existing sources (Annex III, guidance doc, different emissions reduction strategy with equivalent reduction)
  4. Limit values for existing sources if technically and economically feasible or alternative reduction strategy with equivalent emission reduction
3. Apply product control measures according to Annex VI
4. Consider additional product management measures considering Annex VII

### Basic Obligations of the revised HM Protocol (Article 3) (2)

- Develop and maintain emission inventories for HM, use EMEP guidelines
- Participate actively in programmes under the Convention on the effects of air pollution on human health and the environment and programmes on atmospheric monitoring and modelling
  
- Flexible transitional arrangements
  - Workshop in Norway

## Overlapping Sectors HMP and GP

- HM Protocol Annex II / Gothenburg Protocol Annex X
  - Combustion plants
  - Production of cement clinker
  - Lime production
  - Production and processing of metals (Ferrous and Non-ferrous, foundries, smelters)
  - Glass production
  - Waste incineration
  
- Additional source categories of the HMP
  - Chlor-alkali production

## Outstanding issues regarding the revised HM-Protocol

- Only selected ELVs for HM (glass and lead production, incineration of waste, chlor-alkali)
  - Missing EU legislation (BREF, Mercury strategy)
  
- No decision regarding products!
  - Overlapp with Minamata (what does it mean for the HM Protocol?)

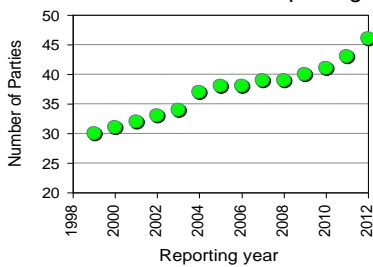
# Is there a need for further measures ?

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9

## Heavy metal emission changes

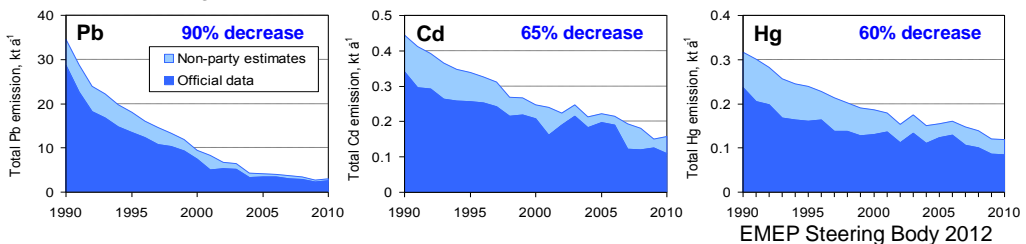
Statistics of emissions reporting



### Reporting of HM emissions:

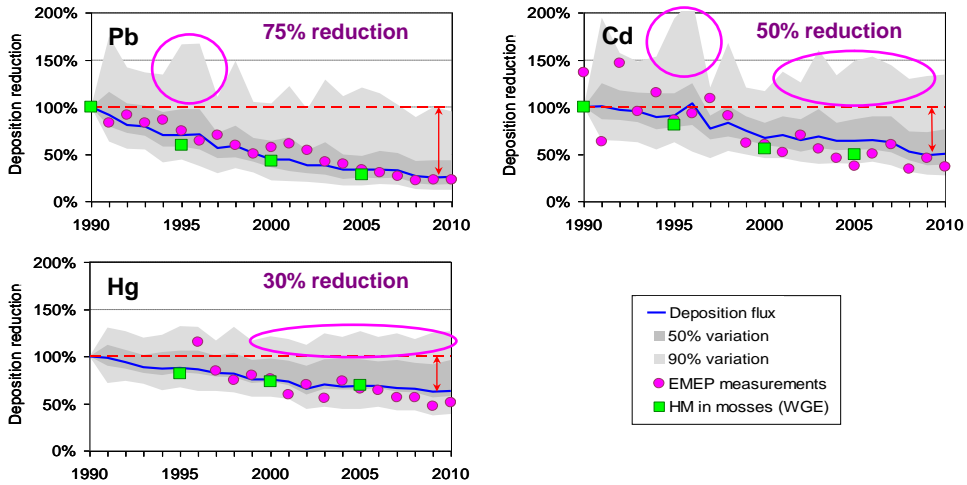
- Number of Parties reported emission data increased from 30 to 46
- Gridded emission data are reported only by 28 Parties

Changes of HM emissions in the EMEP countries over 1990-2010



## Long-term trends of HM pollution

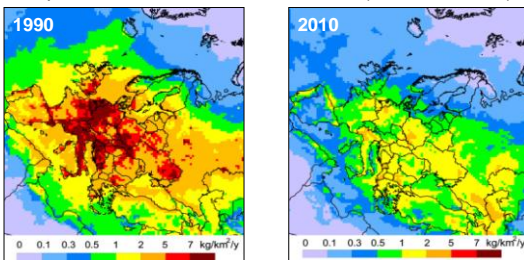
Reduction of heavy metal deposition in EMEP countries (1990-2010)



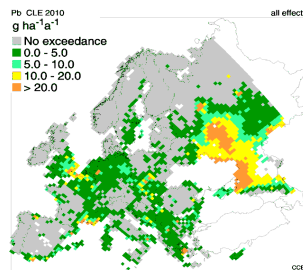
EMEP Steering Body 2012

## Lead: Has the problem been solved?

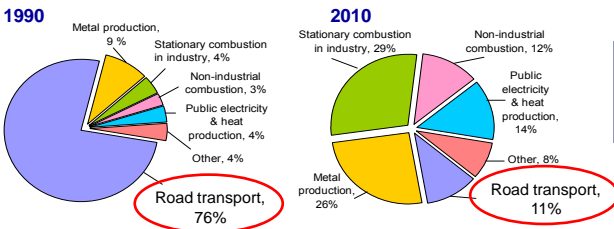
Deposition of Pb in EMEP countries (75% reduction)



Exceedance of critical loads of Pb in 2010



Key source categories contributing to Pb deposition

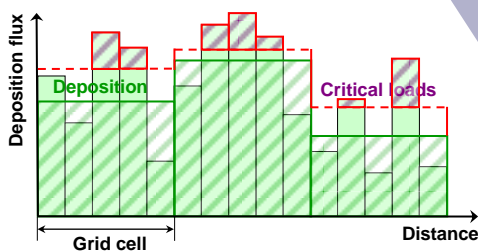
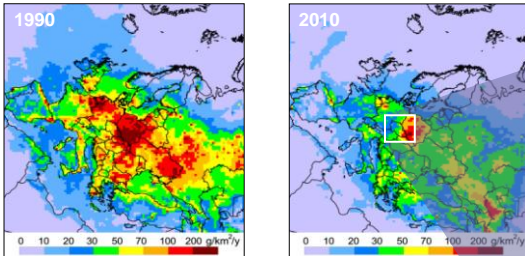


Human health and the environment continue to be at risk in many EMEP countries

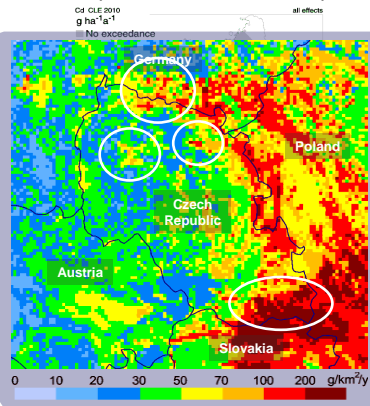
EMEP Steering Body 2012

## Cadmium: Pollution 'hot spots'

Deposition of Cd in EMEP countries (50% reduction)



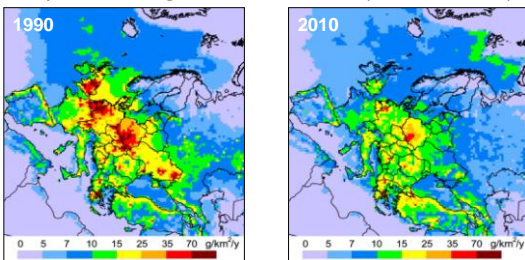
Exceedance of critical loads of Cd in 2010  
Cd deposition in Central Europe



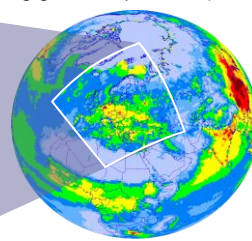
EMEP Steering Body 2012

## Mercury is a global pollutant

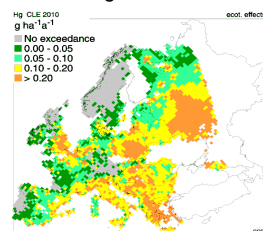
Deposition of Hg in EMEP countries (30% reduction)



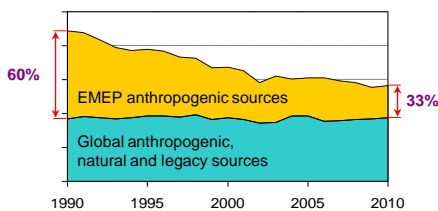
Hg global deposition (2010)



Exceedance of critical loads of Hg in 2010



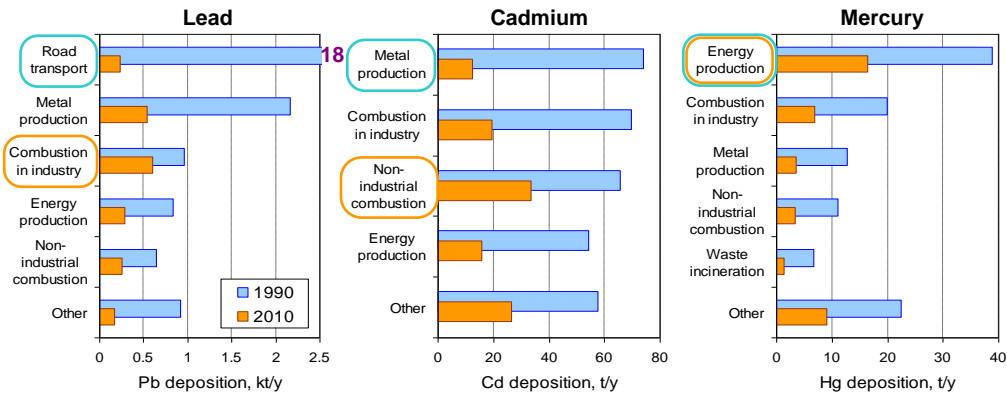
Changes of Hg deposition in EMEP countries



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## Changes in key source categories

Contribution of source categories to **HM deposition** in EMEP countries

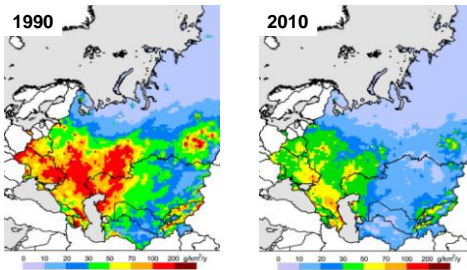


**Note:** Reduction of HM pollution levels was accompanied by changes of the **key source categories** of both emissions and deposition

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## HM pollution in EECCA countries

Deposition of **Cd** in the EECCA countries



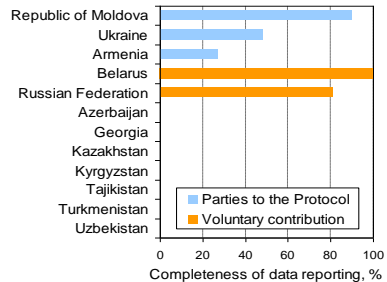
**Pollution levels:**

- Relatively **low reduction** of HM deposition in EECCA countries
- The largest decrease in the **western part** of the region
- The analysis is limited by the **lack of national data**

**Data reporting in the EECCA countries:**

- Only **5** of **12** EECCA countries report data on HM emissions
- **Two** countries report **gridded** emissions data
- **No monitoring data** are reported so far

**Completeness of emission reporting**



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## Results of the Saltsjöbaden V Workshop

- **Growing evidence of effects on human health from HM and POPs**
- **Cd- exposure levels for European population above effect levels**
- **High levels of methylmercury in certain fish species (high up in food chain)**
  
- **Priorities for actions on HM**
- **Increased engagement and cooperation with the EECCA countries**
- **Demonstrate achievements by using monitoring and modelling results (integrated scientific approach)**
- **Establish ELVs for individual HMs**
- **Capping Mercury emissions to avoid increase due to total emissions**
- **Further regulation of products containing HM**
- **Further recommendations regarding international cooperation with scientific programmes and conventions**

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17

## The revised Protocol on Heavy Metals under CLRTAP

### **Only increased ratifications will increase its effectiveness !**

- **What action do we need to increase ratifications?**
- **Will the environment be better protected ?**
- **Will the use of BAT lead to improved environment?  
(general increase of use of energy/coal will possibly outweigh reduction )**
- **Emission Limit Values**

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18

## Workshop in Norway in Spring 2014

- Co-operation between Norway and TF HM
- Aiming for more ratifications from EECCA region
- Information on new guidance document on BAT for HM and revised HM Protocol
- EECCA group coordination meeting?

Katja Kraus - Umweltbundesamt

19

**Thank you!**



[katja.kraus@uba.de](mailto:katja.kraus@uba.de)

20

## Current issues

- Continued use of coal, increasing use of energy
  - increased use of domestic coal in Europe
  - increased use of energy worldwide
  - cheap fuel source because of presently low prices for emission trading
- Heavy metals in selected products not covered by international regulations (?)
  - several toxic metals in children's products in UNECE countries
  - problem of non-regulated items like sports equipment, swimming, protective equipment (e.g. helmets for bicycles), jewellery for children
  - shall we regulate gaps ?
  
- <http://www.grida.no/publications/toxic-metals/>