

## **Why is it so important to reduce heavy metals?**

### **Commentary by Katja Kraus, German Environment Agency (UBA), Chair of the Task Force on Heavy Metals, ECE Convention on Long-Range Transboundary Air Pollution**

Mercury, cadmium, lead and other heavy metals are toxic. They are released from both natural and anthropogenic sources, can travel long distances and persist in the environment. They precipitate on land or over water and reach plants or fish and enter the food chain. The most vulnerable sector of the population are children.

Due to increasing industrial activities and energy demand, heavy metal emissions in many areas of the world are still rising. The largest sources of emissions are gold mining, coal burning and the production of metals and cement. In the ECE region the biggest emitting sector is power generation using coal. Emissions of dust from these and other industrial sources are known to contain most of the heavy metals.

Much has been done during the past 20 to 30 years to reduce mercury, cadmium, lead and other heavy metals in the ECE region. The implementation of the Protocol on Heavy Metals to the Convention on Long-Range Transboundary Air Pollution (CLRTAP) has shown significant positive effects. For example, lead in petrol was phased out and industrial installations reduced their dust emissions by employing highly efficient filters. Still, significant challenges remain, in particular to bring the countries in Eastern Europe, the Caucasus and Central Asia on board. This is particularly important since their heavy metal emitting industries follow different, older standards.

In December 2012, the CLRTAP Protocol on Heavy Metals was revised, and new limit values for dust from industrial activities were agreed. The revised Protocol was designed to facilitate accession by countries in eastern part of the ECE region. Also, a new guidance document with descriptions of best available techniques (BAT) for the largest contributing industrial sectors was adopted.

Furthermore this January, after four years of negotiations, an international breakthrough in the form a global legally binding agreement on mercury was negotiated under the auspices of the United Nations Environment Programme. Over the coming years, the new treaty will control emissions from industrial activities, using BAT, and ban and reduce mercury in certain products and processes.

It will take some more years, even decades, before decreasing emissions and depositions of heavy metals produces the desired effect on the environment. It is important to act now; otherwise we will leave a bigger toxicity legacy to future generations.