

Heavy Metals and Children

WHO EURO Activities

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WHO EURO Activities on Heavy Metals

Outline

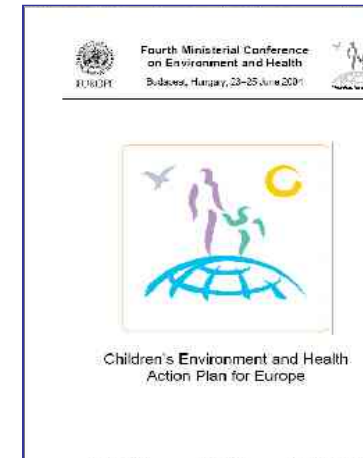
- Policy context
- Guidance and tools to support policy making
- Assistance to countries

Policy context

:Policy context



IV Ministerial Conference
on Environment and Health
Budapest, 2004



WHO is requested to provide guidance and tools to strengthen policy making to reduce and prevent children's environmental health risks and promote health

Policy context

CEHAPE RPG IV:

Reduce the risk of disease and disability arising from exposure to hazardous chemicals (such as heavy metals), physical agents (e.g. excessive noise) and biological agents and to hazardous working environments during pregnancy, childhood and adolescence.

Specific actions suggested for heavy metals in the CEHAPE table of actions by type

Enact legislation on the content of lead in petrol and building materials, to protect children from exposure to lead

Type of action: **Legislation**

Monitor the chemical contaminants of water and soil that are most hazardous to children, such as heavy metals, organochlorine pesticides and polychlorinated biphenyls (PCBs)

Type of action: **Monitoring**

Guidance to support policy formulation

UNECE Convention on Long-range Transboundary Air Pollution (LRTAP)

Protocol on Heavy Metals to the UNECE LRTAP aims at measures for reduction of emissions into the atmosphere of cadmium, lead and mercury with the objective to prevent adverse effects on human health or the environment.

Joint WHO/UNECE Task Force on Health Aspects of LRTAP to assess the health effects of cadmium, lead and mercury from long-range transboundary air pollution, and to document the supporting information on the subject .

The WHO/ECEH acts as the secretariat

Health Risks of Heavy Metals from Long-Range Transboundary Air Pollution
2006 Update (in Printing)

Guidance to support policy formulation

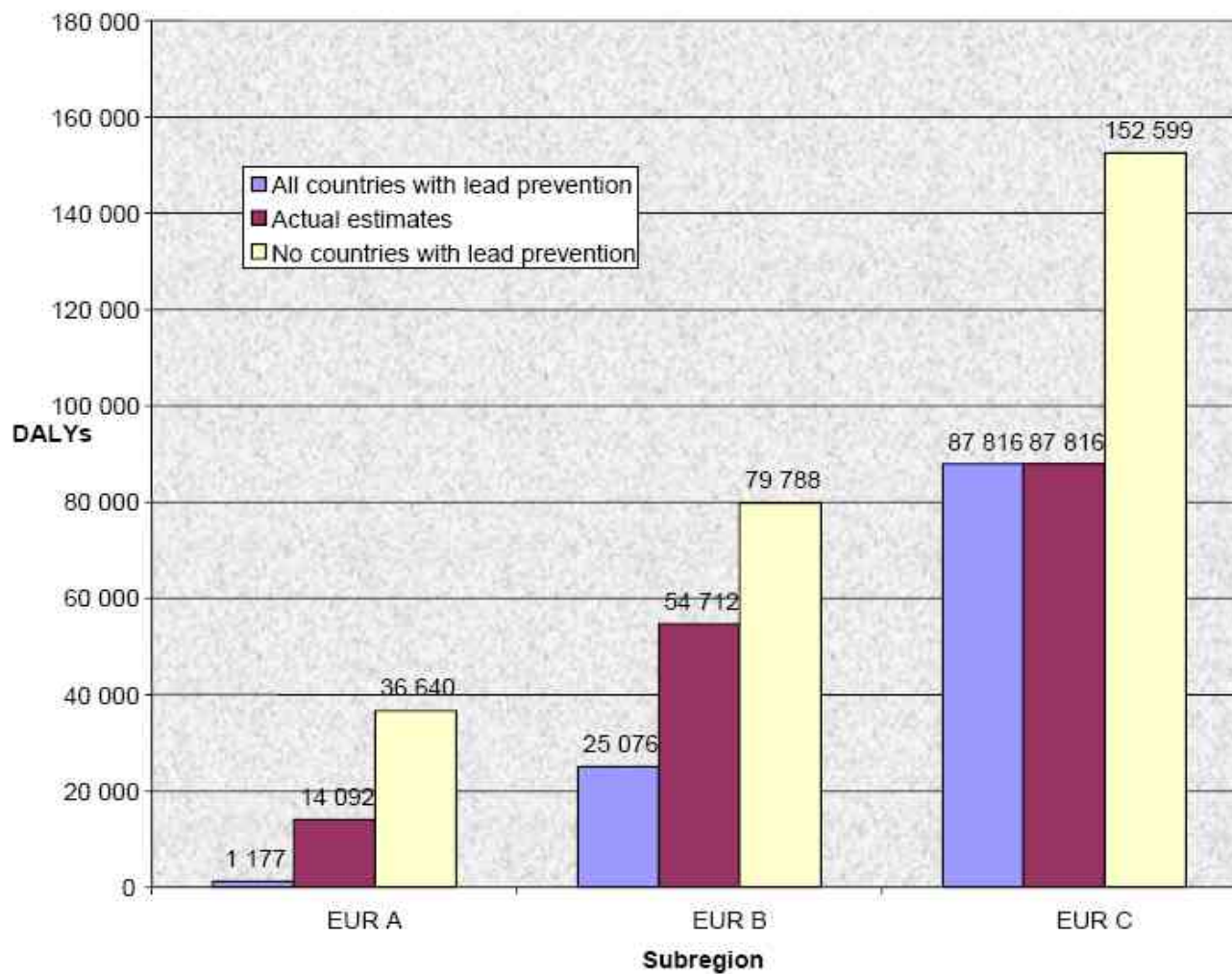


Blood lead levels in children 0–4 years old, by subregion.

Blood lead measurements	Subregion		
	EUR A	EUR B	EUR C
Subregional mean BLL (µg/dl)	1.9 ^a 2.9 ^b 3.8 ^c	3.1 3.9 4.4	4.3 4.3 6.4
Standard Deviation (µg/dl)	1.5	1.6	2.4
Children with >5 µg/dl blood lead (%)	3.3 9.4 24.9	11.5 28.2 38.7	48.6 42.8 61.0
Children with >10 µg/dl blood lead (%)	0 0.1 0.9	0.1 1.6 3.2	21.5 16.9 31.7
Children with >20 µg/dl blood lead (%)	0 0 0	0 0 0	6.2 4.1 11.0

Guidance to support policy formulation

DALYs due to MMR, assuming lead-prevention activity



Guidance to support policy formulation

Table 4.3 The burden of mild mental retardation in children 0–4 years old attributable to blood lead, for EUR

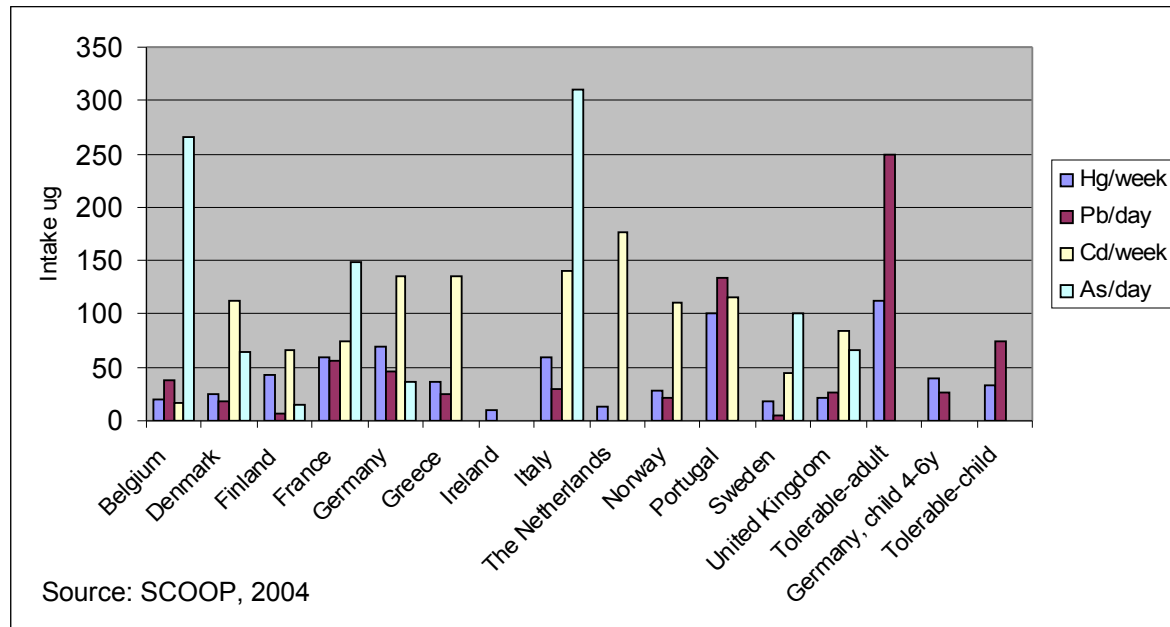
Subregion	DALYs	% of all-cause DALYs	DALYs per 10 000 children
EUR A	14 092	0.8	6.3
EUR B	54 711	0.9	30.4
EUR C	87 816	3.1	77.4
Totals, EUR	156 619	1.4	3.0

Guidance tools to support monitoring of actions and evaluations-Indicators

Indicators CEHAPE RPG 4

Indicator Title	Data source	Age
Policies to lower excessive UV exposure	Member States	YES
Incidence of melanoma	IARC	YES
Incidence of childhood leukaemia	IARC	YES
Work injuries in employees under 18 yrs	EUROSTAT	YES
Children's exposure to chemical hazards in food	WHO TDS	NO
Blood lead level in children	Case studies	YES
POPs in human breast milk	WHO survey	YES
Children exposed to harmful noise at school	Future	YES

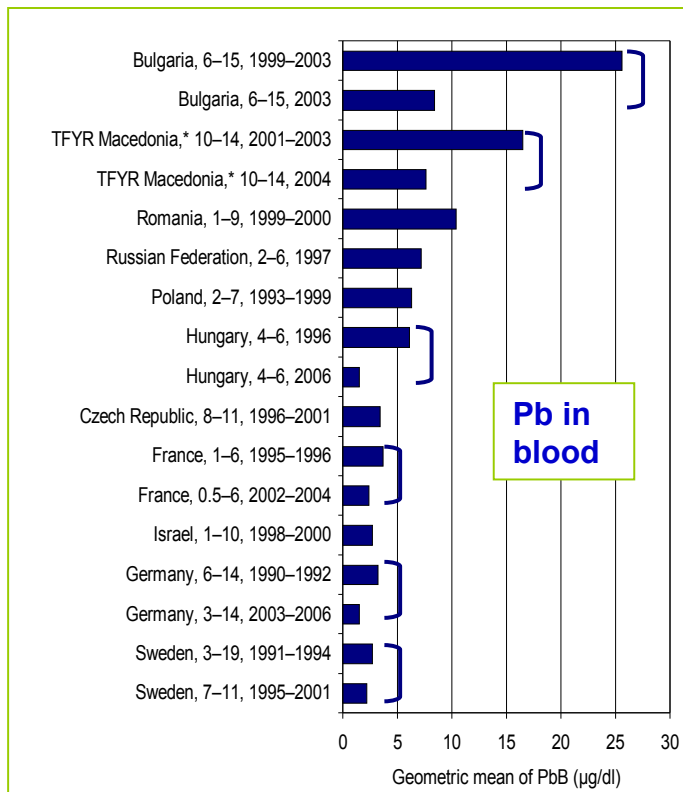
Evaluation



No child-specific data with the exception of Germany

Assessment of the situation: country variations; vs Tolerable intake

Evaluation



Exposure to lead

- Decrease of lead exposure due to unleaded fuels (but plumbing and local industries continue to be of concern)
-

Assistance to countries

Country activities

Kosovo(Serbia)

Risk assessment of lead for ethnic minorities in Mitrovica, Kosovo
Project between WHO EURO and Gwangju Institute of Science and Technology

Objective: to perform a health risk assessment of lead for the minority community in Mitrovica

- blood lead screening completed
- environmental sampling and analyses performed
- report with recommendations for actions to reduce high lead risks will be ready in September 2007

Assistance to countries

Country activities

Kazakhstan

Pilot project to examine mercury exposure and health effects in Temirtau Karaganda



Study mission organized 12- 20 May 2007

- Exposure and health data collected (143 participants)
- Medical examination performed (mainly neurological) (140 participants)
- Urine samples analysed for protein in urine and inorganic mercury(137 samples)
- Blood, hair and breast milk (from lactating women) specimens collected to be analysed at the laboratory in Munich, Germany
- Results and the report to be available in August 2007



Assistance to countries

Inter country work

Assessment of risks due to exposures to environmental chemicals

Workshop on reducing health risks from mercury exposures in WHO European Region (Bonn, Sept 2007)

Scope and purpose

- To evaluate short-term, mid term or long term management strategies, regional needs for exposure prevention,
- Application of substitutes for mercury
- Agree on recommended actions to reduce health risks from mercury exposure in the European region of WHO

- Improve understanding of of the mercury problem and its solutions
- Support international action on mercury, contribute to activities on prevention of children exposure to mercury

WHO European Centre for Environment and Health

Role

Provide the Member States with evidence to support policy-making in environment and health

- Organize systematic review of scientific evidence
- Stimulate research on EH priorities
- Analyse environment-related policies and their health impacts
- Provide stewardship for health in multi-sectorial policies

Thank you



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