HBM and latest developments towards a more harmonized approach in Europe

Reinhard Joas
BiPRO GmbH, Germany

Ludwine Casteleyn
Katholieke Universiteit Leuven, Belgium

Pierre Biot
Federal Public Service Health, Food Chain Safety and Environment, Belgium

Anke Joas
BiPRO GmbH, Germany
Successful examples of HBM programmes as policy tool

1. US (NHANES/CDC, annually since 1999)
4. Czech Republic (Environmental Health Monitoring System since 1994)
6. France (ENNS study – population based HBM and nutrition survey)
7. Italy (PROBE – first HBM survey for heavy metals 2008 – 2010)
8. WHO survey on dioxins and PCB levels in human milk or the envisaged UNEP activity related to mercury
Strenghts and advantages of HBM in policy

• Integrates contribution of different sources and routes of exposure
  – Detection of time trends
  – Difference in sub populations
  – Evaluation of public policies

• Much closer to health effects than environmental monitoring
  – Existing examples of Public Health actions

• Gets pollution personal
  – Awareness raising and education
    • Trigger for actions at personal and at societal level
    • Doing it is a message: society cares about EH
Human Biomonitoring in Europe

Action 3 of the EHAP - 2004

- We will develop a coherent approach to human biomonitoring in Europe
  - ESBIO FP6 2006
  - Council Conclusions 2007
  - Paris Conference 2008
  - COPHES/DEMOCOPHES 2009
  - Berlin & Brussels Conferences 2010
  - Council conclusions 2010
  - Budapest symposium 2011

Commitment to act – 2010

- We will contribute to develop a consistent and rational approach to human biomonitoring as a complementary tool to assist evidence-based public health and environmental measures, including awareness-raising for preventive actions
HUMAN BIOMONITORING FOR EUROPE
a harmonised approach

**COPHES partners**
24 European Member States a well as Norway, Croatia and Switzerland

**Active DEMOCOPHES partners:**
17 countries: BE, CY, DE, DK, PL, RO, SI, ES, HU, SE, UK, PT, CZ, SK, LU, IE, CH

NO, FR, AT, HR involved as ad hoc partners
HUMAN BIOMONITORING FOR EUROPE
a harmonised approach

Similarities – Differences – Common Interests

FP7 funded by the European Commission
→ Provides framework
→ Provides guidance
→ Analyses results on a EU level
→ Recommendations & Conclusions

Life+, funded by European Commission and Member States
→ children and their mothers
→ at least 3600 study subjects
→ cadmium, phthalates, cotinine in urine
→ mercury in hair
→ (bisphenol A in urine)

Harmonised approach for HBM in Europe
Operational aspects – Two project working together

COPHES will provide study protocol, helpdesk functionalities, training etc. to enable the start of DEMOCOPHES

COPHES will support all aspects of DEMOCOPHES, DEMOCOPHES will perform feasibility study

DEMOCOPHES will report back results and lessons learned to enable COPHES to prepare recommendations and conclusions for future EU HBM

COPHES

Dec 2009

1st year

2nd year

3rd year

Nov 2012

~ 2 years

Sep 2010

DEMOCPHES

Demonstration of a study to coordinate and perform human biomonitoring on a European Scale

COPHES

Consortium to Perform Human Biomonitoring on a European Scale
Achievements and milestones

**COPHES**
- EU Protocol and SOP’s ready
- 1st ICI finalised
- Helpdesk started
- WG started
- Training in preparation
- Website updated

**DEMOCOPHES**
- National protocol in preparation
- Sampling Sept-Dec 2011
- Chemical analysis Jan-Feb 2012
- Analysis of results March-May 2012
(DEMO)COPHES priorities related to HBM as policy tool

A) Develop a concept for a sustainable European HBM framework and policy recommendations on how to better link it to policy needs
   1. Assess authorities and stakeholders perspectives for relevant steps of HBM studies
   2. Identify long-term requirements in an organisational context
   3. Estimate costs and resources needed for a sustainable framework
   4. Explore the possibility to liaise with the Health Examination Survey
   5. Ensure that HBM is linked to the existing regulatory frameworks

B) Establish tools for policy developments such as an effective and harmonized approach for interpretation and communication of results
e.g. an effective and harmonized approach for interpretation and communication of results
HBM as policy tool – the way forward

EU/international:

1. Commitment for harmonised HBM approach
2. Development of E&H indicators
3. Idea on feasibility of comparability of data
4. First set of reference data on environmental chemicals
5. Tested infrastructure in 17 countries
6. Expert network

National level:

1. Capacity building on practical application of HBM
2. Awareness raising about possibilities of HBM
3. Integration of national policies on food, environment and health
4. Agreements between industry and competent authorities
5. Selection of chemicals of interest ongoing and expanding (>100)
German Initiative to Support HBM

German Chemical Industry Association (VCI)

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Steering Group:
Representatives from industry, ministry and agency

Expert Group:
Scientists from research institutes, industry and federal agencies

Communication Team:
Representatives from industry, ministry and agency

Development of chemical-analytical methods sensitive enough to detect environmental exposure

Systematizations of chemicals for HBM – The German approach

**120 chemicals** with

a) a potential health relevance or

b) to which the general population might potentially be exposed to a considerable extent

Grouped in the categories:

- Phthalates - Musk fragrances - Nano particles - Flame retardants
- PFC and FC - Aromatic amines - Chemicals used in cosmetics - Metals
- Benzothiazoles - Contaminants in food - Allergenic substances
- SVHC candidates (Art. 57)

Vision and future steps for HBM as policy tool at EU level

→ At short-term
   To design the outline of a more global EU programme
   collecting information on a representative sample of the EU population
   including clear communication strategies and scenarios for translation of
   scientific data into policy

→ At mid-term
   To collaborate with other existing/in development surveys
   coupling HBM to other surveys
   To give the necessary information for data interpretation
   To provide considerable cost savings and
   To create unforeseen research, risk/benefit and policy opportunities.

→ At long-term
   To assure the continuity of a EU HBM programme as a policy tool.
   embedding HBM survey activities in governmental institutions rather than to
   outsource it to academic groups
Thank you for your attention

www.eu-hbm.info