2nd ICPDR Stakeholder Forum

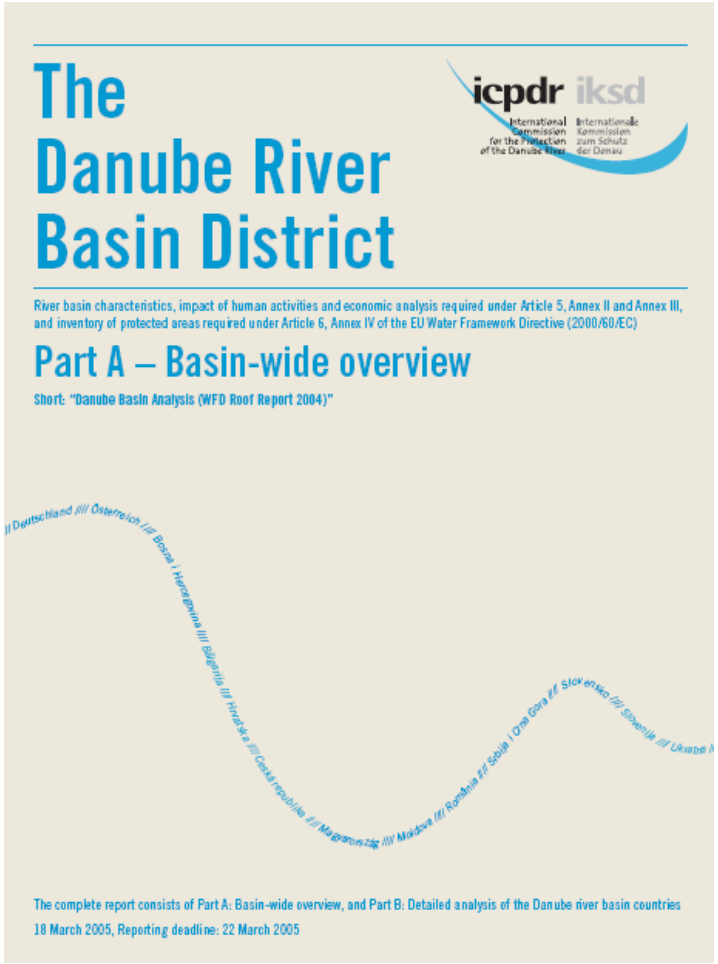
icpdr iksd
International Commission for the Protection of the Danube River
Internationale Kommission zum Schutz der Donau

Pollution by hazardous substances

Bratislava, June 29-30, 2009

Joachim Heidemeier
Chairperson P&M EG

Danube River Basin Analysis Report



WFD Article V Roof Report

Approved at the Ministerial Meeting
Vienna, 13 December 2004

DRBM Plan draft – public consultation

18 May – 31 July 2009

Adopted at the 7th StWG Meeting
Bratislava,14-15 May 2009

Four significant water mangement issues

Organic Pollution

Nutrient Pollution

Hazardous Substances Pollution

Hydromorphological Alterations

Hazardous substances pollution

Danube River Basin Analysis Report

SWIMI	SWIMI	SWIMI
Organic Poll.	Nutrients	Haz. Subst.

Hazardous substances
Main sources

Hazardous Substances Pollution

- industrial effluents
- storm water overflow
- pesticides and other chemicals applied in agriculture
- discharges from mining operations and accidental pollution
- for some substances atmospheric deposition may be of significance (PAH)
- abandoned mining sites

Hazardous substances
Use of agricultural pesticides

Important source: pesticides used in agriculture

Danube Basin Analysis: 29 relevant active ingredients were used in pesticide products

Of these, only 3 pesticides are authorized for all countries, while 7 are not authorized in any of the countries, despite the fact that they have been found in testing of water and sediments (see also results from JDS 1 and 2)

Compared with Western Europe and upstream countries, the pesticide use in central and lower DRB countries is still low

But the risks of pesticide pollution remain and are an important pressure on water resources

Hazardous substances
ICPDR List of priority substances

Hazardous Substances Pollution

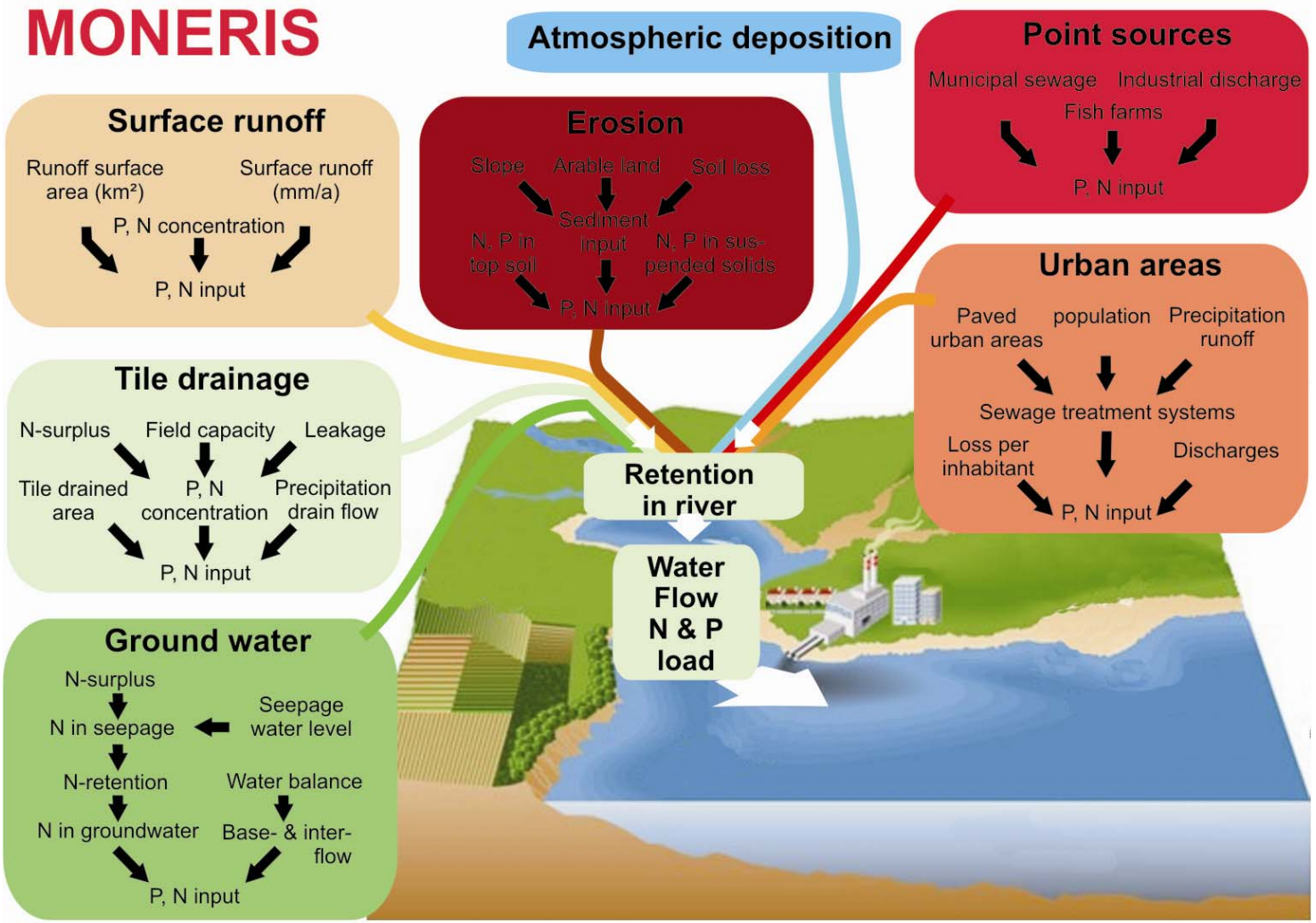
A list of substances/parameters of relevance in the DRB was prepared by the ICPDR:

- **Annex A**: 33 priority substances, in accordance with the Annex X of EU WFD
- **Annex B**: 8 additional substances (of which 4 are hazardous):
  - B1: General Parameters (COD, NH4-N-ammonia, Total N, Total P) ;
  - B2: Danube Specific Substances (arsenic, copper, zinc, chromium).

Hazardous substances

Danube Basin Vision

Programme of Measures



Schernewski (2007)

Hazardous substances

Pressures Assessment

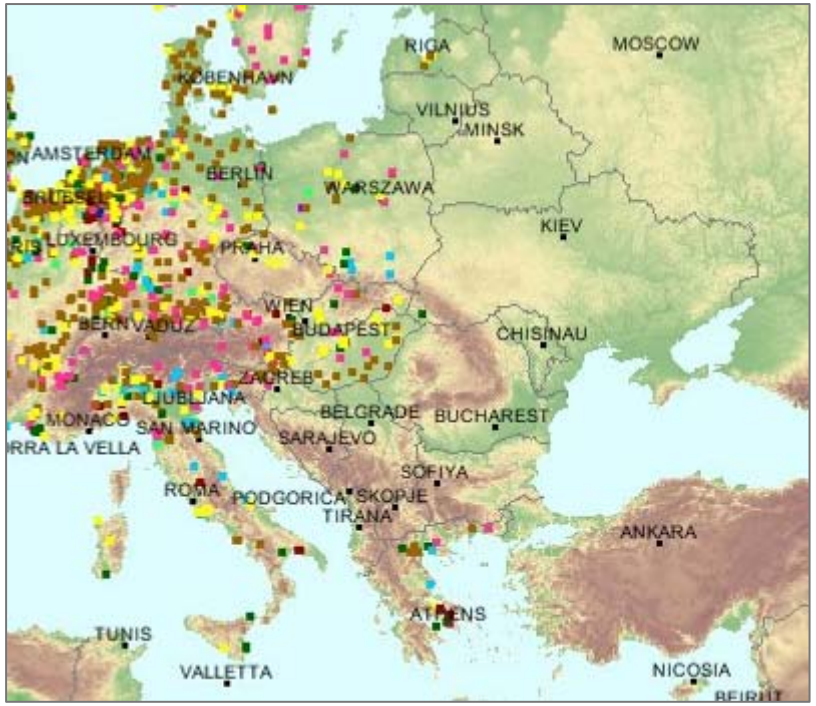
- Based on EPER (EU MS) and ICPDR Emission Inventory
- Lack of knowledge on sources , pathways and losses of hazardous substances on the basin-wide scale
- Inventory data to be improved (PRTR)

Status and assessment of industrial wastewater development

Reporting: all DRB ~ EPER II

Results:

Emissions from industry still lower than those from agglomerations



Hazardous substances
Key measures (1)

- EU Directives (IPPC, Directive 2008/105/EC of 16 December 2008 on environmental quality standards, UWWTD, ..) key measures
- The implementation of BAT in different industrial sectors:
    - EU MS outlined by the IPPC Directive
    - Non EU MS outlined by ICPDR Recommendations
- Appropriate treatment of priority substances from industrial discharges
- Further strengthening of prevention and safety measures at contaminated sites

Hazardous substances
Key measures (2)

- Continued upgrade of WWTPs with biological treatment
  → some hazardous substances accumulate in sewage sludge

- Increases of the number of WWTPs

- Chemical management measures: EU regulations: REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), Pesticides Directive, bans/substitution of certain substances or measures which ensure safe application of products (BEP)

- Measures regarding accidental pollution: prevention of accidents and ensuring effective contingency planning. ICPDR mechanisms: Accident Risk Spots inventories and Accident Early Warning System

Hazardous substances
Key conclusions (1)

- The implementation of Directive 2008/105/EC of 16 December 2008 on environmental quality standards, the IPPC Directive, the UWWT Directive and the widespread application of BAT/BEP **will improve but not solve the problem** of hazardous substances.

- It is estimated that the management objectives and WFD environmental objectives will not be achieved in 2015 regarding hazardous substances.

- There is a need for more monitoring data, as well as information on sources and relevant pathways.

Hazardous substances
Key conclusions (2)

- The present lack of knowledge on the sources, pathways, discharges and losses of hazardous substances will be reduced by monitoring, PRTR reports and reporting of EU REACH, as well as by the results of the inventory on the new EU Priority Substances Daughter Directive.

- JDS2 results showed: EQS for di-(2-ethylhexyl)phthalate (DEHP) was exceeded in 44% of the water samples.
  At several sites EQS for PAHs, nonylphenol and tributyltin were exceeded as well.

- Additional actions need to be developed based on improved information.

Thank you!

Further info: www.icpdr.org