

An aerial photograph of a mountainous region. In the foreground, there are dark, jagged rock formations. To the left, a green, grassy slope descends. In the background, a town with red-roofed buildings is visible through a valley, partially obscured by white clouds. A central graphic overlay consists of a blue square with a mountain silhouette and the text 'WIRE 2018'.

# WIRE 2018

WEEK OF INNOVATIVE REGIONS  
IN EUROPE 2018

# Helmholtz Centre for Environmental Science – UFZ Leipzig

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<http://www.ufz.de/>

1949

Academy of Sciences of the GDR,  
Location Leipzig

Reconstruction in the 1950s

“Die Wende“ 1989  
(the peaceful revolution leading to the  
German reunification)

1990

12.12.1991

**Foundation of the UFZ**

Mission :  
Remediation concepts for industrial  
metropolitan areas in the region





# UFZ Founding Mandate 1991-2003

„Ecological research to help solve the environmental problems in highly contaminated areas of the former GDR “ (*December 1991*)

## Industrial Megasites



## Mining Landscapes



# The UFZ – Strategy Determinants 1991-2004 (I)

framework,  
megatrends



acute environmental  
crisis East Germany

perspective



regional: Eastern Germany



Remediation, end-of-pipe

Water

Recultivation  
of mining lakes



Ecology

Ecological  
redesign/restoration



Chemicals

Remediation of  
contaminated  
megasites



# The UFZ – Strategy Determinants 2004-2018 (II)

framework,  
megatrends



Climate Change,  
Energy Transition  
Sustainable Land Use

perspective



Europe + international



Systemic / technology  
and preventive measures

Water

EU Water Framework



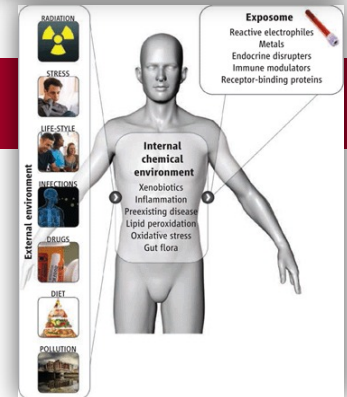
Ecology

Ecosystem services  
Energy Land use



Chemicals

Effects on human and  
the environment



# Resources

## Personnel

- ~1.100 employees
- 88 % in the scientific-technical domain

## Budget

- ~ 60 million EUR (core funding)
- ~ 30 million EUR (third party funding)

## Core funding by



Bundesministerium  
für Bildung  
und Forschung

90 %



5 %



5 %



Leipzig



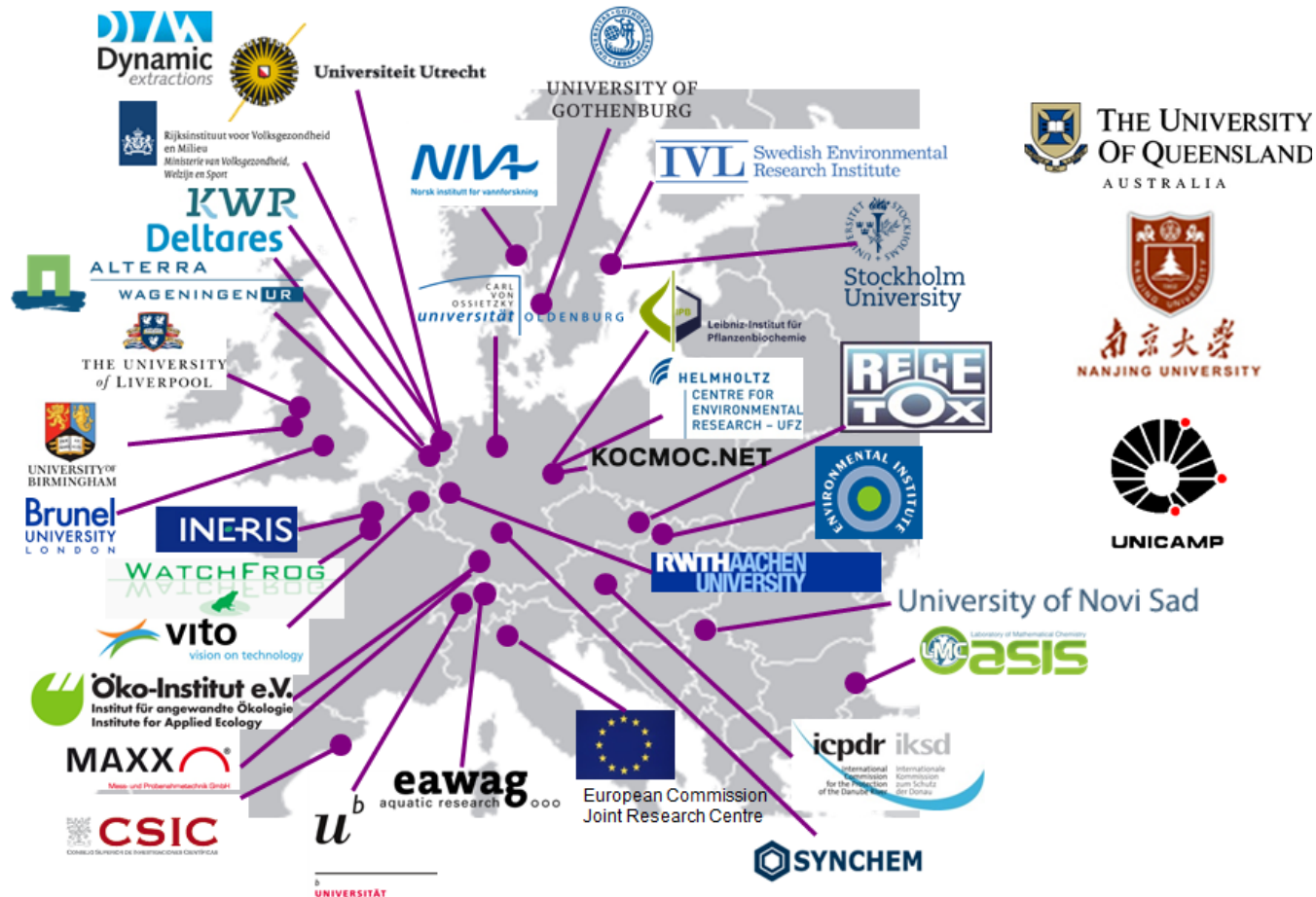
Halle



Magdeburg



# Large European Projects



**Objective -  
Improve Water  
Monitoring  
→ WFD**

**39 partners  
12 mio Euro  
Start: 1.10.2013  
Duration: 5 years**

# Science application in case studies

- 6 week river expedition from source to mouth
- 34 laboratories from 11 countries
- Investigations on
  - Chemistry
  - Ecology
  - Ecotoxicology
  - Hydromorphology





# Product – e.g. Policy recommendations



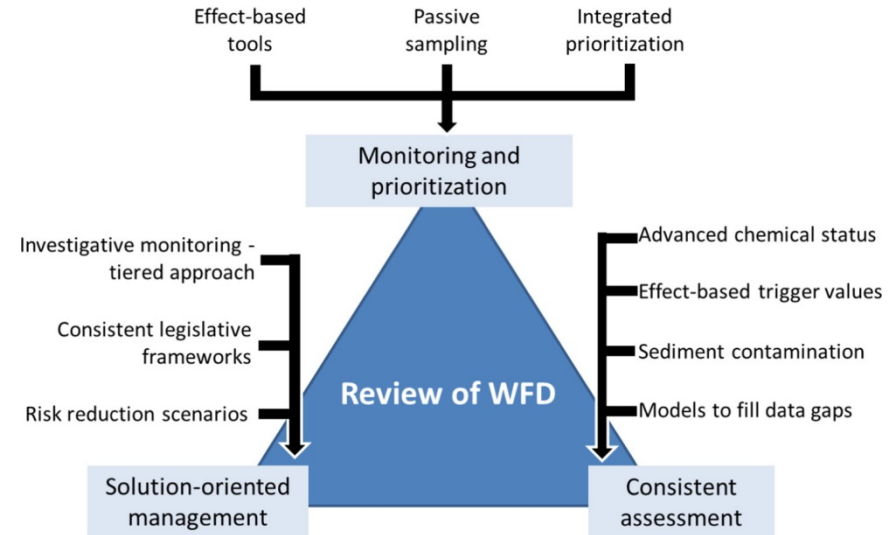
Science of The Total Environment

Volume 576, 15 January 2017, Pages 720–737

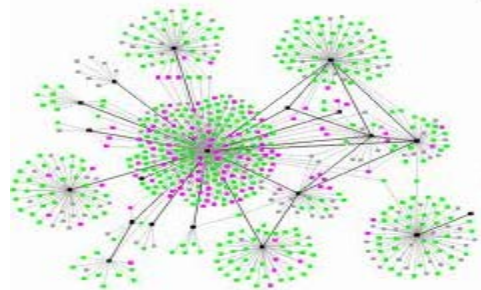


Towards the review of the European Union Water Framework Directive: Recommendations for more efficient assessment and management of chemical contamination in European surface water resources

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## Research Collaboration



**Resource  
monitoring &  
management**



**Chemical  
assessment**



**Technology  
implementation**



**EU training networks**



**Outreach**



**ChemProp**

**EU scientific committees: EFSA, SCHER**

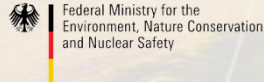
**Coordinated  
actions**



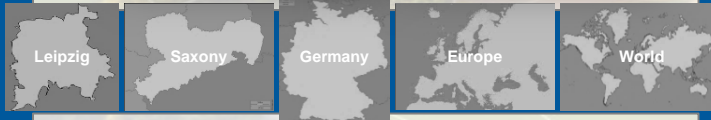
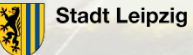
# Knowledge & Technology Transfer - Continuous Stakeholder Dialogue



European Environment Agency



LANDESAMT FÜR UMWELT,  
LANDWIRTSCHAFT  
UND GEOLOGIE



... adapted to  
the scales of decision-making



United Nations Environment Programme







**Safeguarding the Future. Research for the Environment.**

**Thank you for your attention!**