



The unpleasant need of going to court

The Elbe near to Decin (CZ) (source: seznam.cz)

Legal options of a downstream state to bring upstream partner to action

Ilka Carls, Henrich Röper, Sonja Wild-Metzko & René Schwartz

The Elbe – an international river

- **Length:** 1,091 km
- **Area:** 148.268 km²
- **Mean streamflow:** 728 m³/s (barrage Geesthacht)
- **Mean discharge:** 5,4 l/s*km² (gauge: Neu Darchau)
- **Mean suspended sediment load:** 650.000 t/a (from inland into the tidal Elbe)

- **Population:** 25 Mio people (D, CZ)
- **Industry/Mining:** over centuries
- **Agriculture:** 56% of the catchment

Sediment challenges in terms of

- Quantity/Hydromorphology (sediment deficit, erosion; tidal upstream transport)
- Quality (ecological status; floodplain agriculture, dredging ...)



1



2



3



4





1st Elbe management plan (2010-15)

Deficient hydromorphological conditions and contamination are supra-regional issues

Unbalanced sediment conditions and contaminated sediments among main reasons for failure WFD-objectives

ICPER/ RBC Elbe (2009): Sediment management concept in preparation of the 2nd management cycle (2016-2021)

2014 published:

The Sediment Management Concept of the ICPER - Recommendations for a good sediment management practice in the Elbe

- It is **integral**: it combines spatial, functional (**quantity, hydromorphology, quality**) as well as environmental and use-oriented (navigation) sediment aspects in one concept

Conceptual set up – Overview

3

**Recommendations for River Basin Management Planning
Prioritization including cross checking**

2

**Risk
analysis**

Quality deficits

Navigation
handicaps

Hydromorphological
deficits

1

**Status
evaluation**

Quality status

Quantity status

Hydromorphology status

**Indicator
definition**

- 29 Elbe relevant hazardous substances (Table 1)

- Flow rate
- Suspended sediment load
- Suspended sediment concentration
- Bed load

- 6 hydromorphological indicators (Table 4)

**Goal
definition**

- Guarantee the good ecological and chemical status of the ecosystem, its functions and services to the society:**
- Healthy aquatic ecosystem
 - Value of life and human health
 - Agricultural use of floodplains
 - Navigable waterways

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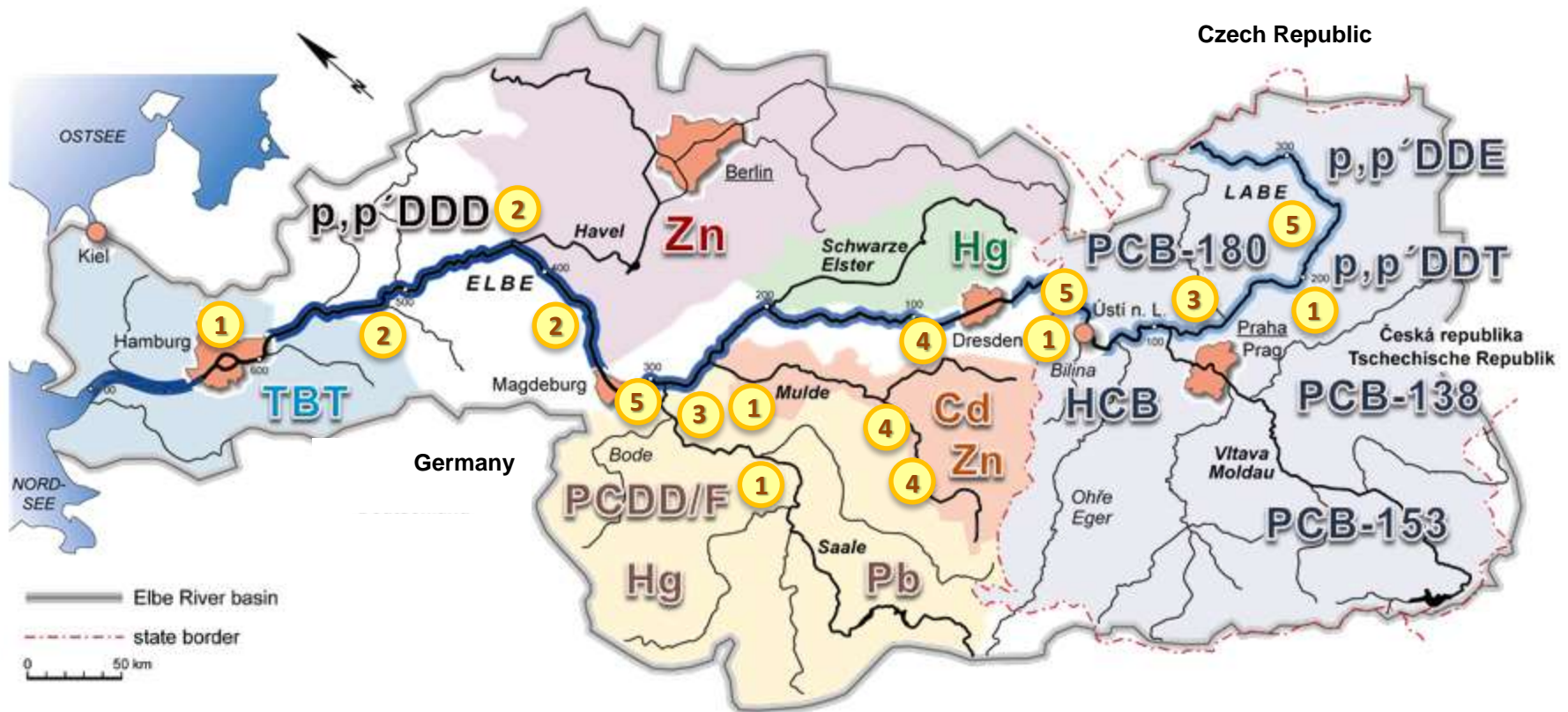
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System view – Main pollution areas



Industry

1



Side structures

2



Major barrages

3



Old mining

4



Old sites

5



Agreed recommendations – Quality perspective



1. Reduction/restoration of point sources,
2. reduction/restoration of historical contaminations,
3. removal of historical sediment deposits sensitive to remobilization,
4. management of fine sediments in the river combined with the optimization of maintenance strategies,
5. reduction of contaminated fine sediments emitted from urban areas, and
6. utilisation and management of contamination sinks.

WFD – The River Basin Concept

- **Holistic approach:**
Protection and sustainable management of all surface and groundwater, including transitional and coastal waters
- Covering **all pressures and impacts**
- Water management at **river basin level**
- **River Basin Management Plans:** basic instrument to implement WFD





Report

of the sediment management implementation process

Internationale Kommission zum Schutz der Elbe
Mezinárodní komise pro ochranu Labe



SEDIMENTMANAGEMENTKONZEPT DER IKSE
Vorschläge für eine gute Sedimentmanagementpraxis im Elbegebiet
zur Erreichung überregionaler Handlungsziele

Implementation in the 2nd management cycle

- Permanent consideration in the responsible bodies of ICPER / RBC Elbe
- Report every 2 years on implementation
 - Questionnaire
- International workshop series (CZ/DE)
- Methodological progress
 - Development of tools for efficiency control (e.g. aspect quality: Sediment quality index)

Progress report 2017

Knowledge

31

- Case studies and research
- ELSA Project: case studies and financial support
- Stakeholder involvement



Monitoring

6

- Extreme event monitoring: flood and low water, extreme pollution situations (e.g. accidents)



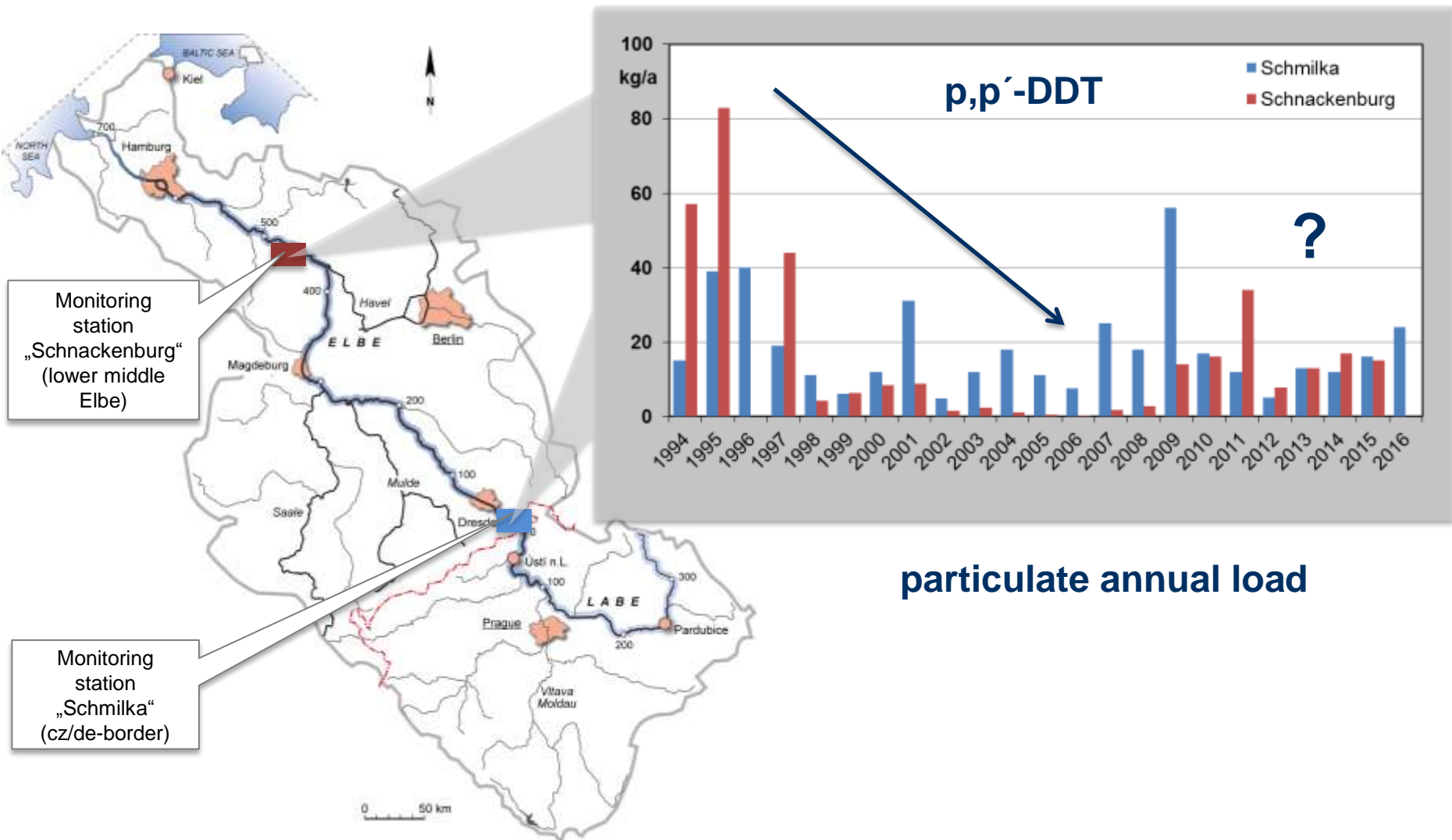
Practical status

46

- Improvement of sediment continuity or removal of old contaminated sediments



Self-solving problem?



particulate annual load

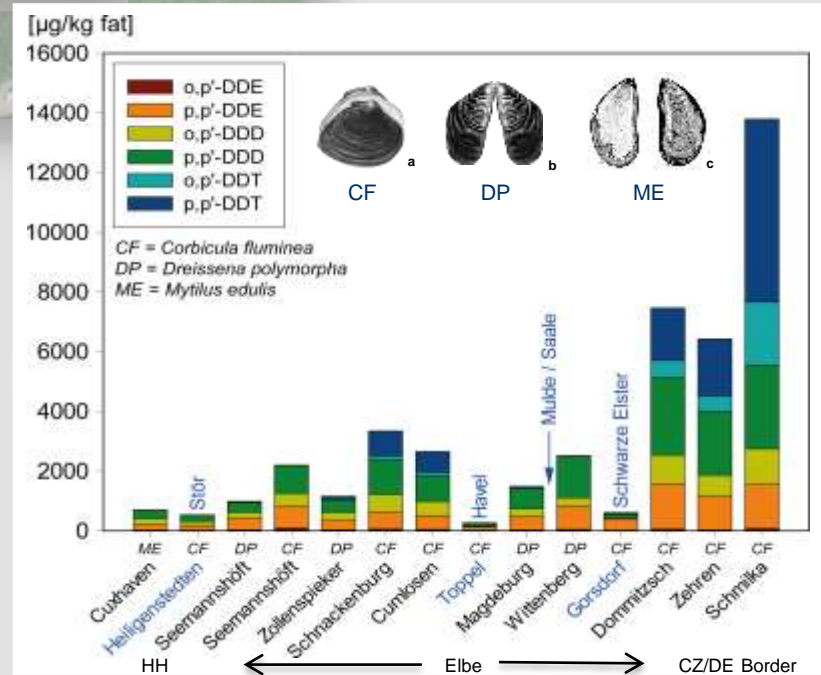
Recent pollution sources and effects



Dredging in the Czech Elbe, use of the underwater bulldozer "Komatsu"

Development of DDx-concentrations in mussels in the Elbe in 2016

pool samples [n= 8 to 20 individuals]



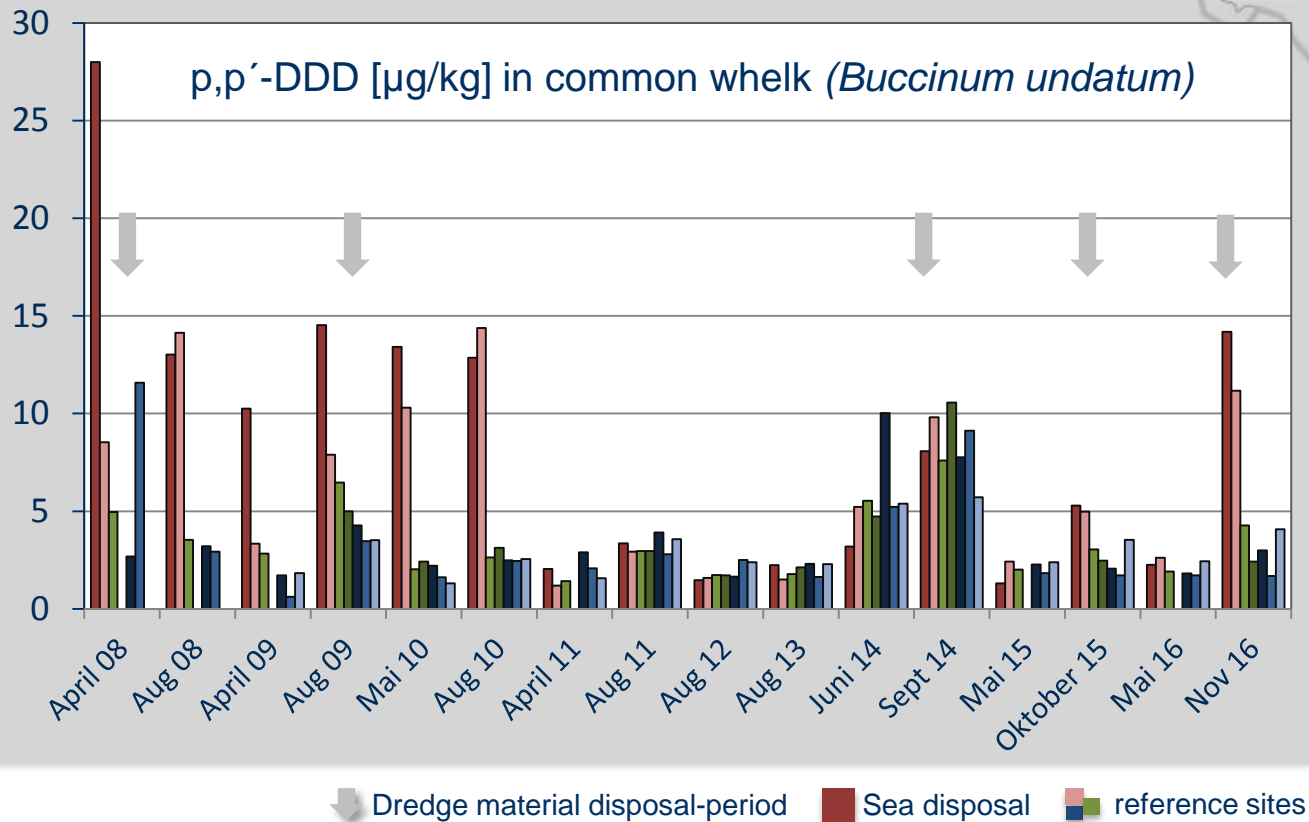
Economic meets environmental interests



Effects in the marine environment



Sea disposal



Implementation process of WFD

1st management cycle of WFD

inventory
(2004)

monitoring
programs
(2006)

manag. plans
measure
programs
(2009)

realisation of
measures
(2012)

Decision was made to create the Elbe
sediment management concept

2015: Did
we meet the
objectives?

No!
Due to the
currently existing
pollution.

2nd management cycle of WFD

1. updating
inventory
(2013)

1. updating
management plans,
measure programs
(2015)

realisation of
updating
measures
(2018)

2014 the international Elbe sediment
management concept was published

2021: Will
we meet the
objectives?

No!
Without the
implementation
of measures.

3rd management cycle of WFD

2. updating
inventory
(2019)

2. updating
management plans,
measure programs
(2021)

realisation of
updating
measures
(2024)

2027: Will
we meet the
objectives?

Yes!
If we consider the
recommendations
of the Elbe
sediment
managment
concept.

now

Legal analysis of political and administration relationships with a special view on contaminated sediments and WFD

- Yes! The Sediment Management Concept meets the spirit of the WFD. RBC Elbe and ICPER are with it on the right way to an integrated, river basin-wide management.
- By contrast, the recent management plan and program of measures (2016-2021) partly fail in meeting the required river basin wide coordination. The plan/program refer to the concept in principle but do not transfer its spirit into adequate management actions.
- Obtaining the required level of cooperation between the Federal States and between the Federal Government and the States remains difficult. Often management decisions are taken just from a single point of view thus simply shifting a problem within the river basin.



Reese & Köck, 2018

Legal options:

- There is a legal claim to examine and coordinate effectively management decisions from a genuine ELBE perspective. Such strategy would include fair cooperation in terms of water and sediment quality - as well as for shipping purposes (see “covenant loyalty”).
- In accordance with the WFD, the obligation to reduce long-term effects and coordinate measures/exceptions also applies to the relationships between the EU member states (see “national lawsuit”).
- The EU Commission can initiate “infringement proceedings” against member states based on own investigations or complaints.



1

Review of the implementation status – Challenges & needs

• **Challenges:** What does complicate the implementation?

Complexity of the system ...

Principle of proportionality in management planning

Lack of (basin-wide accepted) socio-economic approaches

Detailed risk analyses and expensive feasibility studies

High, unevenly distributed costs ...

Lack of clear political commitment ... Insufficient consultation and cooperation

• **Needs:** What do we need to encourage implementation? “Be well informed – Manage adaptively – Take a participatory approach”

System knowledge

Reduce the responsibility ripple

Prioritization & efficient combination of measures

Comprehensive stakeholder involvement in decision-making

Solidarity approach „river basin budget“

WFD and beyond: Political impulse „pro sediment“

Cooperation – a question of common sense. Can legal steps help to enforce?

- Marc Eisma (Port of Rotterdam Authority, NL)
- Philip Spadaro (TIG Environmental, USA)



Discussion:

- We request the consultation of the SedNet community

Thank you!

Ilka Carls
Free and Hanseatic City of Hamburg
Ministry of Environment and Energy
ilka.carls@bue.hamburg.de

