

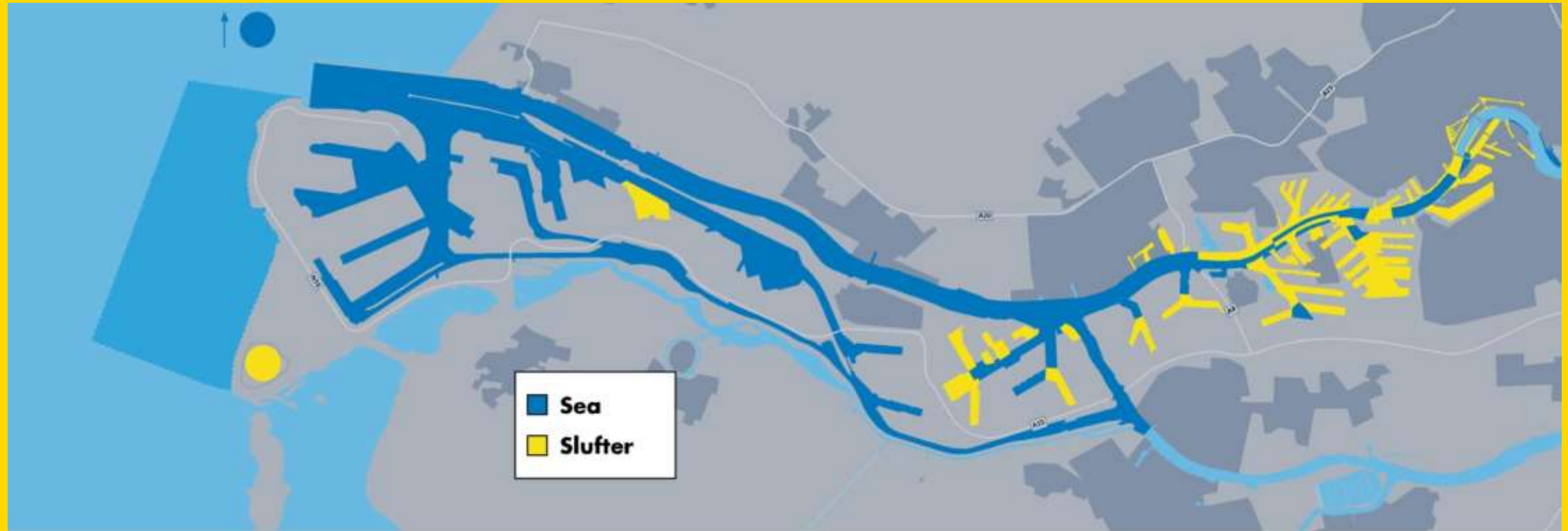
RHINE RESEARCH PROJECT AND UPSTREAM INFLUENCE



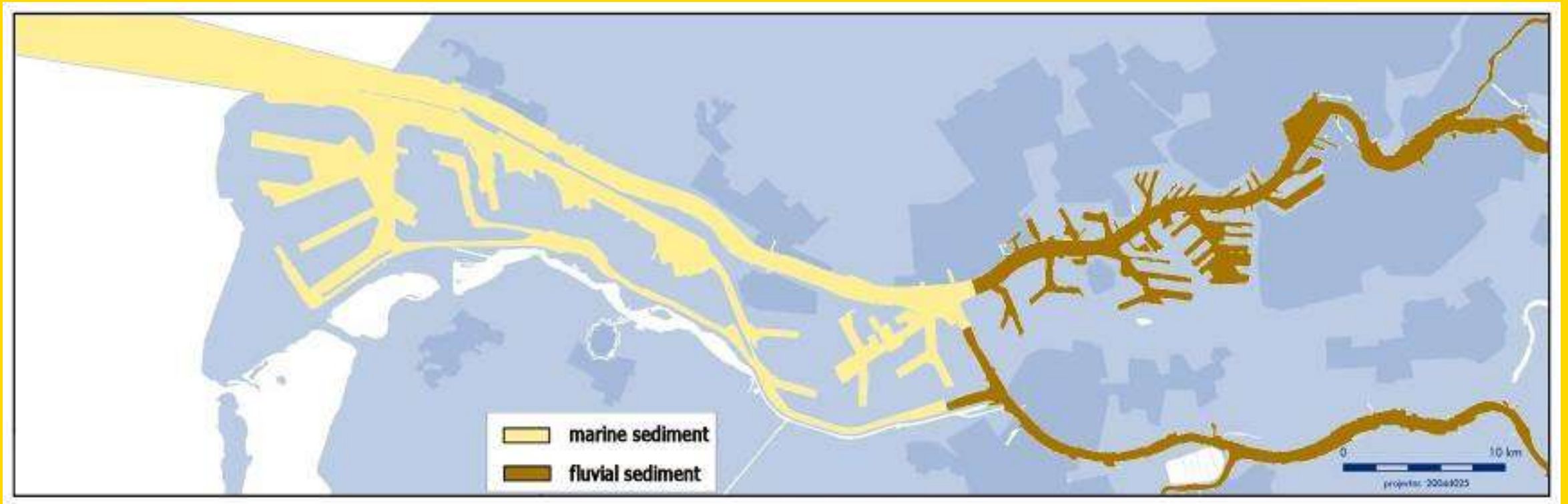
Marc Eisma, Port of Rotterdam Authority

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

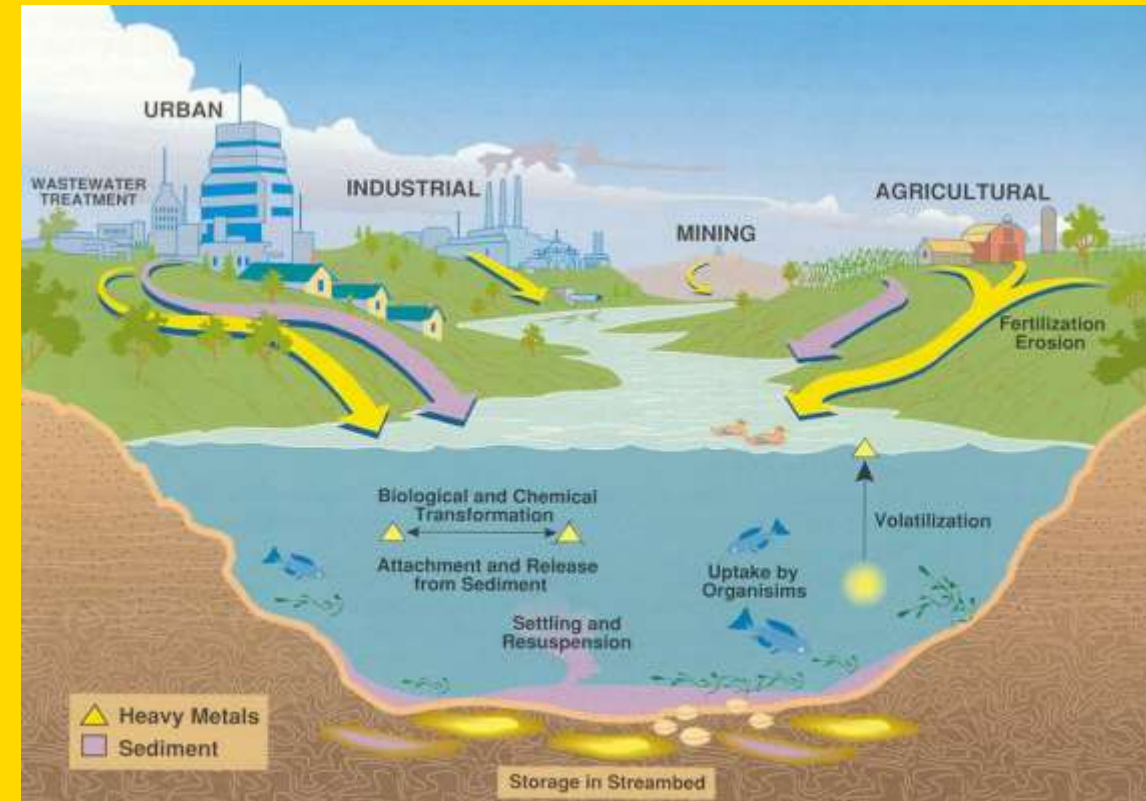
Dredged material classification



Sediments originating from sea and river

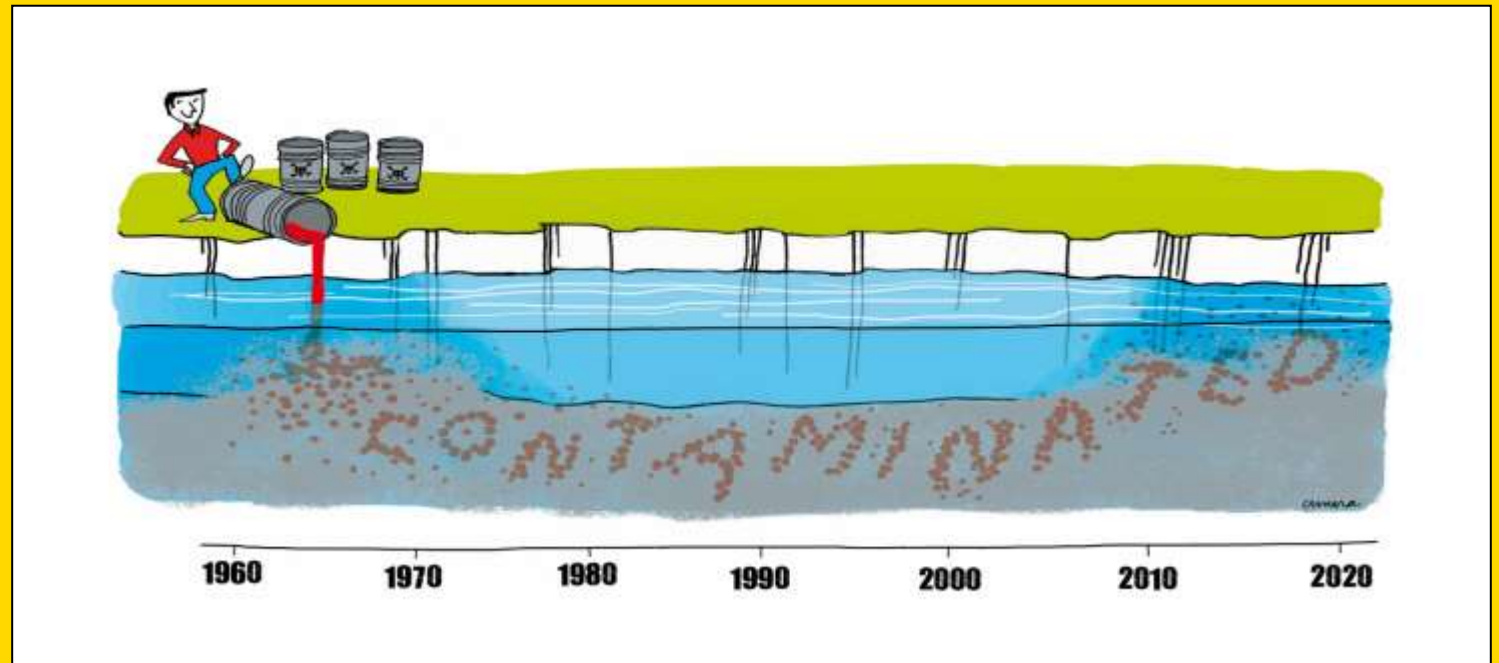


From source to sink



Rhine Research Project part 1 (1984-1994)

- Source identification and load assessment
- Contaminant balances
- Legal research
- Information campaigns
- Dialogues and agreements

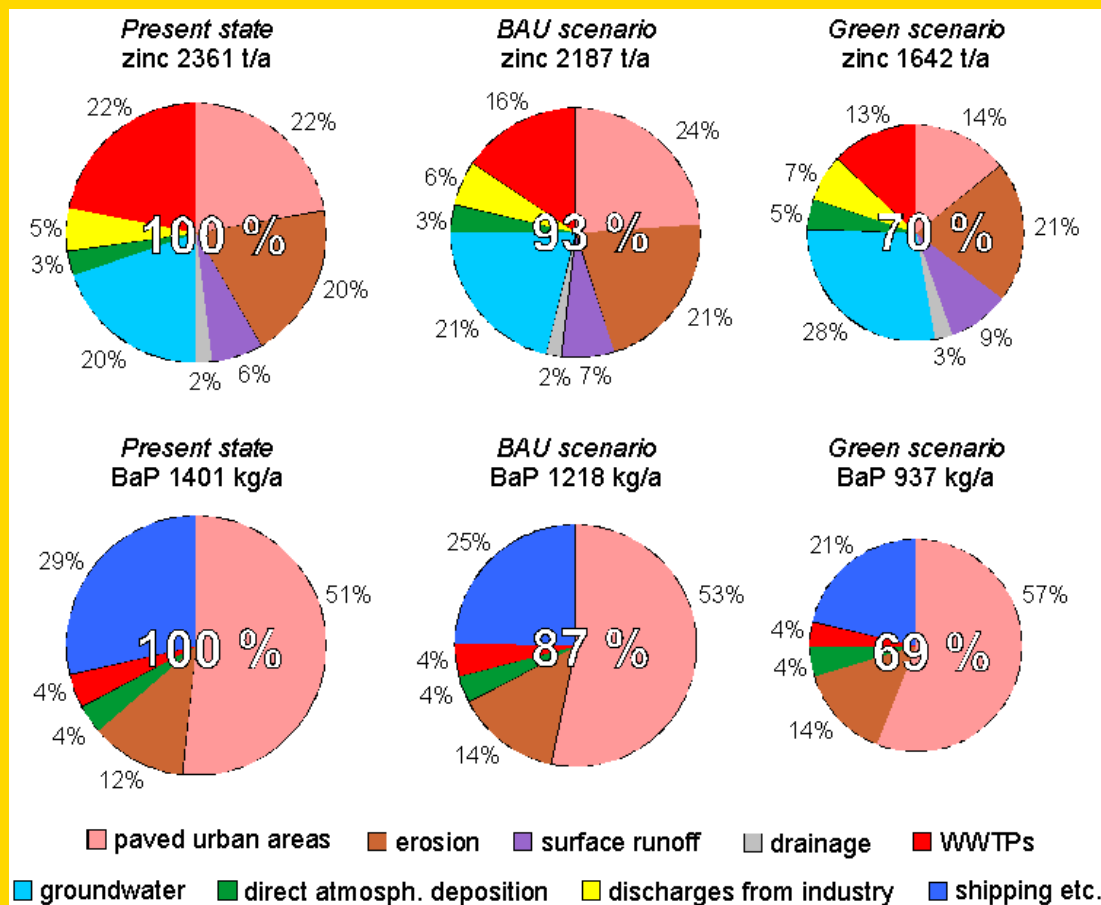
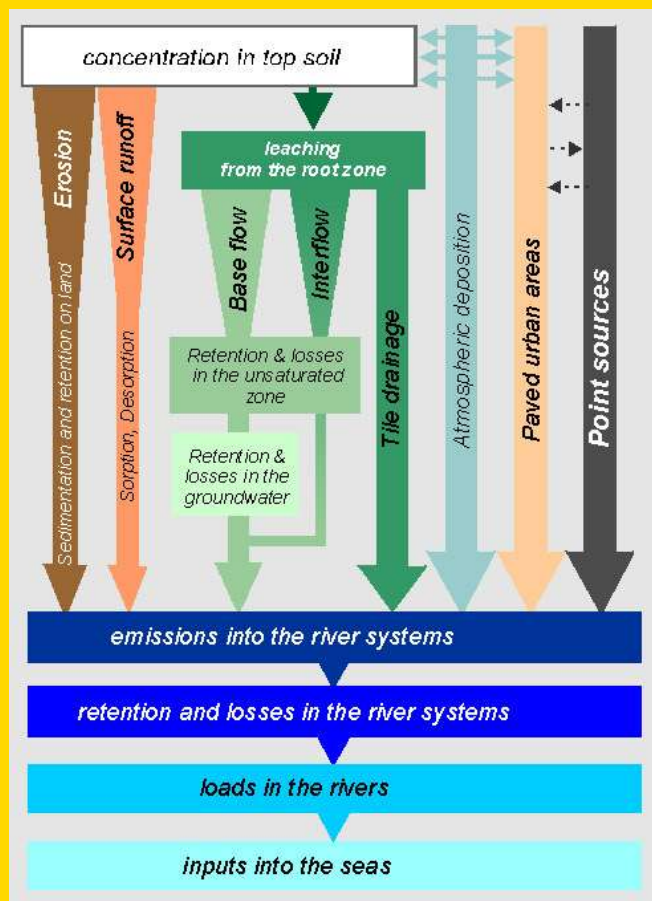


Results agreement VCI – Rotterdam

Compound	Discharges 1984 (t)	2000	2005*	Red.% '84-'05
Zinc	450	100	65	86%
Chromium	150	20	10	93%
Copper	80	25	16	80%
Cadmium	1.2	0.5	0.15	88%
Mercury	0.6	0.14	0.10	83%
AOX	1500	300	150	90%

* in 2006 agreement extended until 2027

Rhine Research Project part 2 (1997-2007)



Historic contaminated sediments

Inventory of historical contaminated sediment in Rhine Basin and its tributaries



(Foto: BfG)

Final report

October 2004

Technical University Hamburg Harburg
in Cooperation with the University Stuttgart



This report was written on behalf of the Port of Rotterdam

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Areas of risk

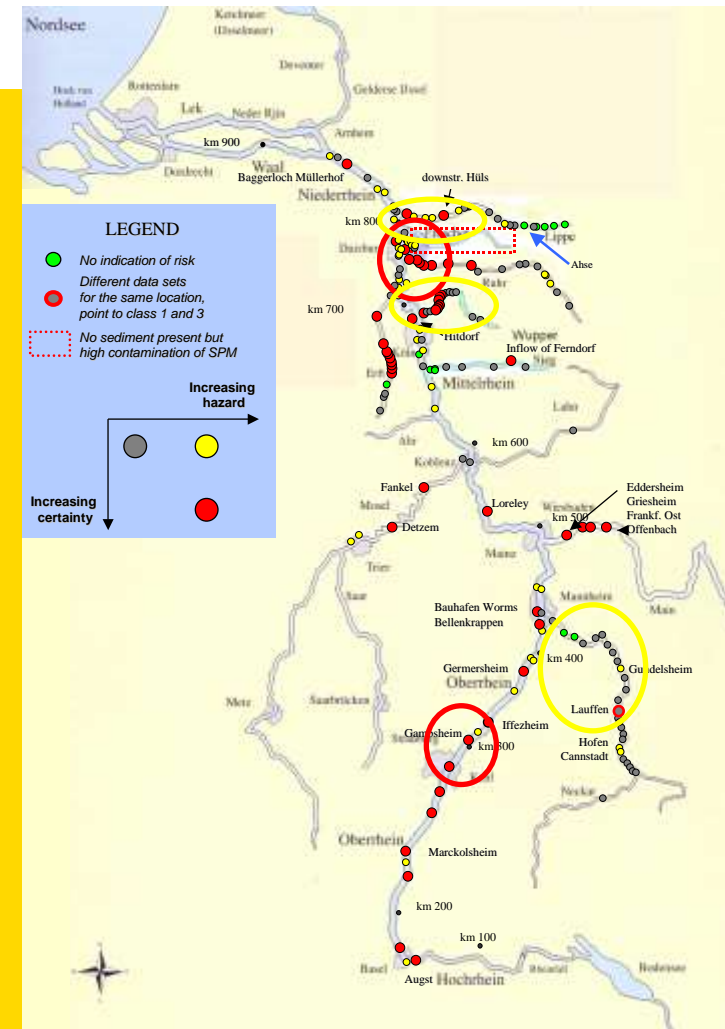
classification of

- substances of concern (WFD)
- areas of concern
- areas of risk

under uncertainty consideration

 evidence for high risk

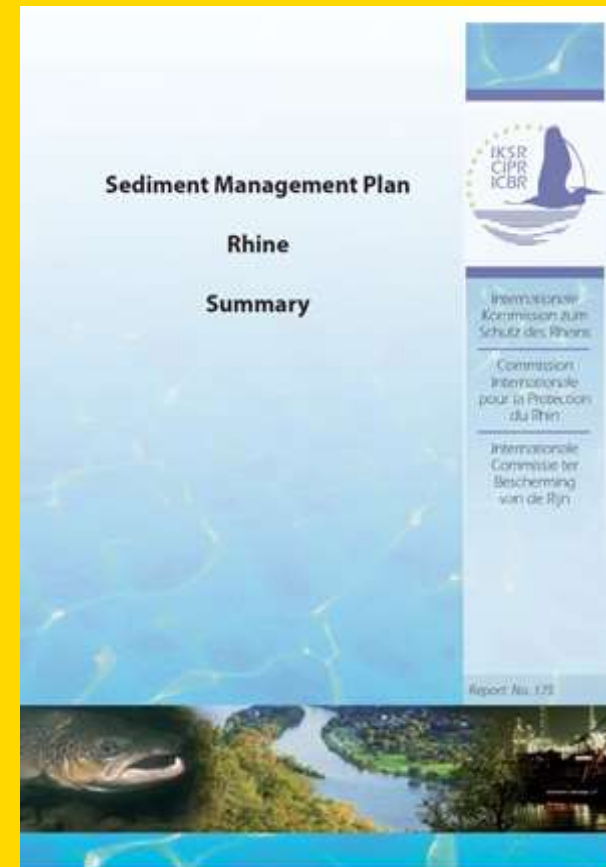
 evidence for risk



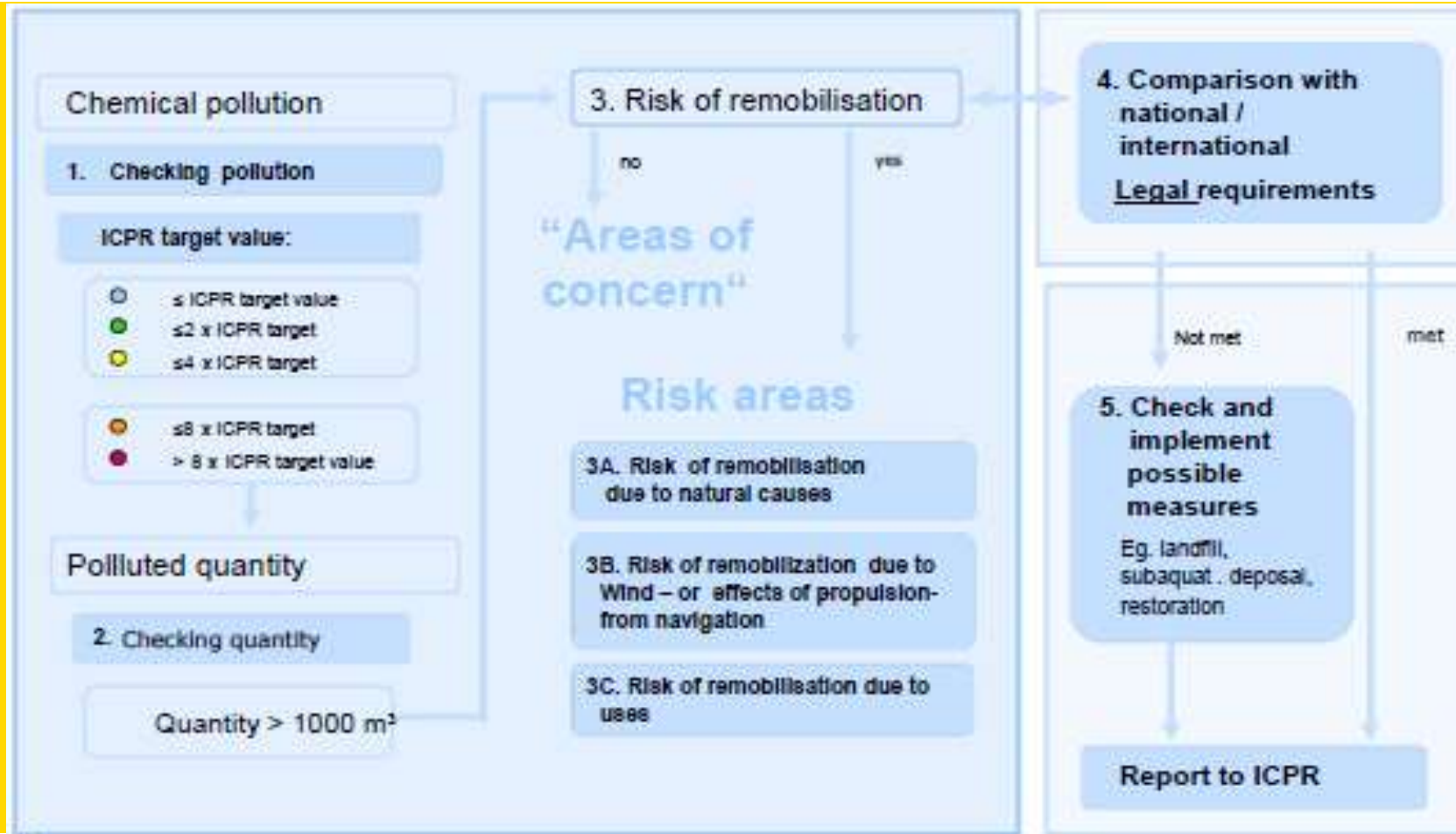
Sediment Management Plan Rhine

On the agenda of International Commission for the Protection of the Rhine

- In 2005, dredging of sediments at the last barrage of the river Rhine at Iffezheim and relocation in the backwater of this impoundment to guarantee the safety of the dams and the flood discharge.
- Questions: due to historical contamination,
 - 1) how are contaminated sediments effecting the water and suspended sediment quality during high flood events and/or during dredging and relocation activities and
 - 2) are contaminated sediments of the Upper Rhine also a risk for sediment quality in regions far downstream like the Netherlands?



Decision making for the identification of areas of risk in the Rhine



Conclusions and results Rhine Research Project

- Significant quality improvement since 1984 (successful emission control industrial sources)
- Emission control still essential in improving quality: programmes of measures Rhine (Water Framework Directive)
- Balanced action in level of protection (sea – river)
- Sediment Management Plan incorporated at river basin scale (International Commission for the Protection of the Rhine)
- Sediments more in focus of EU (SedNet)