

European sediment regulations: Gaps and bridges

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- contaminants in water
- contaminants in sediments
- dredged material assessments
- dredged material guidelines and standards
 - international (e.g., conventions, PIANC)
 - national (federal coastal waterways)

in part based on ...

WG 5 book: Risk management & communication
(chapter 9)

“Diversity of sediment regulations and monitoring programmes in Europe“

Helge Bergmann and Vera Maaß (Hamburg)

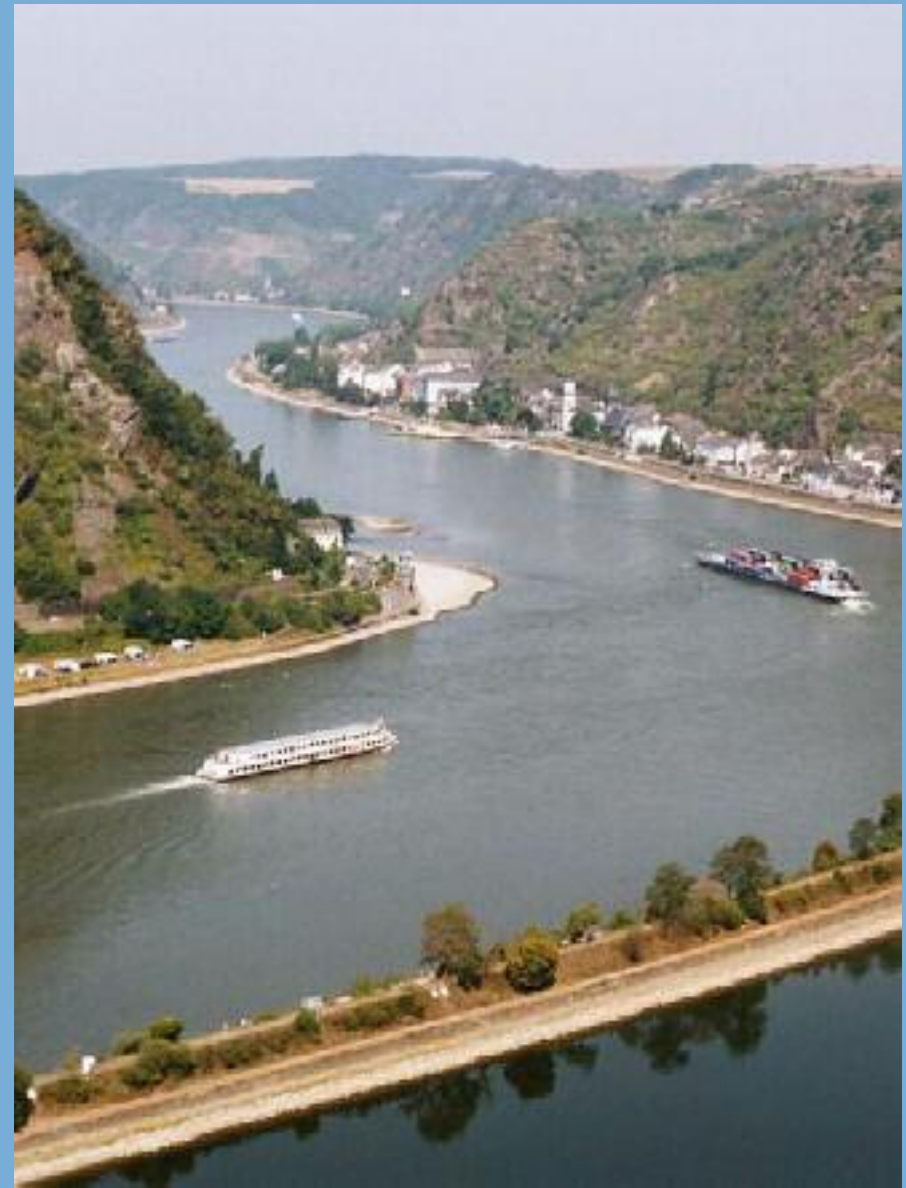
... In the next minutes ...

- Existing regulations
- Gaps
- Consequences of gaps
- Bridges

Why sediment regulations ?

A watercourse may be

- a natural recipient for rain, eroded soil etc.
- a natural ecosystem
- a drinking water reservoir
- an irrigation reservoir
- a waste recipient
- a pleasure space
- a fishing area
- a waterway



Why sediment regulations ?

- to agree on the functions of a water body
- to assess their advantages and risks involved
- to integrate demands and boundary conditions from the many claims involved
- to reach regional, national or transboundary agreements
- to obtain optimal water management at a minimum of ecological impacts and costs

Overview

Regulatory instruments for sediment management

- United Nations Economic Commission for Europe
- European Union
- International maritime conventions
- International river commissions
- National regulations

United Nations Economic Commission for Europe



- promoting cooperation among riparian states in a water catchment area
- no intention to develop any guidance for sediment management

- European Framework Directive on Waste (EC, 1975)
- the European Waste Catalogue (EC, 2000)
- European Landfill Directive (EC, 1999)
- { EU Strategy for Soil Protection (EU, 2002) }

Directive	Document
Environmental Impact Assessment	97/11/EC
Water Framework Directive (WFD)	2000/60/EC
Surface Water Directive	75/440/EEC
Drinking Water Directive	80/778/EEC
Bathing Water Quality Directive	76/160/EEC
Groundwater Directive	80/68/EEC
Groundwater daughter Directive	COM(2003)550
Conservation of Natural Habitats and of Wild Fauna and Flora Directive	92/43/EEC
Fish Water Directive	78/659/EEC
Shellfish-Water Directive	79/923/EEC
Wild Birds Directive	79/409/EEC
Council Directive on Waste	75/442/EEC
Dangerous Substances Directive	76/464/EEC
Urban Wastewater Treatment Directive	91/271/EEC

Name of convention	Convention area	Regulation
LONDON	Globally marine areas	Specific guidelines for assessment of dredged material LC 22/5/Add.1 (2000)
OSPAR	NE Atlantic, North Sea	Revised OSPAR Guidelines for the Management of Dredged Material (2004)
HELSINKI	Baltic Sea	Dredged Material Guidelines (1994)
BARCELONA	Mediterranean Sea	none

- an average volume of 120 Mio. m³ (dry weight) of dredged material is yearly managed
- the only Europe-wide harmonised sediment management

International commissions for transboundary rivers

- action plans focus on pollution abatement and improvement of the ecological status of the waters
- sediment phase does not play any major role in their river management
- Exception:
International Rhine Commission has recommendation for the relocation of sediments / dredged material

- European member countries of marine conventions have developed their specific national guidelines for handling dredged material in coastal waters
- complex picture
- no overview

- On a European level sediment management is not covered by specific regulations
- In part sediment management is taken account of in several European directives (directly - indirectly)
- Guidelines for coastal dredged material have been developed by international maritime conventions
- Some European countries have developed their specific national guidelines for dredged material

Gaps in sediment regulations:

1 - International dredged material guidelines

- International guidelines set up by maritime conventions are *per se* limited to sediment management in coastal areas.
- Analogous guidance is lacking in inland waters.



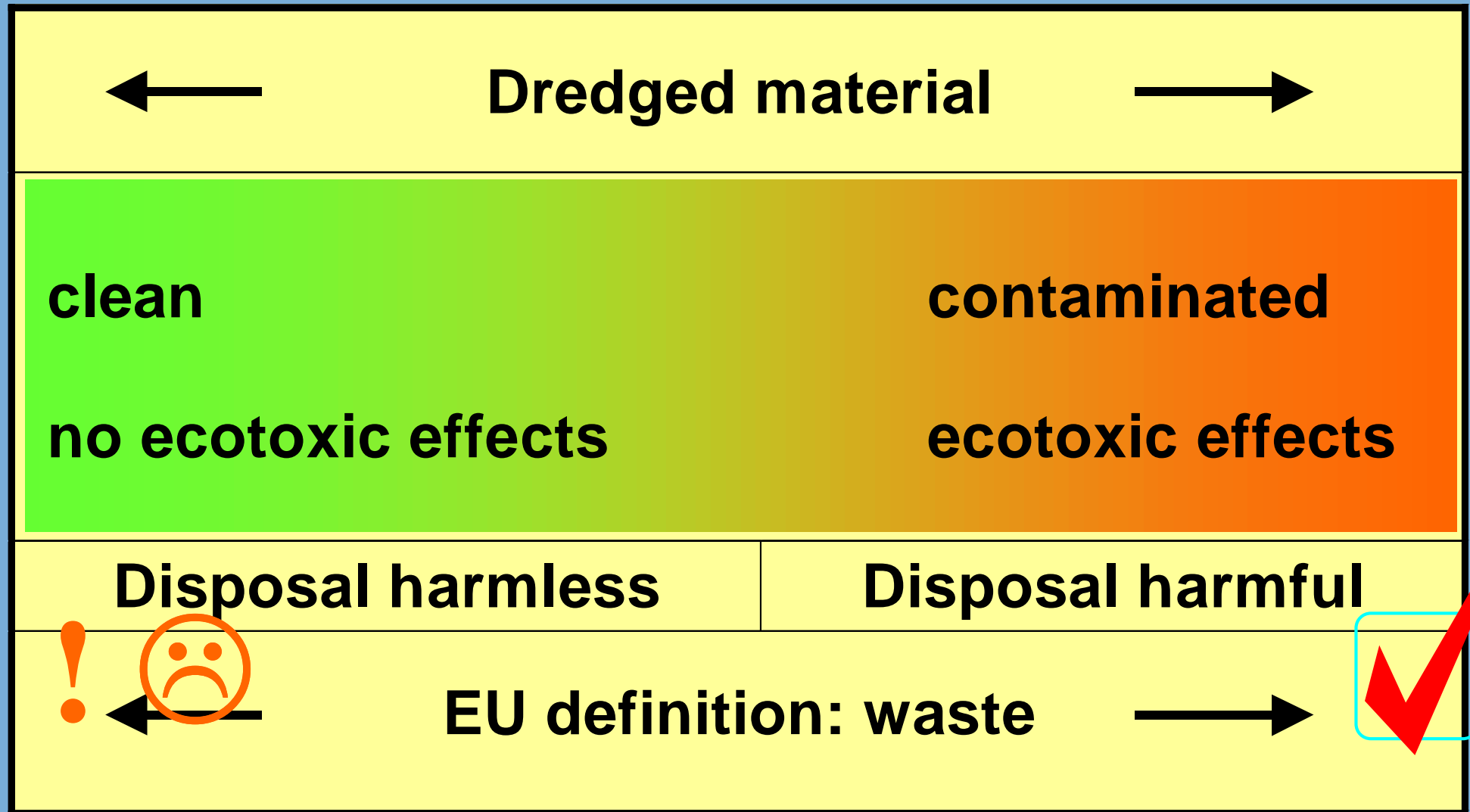
Gaps in sediment regulations:

2 - Dredged material and waste

Source	Definition
Framework Directive on Waste (75/442/EEC), Article 1	“For the purposes of this Directive "waste" shall mean any substance or object in the categories set out in Annex 1 which the holder discards or intends or is required to discard.”
Directive on Hazardous Waste (91/689/EEC), Annex 1	“23. soil, sand, clay including dredging spoils ”

Gaps in sediment regulations:

2 - Dredged material and waste



Gaps in sediment regulations: 3 - European Waste Report 2003

- It describes the management of ca. 800 Mio. tonnes of all kinds of waste.
- Dredged material not being mentioned.
- Compared to this amount the dredged material in Europe (> 120 Mio. m^3) is no negligible quantity.
- Therefore, dredged material was forgotten in the report or was not regarded as waste.



Gaps in sediment regulations: 4 - Control of contaminant sources

The "polluter pays" principle: How should it work?

European Framework Directive on Waste (1975):

In accordance with the 'polluter pays' principle, the cost of disposing of waste... shall be borne by:

- the holder who has waste handled by a waste collector or by an undertaking...***
- and / or the previous holders or the producer of the product from which the waste came."***

Gaps in sediment regulations:

4 - Control of contaminant sources

The "polluter pays" principle: How does it work?

→ "Be strict on dredged material,
but neglect contamination sources"

- Neglects primary contamination of dredged material
- Weak spot in regulatory frameworks.



Gaps in sediment regulations: 5 - EU Water Framework Directive

- In the European Water Framework Directive (152 pages) the word "sediment" appears only eight times.



- Sediment to be included as a natural component of any water body like water and biota

1

Gaps in sediment regulations: 5 - EU Water Framework Directive

- Annex 8 of the WFD contains in the
"Indicative list of the main pollutants" :

"10. Materials in suspension"

- suspended particulate matter = pollutant !



Gaps in sediment regulations: Causes and consequences

Potential causes:

- Knowledge on the role of sediments in the aquatic environment is lacking, even in expert authorities (e.g. EEA).
- Individual stakeholders in the sediment management, i.e. dredging managers, scientists and policy makers, restrict their activities and interests to their own fields.
- Cooperation between these stakeholders in the sediment management is rarely existing or not effective.

Gaps in sediment regulations: Causes and consequences

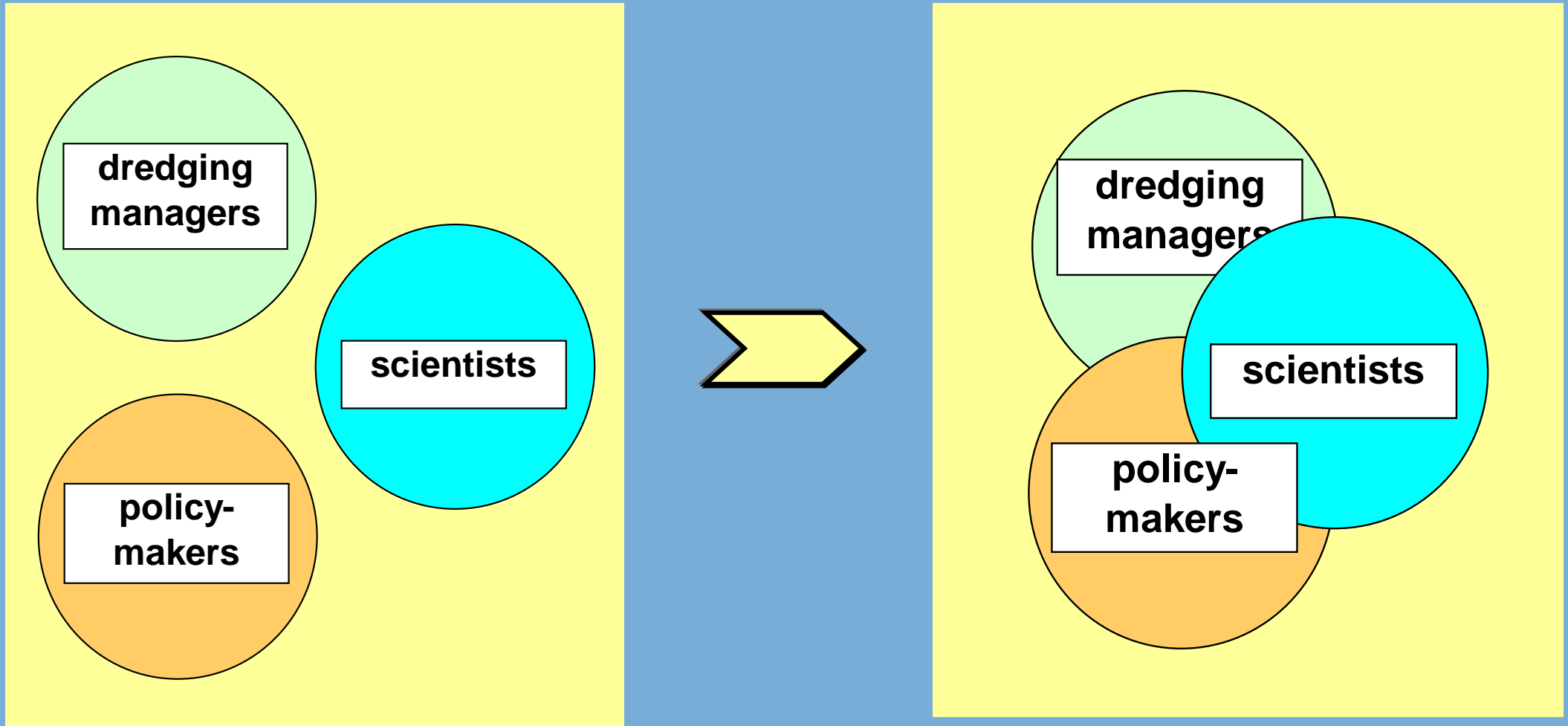
Consequences of gaps:

- Information on the role of sediments in the aquatic environment within policy-maker circles (e.g. EU) is partly lacking.
- Policy-makers, e.g. EU, are badly or inadequately advised in their legal projects.
- Inadequate development of legal guidance for the management of sediment and dredged material (e.g. WFD).
- Uncertainties and difficulties in sediment management, particularly in transboundary rivers
- Unnecessary efforts in costs and time, e.g. for treatment or disposal of dredged material.

Objectives:

- better understanding of the way of thinking and of the problems among dredging managers, scientists and policy-makers
- improved cooperation in developing new policies, research projects or managerial guidance

Cooperation

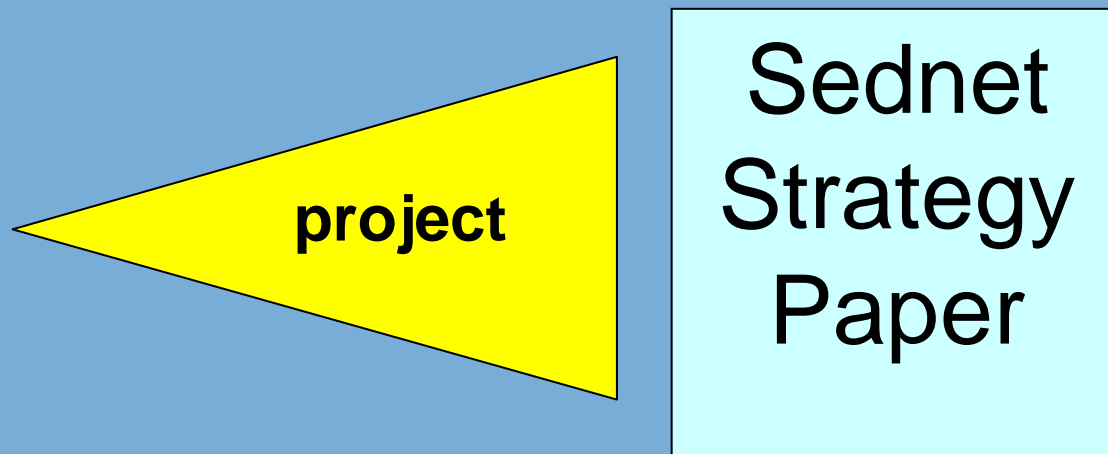


- Improvement of understanding of the thinking and of the problems of the other side
- cooperation in management- (i.e. problem-) orientated scientific research
- joint development of new policies and practical guidance for sustainable sediment management

Examples of „getting together“

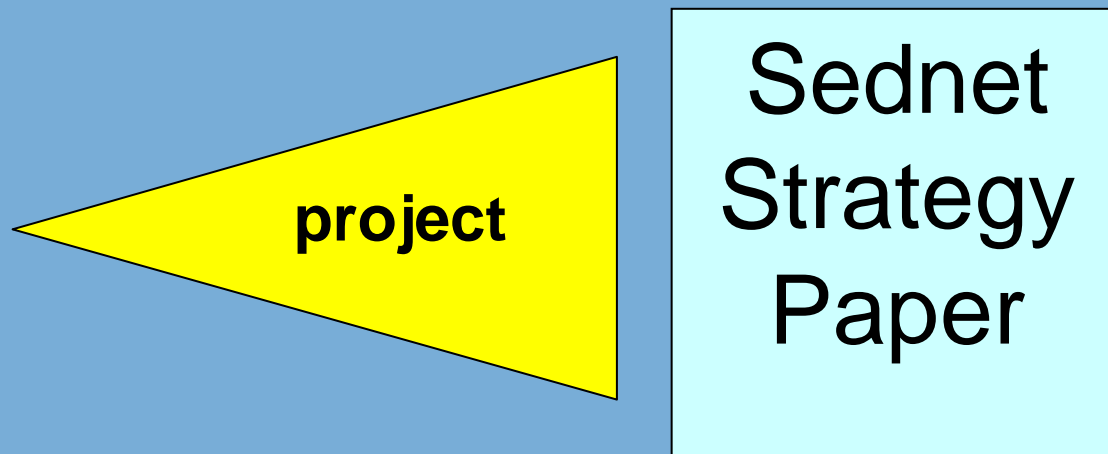
Positive examples:

- guidelines from international maritime conventions
- guidance and standards from, e.g., PIANC, CEDA
- the "Dutch-German exchange on dredged material"



Necessary:

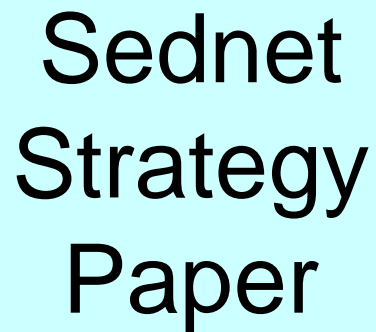
- to look closer at the gaps of present and objectives of future sediment management



Also necessary:

- to interlace personal knowledge with objectives
- to communicate ideas in simple terms
- to enhance the mixed “getting together”
- to take into account target readership

The bridge to regulations



Sednet
Strategy
Paper

Sediment
Guidance
Document

Regulations
for
sustainable
sediment
management

5 Political support and legislation

Action field of dredged material stake holders

