Rijkswaterstaat
Ministry of Infrastructure and the Environment

Sediment quality management in the Netherlands

Measures and Prevention

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SedNet 2013

Sediments and Water Framework Directive

- Dutch Water Act:
  implementation Water Framework Directive (WFD)

- Sediment quality integral part water management:
  No sediment quality standards

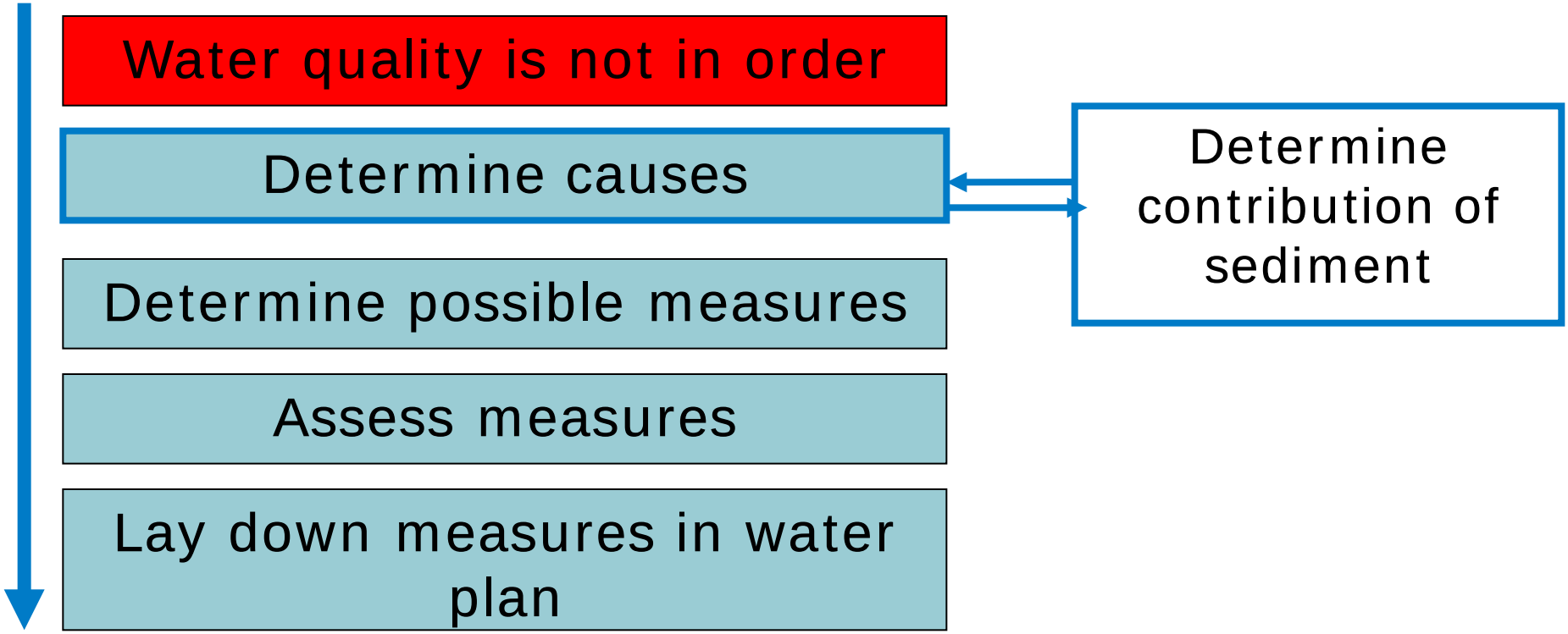
- But:
  Sediments (might) still have adverse effect on water body

Water Framework Directive

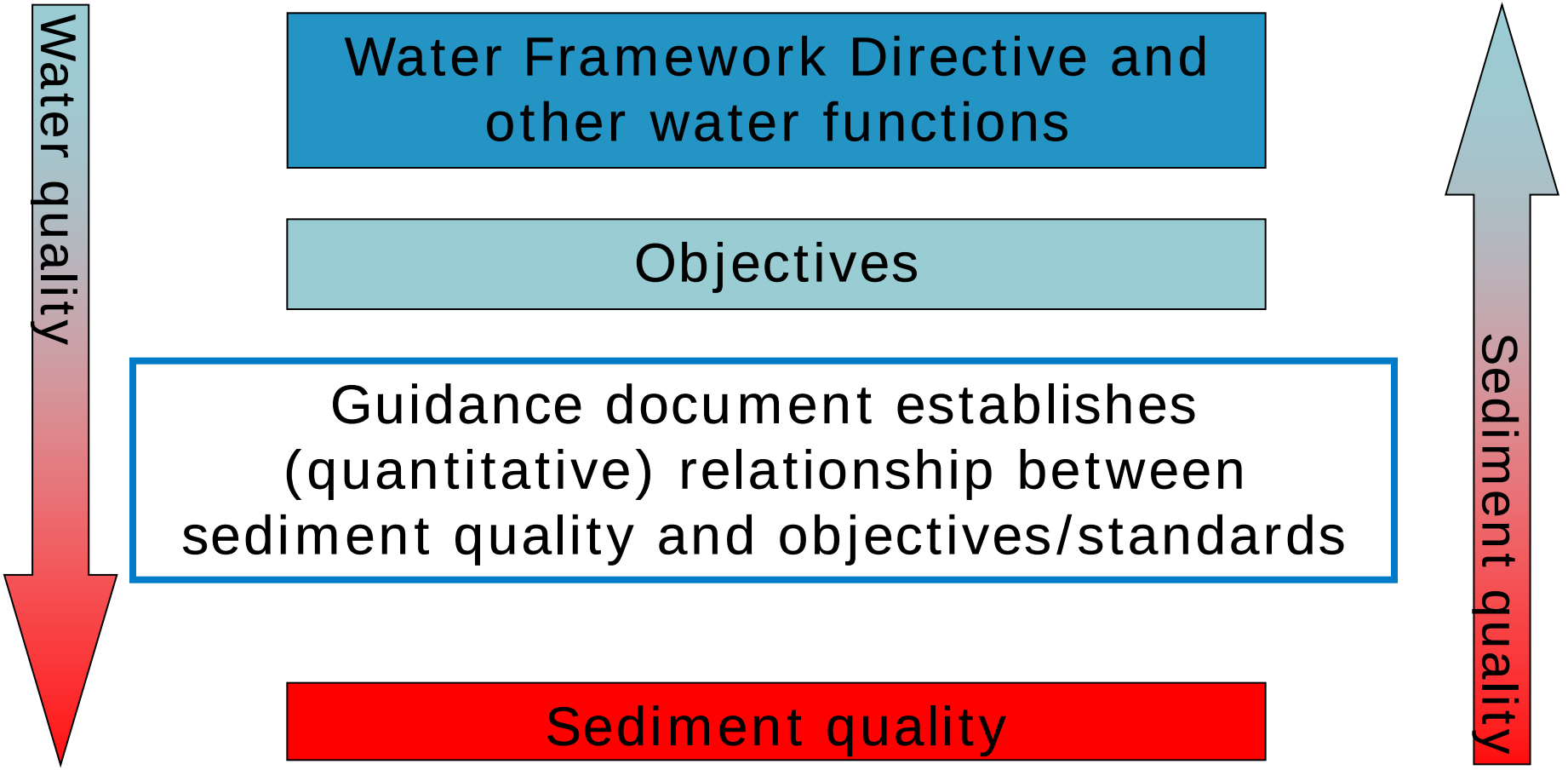
- WFD objectives
  - Good chemical status
  - Good ecological status
- Programme of Measures
- Prevention

Composing set of WFD Measures

Regional Planning Process



Determine contribution of sediment



Use of Guidance Document - WFD

- objectives not met
  - chemical standards
  - macrofauna
  - nutrients
- chemical standard - sediment relevant?
- other sources sufficiently dealt with?

Where to use this Guidance Document?

Pre-screening project in National Waters

Research questions for each water body

1. Is sediment a source?
2. Is sediment a relevant source?
3. Should the Guidance Document be used?

4 river basins
52 water bodies

1. Rhine Delta (n=24)
   - North (n=3)
   - Middle (n=6)
   - East (n=3)
   - West (n=12)

2. Ems (n=3)

3. Meuse (n=14)

4. Scheldt (n=11)

Sediment relevant substances that exceed water standards

Chemical objectives

↓

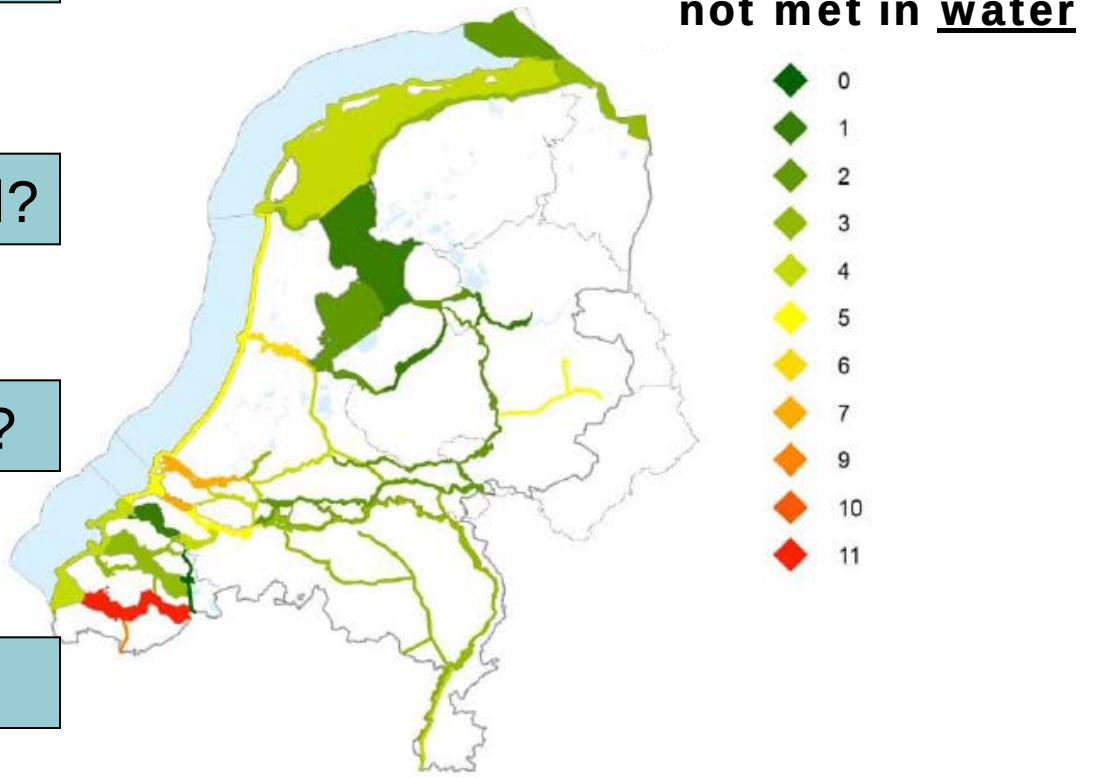
No. exceeding standard?

↓

No. sediment relevant?

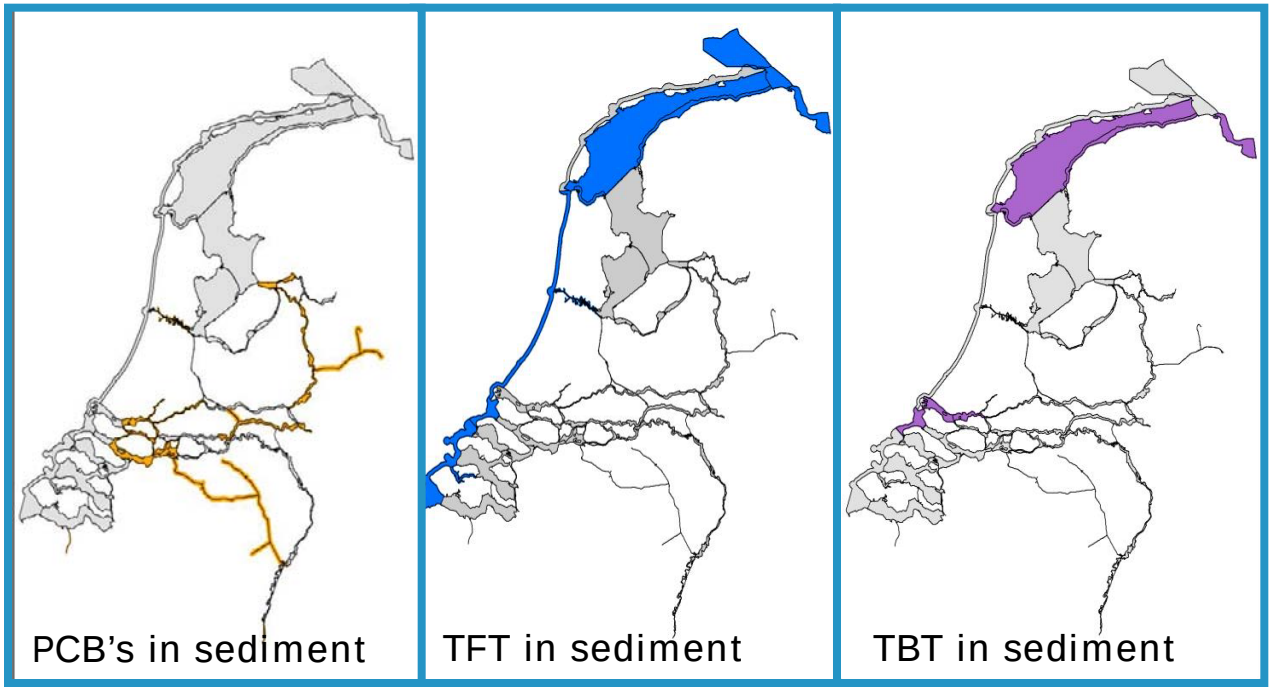
↓

17 substances



Water bodies where sediment relevant water quality standards are not met

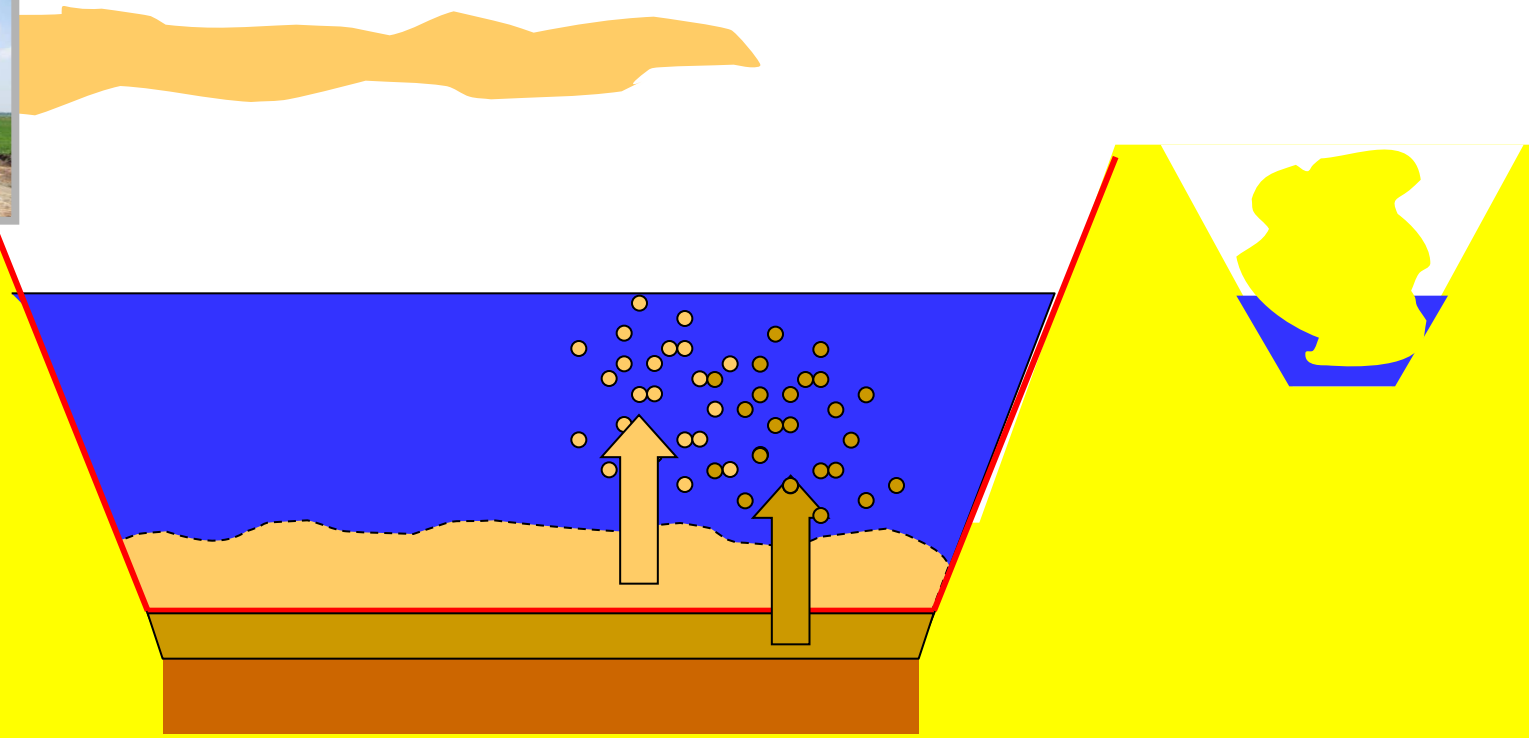
- PAH's - 45
- PCB's - 30
- PBDE - 17
- TFT - 16
- Thallium - 14
- Copper - 13
- Boron - 9
- Zinc - 9
- Cobalt - 8
- TBT - 5



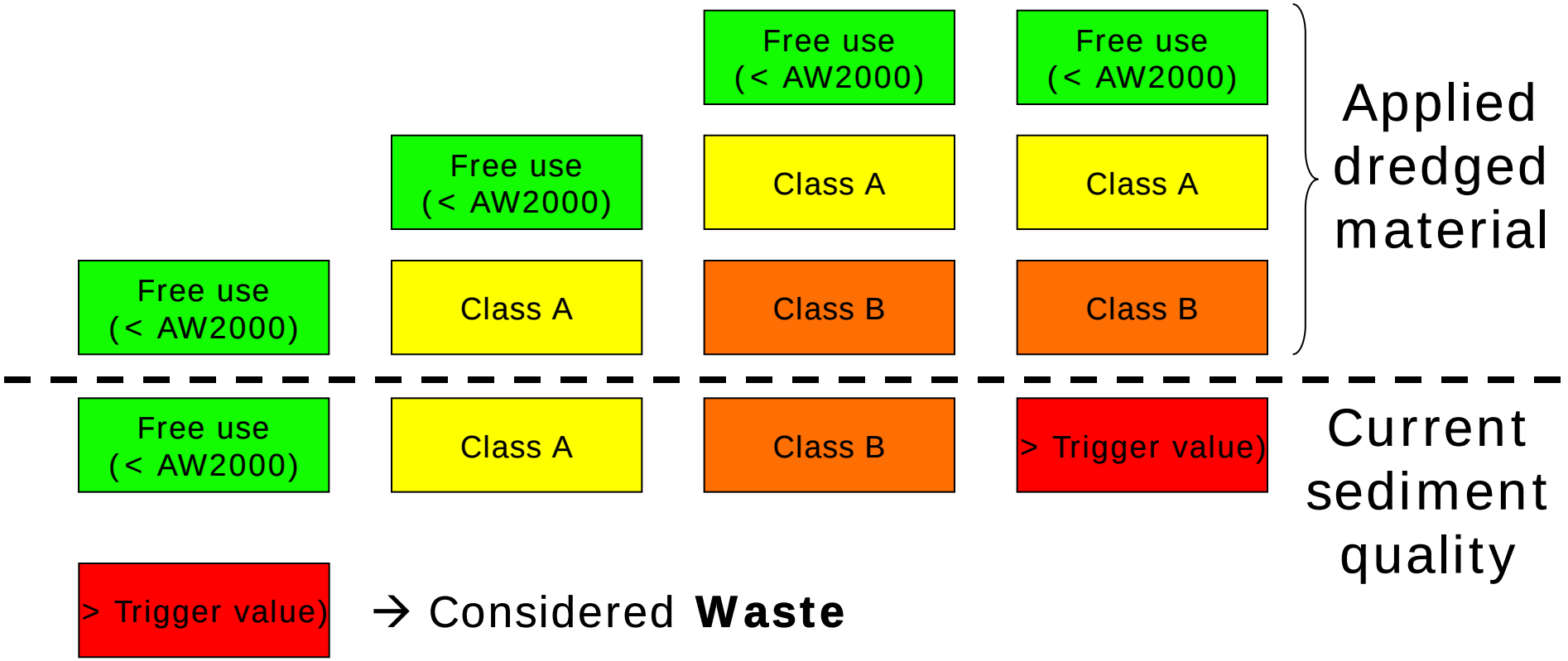
Legal tools for prevention

- Decree for Discharges in Waters
  - Temporal discharging (spill)
- Handbook Managing Immissions
  - Discharges from deeper (exposed) layers
- Dutch Soil Decree
  - Relocation of dredged material

Prevention



Dutch Soil Decree – relocation of dredged material



Handbook Immission – Sediment Immissions

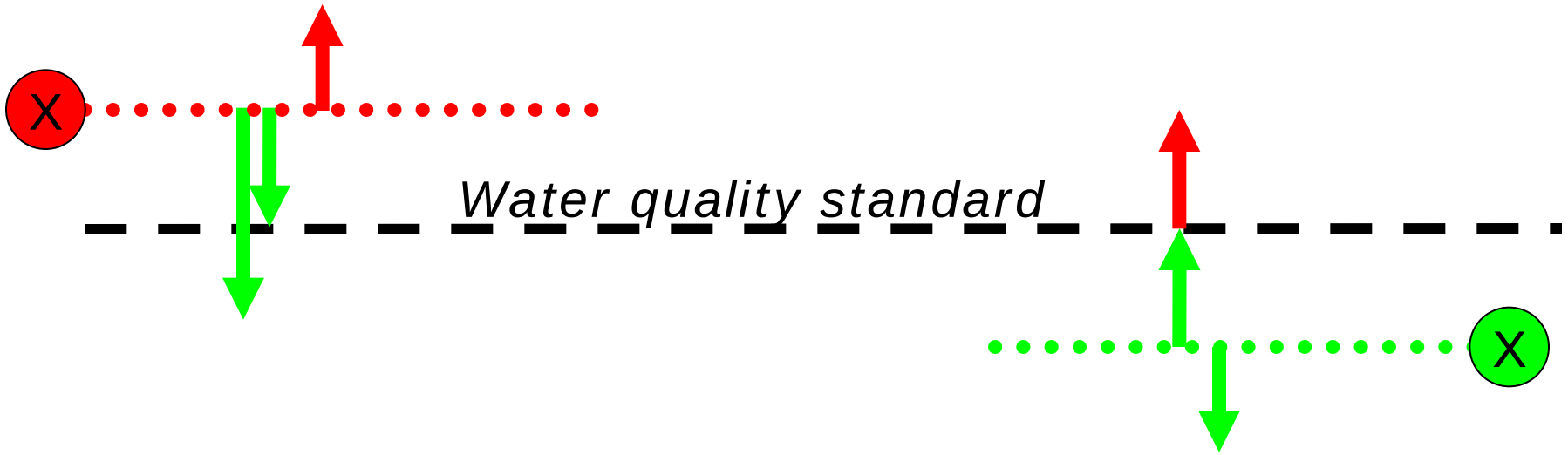
- release of contaminants sediment = emission
  – contributes to water quality

- permitted emission depends on current state water quality

Handbook Immission – Sediment Immissions

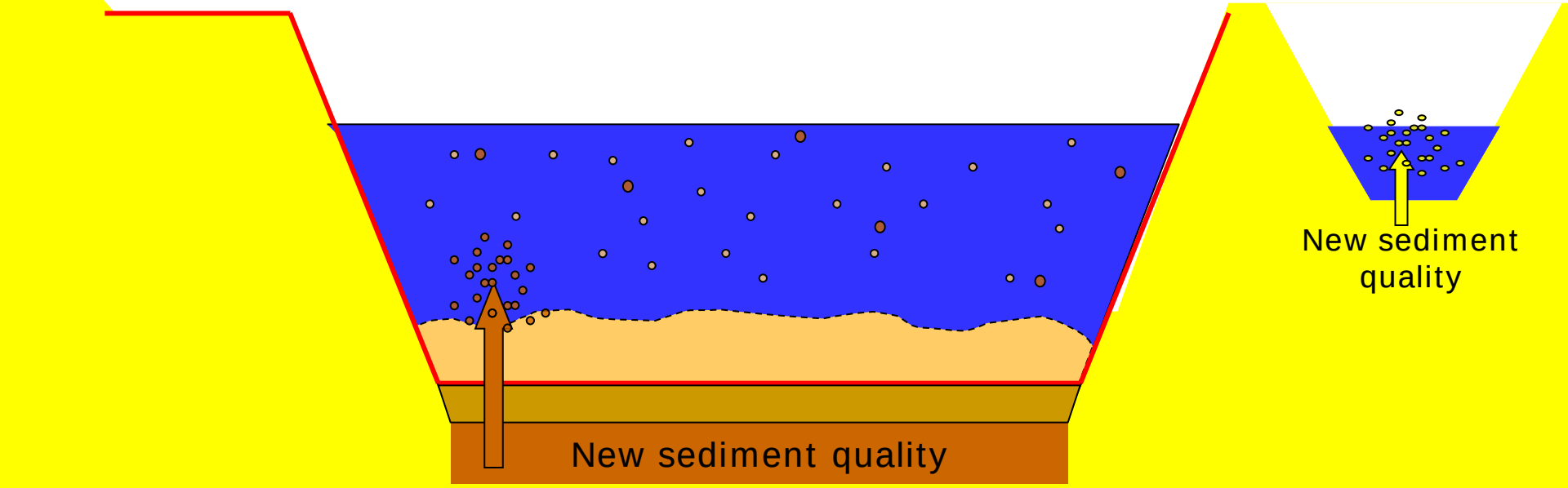
Chemical status not good

Good chemical status



Permitted immission depends on current state

Sediment Immission - Tool



T_0: SM content with SM quality

T_1: SM content + extra discharge with “new” SM quality

With Contributions of Deltares

Thanks for listening!

The Guidance Document is available in English