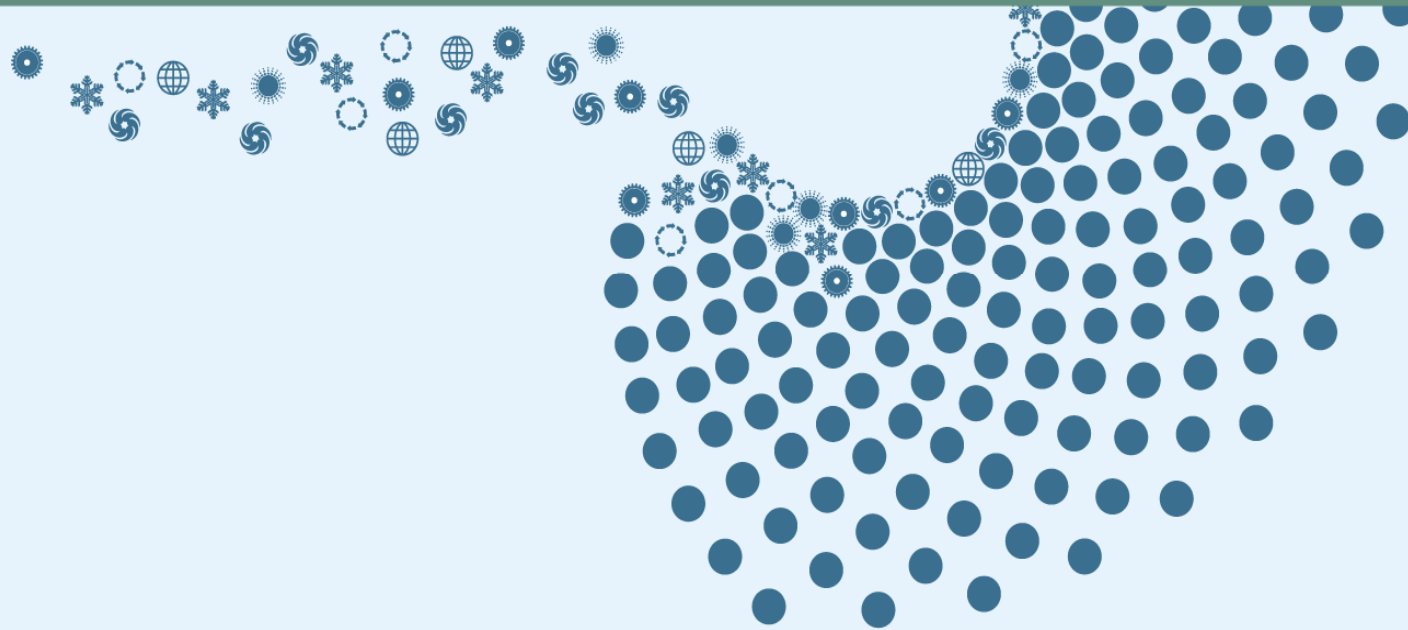
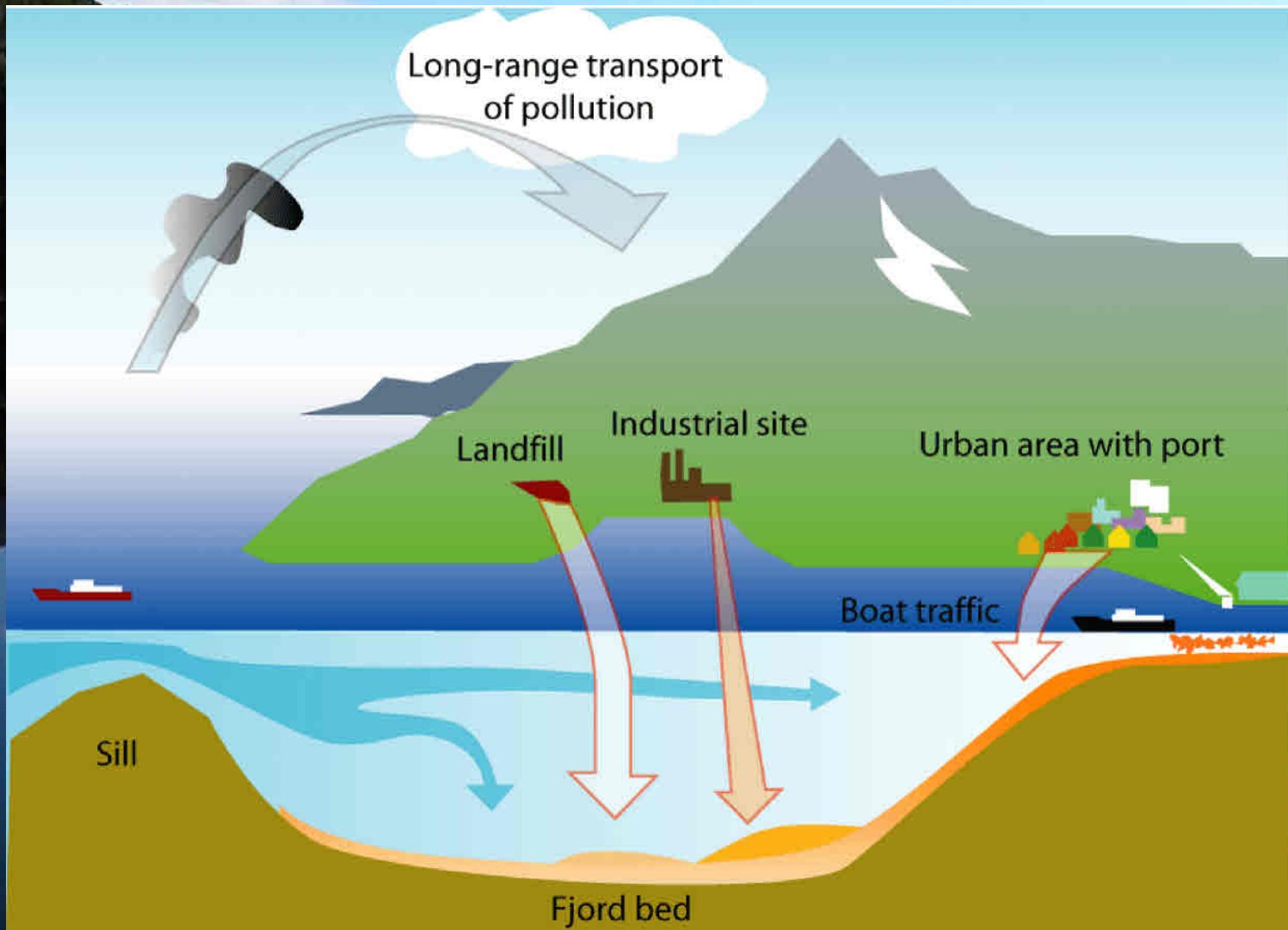


Ellen Hambro, SEDNET CONFERENCE, 27. May 2008

Contaminated sediments in a Norwegian perspective





An aerial photograph of a fjord valley. In the foreground, a rocky, moss-covered slope descends towards a town. The town is situated in a valley, with a large industrial facility, possibly a power plant or refinery, located near a body of water (the fjord). The water is a dark green color. In the background, steep, snow-capped mountains rise above the valley. The sky is overcast.

Typical locality with contaminated sediments

- "Industrial fjord", urban area or harbour
- Low levels of sedimentation - no need for maintenance dredging
- Fjord sill that reduces water exchange



- Dietary advice (advice against consumption) in 32 Norwegian fjords
- Mostly due to high levels of PCB, PAH or mercury in marine organisms
- Contaminated sediment is one of several sources

s ft: Political strategy

- Report no 12 (2001-2002)
Protecting the riches of the seas
- Report no 14 (2006-2007)
Working together towards a non-toxic environment and a safer future



s ft: County action plans

17 contaminated fjords
and harbours

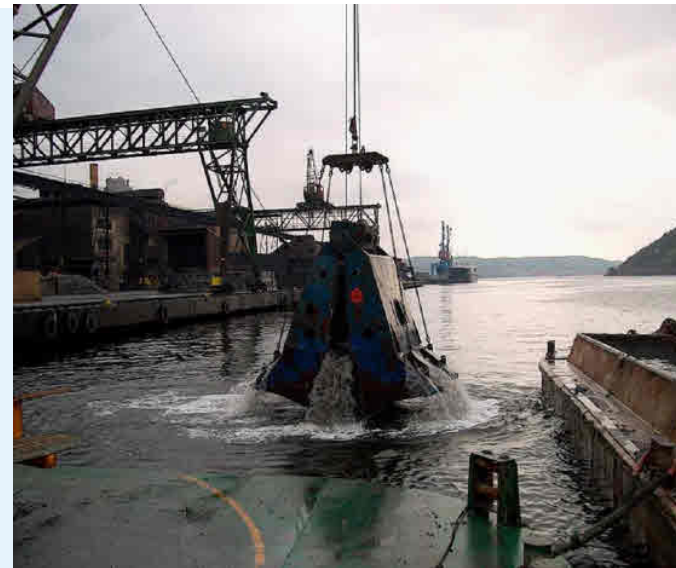
Integrated approach:

- Contamination levels
- Landbased sources
- Contaminated soils
- Contaminated sediments



s ft: Who pays?

- “Polluter pays” principle
- Cost sharing model
- Areas with drivers get priority



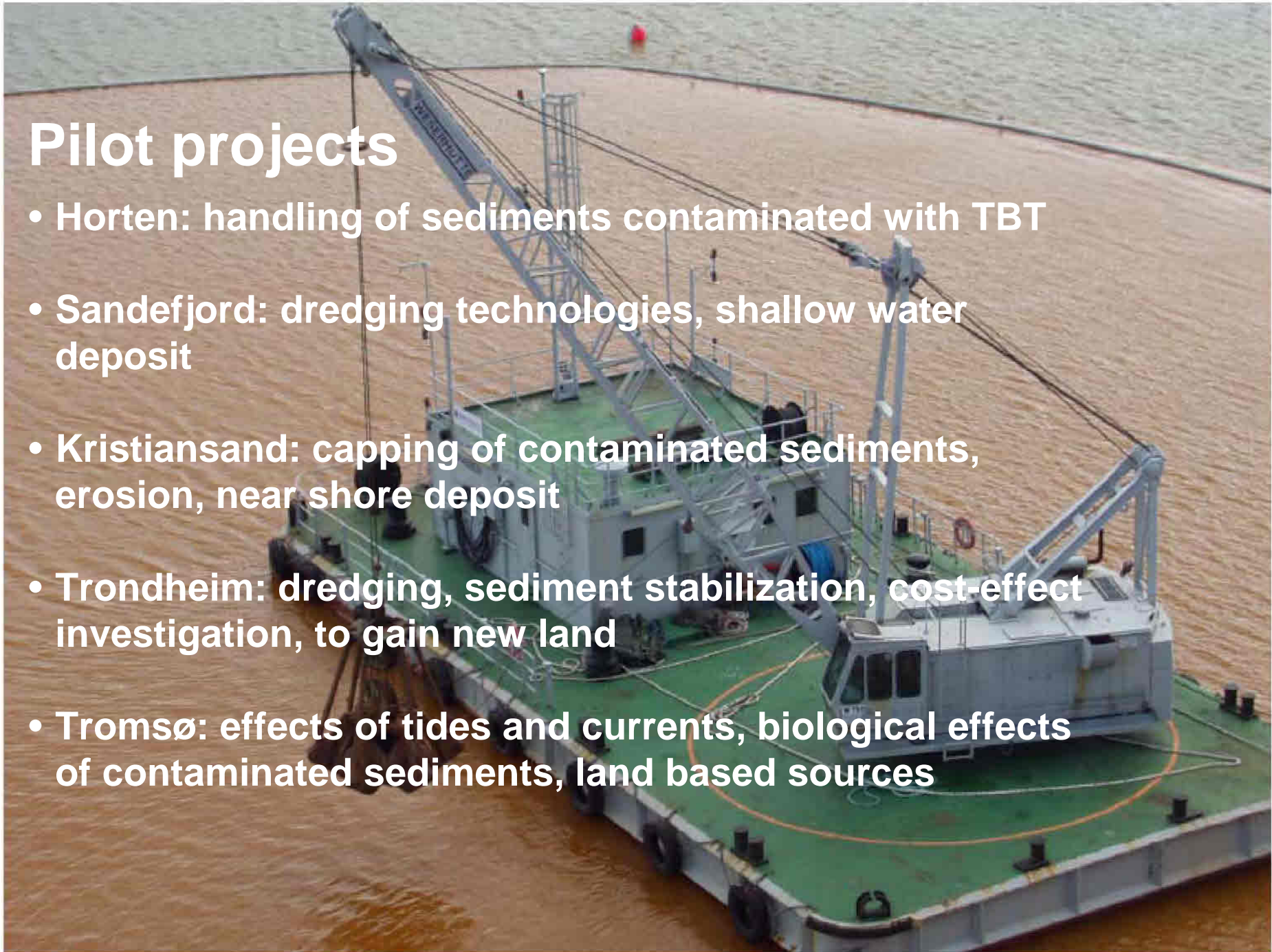
s ft: Gaps in knowledge

- Pilot projects
- Norwegian council on contaminated sediments (2003-2006)
- Consultation group on contaminated sediments (2008-)



Pilot projects

- Horten: handling of sediments contaminated with TBT
- Sandefjord: dredging technologies, shallow water deposit
- Kristiansand: capping of contaminated sediments, erosion, near shore deposit
- Trondheim: dredging, sediment stabilization, cost-effect investigation, to gain new land
- Tromsø: effects of tides and currents, biological effects of contaminated sediments, land based sources



s ft: Challenges

- Liability
- High costs
- How to avoid recontamination
- Handling of dredged sediments
- Communication
- Gaps in knowledge



