

Sediment and society: assessing approaches for including stakeholder interests and contaminated sediment management

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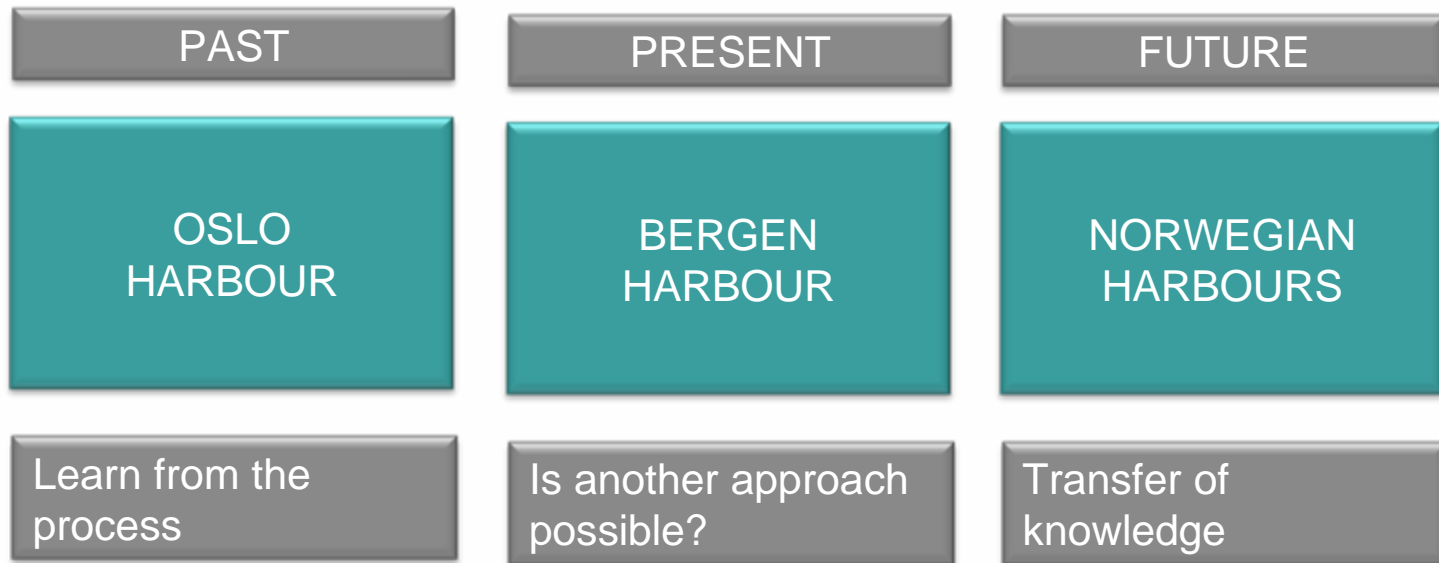


Motivation for the project



(source: www.stopp-giftdumping.org)

Description of work



Oslo Harbour Remediation Project



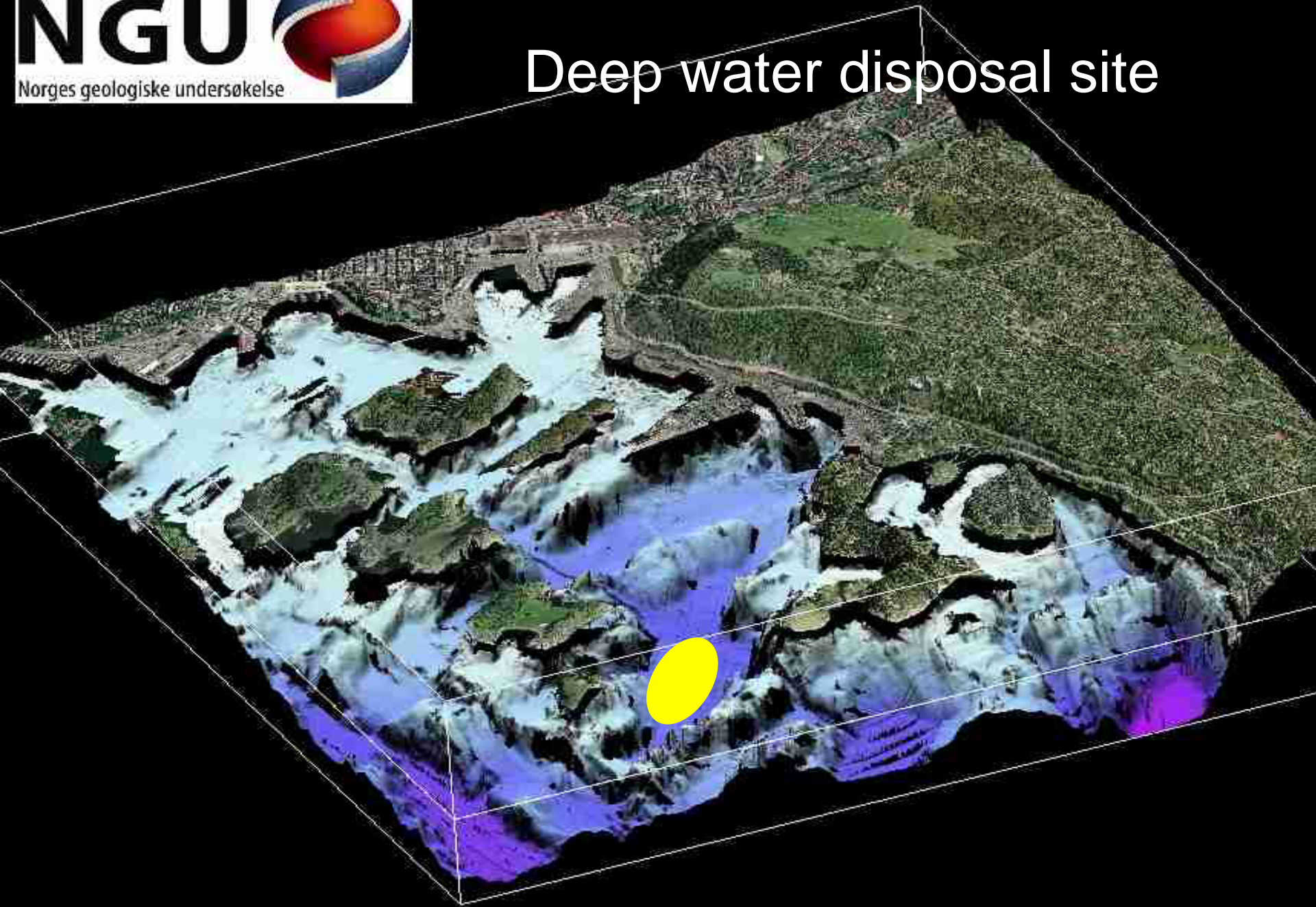
Comprehensive remediation - dredging and capping



Kart: Statens forurensningstilsyn, 2006

Kilde: Norges Geotekniske Institutt og Statens kartverk

Deep water disposal site



Land disposal at Langøya



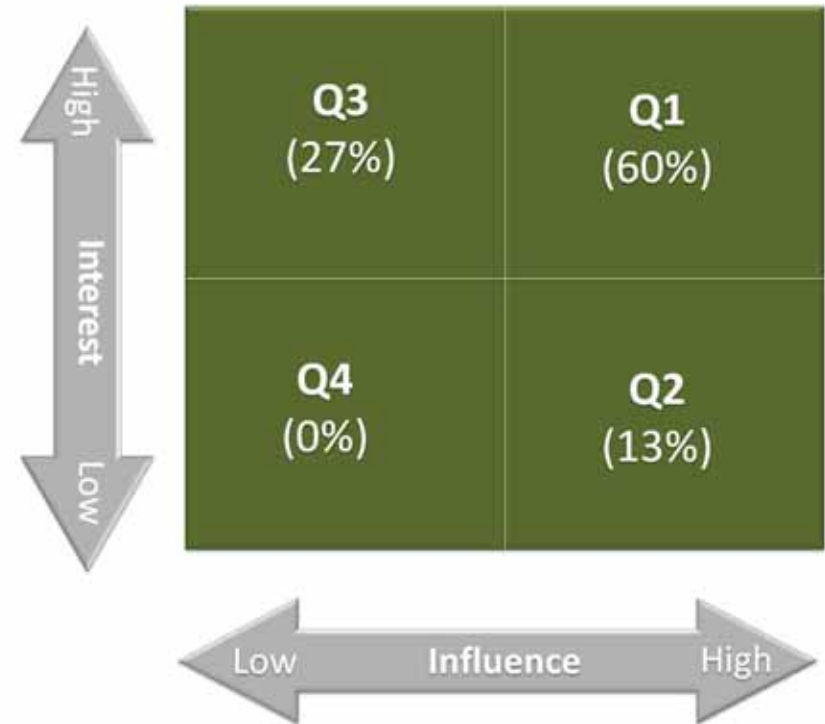
Research aims for Oslo Harbour case study

- **Involvement:** organization and perception of stakeholder involvement
- **Communication:** perception of the communication of data, information and opinions
- **Riks perception:** Stakeholders' approach to risk and perception of the risk of sediments

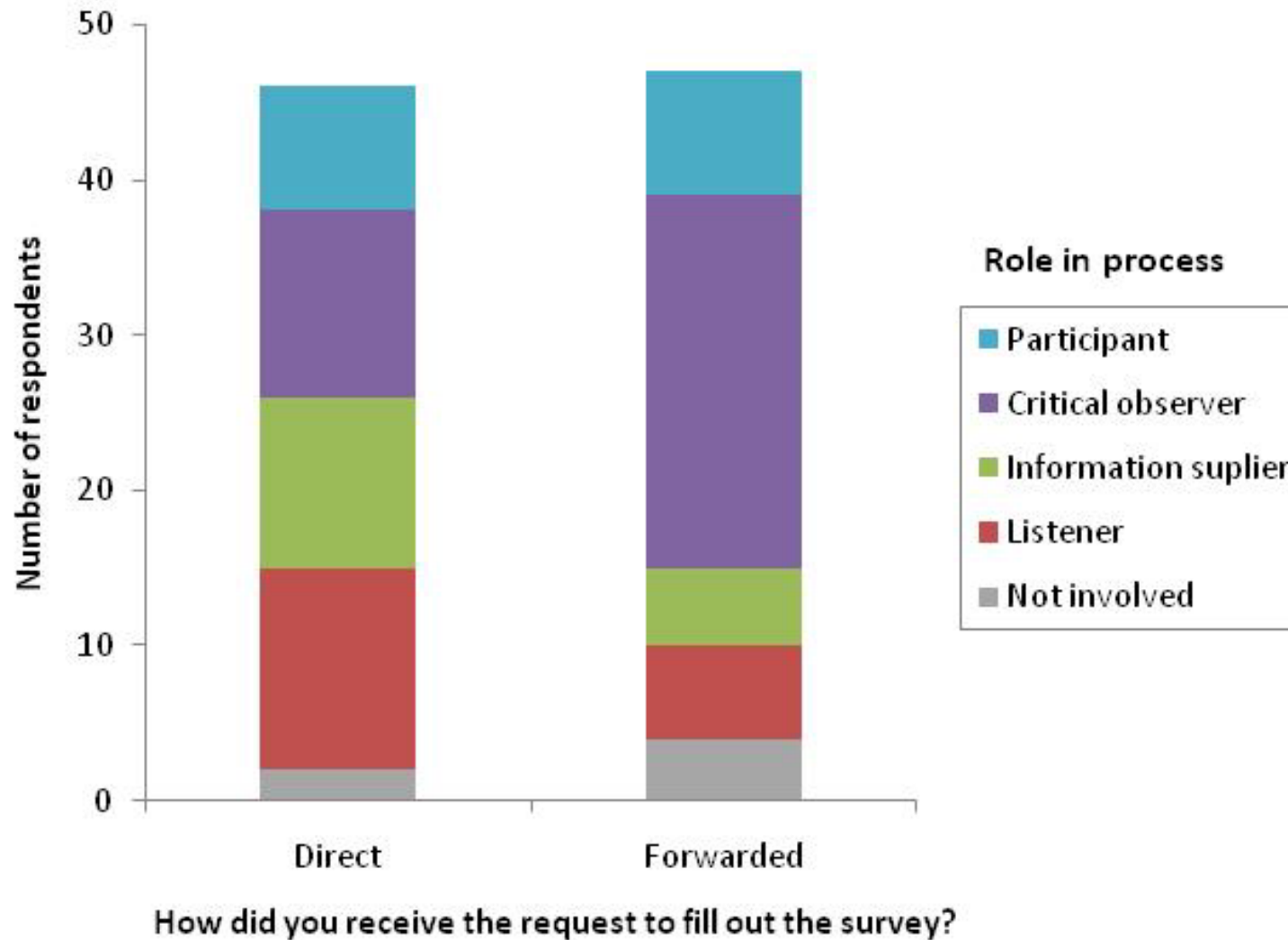


Interview process

- 160 stakeholders identified using document review
- 30 people selected to be interviewed
- 78% participation in the interviews

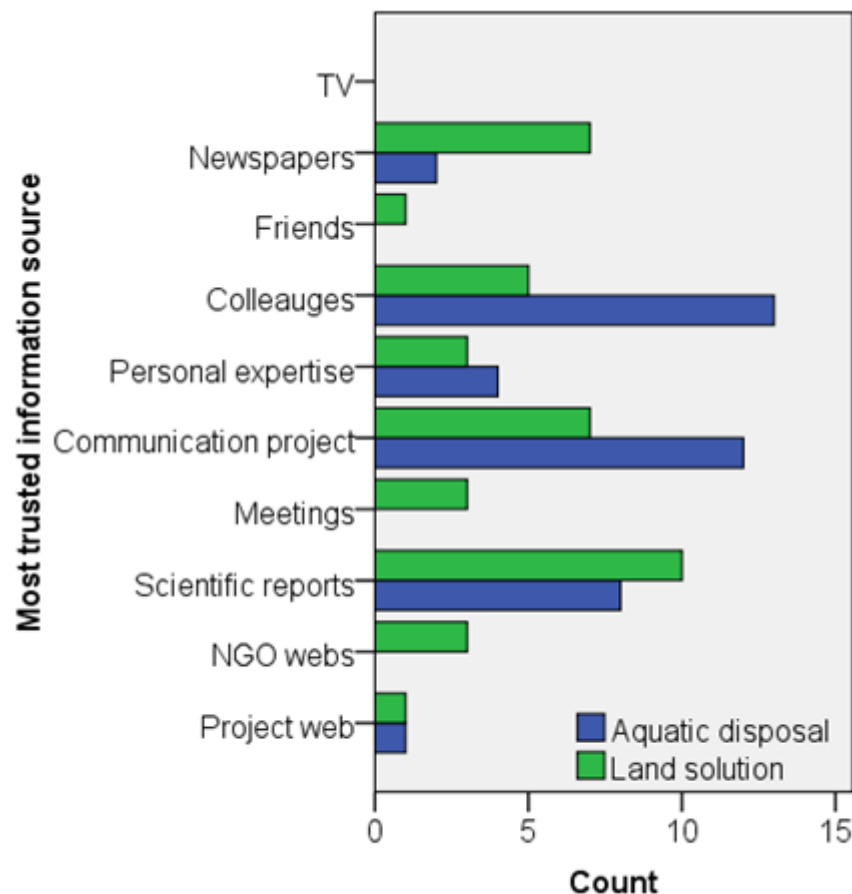


Internet survey respondents

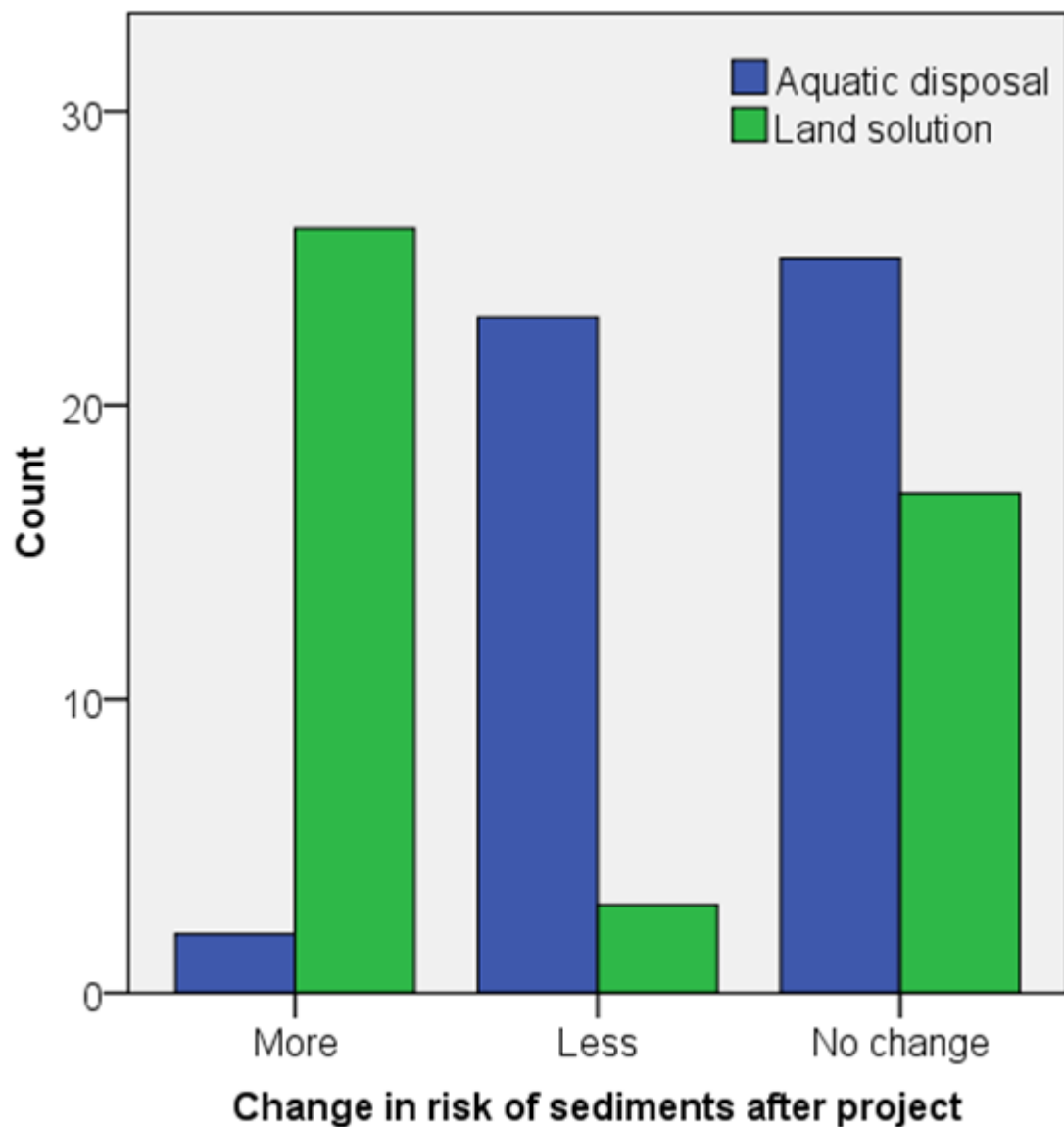


Communication of information – trusted sources

- High trust in scientific reports among both groups
- Communication with project and colleagues more trusted for the aquatic disposal group
- Land disposal group relies more on external sources of information

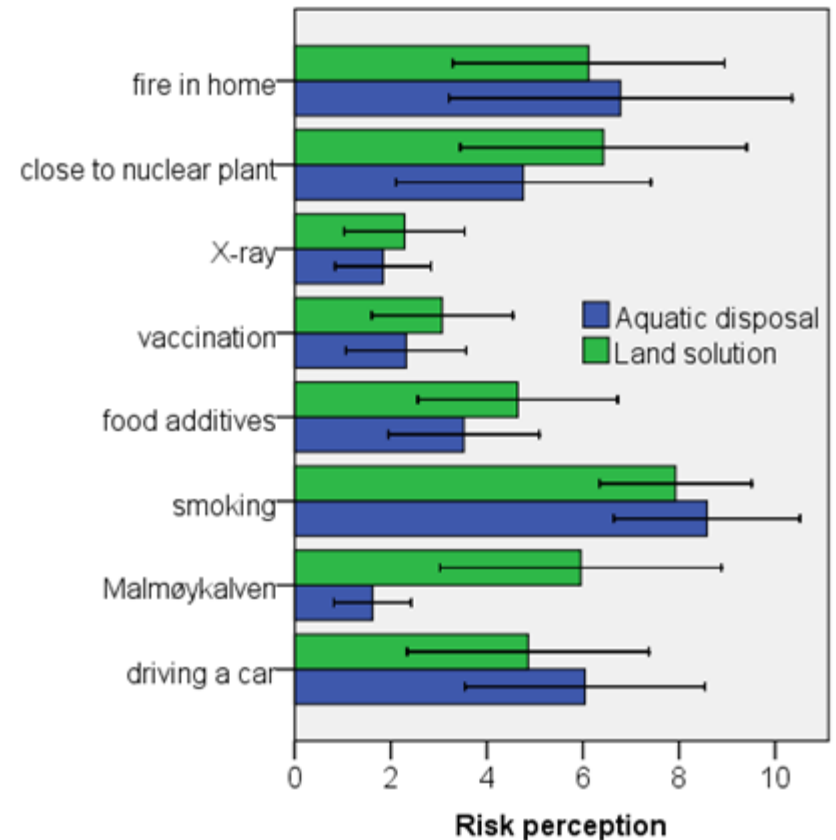


Risk perception of contaminated sediments



Controllability

- Risk perception relates to controllability
 - Ability to control spreading
 - Effect of the CAD on the fjord in the future
- Differences relates to the choice of solution (land/sea)



Bergen harbour – the next comprehensive sediment remediation project?



Control of land based sources



Marine archeological investigations



676
RATTO DALLI VASCELLI INGLESI A QUELLI DEGLI
NEL PORTO DI BERGE IN NORVEGIA IL DI 12
DI AGOSTO 1685



Jonsvollene

Establishing a stakeholder panel – Bergen Harbour case study

- 100 stakeholders identified
- Contact established with Bergen municipality
- Meeting with Bergen municipality and a couple stakeholders to select 10
- Invitation sent to 20 potential participants



Identify
Stakeholders

Select
Stakeholders

Establish a
stakeholder
Panel

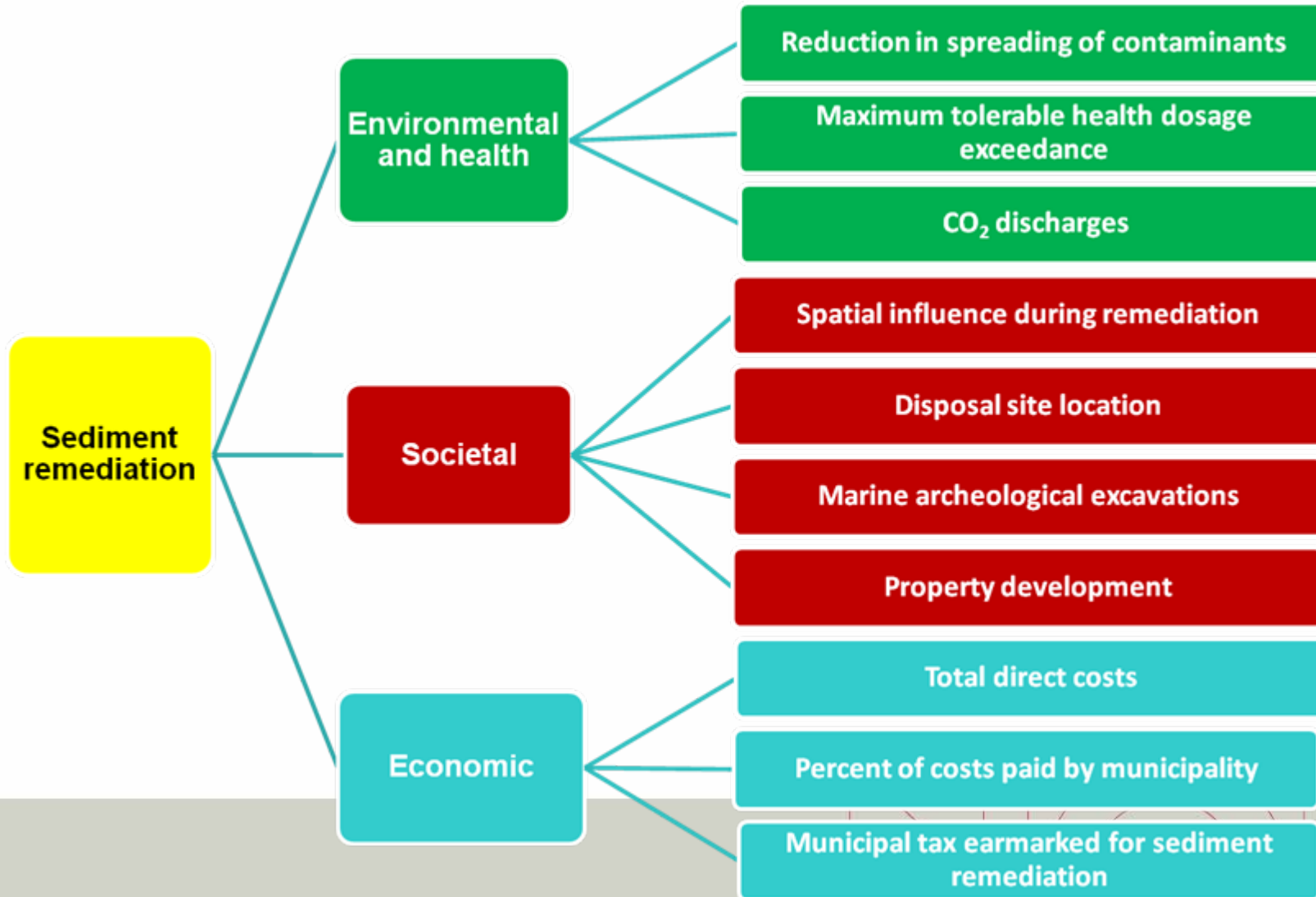
Perform
Interactive
workshops

Establishing a Citizen Panel for Bergen Harbour

- Market research company used to identify and invite citizens to participate
- 30 citizens selected to participate in three evening meetings
- Discuss remediation alternatives and use Multiple-Criteria-Analysis to quantify individual and group preferences

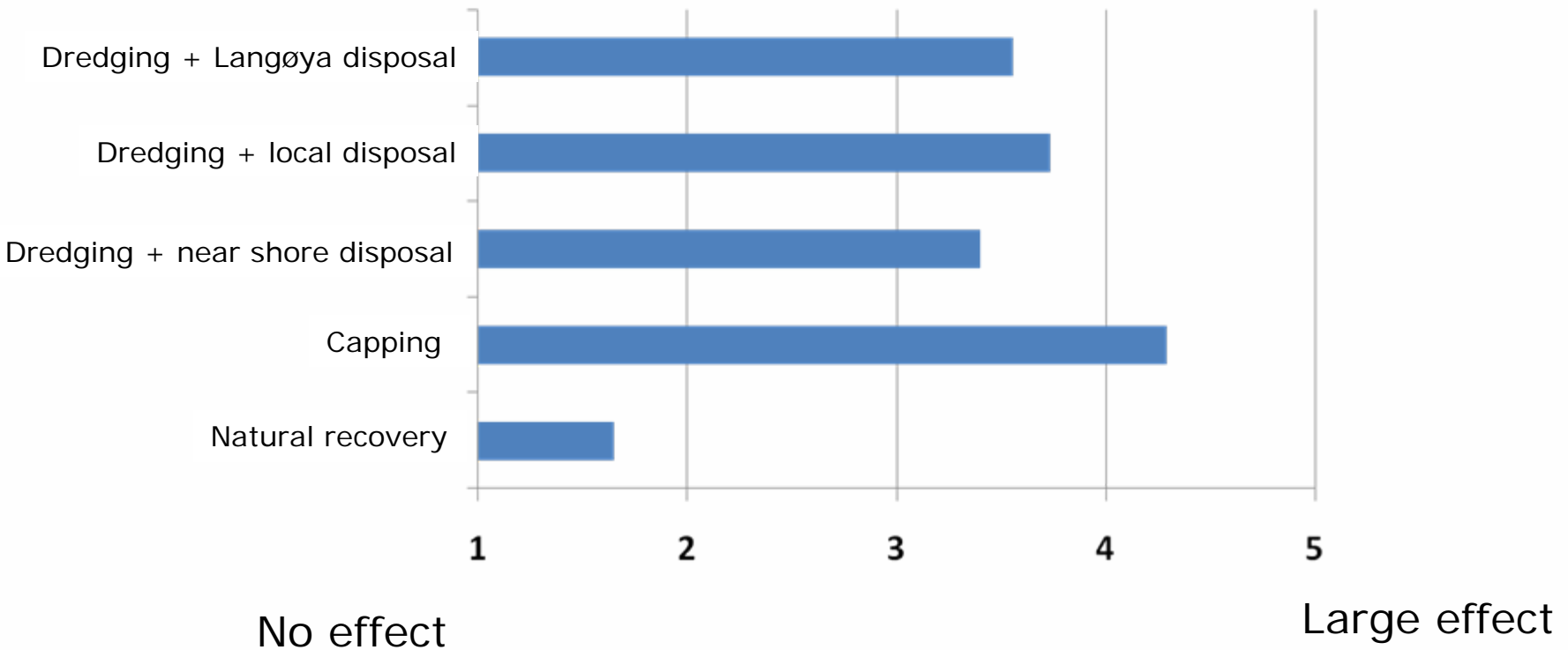


Criteria for assessing the consequences

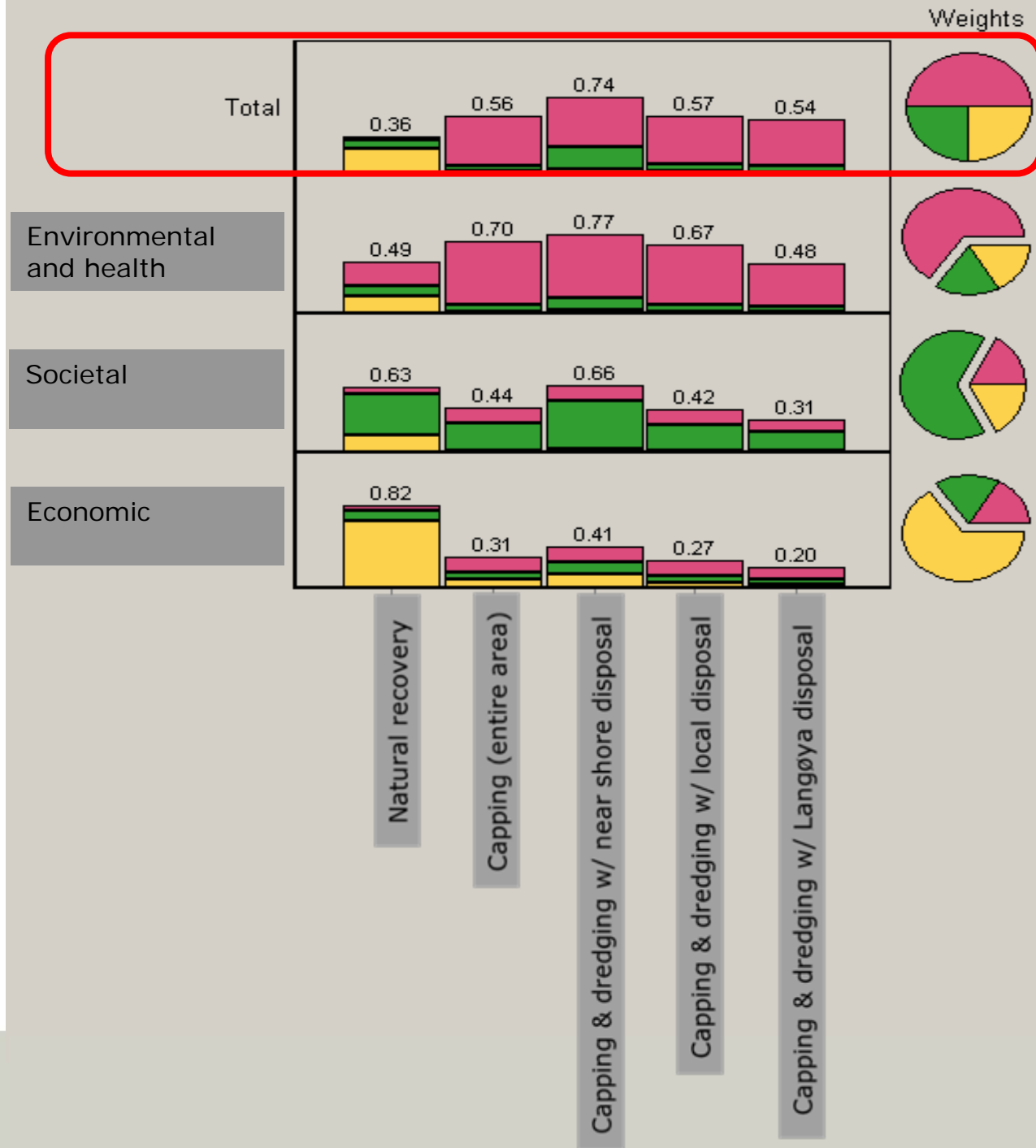


Bergen harbour citizen panel – initial results

What effect will the selected remediation alternative have on the water quality for Bergen harbour?



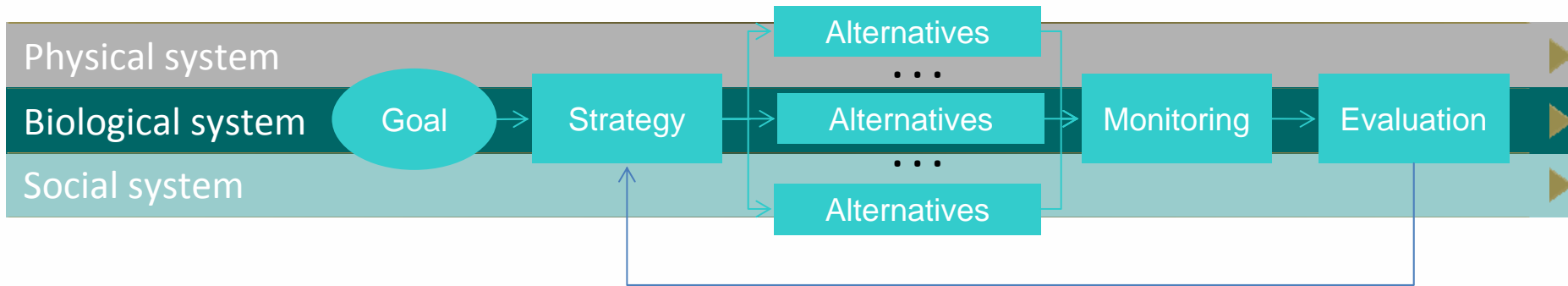
- Using Multiple-Criteria-Analysis to weight the parameters and select a remediation alternative



Outlook towards other projects

- Participation:
 - The 'type' of problem has consequences for the strategy to deal with stakeholders
- Communication & Risk perception
 - Create a shared body of knowledge: lay knowledge is just as valuable as scientific knowledge.
 - Respect the risk perception of all stakeholders, do not try to 'explain it again' to stakeholders

Outlook towards policy



- Adaptive management:
 - Acknowledges the complexity of the physical, biological and social aspects;
 - Emphasizes the importance of stakeholder involvement and monitoring;
 - It builds upon monitoring, evaluating and learning as guiding principles creating flexibility in strategy.

Thank you for your interest!

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FOR MORE INFORMATION:
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