Sediment and Society

Management of contaminated sediments and stakeholder involvement

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The Sediment & Society project

Focuses on three elements (in sediment management):

- Risk perception: how do people perceive risks and how do we acknowledge and incorporate this perception in a decision-making process?
- Participation: how can we identify stakeholders, and how do we organize their involvement in a way that fits with the sediment management issue?
- Communication: in what way can we organize the communication process and how is information received and perceived?
The project focuses on the decision-making process not the technical solutions!
“Stop dumping toxic waste into Oslo fjord!”

(kilde: www.stopp-giftdumping.org)
Different dimensions of the Oslo harbour issue
Approach for the Oslo harbour study

- Identification of stakeholders through document review & expert judgement.
- Selection of stakeholders based on influence, interest and argumentation.
- Interview of 23 persons (78% participation).
  Web survey of 98 persons (91% completed the survey).
- Good sample selection with respect to participation and residence.
Participation

• The majority of the respondents point out that the highest level of influence was in the early phase of the project, people getting involved later felt that they could not influence the choice for a solution.

• 78% of the respondents (strongly) agree that: “To let stakeholder be involved in the decision making is necessary even if this means that the process will take a lot of time”;

48% of the respondents (strongly) disagree that “The decision on what to do should be made by governmental organizations and experts without stakeholder involvement”;
Risk perception of contaminated sediments

- Two groups of respondents concerning the solution have gained different views of sediment risk through the project
- Different motives for the change (A/L)
  - Scientific information (46%/30%)
  - Media (3%/18%)
  - Personal experience (3%/21%)
## Stakeholder argumentation for the choice of solution

<table>
<thead>
<tr>
<th>Factor</th>
<th>Aquatic disposal</th>
<th>Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area use - not occupying hazardous waste deposit</td>
<td>+</td>
<td>—</td>
</tr>
<tr>
<td>Cost/execution</td>
<td>+</td>
<td>—</td>
</tr>
<tr>
<td>Local solution</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Added value</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Reduction in human risk</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Reduction in marine risk</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>
Trusted sources of information

- 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
**Preliminary conclusions - Oslo harbour**

- Relative consensus on objectives and goals
- Differences in participation and influence
- Differences in risk perception and trust of information

<table>
<thead>
<tr>
<th>Little consensus about values and goals</th>
<th>Large consensus about values and goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstructured Knowledge seeking</td>
<td>Semi structured Negotiation seeking</td>
</tr>
<tr>
<td>Not possible to structure</td>
<td>Structured Plan seeking</td>
</tr>
<tr>
<td>Pacifying</td>
<td></td>
</tr>
</tbody>
</table>

Hisschemöller 1993
The Sediment & Society project-WP 2

PAST
WP 1
OSLO HARBOUR
Learn from the process

PRESENT
WP 2
BERGEN HARBOUR
What could be an other approach?

FUTURE
WP 3
NORWEGIAN HARBOURS
Bring together lessons learned
Another approach in Bergen – Define level of involvement

- Be informed
- Be consulted
- Give advice
- Assist in assessments
- Participate in decisions
- Participate in councils
- Questionnaires
- Folders
- Recommend solution
- Decide solution
Another approach in Bergen – Use a governance oriented approach

1. Identify and classify stakeholders
2. Select a stakeholder
3. Establish a stakeholder panel
4. Perform interactive work meetings

- Thorough selection
- Choose key persons to establish the panel
- Depending on the level of ambition
Another approach in Bergen – Make use of decision analysis methods (MCDA)

Technology
Cost
Perception
Ecological risk

Ecological risk
Cost
Energy

Alternatives
Development
Perception
Technology
Possible outcome of the process in Bergen

- More efficient planning and documented decision making;
- Using knowledge from practice and science: finding shared ’facts’
- Goodwill and higher level of trust between stakeholders.
- Smoother execution phase
Thank you for your interest

Sediment and Society
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