

Criteria for a framework of analysis for transdisciplinary and collaborative co-design processes in coastal management

d'Hont, Floortje; Slinger, Jill

Publication date

2018

Document Version

Final published version

Citation (APA)

d'Hont, F., & Slinger, J. (2018). *Criteria for a framework of analysis for transdisciplinary and collaborative co-design processes in coastal management*. 1-1. Poster session presented at 1st International Conference on Water Security, Toronto, Canada.

Important note

To cite this publication, please use the final published version (if applicable). Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights. We will remove access to the work immediately and investigate your claim.

Framework of analysis for transdisciplinary and collaborative design processes in coastal management



Floortje d'Hont
PhD Candidate



Floortje d'Hont¹, Jill Slinger^{1,2}

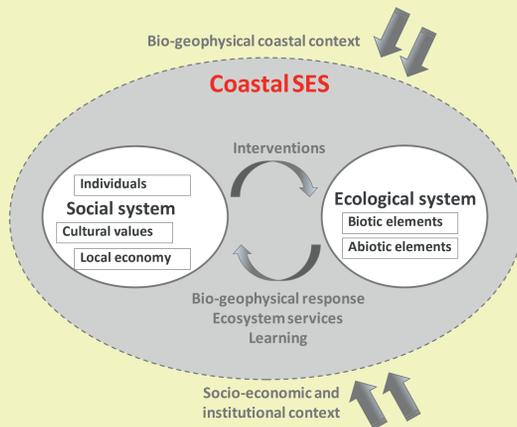
1) Delft University of Technology 2) Institute of Water Research, Rhodes University, South Africa

Aim: to distill practically recognizable criteria for collaborative design processes in coastal management

Lessons from theory

Social-ecological systems

- Currently, the empirical **understanding of ecological and social factors** is not evenly balanced.
- In fact, where biophysical or economic factors are targeted, often **stakeholders' priorities, knowledge, preferences and values are overlooked** in coastal management plans.
- To utilize social-ecological frameworks in coastal management, we need more understanding of stakeholders' perceptions.



Experiential case study learning

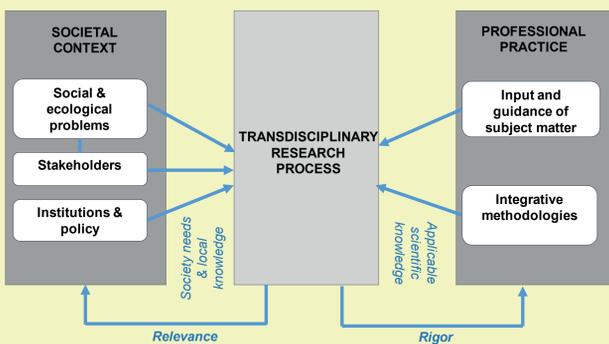
Case study: The Slufter, Texel, The Netherlands

Where? The Slufter, a nature reserve with a flood defense function.

- Tidal inlet
- 400 - 600 m wide opening,
- Narrow channel (10 m) links North Sea with dune valley (400 ha)
- Multifunctional area



Transdisciplinary research



- **Requires integration** of formal and informal knowledge
- **Scientific rigor and societal relevance** link research to respective bodies of knowledge
- Emphasis on inclusion of **local knowledge**

Integrated Coastal Management

- Involves a bottom-up approach, with multiple centers of decision-making (**polycentric governance**)
- **Perceptions of policy makers, scientists, citizens** are influencing coastal programs implicitly and explicitly.
- Success depends on stakeholder values, ecological values and engineering values.
- Particularly for coastal management, the **knowledge of the system context** of the designed intervention is essential.

Approach

What? A participatory activity in a 1-day workshop setting

Aim? To **build and explore shared system understanding**

Who? Between local stakeholders, researchers and policy makers.

Knowledge Input: stakeholder perceptions and system understanding from researchers and decision makers:

1. Abiotic simulation model
2. Stakeholder interviews and expert interviews
3. Information on policy options and ongoing decision making processes

Observations

- × Local stakeholders are part of a **close-knit island community**
- × many other decision-making processes
- × **Stakeholder fatigue**
- × Participants with **professional authority dominated** the discussions
- × Professionals display their expertise with **language** that is not understood by locals.
- × A different understanding existed among all participants in terms of **dynamics, temporal and spatial scales**.

- × **Local stakeholders categorically mistrusted insights derived from simulation models** (a core element of the workshop).
- ✓ Stakeholders know how to access and alert relevant authorities
- ✓ **Conceptual system understanding** on abiotic processes provided a basis for discussion
- ✓ **Interviews were successful in sharing understanding** of varying stakeholder preferences
- ✓ **Stakeholders' preferences changed** with new information and discussion

Evaluation on content

Is the success of the activity based on the rationale?

1. What **knowledge** was exchanged? And when?
2. Can we assess the feasibility of the solution **considering societal and professional values**?
3. Can participants recognize their contribution?
4. Can participants **locate themselves** in the social-ecological systems view?

Methodological considerations

1. **Process serves as input** for the technological design process
2. Justified **level of participation**
3. Process gives priority to finding **stakeholder values**

Participants

Do participants cover a wide range of system knowledge?

- ✓ Are selected participants **neutral and independent**?
- ✓ Are all participants equally **comfortable** sharing their views?
- ✓ Are the ethics of involvement communicated to ensure **integrity of process**?
- ✓ Is the **facilitation perceived to be neutral**?

Problem

- ✓ Does the starting point for the process relate to **participants' understanding** of the problem?
- ✓ Is the problem **'urgent'**?
- ✓ Are social, ecological and technological values appreciated during the activity?
- ✓ Time scale uncertainty
- ✓ Unequal distributions of costs and benefits

Key lessons for designing collaborative activities in coastal management

General discussion

- Current coastal management policies aim for physical solutions (whereas solutions may lie in the social realm)
- The experiential learning is based on one case study to research place-based context and knowledge
- Results that are sufficient for research, are not necessarily sufficient for the policy arena.

Next research steps:

1. Eliciting values through collaborative design (instead of discussion)
2. What are the implications for other coastal contexts?
3. Can we move to higher levels of participation for coastal problems?