

Accommodating various discourses in IA: multi-actor management in mangrove forests

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Context

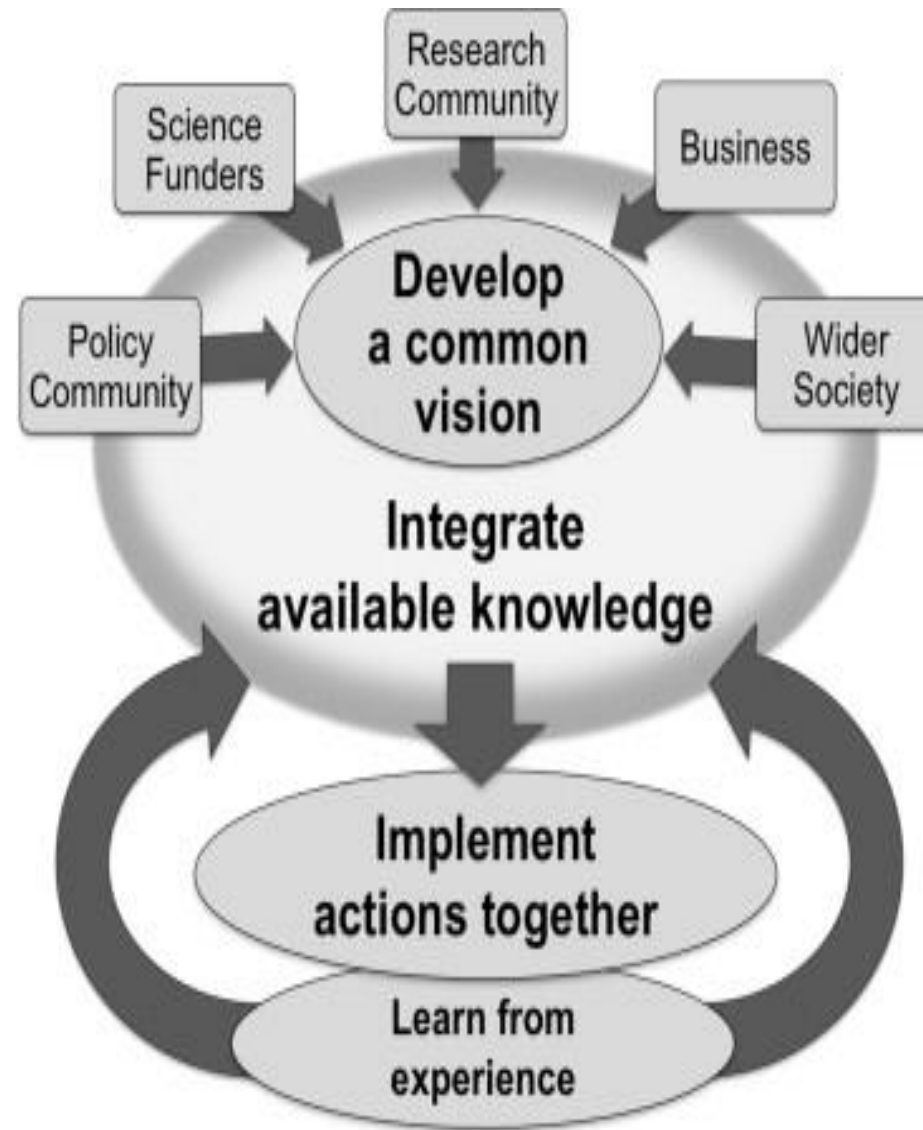
- How to generate relevant action-generating knowledge that can help to manage mangroves sustainably?
- ‘sustainability science’
- builds on both normative and positive inputs
- requires alternative problem framings
- Inter- and trans-disciplinary approaches – but what does that mean?

Mangroves



Case: Matang Mangrove Forest, Malaysia

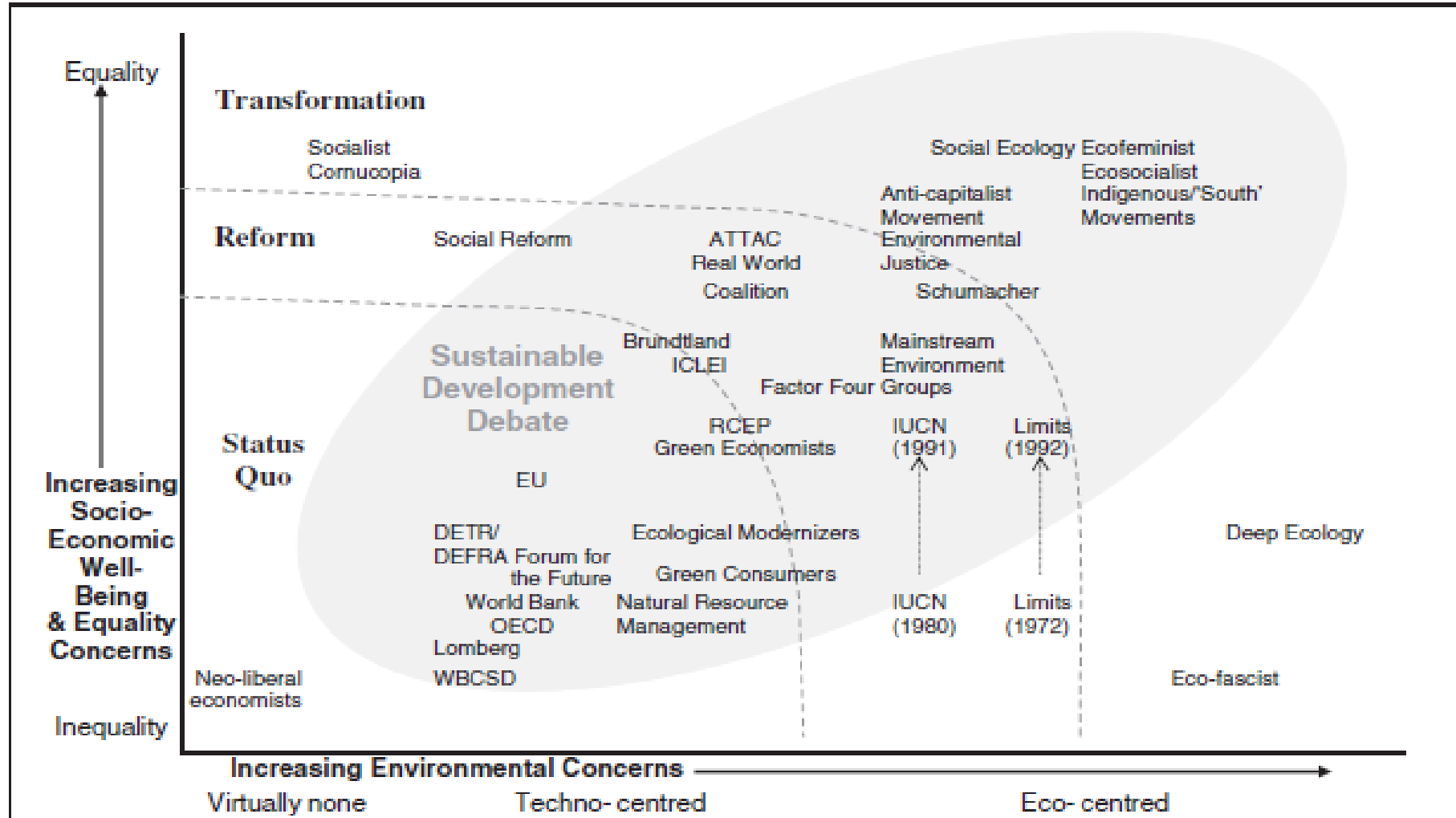
- 40,000 ha+
- Managed mangrove forest on the West Coast of Peninsular Malaysia (state of Perak)
- Charcoal production & pole production
- Managed by the Forestry Department of the State of Perak
- Multiple services provided by this largest mangrove tract in mainland Malaysia



What should we do?

- Apparent consensus on the necessity to manage mangroves (and other socio-ecological systems) sustainably
- Yet there is no blueprint approach to sustainable mangrove management and/or to mangrove conservation: what exactly should we do?
- As sustainability is a contested concept, subject to interpretation

Sustainability?



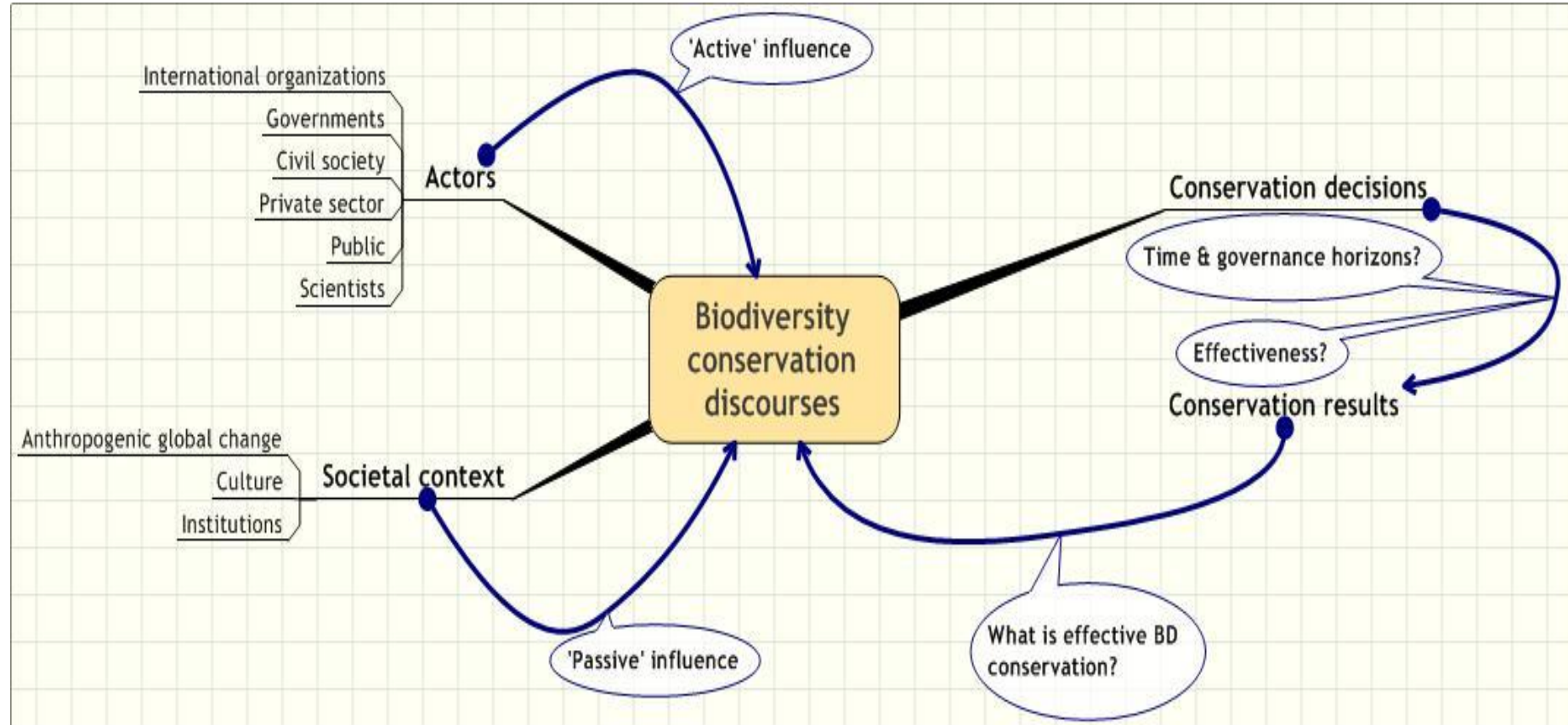
Conservation?

- ***Nature for itself*** (with species, wilderness and protected areas as the key ideas)
- ***Nature despite people*** (extinction, threats and threatened species)
- ***Nature for people*** (ecosystems and their services, economic values) to the more recent and nuanced version of it:
- ***People and nature*** (resilience and adaptability in socio-ecological systems)

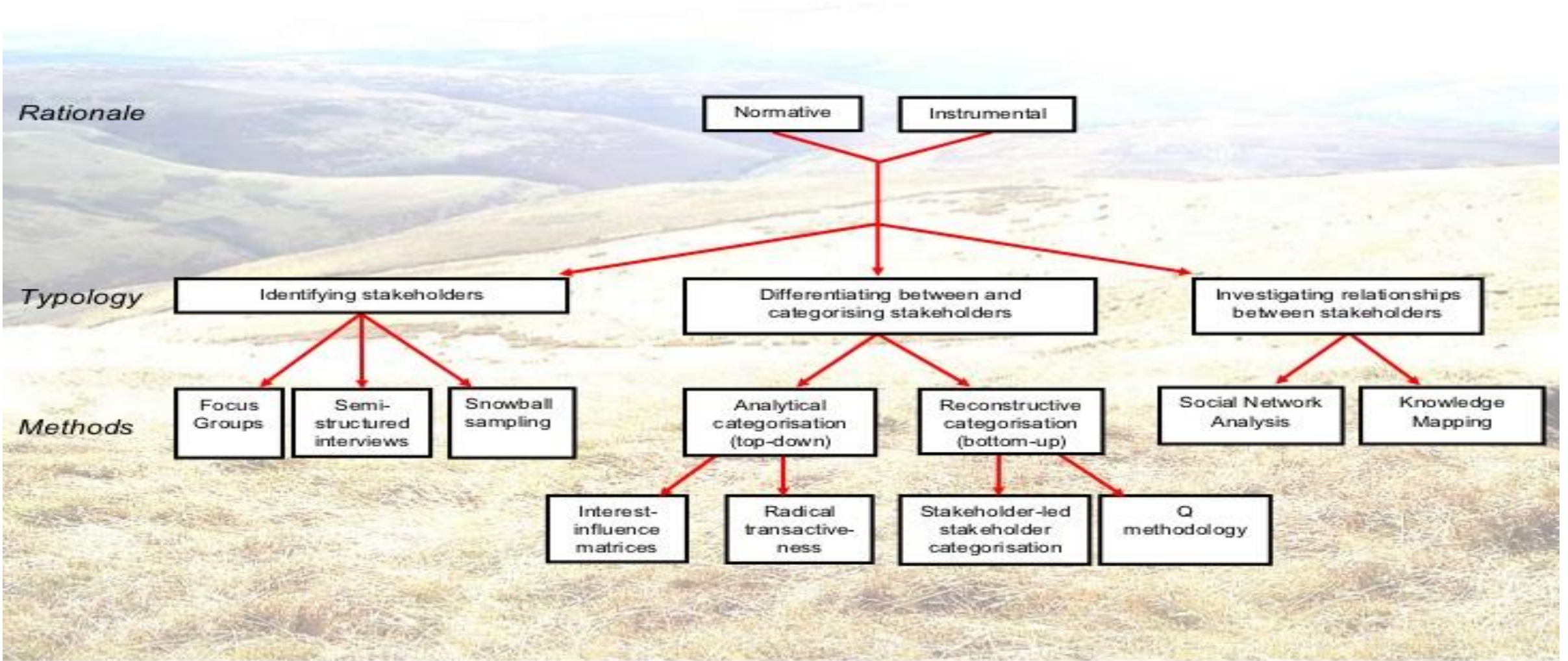
IAs take place in complex environment – Questions to be addressed:

- Q1. *Who's concerned? What about the **actor network** & its organization?*
e.g. who's with whom, who's against whom?
- Q2. *Changes in **discourse** & interpretation?*
e.g. conservation for the people vs. with the people?
- Q3. Changes in perceptions of conservation **effectiveness**?
e.g. what 'matters' and how do we measure it?
- Q4. Changes in **ecosystems**?
e.g. status of umbrella species

Q1: Who are the stakeholders? Who shapes management?



Who's in, and why? (Reed et al. 2009)



Stakeholders in Matang Mangrove Forest (1/2)

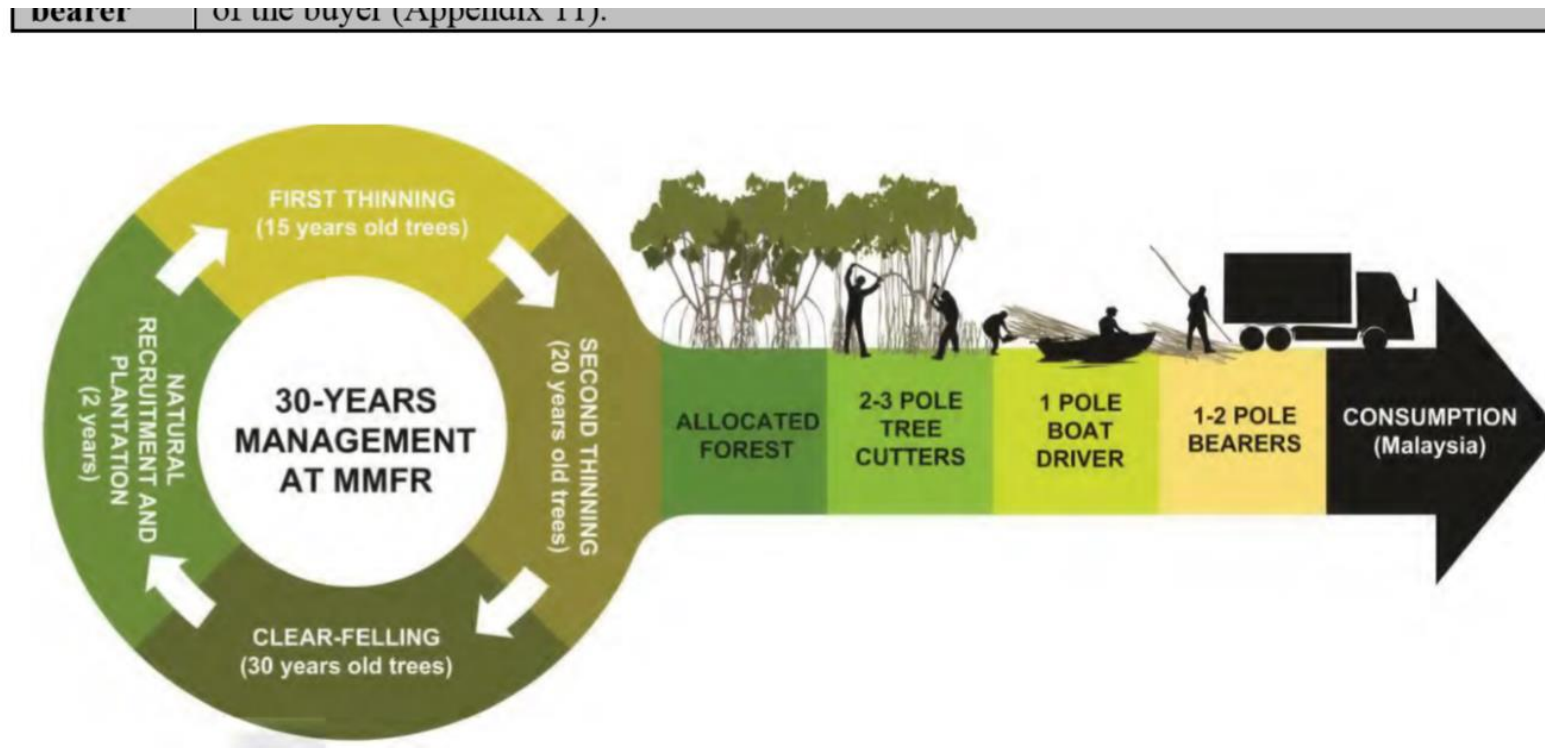


Figure 11: Production system of poles in Matang Mangrove Forest Reserve. Refer to Table 14 for definitions of each task.

Stakeholders in Matang Mangrove Forest (2/2)

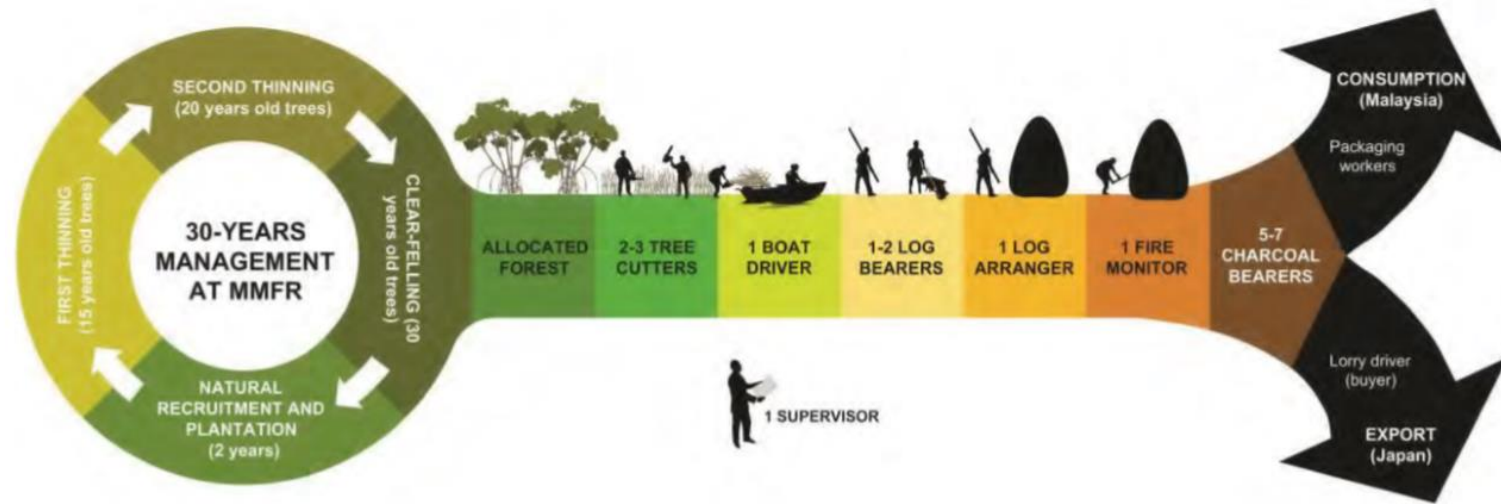


Figure 10: Production system of charcoal in Matang Mangrove Forest Reserve. Refer to Table 13 for definitions of each task (Appendix 8).

In order to provide a thorough view of the fieldwork, we need to understand the

< organization of work: ... in Appendix 7.1: Figure >

Q2: Discourses?

- = a specific ensemble of ideas, concepts and categorizations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities (Hajer, 1995)
- Discourse entails more than a mere description of things: it does things;
- as discourse both 'rules in' certain ways of talking about a topic and defining acceptable behaviour, yet, it also 'rules out', limits and restricts other ways of talking and acting.

Q2: Discourses?

= a shared, structured way of speaking, thinking, interpreting and representing things in the world (Dryzek, 2005).

= 'a way of seeing and talking about something'

We are not primarily driven by respectively rational calculations or social norms, but by ideas, interpretations, and meanings attached to the world.

Discourse analysis?

- How to identify and map discourses?
- Various methods can be used:
 - Qualitative, descriptive textual analysis
 - Delphi method to gather (expert) opinions & identify discourses
 - Q methodology to map discourses
 - ...

Qualitative discourse analysis (1/2)

The screenshot shows a web browser window displaying a Springer article. The browser's address bar shows the URL: link.springer.com/article/10.1007%2Fs11625-012-0184-2. The article title is "A discourse-analytical perspective on sustainability assessment: interpreting sustainable development in practice" by Jean Hugé, Tom Waas, Farid Dahdouh-Guebas, Nico Koedam, and Thomas Block. The journal is "Sustainability Science", April 2013, Volume 8, Issue 2, pp 187-198. The page includes a "Feedback" button on the left, a "Download PDF (287 KB)" and "View Article" button at the top, and another set of these buttons below the abstract. The abstract text discusses the concept of sustainable development in public decision-making and the application of a discourse-analytical lens. On the right, there is a "Look Inside" button and a "Within this Article" section with a list of links: Introduction, Rationale of discourse analysis in the context of sustainable development, Sustainable development discourses: an overview, Applying discourse analysis on sustainability assessment, Conclusion, and References. Below this is an "Other actions" section. The Windows taskbar at the bottom shows the time as 17:47 on 11/02/2014.

link.springer.com/article/10.1007%2Fs11625-012-0184-2

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Sustainability Science
April 2013, Volume 8, Issue 2, pp 187-198

A discourse-analytical perspective on sustainability assessment: interpreting sustainable development in practice

Jean Hugé, Tom Waas, Farid Dahdouh-Guebas, Nico Koedam, Thomas Block

» 1 Citation

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Abstract

Sustainable development is a ubiquitously used concept in public decision-making: it refers to an ideal vision of global society where human development and environmental quality go hand in hand. Logically, any decision-supporting process aiming at facilitating and steering society toward a sustainable future then seems desirable. Assessing the sustainability of policy decisions is, however, influenced by what sustainable development is believed to entail, as different discourses coexist under the umbrella of the sustainable development meta-discourse. This paper proposes a typology of sustainable development discourses, and, subsequently, applies a discourse-analytical lens on two practical cases of sustainability assessment in different institutional and geographical contexts (in Belgium and in Benin). The results indicate that sustainability assessments tend to be influenced mainly by the consensual 'sustainable development as integration' discourse, while also providing a forum for dialogue between different discourses. The results shed light on context-specific discursive and institutional dynamics for the development and application of sustainability.

» Introduction
» Rationale of discourse analysis in the context of sustainable development
» Sustainable development discourses: an overview
» Applying discourse analysis on sustainability assessment
» Conclusion
» References
» References

Other actions

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Table 3 Indications for constitutive elements of sustainable development discourses in the Benin sustainability assessment process (sources: own research, Hugé and Hens 2009)

Discourse elements in the sustainability assessment	Basic entities	Assumptions about natural relationships	Agents and their motives	Metaphors and rhetorical devices
Case: Benin PRSP sustainability assessment	<p>“The PRSP is an integrative and holistic document”</p> <p>“Participation is key” (regional workshops, national forum, media)</p> <p>“PRSP drafting is an iterative process”</p> <p>“PRSP greening builds on existing environmental legislation” (e.g. Framework Law 2003)</p>	<p>“Narrow focus on ecology (discussion)”</p> <p>“Few linkages with Millennium Development Goals”</p> <p>“Discrepancy between intentions and situation on the ground”</p> <p>“Drafting team decided on eventual inclusion of citizens’ remarks”</p> <p>Trickling down of environmental concerns</p> <p>Strategic environmental assessment—concept</p>	<p>“Mixed PRSP drafting team (Finance Ministry and Environmental Agency)”</p> <p>“Donors need to put pressure on Benin politicians to keep sustainable development on the agenda”</p> <p>“Facilitating role for donors”</p> <p>“Influence on the private sector apparent”</p> <p>“Broader picture: policy coherence”</p> <p>“Environmental cells within sector ministries”</p> <p>“Tiering”</p> <p>“NGO participation is key” yet hampered by capacity problems</p>	<p>“Greening” the PRSP</p> <p>“‘Signal function’ of the ‘greened’ PRSP to lower decision-making levels”</p> <p>“PRSP greening is a forum for discussion”</p>

Q methodology: an introduction (1/2)

- It reduces individual viewpoints of the subjects down to a few discourses ('factors').
- *Step 1: Definition of the Q concourse:* involves the collection of all possible statements covering all relevant aspects on the subject at hand.
- *Step 2: Development of a Q set.* In this stage, a subset of statements (called the Q set) drawn from the concourse is compiled to be presented to the participants.
- *Step 3: Selection of the Q sample.* Q requires only a limited number of respondents if they are expected to cover the variety in discourses.

Q methodology: an introduction (2/2)

- *Step 4: Q Sorting.* Participants are then required to sort the statements in the Q set according to how they strongly agree or disagree to each statement.
- *Step 5: Analysis and Interpretation*
 - First, the correlation matrix is calculated showing the degree of (dis)similarity in viewpoints between participants.
 - Next, the correlation matrix is subjected to factor analysis in order to identify the number of natural groupings of Q sorts based on their similarity (people with similar views share the same 'factor').
 - Next step is the factor rotation where a final set of factors are selected.
 - Each resulting final factor represents a group of individual viewpoints that are highly correlated with each other and detached with others.

Q methodology: schematic representation

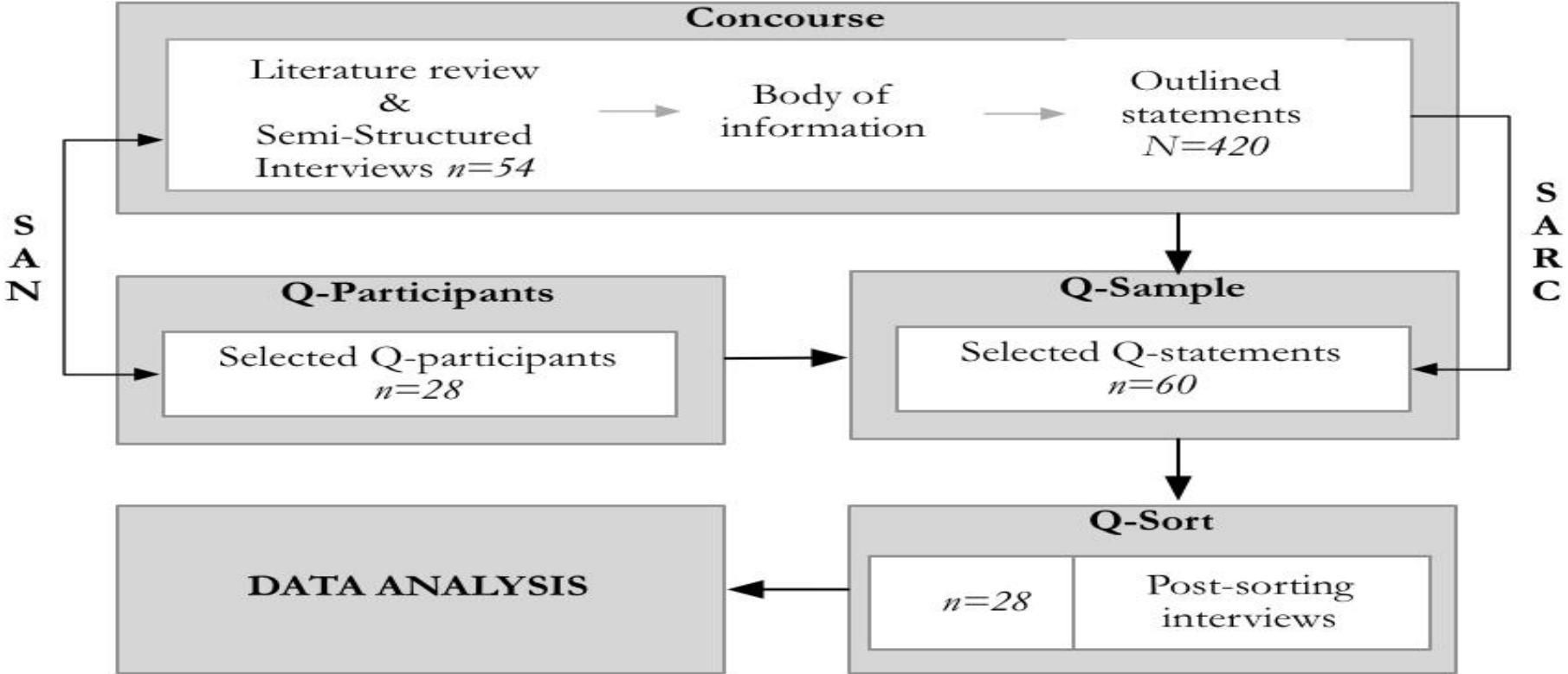


Figure 1. Diagram flow for gathering data in Q methodology. From the top left to right: a stakeholder analysis (**SAN**) was used to identify and capture the spectrum of opinions occurring in Galapagos (see STable1) and to further identify relevant Q-participants. A structured approach to reduce the concourse (**SARC**) from 420 to 60 statements was used to generate the Q-sample. Q-participants ranked the Q-statements according to her/his preferences (agreement or disagreement) over a forced Gaussian distribution from -6 to +6 (SFig1). Post-sorting interviews were conducted to record participants reactions to particular statement(s) of their interest, upon Q-sort completion.

Application of Q in Matang Mangroves

- Map discourses on mangrove forest management
- Building on earlier research (eg stakeholder mapping)
- Identify commonalities and differences between Matang & other mangrove areas (Singapore, Selangor state (Malaysia), wider Indo-Pacific Region)
- Confronting discourse-related information with ecological data (eg bird census as proxy for biodiversity assessment)
- Work in progress!

Conclusion

- IA processes ideally should contribute to map stakeholders & discourses
- ‘Discourses’, framings, worldviews dominate decision-making, whether one likes it or not
- There are methods that allow to consider & measure discourses
- Combined with sound ecological data, this approach leads to ‘socio-ecologically robust’ science & management.
- IA processes could be guided by this approach
- Case work in Malaysia ongoing