# Sustainability indicator development – *science or political negotiation*?

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**SHAPE YOUR SUSTAINABILITY TOOLS**
**– and let your tools shape you**

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# 1. Context and research question

Context: development of sustainability indicators since 1990ies

- in *government-led processes* at global and European level (e.g. CSD, EEA, MCPFE etc.)
- in *science-driven processes* within sustainabilty impact assessment projects (e.g. EFORWOOD, SENSOR, SEAMLESS etc.)

Research Question:

- How have indicator development processes addressed the issue of knowledge production and normative judgments?

Cases Description:

- Most-different case design (5 cases)

# 2. Hypothesis

- Development of sustainabilty indicators is not a scientific task alone, but involves political negotiation:
- A) Indicator developers (in science-led initiatives) are often not aware of and/or negate the political ‚norm creation' activity they perform; they put emphasis on technocratic conception expertise and separation of science and policy.
- B) Political-decisionmakers (in government-led initiatives) can ‚easily' hide behind the knowledge production activity downplaying norm creation.

=> **No seperation of roles according to science/policy domains**

# 2. Conceptual Approaches

Sustainabilty indicators as ‚attention hotspots'

⇒selection reflects fundamental implicit value judgments

⇒two „ideal models" distinguished

| | Knowledge production | Norm creation |
|---|---|---|
| Background and input | Scientific / technical objective knowledge | Norms, values and interest |
| Actors | Scientists, experts | Citizens or their substitutes (democratically elected politicians as representatives |
| Ideal-type knowledge application | 'Best available' reflection of factual knowledge | 'Best possible' reflection of societal norms, values and interest |
| Ideal-type process | Scientific methods of disciplinary, inter-, multi- or trans-disciplinary science | Democratic voting |
| Outcomes | 'Truthful' representation of human system-ecosystem interaction | Democratically legitimized preferences on values of nature, inter- and intra-generational equity |

# 3. Framework of Analysis

| Factors of Analysis | Explanation | |
|---|---|---|
| *Participation* | 1. Merging knowledge creation and norm creation | Degree and form of participation of scientists /experts / policy makers, citizens |
| | 2. Merging different fields of knowledge | Participation of scientists and experts with ecological, economic and social expertise |
| | 3. Merging different policy domains (cross-sectors) | Participation of citizens, policy-makers from different affected policy domains |
| *Learning* | 4. Adjusting sustainability indicators to emerging scientifically produced knowledge | Iterative revision also over the short term |
| | 5. Adjusting sustainability indicators to changing social and political norms | Iterative revision both short term and longer term |

# 4. Five Case-studies

- EFORWOOD

  indicator development for the forestry-wood chain
- SENSOR

  criteria and indicator development on land-use related policies
- SEAMLESS

  indicator development for new agricultural and environmental policies
- MCPFE

  indicator development for sustainable forestry management
- EU

  indicator development for sustainable development

# 4. Results: Case-studies

| Factors of Analysis | EFOR-WOOD | SENSOR | SEAM-LESS | MCPFE Ind. | EU SDS Ind. |
|---|---|---|---|---|---|
| 1. Merging knowledge creation and norm creation | ✓ some (science) | ✓ some (science) | ✓ some (science) | ✓ some (norm) | ✓ some (norm) |
| 2. Merging different fields of knowledge | not balanced | not balanced | not balanced | ✓ limited | ✓ limited |
| 3. Merging different policy domains (cross-sectors) | limited | ✓ | limited | limited | ✓ |
| 4. Adjusting sustainability indicators to emerging scientifically produced knowledge | ✓ in project | ✓ in project | ✓ in project | ✓ review | ✓ review |
| 5. Adjusting sustainability indicators to changing social and political norms | not really | only a few | not really | ✓ | ✓ |

# 5. Discussion and Conclusion

- Science-led indicator development processes:

  - *constraints* on merging knowledge production and norm creation activities
  - *models* can only use limited number of indicators
  - *indicator selection* follows only to very limited extend the scientific method, but open and/or hidden voting for / and against indicators is usual procedure
  - *3rd group of actors*: model developers => involved in decision on in/exclusion of indicators

# 5. Discussion and Conclusion

- Government-led indicator development processes
  - *Norm creation* activities central
  - *indicator selection* => voting procedure
  - *Possibilty to react* to up-coming norms & values is taken up

# 5. Discussion and Conclusion

- *biases and different rationales* of scientific disciplines and policy makers:
  - => scientists tendency to see only issues relevant to their domain
  - => policy-makers sort out indicators that may cause conflict
- Participation:
  - => same attention to socio-political and knowledge creation dimension is needed during indicator development process
- Learning:
  - => scientific projects: indicators as „interim“ results
  - => policy: actors that participate may assume ‚ownership‘ and indicators become recognised as legitimate

# 5. Discussion and Conclusion

- *Are science-led processes biased towards accuracy and comprehensiveness?*

  maybe, but if they manage to link SD ind. to concrete strategies & policies those become more relevant

- *Are government-led processes more policy relevant?*

  link between sets and explicit policies enhances political relevance

Thank you for your attention!