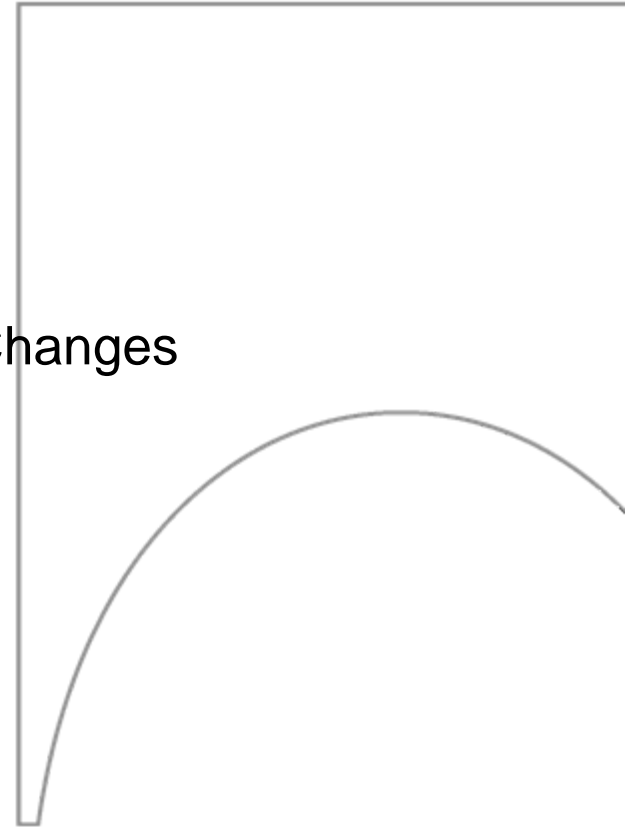




Sustainability indicator development – *science or political negotiation?*

presented at the Impact Assessment of Land Use Changes
Humboldt University, Berlin, 6th-9th April 2008

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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 sustainability 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 (4 cases)

2. Hypothesis

- ❖ Development of sustainability 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 separation of roles according to science/policy domains**



2. Conceptual Approaches

Sustainability indicators as 'attention hotspots'

⇒ selection reflects fundamental implicit value judgments

⇒ two „ideal models“ distinguished

		Knowledge production	Norm creation
	Background and input Actors	Scientific / technical objective knowledge Scientists, experts	Norms, values and interest Citizens or their substitutes (democratically elected politicians as representatives)
	Ideal-type knowledge application Ideal-type process	'Best available' reflection of factual knowledge Scientific methods of disciplinary, inter-, multi- or trans-disciplinary science	'Best possible' reflection of societal norms, values and interest 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	
<i>Participation</i>	<ol style="list-style-type: none"> 1. Merging knowledge creation and norm creation 2. Merging different fields of knowledge 3. Merging different policy domains (cross-sectors) 4. Adjusting sustainability indicators to emerging scientifically produced knowledge 	<p>Degree and form of participation of scientists /experts / policy makers, citizens</p> <p>Participation of scientists and experts with ecological, economic and social expertise</p> <p>Participation of citizens, policy-makers from different affected policy domains</p>
<i>Learning</i>	<ol style="list-style-type: none"> 5. Adjusting sustainability indicators to changing social and political norms 	<p>Iterative revision also over the short term</p> <p>Iterative revision both short term and longer term</p>

4. Case-studies

- EFORWOOD
indicator development for the forestry-wood chain
- SENSOR
criteria and indicator development on land-use related policies
- MCPFE
indicator development for sustainable forestry management
- EU indicator development for sustainable development

Factors of Analysis	EFORWOOD	SENSOR	MCPFE Ind.	EU SDS Ind.
1. Merging knowledge creation and norm creation	✓ some	Not balanced	✓ some	✓ some
2. Merging different fields of knowledge	not balanced	✓	not balanced	✓
3. Merging different policy domains (cross-sectors)	limited	✓	limited	unknown
4. Adjusting sustainability indicators to emerging scientifically produced knowledge	✓ during project	✓ during project	✓	✓
5. Adjusting sustainability indicators to changing social and political norms	Not really	unknown	✓	✓

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 => decision on in/exclusion of indicators
 - *biases and different rationals* 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

5. Discussion and Conclusion

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

- ❖ *Are science-led processes biased towards accuracy and comprehensiveness?*
maybe, if they manage to link SDI ind. to concrete strategies & policies

- ❖ *Are government-led processes more policy relevant?*
link between sets and explicit policies enhances political relevance



Thank you for your
attention!

