

Sustainability Indicators and Sustainability Research

Comments based on a PEER Conference

Alain Vidal, Cemagref - alain.vidal@cemagref.fr

Mikael Hilden, SYKE - mikael.hilden@ymparisto.fi

PEER – Partnership for European Environmental Research

PEER - Partnership for European Environmental Research

- A network of large European environmental research centres devoted to the interactions between man and environment, covering the full spectrum of natural and social environmental sciences, and combining basic and applied interdisciplinary research
 - Alterra – Green World Research Centre (The Netherlands)
 - CEH – Centre for Ecology and Hydrology (United Kingdom)
 - Cemagref – Centre for Agricultural and Environmental Engineering (France)
 - JRC-IES – Joint Research Centre - Institute for Environment and Sustainability (European Commission)
 - NERI – National Environmental Research Institute (Denmark)
 - SYKE – Finnish Environment Institute (Finland)
 - UFZ – Centre for Environmental Research (Germany)

PEER Facts Sheet 2004

- Total staff: 4430 (41% female)
- Total budget: 336 Million Euro / year
- Number of scientific publications:
 - 5200 / year (1380 in peer-reviewed journals)
- Number of PhD students: 690
- Selected European Integrated Projects and Networks of Excellence with major PEER participation:
 - NOMIRACLE, ALTER-NET, ALARM, SENSOR, CARBOEUROPE, FLOODSITE, EURO-LIMPACS
- Organised a major European Conference on Sustainability Indicators in 2004

The questions

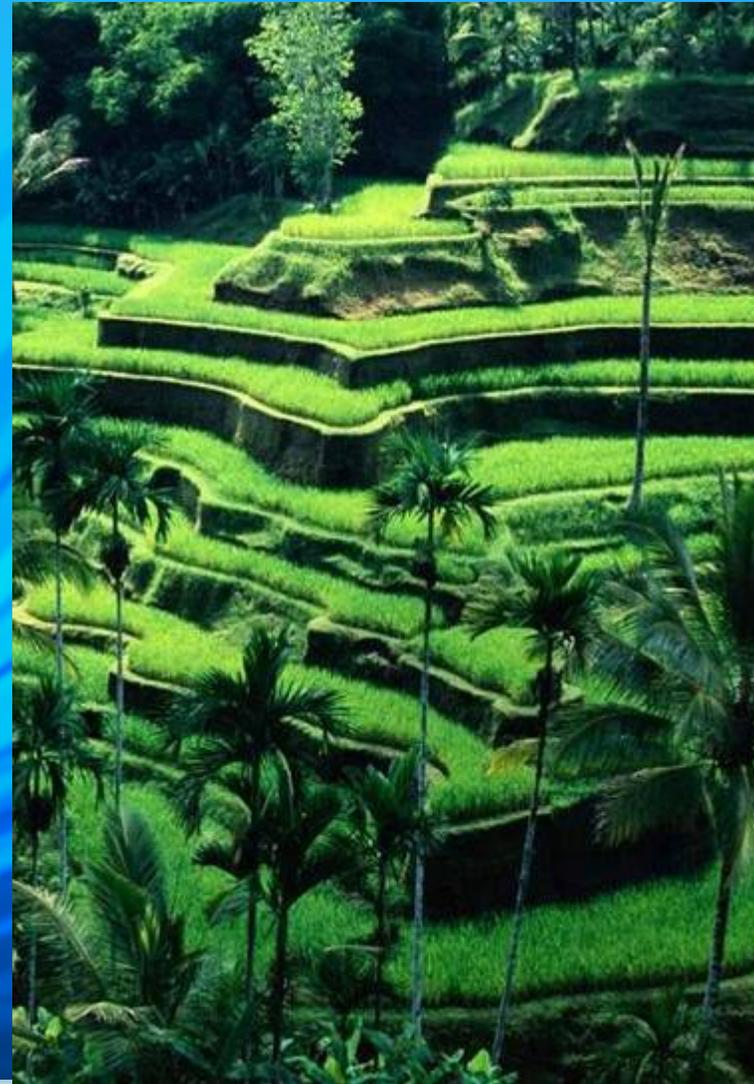
- **What are the primary drivers advancing sustainability among scientists, regulators, and policy makers?**
- **What research areas for sustainability must have the highest priority for the future?**

Sustainability Indicators (SIs) help in advancing sustainability

- "The role of sustainability indicators is **essential** in any political process today" (MP and MEP Heidi Hautala)
- Indicators give information on the development in the city (Environmental Manager Michael Naumann, Germany)
- Indicators can give food for thought and reflection among young people (Teacher Maija Flinkman, Finland)

Example: water cost recovery in agriculture

- Lack of transparency (Brazil, Uzbekistan)
- Dissatisfaction with the water service (almost all large public irrigation schemes...including France)
- Poor law enforcement (Madagascar, Jordan)
- Economic and political uncertainty (Mauritania)
- Insufficient farmers income (Niger and most African countries)



But SIs can be used in different ways

- Indicators can be seen to provide a normative basis for action
- Indicators can provide an impulse for reflection rather than action
- Indicators are intrinsically political although indicators ought to be objectively orientated
- The intended use of the SI puts specific demands on the research for SIs

Research for developing SIs

- There can be conflicts between pragmatic indicator development and scientific understanding
 - This conflict is made more difficult by the participation of stakeholders, but the science of indicator development should not be neglected and is needed if in the long term indicators are going to be trusted
- view indicators and indicator development as part of a communicative process

Policy relevance vs scientific accuracy

- “Ask scientists for one indicator and they give at least 25”
- Research should find links between several variables and then be able to use just one as *the* indicator that “tells the story”
- Transparency is a key, it must be possible to trace the source
- Uncertainty will always be part of the game and it should be analysed and explicitly recognised

Policy relevance: sustainability research should deal with the future

- Policy relevance is a question of informing where we have been, where we are, *but in particular, where we might be going under alternative scenarios: "WHAT IF?"*
- Indicators and indicator research should give a basis for alternative projections



Thank you