Uwe Schubert

EVALUATION OF SUSTAINABILITY - NEW CHALLENGES FOR EVALUATORS AND METHODS OF EVALUATION

Sustainability poses new challenges for methodology and evaluators

The evaluation of Sustainable Development poses new challenges to evaluators and methods of evaluation which cannot be solved through the application of methods developed in other fields of evaluation. This can be illustrated by highlighting some of the principles of Sustainable Development:

Integrated Approach

- Sustainable Development aims at an integrated solution of ecological, economic and social problems. For the evaluation of Sustainable Development this means the use of multidimensional target systems and the aggregation of data from different scales and indices. For specific decisions between different options there is also the problem of aggregating data, measured on different scales, which can only partly be expressed in monetary terms. This implies the use of sophisticated and well tested methods for the evaluation and aggregation of data, the further development of which seems one of the most interesting tasks for the future.
- From this follows, however, that the evaluation of Sustainable Development should only be conducted by interdisciplinary teams, which have a common understanding of the problems involved and use a common metadisciplinary language. For example, the evaluation of a communal programme may include the analysis of the environmental impact (natural science aspect), the assessment of the technologies used (technological aspect), an evaluation of how public funds were spent (economic aspect), a role analysis (social science aspect) and changes in power constellations resulting from it (political science aspect).
- Furthermore, the integrated approach offers a chance to control longer chains of cause and effect (for example using material flow analysis), and to find solutions which would be inconceivable with a purely sectoral approach (for example through networks of agents). For evaluations, this means a significant increase in complexity of the matter investigated, the deliberate inclusion of indirect effects, and a special focus on the delineations of the system evaluated. For example, when evaluating Sustainable Development in a region, one has to clarify whether the focus is to be on direct resource use only (e.g. tons of steel) or whether the side effects arising from the production of these resources (e.g. the use of energy and materials in mining) are to be taken into account as well.

Emphasis on the Long Run

- The deliberate focus on a long-run perspective in Sustainable Development offers the chance to tackle environmental problems not only after they have arisen in the sense of damage repair, but to prevent them from arising in the first place. At the same time, however, there are the problems of a comparative scarcity of data on long-term developments (for example global climate change) and of the comparability of solutions involving different time scales. (The latter problem is only insufficiently tackled by economists applying discount rates.) Evaluations of Sustainable Development can therefore only be done if firmly based on the findings of natural sciences, must include long term effects and should be conducted repeatedly to assess the latter.

Participation

- Sustainable Development not only addresses ecological questions, but also tries to give equal weight to social issues. This is made especially difficult by the fact that, so far, no common understanding has been developed of Social Sustainability and there is no established set of indicators to measure it. The further development of such indicators would therefore be a prerequisite for its evaluation.
- The Evaluation of Sustainable Development therefore calls for a participatory approach to evaluation in general. This could be done through participatory contracting of projects and project design (through programme steering or Local Agenda initiatives), task sharing between internal and external evaluators, or increased involvement of stakeholders in the assessment of results.
- As a result, evaluation also shares some characteristics with mediation and can contribute to a change in lifestyle patterns, increased awareness, the strengthening of problem-solving capacities of various stakeholders in society and to develop vision statements of Sustainable Development.

Implicit understanding of the concept of Sustainable Development raises the need for a meta-disciplinary dialogue

Evaluation of Sustainability requires a common understanding and a shared usage concerning the concept of Sustainable Development. In evaluation practice, this common understanding is often assumed, although literature research shows that there are vastly different scientific positions. The following examples show the extreme positions held in the discussion about Sustainable Development:

Examples	Extreme Position A	Extreme Position B
Normative approach	Sustainable Development means to identify natural limits and to take them into account in all societal decisions. Within this approach, ecological limitations put normative limits on economic and social activity.	The discussion of ecological problems and natural limitations is a societal process and thus to be observed without any value judgements. The normative approach of natural science cannot be justified since it is the goals of societal agents that are important.
Dimensions of goals	Sustainable Development aims at an equally weighted and simultaneous representation of ecological, economic and social goals (three-pillar model).	Different authors have extended the three-pillar model (adding, for example, cultural and institutional sustainability) or changed the weights given to the individual pillars.
System boundaries	Regionality is a natural principle which should be reflected in the concept of Sustainable Development. Therefore, all claims resulting from	Through regional, national and international division of labour, higher efficiency can and should be attained (e.g. through specialisation and

	the guiding principles of Sustainable Development have to be fulfilled on a regional basis. Violations of system boundaries (for example through imports and exports and far-reaching indirect effects) are to be minimised. Taken to the extreme, this concept advocates regional autarchy.	economies of scale). Sustainable Development therefore is a global concept, from which no demands for regional sustainability can be deduced.
Substitutability	Non-regenerative resources and energy sources must not be used, as their rate of regeneration (e.g. fossil fuels such as oil) exceeds the expected life span of mankind by far. A shift to renewable resources and regenerative energy sources is therefore indispensable.	The use of regenerative resources and energy sources can build up human capital (for example better education and higher social security) which justifies its use and can also lead to the development of new resources or the more efficient use of existing ones.
Ability to innovate	Most technological developments have led to a higher rate of use of natural resources and energy, and higher efficiency could only marginally compensate for the overall growth. Since the risk potential of new technologies (nuclear power, genetic engineering) is disproportionately high Sustainable Development is associated with "soft" and decentralised technologies or even implies the banning of certain technologies.	Only through the development of new technologies can a solution to the high use of energy and other natural resources be found. Today's technologies only show the way to future technologies. To renounce the use of present technologies would reduce the ability to innovate and thus prevent progress towards Sustainable Development. The scarcity of resources itself and the urgency of current environmental problems will create pressure to raise the ability to innovate.
Political Background	Sustainable Development is a political concept which includes questions of distribution (e.g. between current and future generations or between less developed and industrialised countries). Therefore, methods are needed to balance interests of different social groups and to critically assess their wants and needs (for example the principle of subsistence).	Sustainability can best be achieved by decoupling the satisfaction of needs from energy and resource use (e.g. the factor-4 concept and eco-efficiency). Technological innovation may enable needs to be satisfied through qualitative growth and may thus also solve distributional problems.

In view of this diversity of positions we can expect evaluation results to be strongly biased, depending on which concept of Sustainable Development is used in the evaluation. Therefore the same evaluandum may be assessed positively or negatively according to the assumptions underlying the evaluation. At present this problem is not adequately addressed, nor is it discussed sufficiently on an academic level. In evaluation reports, these paradigmatic questions are rarely addressed and the commissioning agencies are largely unaware of the consequences of different paradigms. In light of this situation, further research is clearly required.

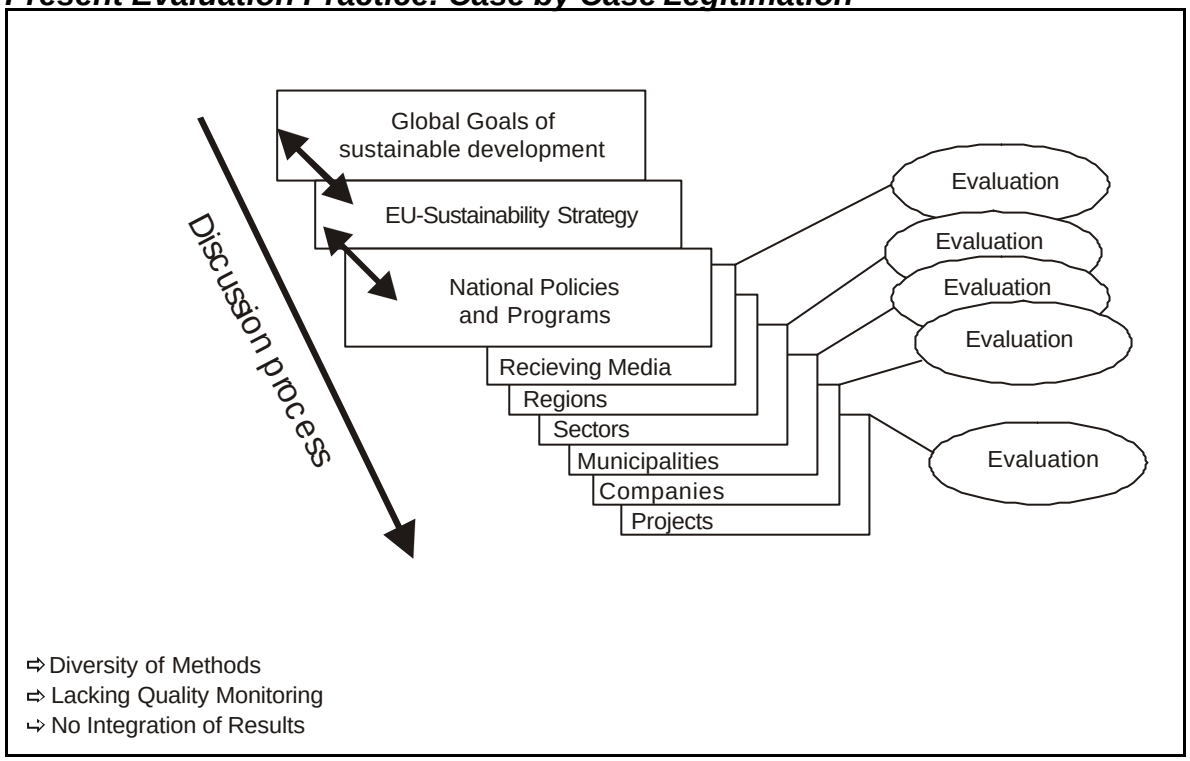
Evaluation of Sustainability must be seen as a part of a Sustainability Management System

Sustainable Development aims at the integration of environmental protection with other policy areas, which requires the integration of the aims of different sectoral policies. For this purpose, a cross-sectoral goal system is needed, the development and harmonisation of which calls for additional coordination. Since the number of agents involved is large, flexibility is needed and the principle of subsidiarity , in this case hinging critically on the assumption of better know-how in special agencies, has to be taken into account. The process of defining these goals cannot be centralised, but local and regional agents have to be involved in the implementation of Sustainable Development plans.

A policy of Sustainability must therefore concentrate on setting overall goals and rough guidelines and leave it to decentralised agents to decide how to attain them, as they usually have the best technical information and know-how. Through the setting of macro goals, a framework for orientation is created for the decentralised agents, which allows closer monitoring of decentralised activities with regard to their attainment of goals(Target base

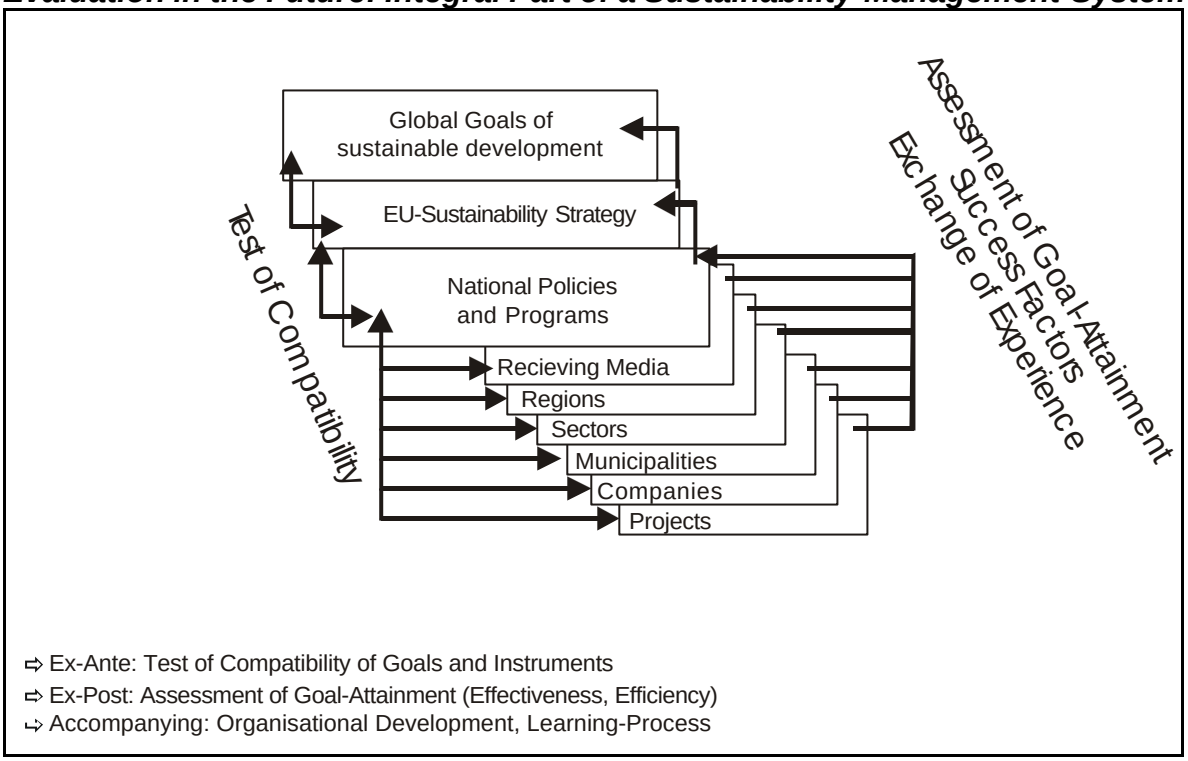
decentralised planning). Therefore, evaluations are not only assessments of the "success" of programmes and policies, but part of a larger "Sustainability-Management-System" on supranational, national, regional, communal and corporate levels, which consists of agreed goals, operationalisation of concepts, programme conceptualisation, programme implementation and feedback (=evaluation). It should lead to a more objective environmental policy, guarantees an adequate use of resources to attain goals and reduces the need for tedious, detailed coordination on the part of the agents. Environmental policy thus becomes more rational, goal-setting becomes more similar to corporate management systems, the organisational prerequisites for the attainment of goals are created and the attainment of the goals itself is measured.

Present Evaluation Practice: Case by Case Legitimation



⇨ Diversity of Methods
⇨ Lacking Quality Monitoring
⇨ No Integration of Results

Evaluation in the Future: Integral Part of a Sustainability-Management-System



Evaluation of Sustainability is therefore not an isolated task to measure the effectiveness and impact of individual projects, but an organised feedback process for decision-makers in politics, business and society. The sustainability strategy which the EU is currently developing, and which is a top-down process designed to integrate environmental concerns into other policy areas, particularly requires a feedback process which...

- secures learning effects and enables the transfer of experience within and between sectors, and between different tiers of administration,
- guarantees decentralisation and subsidiarity, and therefore efficient decision-making structures,
- ensures the attainment of the goals following the hierarchy of tiers ,
- provides a reference framework for the evaluation of smaller units (individual companies or projects)

In the context of Sustainable Development, evaluations are therefore not just ex-post outcome analyses, but instruments to co-ordinate and harmonise the goals of different agents and part of a feedback loop designed to provide information about the success of implementation activities.

Conclusions

Evaluation of Sustainability could play a significant role in the implementation of an international, national and regional sustainability policy. Therefore the following tasks will have to be taken care of:

- Theoretical discussion of the paradigms of Sustainable Development, reflection on the basic assumptions underlying evaluation projects and their consequences for the evaluation of Sustainable Development.

  This discussion should lead to a generally recognised operational concept of "Sustainability", directly applicable for evaluation projects. To overcome the semantic confusion between different disciplines involved a referential framework for a meta-dialogue is warranted.

- Development of an interdisciplinary framework to systemise present know-how available from the various disciplines dealing with the evaluation of Sustainability.

  The prominent purpose of this endeavour is to show the contributions as well as the limitations of the different disciplines involved and bridging the gap between them. Only a modular combination of the know-how of the various disciplines can meet the challenge posed by the postulate of sustainable development plans.

- Critical reflection on current evaluation practice via meta-evaluation, comparative methods analysis, country analysis and dialogues between scientists and practitioners.

  The aim of this effort is to increase market-transparency in the field, more extensive exchanges of experiences as well as ascertaining the quality of evaluation analyses. Surveys, meta-evaluations and a continuous dialogue between scientists and practicioners is indispensable to this end..

- Fundamental research to further develop methods for the evaluation of Sustainable Development with a view to creating a modular toolkit.

  Theoretical concepts need to be developed which facilitate the integration of different evaluation approaches by creating common concepts, which should make cause-effect analyses viable. It is only on this basis that evaluations can make assessments of impacts of policy interventions.

- Further development of the Evaluation of Sustainability into an integral part of a Sustainability-Management-System which shows successful implementation on different levels and contributes to a transfer of learning effects.

  The final goal is to establish evaluation as a social learning and feedback process , which enables a wider range of actors in development policy to benefit from the experiences made in the process of sustainable development. This requires professionality of agencies commissioning evaluation projects, raising the awareness of commissioning agencies of the need for an early conception of evaluations instead of mere ex-post analyses and measures to improve the market transparency.

For the attainment of these objectives monitoring and analysis of current demand trends on the international, national and regional levels, collection of evaluation reports, conducting meta evaluations and comparative country analyses are necessary. EASY-ECO constitutes an attempt to contribute significantly to this end.

by Uwe Schubert, Vienna University of Economics and Business Administration