

***Setting concepts into motion:
Sustainable Development and R&D policies
Development of scientific tools in support of
Sustainable Development decision making***

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**Setting Concepts in Motion:
Sustainable Development and R&D Policies**

The workshop "Setting concepts into motion : Sustainable Development and R&D policies – Development of scientific tools in support of Sustainable Development decision making" took place in the Astoria hotel in Brussels on the 28th and 29th of November 2002.

On the first day, the presentations and the debate were focused on **research policy instruments** for Sustainable Development (SD). The impact of the latest EU policy papers on Sustainable Development and on R&D (EU research instruments in the next Framework Programme, in particular Art. 169 of the Treaty of Amsterdam) was at the fore. The main topics of the second day were **scientific methodologies and tools for underpinning a Sustainable Development policy**, which deal with economical, social and environmental policies in a mutually reinforcing way in such context as in sustainable impact assessment. The workshop provided an overview and classification of various existing tools used in Sustainable Development research, experiences with these tools and their usefulness and examples of case studies that have implemented and/or developed tools. The final discussion round centred on the need for further research in this context and how to go beyond.

Since the Göteborg Summit, it is much easier to define what the priority elements are than before, when only different patches were sufficiently consolidated. The strategic aim is that EU citizens shall be granted economic stability, social supporting conditions and a clean environment. We can also distinctly state that the SD policy is based on the three pillars or dimensions of SD. This means that all new major suggestions for decisions have to be judged against their effects with regard to economic, social and environmental outcomes. The most important point is that these dimensions should also be

seen as mutually reinforcing each other. As a consequence, we can thus say that the EU Sustainable Development Policy is multidimensional (systemic in nature), emphasises the policy process (including review and feedbacks), deals with multilevel governance, is consultative and participatory in nature, has not only a European but also a global connotation and has provided a priority sequence and a set of themes.

According to the Göteborg priorities, policy makers are waiting urgently for research background information and transparent methodologies on environmental and economic dimensions of S.D., integrating social aspects. Priority needs consist of the development of methodologies for Sustainability Impact Assessment (economic tools, both micro and macro, cost-benefit analysis and quantitative valuation of indicators or criteria...), accounting frameworks for externalities (cost of environmental and health impacts of technologies), thresholds of sustainability, impact assessment and forecast, cost-efficiency analysis against thresholds and external dimension of SD.

The decision on a common European strategy for sustainable development would not have been possible without preparatory work linking political aspects and scientific expertise, as the workshop revealed. By implementing the European strategy for sustainable development, the European Union will assume a pioneering role among world regions with regard to sustainability. Sustainable development has been given a prominent position on the political agenda of the Community, and more precisely through four priorities: climate change, transport, public health and natural resources. Several possible priorities for scientific co-operation between countries were identified: e.g. monitoring and assessment tools and

indicators, integrated ecosystem management, sustainable climate change policy and global governance, integrated product policy, sustainable transport systems, European fisheries policy, European land use, food production and biodiversity etc. In particular, it was discussed *if* and *why* article 169 is suited or if other modes of co-operation would be more appropriate. The majority of the participants felt that a better co-ordination can be achieved from small steps and showed some reservation with respect to article 169.

The goal of the second day of the workshop was to give an overview and classification of scientific methodologies and tools for underpinning a sustainable development policy. Experiences with these tools and examples of case studies were presented. The ultimate objective was to start a discussion on how to go beyond current practices in sustainability research and how to integrate it inside the R&D programmes and instruments.

In the first presentation of this session, P. Boulanger and Th. Bréchet described the decision making process and the need for relevant tools. This was based on a set of five criteria used to characterise sustainability issues. P. Hardi gave an overview of models and conceptual frameworks in the context of measurement tools. D. Rossetti di Valdalbero presented research results on external costs of energy production and transportation activities as obtained by the ExternE project team. F. Summer tackled the question whether indicators can make a difference for local policies for sustainability. M. O'Connor presented tools to support deliberative procedures for the integrated management of underground water. J. Eyckmans' presentation was about an inter-disciplinary research network on climate change, which had mathematical simulation models as its common research language. Finally, R. Schleicher-

Tappeser discussed a system for the management of sustainable development processes consisting of concepts, methods and internet-based tools.

From the presentations, M. Craye concluded that future activities in sustainability research can be situated vis-à-vis the following "traditions" or "streams": *analytical approaches* (the methods used in formal decision science and environmental assessment are intended to evaluate policy options by means of economic, physical, and administrative criteria) and *deliberative approaches* (these approaches explicitly recognise the existence of different mental frames and look for appropriate methods for making more explicit the arguments of the various actors involved regarding problem definitions, solutions, ways of thinking and deeper preferences).

A synthesis of the two above traditions would imply a mutual enrichment of the social, policy and scientific discourse. It could lead to evaluations that integrate values and scientific knowledge and that are useful to policymakers. It could, for example, provide knowledge about more options, insight into the criteria that are relevant to decision-making, as well as insight into the source, the nature and the perception of uncertainties. The purpose of a synthetic approach is then to provide a framework for learning processes as well as a systematic exploration of issues. Key concepts are therefore: transparency, scepticism, independence, responsibility; but also: a broadening of the approach, taking due account of alternative options, plurality of societal perspectives, recognition of uncertainty and ignorance, and taking into consideration the question of usefulness and merit.

Some progress has been achieved during the workshop in identifying the typical features of SD research. Summing

up the contributions both from the first and the second day, the following characteristics can be stressed out, thereby providing a tentative basis for the final process of agreeing on the following results: systems features (Inter-disciplinarity, cross-sectoral approach, etc.), problem-solving research, actors' presence, inclusion of socio-economic aspects, governance embedded and long-term perspective (or medium-term perspective).

In his concluding remarks, P. Valette, stated that **tools in support to Sustainable Development policies** and measures (including their monitoring and their assessment) and **tools in support of Research policy in the context of SD** can be organised in three categories:

- Building of "accounting frameworks" of positive and negative externalities associated to technologies, policies and measures implemented in the framework of a Sustainable Development strategy; application of these "accounting frameworks" to the elaboration of the "green accounting" of GDP;

- Development of assessment tools and decision support tools; tools include mathematical tools, models for forecasting and impact analysis (like E3 models), conceptual environmental and socio-economic frameworks in the context of measurement and assessment, development of indicators and indices that capture element of SD (including their linkage), common data sources (economic and social, scientific, techno-economic) for tools, treatment of uncertainty and risk assessment (for Precautionary Principle application), tools for multi-criteria analysis;

- Development of tools for research policies: conceptual framework for definition of new programmes and selection of projects (criteria and

indices); tools for monitoring the research.

With respect to the tools for Research policy, P. Sørup summarised the following issues as being of common interest:

- Detailed mapping and exchange of experience in R&D programmes supporting sustainable development;

- Development of relevant selection criteria for integrated R&D programmes and activities supporting sustainable development;

- Creation of incentives for scientists and researchers to contribute pro-actively to R&D programmes and activities supporting sustainable development.

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