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Impact Assessment practice to support sustainable policy objectives in Europe

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ABSTRACT

Sustainable Development (SD) has become an overall policy objective in Europe. The sustainability transition is seen as the process of coming to terms with sustainability in all its ecological, social, economic and institutional dimensions. This process is as much about new ways of knowing, as it is about management and innovation of products. This is confirmed by the recent issuing of a renewed European SD Strategy in 2006 and a variety of national and regional SD strategies. The purpose of this paper is to analyze how policy instruments, such as environmental and socio-economic models have been developed in order to provide a solid foundation for sustainable policy objectives. The analysis involved the set-up of a scoping study during Spring 2008 to evaluate and compare different current practices within the European Commission (EC). The selected Impact Assessment (IA) exercises and research policy cases have been analyzed on the basis of a set of criteria developed for this scoping study.

The empirical evidence of this scoping study confirms a broad variety of successfully established IA-related initiatives in Europe and the interviewed policymakers and researchers find the IA approaches legitimate on a conceptual basis. Formal activities and guidance for IA, for example, are well established within the EC. Both communities however acknowledge that the full potential of IA tools to support sustainable policy objectives in practice is not yet met. Researchers often find the scope of the current IA exercise too narrow and too sectoral to support real change in order to anticipate the unsustainable developments. Yet, the contribution of a formal IA exercise should be evaluated in its full context as being part of a broader policy process. The framing of the policy question, for example, has most often been established before the IA exercise was initiated. In addition, research projects often struggle to bridge the gap between science and the formal policy process. The tools used in any such process-based application must be simple, based as far as possible on rigorous analysis, while recognizing explicitly where value judgments are included. Moreover, whilst being simplifications of reality, many scientific models remain so complex that they are seen rather as black boxes instead of transparent analytical tools. Hence, some of what modelers see to be the great strengths of modeling tools are felt by non-modelers to be serious weaknesses. Consequently, research outcomes do not fully reach the policymakers.

These findings support that, although IA can provide researchers and policymakers with a relevant and legitimate common tool, in practice both communities only show a limited collaboration. Still, the scoping study reveals some evidence of effective close collaboration between researchers and policymakers. The study also confirms - and this is in contrast with most scientific literature - that these promising experiments are not only limited to research projects, but can also be found in formal IA experiences within the EC. This supports the importance of an intensive collaboration where researchers and policymakers interact on equal basis to support a more integrated and explorative approach.

Keywords: *Sustainable development, Impact assessment, Science-policy interface*

1. INTRODUCTION

The last decade has seen a growing international interest in the development and use of evidence-informed policy and practice across a wide range of public policy issues (Lee & Kirkpatrick, 2006). Policymakers at different scales are confronted with the complexity of a future that holds an array of possibilities. They need to find ways to deal with this uncertainty and to anticipate trends and expectations. This is confirmed by the recent issuing of a renewed European Sustainable Development Strategy (CEC, 2006) and a variety of national and regional Sustainable Development strategies (De Smedt, 2006; Meadowcroft, 2007). The precise meaning of sustainable development, both in theory and in practice, is a vexed question for its broad appeal has not led to coherent interpretations (Cashmore, 2007). Looking backwards at its origin, the concept of sustainable development was the result of the growing awareness of the global links between increased environmental problems, of concerns about quality of life now and in the future, and of complex socio-economic issues related with poverty and inequality. In previous times, sustainability of human kind was taken for granted and did not appear as an explicit goal. It certainly was an implicit goal: no human society has ever consciously promoted its own 'unsustainability' (Bossel, 1999). Global developments now focus attention on sustainability as an explicit goal (Watson, 2005). The sustainable transition is not just a change from the present society to another; it is the endless quest for a permanent and habitable planet on wich life evolves with reliability and dignity (O'Riordan & Voisey, 1998). However, the detailed principles required to implement these concepts are profoundly contested (O'Riordan, 2008).

Since the introduction of the sustainability notion into the realm of political and environmental thought some thirty years ago (Goldsmith et al., 1972), the concept's meaning has evolved considerably. While the environmentalists of the seventies blamed industry, economic growth and technological development for environmental degradation, representatives of a second wave in environmentalism came to hold the idea that environmental protection is not necessarily opposed to economic development (Grin et al., 2002). The first important use of the term was in 1980 in the World Conservation Strategy (IUCN et al., 1980). This process of bringing together environmental and socio-economic questions was most famously expressed in the Brundtland Report's definition of sustainable development as meeting 'the needs of the present without compromising the ability of future generations to meet their needs' (WCED, 1987). This defines needs from a human standpoint. As such, sustainable development should be understood as an anthropocentric concept (Hopwood et al., 2005). The political content of the concept was developed above all at the UN Summits of Rio in 1992 and Johannesburg in 2002. It is now widely accepted that governments all over the world and at different levels share responsibility and should work together and in partnership with non-governmental actors towards the achievement of a sustainable society (Bomberg, 2004). Hence, societies and their environments are dynamic, technologies and cultures change, values and aspirations change, and a sustainable society must allow and sustain such changes, i.e. it must allow continuous, viable and vigorous development, which is what Bossel refers to as a sustainable development (1999). Therefore, instead of being defined in objective terms, sustainable development should be understood and defined by process-oriented logics (Holling, 2000).

The purpose of this working paper is to analyze how, in Europe, policy instruments have been developed in order to provide a solid foundation for sustainable policy objectives. This paper thus aims to advance the debate on Impact Assessment (IA) and the relationship with sustainable development (SD) by contributing to a richer understanding of the current practices drawing on the new empirical evidence. To do so, this paper reflects on IA as a policy instrument and explores the core problems concerning practice to support SD. In a broader context, policies are seen as legitimate and accepted by society if they are well motivated and based on sound evidence. This also includes that policies should be effective to reach clear goals and be respectful for social and individual rights. The next section of the paper, How does SD fit into EU policy making?, begins with a brief overview of the IA system to support the implementation of the renewed EU SDS in the Commission (EC). The third section: Aims and Methods explains how a scoping study was conducted to evaluate current IA practice through the lens of users via document analysis and interviews. The three evaluation criteria - relevancy, accuracy and legitimacy - are being used in section four to structure the main findings. The fifth and final section summarizes the principal findings and outlines some issues requiring further research for integrating the underlying learning-by-doing dynamic to improve current practice. The paper is a working document for discussion and reflects the authors' personal opinions. The paper does not entail an official point of view of the EC, nor can it be binding the EC in any sense. We would appreciate that it would not be cited without authors' permission.

2. HOW DOES SD FIT INTO EU POLICY-MAKING?

Managing a transition toward a more sustainable development path at a global scale is one of the great challenges today (Raskin et al., 1998; Rotmans et al., 2001). From a policy point of view, SD is a crosscutting issue that needs a very high degree of policy coordination. This is especially true considering that the European Union's 2001 Sustainable Development Strategy demands all European Union (EU) policies to actively support the sustainable development of other countries, particularly those in the developing world (Adelle et al., 2006). Following the review (EC 2005a; EC 2005b) of the 2001 Sustainable Development Strategy launched by the EC in 2004, the European Council adopted a renewed Sustainable Development Strategy (renewed EU SDS) in June 2006. The overall aim of the renewed EU SDS is "to identify and develop actions to enable the EU to achieve continuous improvement of quality of life both for current and for future generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion" (CEC 2006). In order to fulfill this ambitious obligation, the Commission has committed itself to consider the impacts that all new policies have within and outside the EU as part of a new integrated impact assessment regime (Adell et al., 2006). This builds on the Göteborg European Council meeting in 2001 and was also outlined in the Communication on Impact Assessment (EC, 2002). This communication commits the Commission to undertake an IA "to improve the quality and coherence of the policy development process" and to "contribute to an effective and efficient regulatory environment and further, to a more coherent implementation of the European strategy for Sustainable Development".

In 2003 the Impact Assessment (IA) system was introduced in the Commission, replacing and integrating all sectoral assessments of direct and indirect impacts of proposed measures into one global integrated instrument. For reasons of simplification, IA was chosen as the overall concept (Rudy & Hilty, 2008). Yet, the integrated character is clearly foreseen as an essential element of the IA system. These new IA procedures, including official IA guidelines, became fully operational in 2005 (Lee & Kirkpatrick, 2006). The IA system is implemented as a decentralized approach whereby each Directorate-General is responsible for preparing its own impact assessments. The lead service is also responsible for timely and adequate consultation of stakeholders. The results and conclusions of the impacts evaluated in all IA are to be integrated into policy-making, thereby guiding the final policy choice by anticipating the possible effects of the proposed policy. In 2006, an independent IA Board was launched at the highest level to provide independent quality support and control. To summarize, the IA procedure is meant to inform and improve policy coherence, but not to replace the political process or to determine the final decision. IA is conceived as an assessment of distinct alternatives to achieve a specified policy objective, thereby providing the basis for a decision in which the policy is chosen with the 'best' net benefit.

3. AIMS & METHODS

As stated earlier, the purpose of this paper is to analyze how in Europe policy instruments have been developed in order to provide a solid foundation for sustainable policy measures. The analysis involved the set-up of a scoping study during Spring 2008 to evaluate and compare different current 15 practices, including formal IA exercises within the Commission and more experimental and novel research policy cases in the EU Framework Programme for Research (FP5 & FP6 projects). The selected IA exercises and research policy cases are analyzed on the basis of a set of criteria developed for this scoping study. The criteria for evaluating the use of IA tools incorporates: (i) the relevancy, i.e. 'How closely connected or appropriate IA of the EC and novel IA policy cases are to the renewed EU SDS.'; (ii) the accuracy, i.e. 'The quality or state of being exact or precise and correct in all detail, of being capable of, or successful in reaching the intended target.'; and (iii) the legitimacy, i.e. 'The extent to which the IA conforms to a given standard (= EU SDS and EC IA Guidelines). Two different user communities are distinguished: (a) a first group is composed out of policy-makers, i.e. the desk officers within the EC responsible for IA exercises of EU policies; and (b) a second group is composed out of researchers who are supposed to provide scientific knowledge supporting IA via theories and methodologies and/or supporting IA practice via IA methods. The comparative case-study design allows for an in-depth study of the science-policy interface and a systematic examination of similarities and differences between the 15 cases. The data in the scoping study consists of primary documents such as scientific reports, IA reports and public policy documents and 10 additional interviews with researchers and policy-makers.

4. RESULTS

The scoping study on the use of IA tools revealed a broad variety of successfully established initiatives linking to several SD challenges but also recognizes the limits of current knowledge and practice. As a concept IA, is effectively accepted among researchers and policy-makers as a tool to support sustainable policy measures. Although the general application is still recent, more and more expertise is being achieved within the EC and among research projects. In 2007 for example, more then 170 IA exercises have been conducted within the EC. The next section reflects the findings of the scoping study including the empirical evidence from the interviews and the analyzed documents. The set of criteria and related series of questions ensured a consistent approach to data collection, showed to be analytically sound and supported a comprehensive dialogue during the interviews. In this section, the three criteria are also used to present the findings and to provide guidance to the reader. However, issues often do (in)directly relate to more than one criteria and some overlap exists. The main findings reflect on the use of the tools in general. Hence, the criteria should be considered as a framework to support comparison, not as a strict classification.

Relevancy: Most desk officers recognize the potential relevance of IA to support sustainable policy objectives. However, they also realize that current IA practice has its limits. These observations can partly being explained due to its relative short existence and its inherent complexity to support a crosscutting issue, like SD. As such, SD needs strong co-ordination on all domains and this is even more challenging in a multi-level governance system such as the EC. Researchers also recognize the potential added value but they find it difficult to evaluate the contributions of current IA exercises for SD in the complex process of decision-making. It is also important to remember that outcomes and decisions are not necessarily one and the same (Cashmore, 2007). Often researchers find the scope of the current IA exercise too narrow to support real change for the unsustainable developments, such as climate change and biodiversity loss. A variety of analytical tools are being used in current IA practice to evaluate the social, economic and environmental dimensions of SD in a balanced way. The use of SD indicators, for example, is effectively established in Europe (see also De Smedt, 2006). A set of indicators can provide a sound analytical reference to the well-known three pillars and/or to the renewed EU SDS challenges. Indicators can also serve as means to communicate the IA outcomes. Science has provided effectively accepted concepts and data for a broad range of economic and environmental indicators. However, most of the social indicators are still lacking sound concepts or monitoring initiatives to provide qualitative data. Although the use of this indicator list often entails practical problems due to missing data, less appropriate indicators for the policy proposal, etc., the indicators can be seen as a checklist to ascertain if the full scope of the assessment is met.

Accuracy: No evidence is found of a methodologically sound way to be precise and correct in all detail and great variation in the presentation of evidence can be found in the IA exercises and research projects. Both, desk officers and researchers, mention time and resource constraints, which have an impact on the accuracy of the assessment. It should also be noted that research projects and policy initiatives such as IA exercises have a limited life-span and have specific starting and completing dates, making it difficult to link them to each other. They also recognize that practice is - even more than the mentioned constraints such as data availability and time to perform the analysis - dependent on the people conducting the assessment. Hence, both user communities recognize the importance of the process. The EC IA guidelines foresee 6 key analytical steps, supporting a coherent presentation in the formal IA exercises. This is in contrast with most of the research projects that only report on some of the 6 key analytical steps. The guidelines also recommend the use of quantitative information. The scoping study indeed revealed that most of the knowledge generated, analyzed and presented has a strong quantitative origin including official statistics and numeric models. Most of the models used are developed by standing research organizations and were peer reviewed and applied in policy for many years. In general, most researchers and policy-makers perceive the quantitative knowledge as accurate. However, most quantitative knowledge (i) is often fragmented due to sector specific models; (ii) is strongly based on assumptions of the past and (iii) ignores the high-levels of uncertainties of a complex and cross-cutting issue such as SD. In addition, some researchers are more interested in developing (new) concepts and tools and are less focused on the policy relevance. So even promising or successful tools from a policy perspective are not always being maintained or further applied by the developers for new policy challenges. These ‘orphan tools’ clearly indicate a potential limit to research funding.

Legitimacy: Practice does not reveal an agreed understanding of SD and the detailed principles required to implement SD are profoundly contested. Most practice, however, does include some reference to the renewed EU SDS and/or some of the seven challenges, providing some form of legitimacy. Especially the EC IA guidelines and the IA Board support the legitimacy of an IA exercise and the related decision-making process. The fact that the IA Board was launched at the highest level to provide independent quality support

and control also underpins the legitimacy of IA within the EC. Actual practice within research projects is less connected with the formal IA system. As mentioned by the interviewed researches, there is no successfully established and accepted theory of sustainable science to support legitimacy of current research practices. Most researchers see sustainability science as a trans-disciplinary endeavor to better understand the complex dynamic interactions between environmental, social and economic issues. Some researchers strongly believe that science should go beyond progress in a better understanding of the complex dynamic interactions. Science should also engage itself in the process of 'putting knowledge into action', i.e., for a sustainable transition, goals and policy measures must be assessed. This has posed important challenges to the scientific community to provide not only sound theories but also efficient and reliable tools.

5. DISCUSSION AND CONCLUSIONS

Achieving more sustainability depends on establishing an interpretation (or interpretations) of sustainable development in a given context. Policy-makers have to rely on information that allows them to judge on a regular basis whether or not the current evolution is to be considered as a contribution to stay or to engage on a sustainable path. As such, sustainable policies require constant feedback, providing information to policy-makers that enables them to establish a connection between past evolutions and future expectations, while integrating the underlying learning-by-doing dynamic (Bauler & Hecq, 2000). This process should reflect on what to avoid as well as what to seek to attain, including the relevant relationships, interdependencies and uncertainties (Tàbara et al., 2008) and encouraging enough solidarity among stakeholders to accept a joint responsibility (Norton, 2005). Therefore, SD – as a policy domain- poses particular challenges on the agenda of policy-makers due to its conceptual vagueness and inherent complexity (O'Riordon, 2008), and the uncertainty related to policy choices and their outcome in a multi-level governance such as the EC (Hooghe & Marks, 2003). Furthermore, as a research domain, SD is a complex and multi-dimensional phenomenon with a breadth and depth that cannot be fully covered by the current theoretical underpinnings from science (Rotmans, 2006). Hence, science should provide better understanding and evidence for policy, and policy-makers should increase the transparency of the difficult policy decisions lying ahead (Cashmore, 2004, Ruddy & Hilly, 2008). The practical problem to be addressed here is whether it is possible to design and implement a system - operating effectively in complex and pluralistic situations - to support a deliberative decision process (Norton, 2005).

The inherent complexity of SD for policy and science was also recognized within the scoping study. Both researchers and policy-makers acknowledge that the full potential of IA tools to support sustainable policy measures in practice is not yet met. Researchers often find the scope of the current IA exercise too narrow – often including only a limited consideration of alternatives - to support real change in order to anticipate unsustainable developments. Indeed, most of the analyzed research projects have a broader scope focusing more on the framing of the policy question. Still, the contribution of a formal IA exercise should be evaluated in its full context as being part of a broader policy process (Jacob & Hertin, 2007). The framing of the policy question for example has often been established before the IA exercise was initiated. In addition, research projects often struggle to bridge the gap between science and the formal policy process. This is also observed as the potential gap between the contributions of researchers and the types of assessment tools that policy-makers seem most able/willing to use (Lee, 2006). The tools used in any such process-based application must be simple, based as far as possible on rigorous analysis, while recognizing explicitly where value judgments are included (Turnpenny, 2008). Moreover, whilst being simplifications of reality, many scientific models remain so complex that they are seen rather as black boxes instead of transparent analytical tools. Hence, some of what modelers see to be the great strengths of modeling tools are felt by non-modelers to be serious weaknesses (Lee, 2006 and Lotze-Campen, 2008). Consequently, research outcomes do not fully reach the policy-makers. Of course, the complexity of SD does not entail easy application of research findings. It should also be noted that research projects have a limited life-span (Leeuwis, 2004). Still, the scoping study also reveals that most of the research outcomes are not specific enough to support direct use in the decision process. Knowledge delivered must be recognized as not only factually, but also politically relevant.

These findings support that, although IA can provide researchers and policy-makers with a relevant and legitimate common tool, in practice both communities only show a limited collaboration. Yet, the scoping study reveals some evidence of effective close collaboration between researchers and policy-makers. The study also confirms - and this is in contrast with most scientific literature (such as Weaver & Jordan, 2008) - that these promising experiments are not only limited to research projects, but can also be found in formal IA experiences within the EC. This supports the importance of an intensive collaboration where researchers and policy-makers interact on equal basis to support a more integrated and explorative approach. As Cash and colleagues (et al. 2003) also describes, an assessment process is often more effective if the knowledge being produced and communicated at the interface between science and policy is perceived by both sides to be

credible e.g., meets scientific standards, legitimate, e.g., produced by a fair process that reflects the interests of the stakeholders - and salient e.g., answers questions seen to be relevant by potential users. For example, the upcoming generation of IA models will be more demand-driven, in the sense that the policy-makers need to be involved at an early stage of the model development (Rotmans, 2006). This is needed because the dialogue linking researchers and policy-makers will not happen by itself (Liberatore, 2001). Also Gulbrandsen (2008) mentions that science has a greater chance of guiding (policy) action in inclusive, deliberative decision processes. If sustainable assessment practice will evolve in such a way, IA can be considered to be operating as a 'frontline' tool in making sustainable development operational, but in a markedly different manner to conventional expectations (Cashmore, 2007). Further research and policy initiatives should therefore include a joint collaboration between researchers and policy-makers to develop a shared understanding of what constitutes a satisfactory - i.e. relevant, accurate and legitimate – IA resulting in concerted action (Lee 2006). This will provide cross-fertilization and learning opportunities among researchers and policy-makers, providing a solid foundation for sustainable policy measures.

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