Poster Abstracts

Strategic Environmental Assessment in Flanders-Belgium: Is There an Implementation Strategy?

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On 18 December 2002, the Flemish Government adopted new EIA-legislation (decree) including a chapter on SEA, which transposes – at least partially the EU SEA Directive of 2001. This decree contains a number of definitions and general procedural provisions that include issues on participation/consultation, scoping and decision making (justification).

The SEA chapter came into force on 21 July 2004 – the ultimate transposition date for the EU SEA Directive. However, up to now formal scope of application has been identified in an executive order due to a lack of political willingness.

Some SEAs have been finished or are now being prepared. The unclear legal situation does not enhance the application of SEA.

It was the intention to learn from a few "experimental SEAs" done before the transposition date. Some preliminary observations on finished SEAs (lessons learned) cannot be dismissed such as the tendency of planners to "control" the SEA-work (fear that the SEA may lead to undesirable political reactions) and the lack of transparency and communication in general.

The paper will give an overview of other lessons learned from finished and ongoing SEAs. A particular focus will be the relationship with the wider institutional framework and the federal plans and SEAs.

Testing SEA in Practice: Austrian Experience on What Worked, What Did Not Work and How We Try to Make SEA Work

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Between 1997 and 2004, seven SEA pilot projects were carried out in Austria to test the SEA Directive in planning practice. Our first SEA approaches stuck closer to the Directive's requirements. We gained valuable methodological experience. But we also learned that procedural issues are at least as important for effective SEAs as methodological ones. Therefore, after four pilot SEAs, we developed a new approach – the SEA Round Table. This is a participative approach trying to (1) fully integrate the planning and the SEA process and (2) to actively involve the interest groups concerned throughout the whole process, from defining aims to choosing the planning solution. This new approach increased the effectiveness of SEA distinctly. In particular, the SEA for the Viennese waste management plan showed how SEA (1) increases the quality of the plan, (2) can be used as an instrument to reconcile various interests concerned, (3) fosters the plan's implementation and (4) contributes to a better environment by solving problems at their roots. The SEA Round Table approach goes beyond the Directive's requirements in some aspects, and our experience is promising.

SEA Guidelines for the Evolution of Strategy Papers in Development Co-operation

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Strategic Environmental Assessment (SEA) in development co-operation is still in evolution. However, international commitments for both sustainable development and aid harmonisation induce the need to clear out current practices of SEA in development co-operation.

Guidelines can play a role in establishing a more systematic approach and a common framework and contribute to the acceptance of the SEA-approach within the donor/lender agencies and the recipient countries. Coordination on the use of SEA will be necessary for evolving aid modalities in line with the call for delivering aid more effectively.

The presented guidelines address country strategy papers of the Belgian Directorate General of Development Co-operation and equivalent plans and programs. The study emphasises the need to focus on set-

ting up environmental objectives and ensuring the compatibility of the strategy with other environmental policies, plans and programs, both at a national and international level. In the same field of research, the Free University of Brussels recently started a project on the sustainability appraisal of Poverty Reduction Strategy Papers. The SEA approach may prove very useful in attaining an integration of poverty reduction and environmental issues.

Sustainability Windows (SuWi). Multi-Level Decision Aid Tool for Managing Complex Systems

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Projects affecting the public entail cross-scale interactions, non-linearities and interdependent effects reflected in the ecological, economical and social domain. Therefore, a linear analysis of causes and effects becomes arbitrary and misunderstanding and conflicts among related stakeholders increase, bearing additional costs and risks for planning and management.

To address these conflicts we develop a multi-level decision aid tool, SuWi, which tackles both, the need for improved system understanding and the need for enhanced participation. Drawing on key indicators of co-evolutionary interactions, dynamic system modeling and GIS computer simulations, SUWI clarifies and visualizes interdependencies of sub-systems and non-linear dynamics in order to identify and process necessary information to balance decisions between ecological and socio-economic issues. Heading for sustainability, the central idea of SuWi is to facilitate a shared vision of the complex system/ the project. This provides the stakeholders involved in the decision-making process with 'integrative information' about the system in question, but allows them to develop their own way to reach context-dependent solutions.

The Ways for Better Environment Assessment at the Central Asian Regional Level

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The Central Asian (CA) region has a lot of ecological problems. The priority in this set should be given to the drinking water, children's environmental health and air pollution. Some joint actions toward combating these issues have been done and number of strategic environmental programs have been created. The Strategic Environment Assessment key question is access and sharing of environmental information.

With the goal of creation of basis for effective sharing of environmental information, the project named "Capacity Building in Environmental Information Management System in Central Asia" has been launched by CA NIS including Tajikistan, Kazakhstan, Turkmenistan, and Kyrgyzstan.

The project is financially supported by the Government of Finland and is to be continued for two years. The author of the poster has been appointed as analytical laboratory expert and is in charge of highlighting the main problems which had arisen at the initial stage of the project. The regional informational system should have an electronic data base concerning environmental pollution. This means that all analytical investigations are to be carried out using standardized methodic and common indicators for the purposes of environmental monitoring.

Since the project's inception, two regional workshops have taken place (Dushanbe 2004, Almaty 2005) and the problem has been discussed thoroughly, but no decision on this subject was elaborated. To date, some actions on improving the situation with standardized methodic and common indicators has been taken by CA NIS national experts and it is expected that one additional workshop dedicated to this issue will take place soon.

The Strategic Environment Assessments should be based on available laboratory instrumental data information. That is why the organizations involved in Environmental Information Management System projects should have modern equipment and the results of analyses should be taken continually.

Unfortunately, the laboratory equipment which was examined in many governmental and scientific organizations in the Republic of Tajikistan is not responding to project's needs. Some actions toward improving the situation in this area should also take place.

At the local level we are also planning to conduct training of laboratory technicians on topics of efficient use of standardized methodic and common indicators for the purposes of environmental monitoring.

Education in Coastal Management for the Mediterranean

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In the European Union a long tradition in the development of environmental protection, conservation and related regulations have provided the basis for a sophisticated view on the management of complex systems, like the coastal environment. Educational programs have somewhat reflected this preoccupation with the proliferation of courses in environmental management, in general, with great attention to technical and the legal aspects.

In parallel with the thematic advancement in the disciplines that affect the studies of environmental systems (and their management) the EU has moved forward significantly in the facilitation of sound basis for the design and implementation of higher education curricula, culminating in the signature of the Bologna Declaration, which sets the standards for future models for the EU and other countries seeking highly developed concepts in learning and teaching.

Complex problems of the Mediterranean coastal area of Croatia and Egypt, as best representative countries of the region, demand an integrated, multidisciplinary and interdisciplinary approach with a sound scientific basis and co-operation of all involved stakeholders, public and private institutions and organizations through Integrated Coastal Area Management (ICAM). Strategic Environmental Assessment is one of the important tools of ICAM. The crucial issue is, thus, to introduce through an EU standardized curriculum, the possibility for stake holders to achieve the necessary capacity building that is required to manage the complex coastal environments of the Mediterranean.

In phase II of the Mediterranean Action Plan (MAP), inadequate human resources allocated for the coastal management activities are one of the main shortcomings in the protection of the Mediterranean environment and its coastal region. This problem is particularly acute in Mediterranean countries; Croatia and Egypt are well suited representatives of this situation.

One of the issues that has stopped Mediterranean Region countries from engaging with EU members has been a geographical barrier encountered by stakeholders, at work, to access higher education programs. However, with the advancements in Information and Communication Technology, a full curriculum in ICAM can be developed on the basis of an easy access e-learning program heavily based on the ideas from the Bologna Declaration and its ECTS based modular teaching methods. Therefore, the provision of an Internet based post-graduate course on ICAM, created by several Mediterranean Universities, should be recognized as an exceptional value for capacity building in all Mediterranean countries.

This poster presents the outline and the initial steps taken by four universities and one institution in the Mediterranean To create and to implement a new Postgraduate Course in ICAM in the Mediterranean Region filling the gaps of existing education programs with particular emphasis on the managerial aspects. The Project is funded by TEMPUS, and the Joint Educational Program (JEP) is intended to create an effective network of higher education institutions to share resources and capabilities available in the consortium members and in line with the EU principles and regulations.

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The Swedish EIA Centre

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The main purpose of the Centre is to enhance quality of EIA and SEA and be the national centre for further education, information and research in Sweden. The Centre also functions as adviser and organizes a network in which more than 1200 EIA professionals take part. The Centre is situated at the Swedish University of Agricultural Sciences (SLU) in Uppsala.

Education, courses and seminars

The Swedish EIA Centre gives undergraduate EIA courses on several levels, including master theses. A postgraduate training course for EIA professionals is also provided. The Centre arranges open seminars and conferences on EIA/SEA related topics. Customized training courses and seminars are also provided. Lately, seminars concerning the implementation of the EU Directive 2001/42/EC on SEA, have been in great demand.

Sida EIA Helpdesk

The Swedish EIA Centre, provides an EIA Helpdesk for the Swedish International Development Cooperation Agency (Sida/Asdi). The assignment includes for example:

- Review EIA documents for Sida-supported projects
- Advice on terms of reference for EIA
- Support national or regional EIA centres in Sida partner countries
- Assemble information in the area of EIA/SEA
- Provide EIA training for Sida staff and cooperating partners

Research and development

The Swedish EIA Centre is disseminating information about research as well as doing own research. The research regards for instance:

- SEA in comprehensive and early planning processes in Sweden
- SEA of the use of abandoned farmlands in Estonia
- Indicators for EIA and future eco tourism in Nicaragua
- Cumulative effects in EIA.

The development work comprises a wide field, including, for example:

- Upgrade EIA competence among university teachers
- Establish guidelines for environmental monitoring of roads and railways
- Integrate SEA into regional development planning
- Advice on EIA of nuclear waste treatment

Inclusion of Environmental Risk Assessment within Strategic Environmental Assessment (SEA), as a Way to Ensure the Biodiversity Conservation in Brazilian Oil and Gas Exploration & Production (E&P) Offshore Areas

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The 3.5-square-km Brazilian shore areas include coral reefs, dunes, mangroves and estuaries, some of them endemic, contributing to appoint the country as the largest biodiversity on Earth. However, these ecosystems are being lost, damaged or threatened by the risk of oil spills from E&P activities.

In order to reduce such environmental pressure, the regulatory agency (ANP), together with the Brazilian Environmental Institute (IBAMA), published, in the last three concession rounds of E&P blocks, environmental license guides and studies, emphasizing the environmental sensibility of the E&P areas. How-

ever, this approach only takes into account the plan-level of the decision making process, when politics, plans and programs (PPP) should be addressed; furthermore, this is not sufficient to guarantee the incorporation of all environmental issues.

This paper proposes a novel methodology, by utilizing the Environmental Risk Assessment within SEA as a way to efficiently incorporate all the environmental issues, including the reduction of the risks of oil spills, and its catastrophic consequences to the biological diversity and to the communities of the E&P areas. Moreover, the proposed approach can determine the exclusion (or postponement) of concessions areas with extreme environmental sensibility, as well as the choices for biodiversity-friendly E&P technologies.

Barriers Preventing Large-Scale Usage of Renewable Energy

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As the world is attempting to utilize more renewable energy, a number of barriers are preventing its large scale usage. Using the heavily industrialized countries of the Czech Republic and the United States, this paper examines those barriers and offers recommendations to overcome these barriers. The barriers are separated into four categories: economic, political, social, and technological/infrastructural, though the means to overcome those barriers entails actions from all sectors. Regions in the Czech Republic and regions around the state of Minnesota are analyzed in on-site case studies and are found to have complementary renewable energy situations. Each region could better its renewable energy sector by modeling certain aspects of its policies on the other region, as the Czech Republic needs more NGOs and more technological and economic support, things already present in Minnesota. Similarly, the Minnesota region needs a better electricity grid infrastructure and more consistent policies within and among states, for which the Czech Republic serves a great model. Accomplishing these goals requires concerted efforts from lawmakers, NGOs, utilities, citizens, and engineers, and could be best organized through a series of conferences in both areas, which would serve to bring together these different actors.

A Case Study on SEA of Surrey County Council in the UK for Applying Learning to SEA Practices in Japan

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SEA has been a rapidly emerging area of interest and practice for the last decade, and SEA activities by EU member states seem to be specially proactive after the agreement of the European Union SEA Directive in 2001. In the UK, qualitative approaches such as environmental appraisal in 1993 and sustainability appraisal in 1999 were introduced as guidance before the agreement of the SEA Directive. With regard to Japan, SEA is not yet legislated at the national level, and SEA legislation has been made only in a few local governments. Studying on SEA cases practiced in local government in the UK might be bale to provide useful tips for introducing SEA practices in Japan, especially for the prefecture level.

This study focuses on the SEA of Waste Local Plan conducted by the Surrey County Council in the UK. The methods used for this study were critical review of the SEA documents and interviews for the responsible officers for the SEA. As far as findings are concerned, the information which needs to be prepared for assisting a SEA is identified besides the information related to SEA methods.

Inspection Panel of the Environmental and Social Consideration Guideline of JICA

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The Japan International Cooperation Agency (JICA) is the major organization for Official Development Assistance (ODA) in Japan. It has three functions: assisting the planning process of big projects, con-

ducting basic surveys for making gifts, and technology transfer to developing countries. It has a big role for assisting studies on big projects supported by official loans of the Japanese government. It therefore is required to make enough considerations to environmental and social impacts caused by its activities. JICA already has a guideline for this purpose. By strong requirement from the Japanese Diet for revolution of the Ministry of Foreign Affairs, JICA started to revise the environmental guideline.

The new guideline is fairly high level for sustainable development by requiring good practice of EIA. For instances, it requires three-time public consultation, very positive information disclosure, and introduction of SEA. The author analyses the characteristics of the guideline and the reason why it had been done, and in particular why was it successful to introduce SEA into the revised guideline. It should give good suggestions to development cooperation activities. The process of creating it was very transparent. Major stakeholders were collected into the study committee including not only academics but also the representatives from major ODA related governmental bodies, NGOs, and the business world. Diverse opinions were collected and put into the committee. After the committee report was made, JICA made the draft of the guideline. It then held also several public consultation forums. Public comments were collected. The very transparent process made it possible to achieve a high level of guideline which includes SEA.

Using SEA for Urban Underground Infrastructure Appraisal

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At the turn of the twenty-first century, nearly half of the world's population (about three billion people) lives in urban areas. It is estimated that in the next twenty-five years, almost two billion more people will move to cities. This expansion will predominantly occur in the developing world, where "young" metropolises are growing. Development of underground infrastructure is needed for a city to be sustainable, although careful planning and environmental appraisal is indispensable for archiving urban sustainability goals.

This paper will discuss SEA application for elaboration and analysis of strategies for urban underground infrastructure development at a policy, plan, and program levels. Meso-analysis of urban underground infrastructure environmental assessment will be given, which means that focus is made on setting the agenda for development and policy formulation, rather than legal issuers and practical implementation of decision-making process. For this study, given obvious lack of information and great level of uncertainty in input data, streamlined approach is used, which means that priority is given to reliability of information for setting the policy, rather than production of accurate and detailed data. Analysis is based rather on qualitative data; however, some quantitative techniques are used.

Addressing Natural Hazards in the SEA Process

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The environment is usually thought of as an object that living beings inhabit and modify. However the "environment" can also be an agent acting on human plans, inter alia, in the form of geologic, atmospheric, and hydrologic events that reach the status of natural hazards or disasters. The static environment and dynamic environment are like two sides of a coin, and both are critically important to consider in strategic environmental assessment (SEA).

While the existence of natural hazards can be glossed over in the policies, plans, and programs of some developed countries, not addressing them in developing countries can lead to poorly designed development that increases vulnerability to hazards and engenders disastrous consequences, perhaps erasing decades of investment, deepening the levels of poverty, and reducing the society's resilience to future events. According to the World Bank's 2001 World Development Report, between 1990 and 1998, 94% of the world's 568 major natural disasters and more than 97% of all natural disaster-related deaths were in developing countries.

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In light of recent events, past experiences, and striking statistics, the environmental vision of SEA proponents and practitioners working in developing countries must encompass natural hazards. This paper offers guidance on the conceptual framework and methods of natural hazard risk management and entry points for smoothly and effectively addressing natural hazard risk in the SEA process.

SEAs for Prority Setting in Food Policy Illustrated Using Biotechnology

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Meeting the food needs of the world's growing population while reducing poverty and protecting the environment is a major global challenge. Genetically modified crops appear to provide a promising option to deal with this challenge. However, there is a need to make strategic decisions on how to spend limited agricultural research funds in order to achieve a maximum impact with regard to finding sustainable solutions to end hunger and poverty. In this paper, we propose using SEA for policy research and priority setting process regarding new technologies, taking the development of Genetically Modified Organisms (GMOs) as an example. We outline a Strategic Environmental Assessment approach currently being consider at the International Food Policy Research Institute (IFPRI) for use in evaluating biotechnology polices and potential applications. We show that this method is a useful tool for the international agricultural research centers supported by the Consultative Group for International Agricultural Research (CGIAR) to meet its objectives to streamline business processes, strengthen accountability, sharpen the research agenda it supports, foster broader partnerships, and increase relevance and impact of CGIAR research in achieving international development goals.

Developing an Indicator Set for Use in SEA

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The principle aim of indicators in the context of Strategic Environmental Assessment (SEA) is to assess the impact of plans and programmes on the environment and to illustrate and communicate this process in a simple and effective manner. Indicators are used to monitor change and predict impacts.

There are several environmental receptors outlined in the SEA Directive which must be addressed in the process. Numerous lists of indicators have been proposed at the EU, national and regional levels from which SEA practitioners may choose. However, while such lists may be useful guides they may also restrict and influence practitioners. In this paper we present a working methodology for developing a set of indicators for each specific plan or programme. We will concentrate on four environmental receptors i.e., biodiversity, water, air and climatic factors, however, it is intended that the basic principles will be applicable to all environmental receptors listed in the SEA directive. The output(s) of this methodology will help maximise existing resources, minimise the need for monitoring and reduce the cost associated with the implementation stage of SEA. It is anticipated that this methodology will be of benefit to other environmental users for monitoring purposes.