

Coordinated by Ralf Aschemann, An !dea – Austrian Institute for the Development of Environmental Assessment, Austria, office@anidea.at

Session D1 Data and Scale Issues for SEA

Topic chair: Elsa João, University of Strathclyde, elsa.joao@strath.ac.uk

This workshop aims to clarify how best to handle data and scale issues that will lead to the best possible SEA process. The workshop will be a mixture of short paper presentations and a final panel discussion. In particular, the workshop will try to answer some of these questions:

1. What comes first - data or issues? How to avoid issues being ignored for lack of data? Is an objective-led approach preferred to a baseline-led approach? Can issues alone (i.e., deprived of data to back them up) survive a public enquiry?
2. How much data is enough and what type of data is needed? What are the data needs for different sectors, for different issues (e.g., biodiversity, health), for different levels (linked with tiering), for different alternatives, for different stages (e.g., scoping, monitoring), for cumulative impacts, for transboundary issues, for different methods, and for environmental, social versus economic issues?
3. How does the disparity in the data availability affect the importance of different issues? Would SEA objectives for which there is no data lose out in relation to other data-rich SEA objectives? Are quantitative data given more importance than qualitative data, for example in a public enquiry?
4. How does data collection and scale choice relate to 'pragmatic aspects' of SEA? How does data collection relate to the timing of the SEA process? What to do when resources (money, staff, time) are scarce? Should we give priority to data that is considered 'most important'? Is it possible to classify SEA data in terms of its importance? Are budgets and schedules getting in the way of using sufficient detail in SEA?
5. What are the scale effects in SEA? How does scale affect the determination of significance in SEA and how does it affect the quality of the screening and scoping processes? Are scale effects more important in SEA than in EIA?
6. What detail is relevant for each SEA tier? What data and at what detail is needed for each tier? At what level should certain issues be dealt with? What issues should be dealt at which level?
7. Multi-scale analysis. Are multi-scale analysis needed and do the same issue need to be re-visited at different tiers with different scales?
8. Other data quality issues besides scale issues? What are the uncertainty and accuracy issues in SEA? How best to handle uncertainty and accuracy in SEA? What should metadata for SEA look like? How to take into account data and targets that might change during the timeline of the strategic action? Should data collection be on-going throughout the implementation of the strategic action? Would an 'adaptive SEA' be a solution?
9. Are there any examples of data and/or scale abuse? Have data and/or scale been chosen to suit particular interests rather than what the SEA process requires? If yes, what can be done to protect the SEA process from this abuse?
10. Are guidelines or guidance needed regarding data and/or scale for SEA? If so, how would such guidelines or guidance look like? How would it vary for different sectors (e.g., agriculture, waste), levels (e.g., regional, local), issues (e.g., biodiversity, health), SEA stages (e.g., scoping, monitoring)?
11. What information should be included in databases? Should databases keep track of mitigation and enhancement measures that may affect other SEA and project EIA? Who should be in-charge of databases, in order to reduce duplication of effort?

12. What kind of link between data and public participation? Can public participation help with data gaps? Can public participation help with monitoring? Can public participation help with poor data quality? Can the public be trusted on the data provided?

Workshop D1.1 Introduction: Data and Scale Issues for SEA

Topic chair: Elsa João, University of Strathclyde, elsa.joao@strath.ac.uk

What Scale is Relevant for the Decision Making Process? A Multi-Actor Perspective on Xscale.
Sonja Karstens, Pieter Bots, Wil Thissen

Scales and Associated Data—or the Other Way Round? What Is Enough for SEA Needs?. Maria Rosário Partidário

Panel Discussion on position paper and paper presentations

Panel members: Riki Therivel, UK; Elvis Au, Hong Kong; Jos Arts, The Netherlands

- a) Comments on position paper and paper presentations
- b) Panel and paper presenters respond to questions from participants
- c) Final key conclusions from panelists, paper presenters and participants

Session D1 abstracts (in order of presentation)

Data and Scale Issues for SEA

Elsa João, University of Strathclyde, elsa.joao@strath.ac.uk

The workshop will start with a short presentation of the key issues raised by the position paper, namely: data issues; scale issues; tiering and multi-scale analysis; data quality, metadata and uncertainty; and data and/or scale abuse.

What Scale Is Relevant for the Decision Making Process? A Multi-Actor Perspective on Scale

Sonja Karstens, Pieter Bots, Wil Thissen; Delft University of Technology/GeoDelft, sonjak@tbm.tudelft.nl

There is no such thing as an ‘ideal’ scale: difficult trade-offs are involved in the selection of scale. A high level of aggregation might for example secure the progress of the study, contribute to the general political agenda and prevent conflicts. On the other hand, it might fail to recognize the responsibilities and interests of actors and the possibilities for issue trade-offs. In order to be effective a SEA should take the decision making process as a starting point. Therefore the function of the SEA in the decision making process should play a key role in the selection of scale because scale sets bounds on the types of problems addressed, the solutions to be found, and the impacts to be evaluated. This attaches a strategic value to scale because it may intentionally or unintentionally privilege certain actors. This research provides a framework for ex ante evaluation of scale effects from multiple actor perspectives involved in a study and the decision making process. The framework is used in a thought experiment in different case studies. Interviews are conducted to reveal perspectives of different actors of what the consequences might have been if different scales had been used in the study and how they value these consequences. This provides a clearer insight in the trade-offs that need to be made and facilitates making deliberate scale choices.

Scales and Associated Data - Or the Other Way Round? What Is Enough for SEA Needs?

Maria Rosário Partidário, DCEA/FCT-UNL, mp@fct.unl.pt

Given multiple variants of SEA, I got used to thinking of SEA as a function of strategic issues that are associated to a given problem and to the respective scale(s). The underlying note being, however, that at any scale the thinking must be strategic! And so the first thing is to think of what is strategic about the situation or initiative that is the object of assessment, and how can SEA be used strategically. It seems therefore that after understanding what is actually going on, in other words, what is actually being assessed, a next step involves deciding what are those strategic issues that must be explored and at what scale, or range of scales, before progressing into further assessment, including digging for data that ensure the “robustness” of the assessment (whatever this means for strategic decision-making). Deciding what are strategic issues isn’t an easy decision in itself. It requires “some” data, fair and pragmatic data, but what data?! Now what means data in SEA? Is there one moment in SEA for data collection? Or should data be collected when needed? When, if ever,

should investment be made on significant data collection (e.g., baseline)? When is the right moment to decide what data is needed? And how much data will be enough? Shouldn't data be an issue of collective effort together with the strategy development per se? These questions lie in the frontier of the debate between EIA-based SEA and strategically-based SEA. Hot topic and so far unresolved. The debate probably lies between the comfort of knowing everything (presumably!) and not moving before a sound knowledge base, and the capacity to be effectively uncertain while moving forward. Behind the scene is still the same old question: what do we want SEA for? To assist sound decision or to establish a sound information base for decision? Both!! But then what is the priority when we can not have both?

Session D2 Public Participation in SEA - Current Situation and Trends

Topic chair: Bo Elling, Roskilde University, be@ruc.dk

The session will address public participation in SEA practice as it develops from single cases to a more systematic applied process in accordance with certain rules and principles. Its main focus will be how the strategic character of SEA makes public participation desirable, and - on the other hand - how the abstract and general character of SEA also complicates such involvements. Until present challenges have emerged at all levels of PPP for citizen involvement in SEA, such as the integrative approach to SEA, balancing effects, and the sustainability approach. Other challenging trends are the use of IT and the Internet for the dissemination of information, and early involvement of the public in defining and identifying objectives for the PPP and the scope of the assessment. Finally, if public involvement expands at all stages of the SEA process and citizen contributions to substantive parts of the assessment develop, ownership to the final decision and political responsibility will be a highly important issue.

Key issues for consideration at the session:

- Early public participation in the identification of policy, plan or program objectives and means.
- New ways and opportunities for public involvement at specific stages of the SEA process.
- The type of rationality related to SEA and how it can reflect its dialogical character.
- Public involvement in the process of monitoring environmental effects.
- The use of information technologies and the Internet for submission of information in-between the competent authorities and the general public and concerned citizens and how it will affect the SEA process.
- The issue on ownership and political responsibility to final decisions in case of actual public involvement in the SEA process.

The session will include four workshops. The first takes the point of departure in a presentation of the position paper and views on SEA in theory and practice by panelists and paper contributors. The second workshop will be a panel discussion of position paper issues defining a general framework for discussions at the single workshops. The third workshop will present specific papers mainly on theoretical matters that give different approaches to position paper issues. The fourth workshop will present specific case studies on SEA practice (A) and conclude on the session findings (B).

Workshop D2.1 Presentation of session issues, panelists and paper contributors

Presentation of position paper by Bo Elling

Short comments and statements

Presentation of panel members and participants' submitted abstracts

- a) Profession within EA
- b) View on SEA in theory and practice

Planning of Workshop 2 and Workshop 3

Panelists and paper contributors:

Polina Agakhanyants, Technical University Berlin
Sona Anyvazyan, Center for Regional Development/Transparency International Armenia
Ralf Aschemann, An Idea - Austrian Institute for the Development of Environmental Assessment
Peter Croal, CIDA
Lee Doran, Ecological Writings, Toronto
Bo Elling, Roskilde University
Yuko Furugori and Sachihiko Harashina, Tokyo Institute of Technology
Ainhua Gonzales, Dublin Institute of Technology
W.F.M. (WIM) Haarmann, Tilburg University
Hilary Schaffer, Stanford University

Workshop D2.2 Panel discussion on position paper issues (listed above)

Panel members:

Ralf Aschemann
Peter Croal
Hilary Shaffer
Yoko Furigori
Ainhua Gonzales

- a) Comments on position paper issues from panelists
- b) Responds and comments on questions from participants

Note: In case of exceptional participation part of Workshop 3 may be split into group work, for example after presentation of panelists views and before final plenum discussion (in-between a and b).

Workshop D2.3 Paper presentations

The Place and Role of Public Participation in Monitoring Regional Sustainable Development. W.M.F. Haarmann

Capacity Building Project for Public Participation in Southern Africa. Peter Croal

Public Participation in Master EIS Processes for Land-Use Plans. Hilary Schaffer

Environmental Assessment Systems in USA and Japan. Yoko Furigori, Sachihiko Harashina

New Technologies Promoting Public Involvement: An Interactive Tool to Assist SEA. Ainhua Gonzalez et al.

Aesthetic and Ethical Values and Public Participation in SEA. Bo Elling

Conclusion of D2.3 by Bo Elling

Workshop D2.4

A. Presentation of case studies

Public Participation within the UNDP/RECSEA Pilot Project in Armenia. Sona Ayvazyan

Public Consultation at the Regional Level Facilitates Decision-making at the Project Level: An example from the Victoria Nile. Lee D. Doran

SEA and Public Participation Experiences in Russia. Polina Agakhanyants

Expected Impact of Strategic Environmental Assessment on National Plans and Programmes in Estonia. Kaja Peterson (*abstract unavailable*)

B. Conclusion of session

Topic chair and panelists present their findings for conclusions of the session for discussion by participants

Final conclusions

Session D2 abstracts (in order of presentation)

The Place and Role of Public Participation in Monitoring Regional Sustainable Development

W.M.F. Haarmann. *Telos*, haarmann@uvt.nl

Telos (Brabant Centre for Sustainable Development in The Netherlands) has developed a participative method to monitor regional sustainable development. This method was applied in four Dutch provinces, during 2000-2003. We discovered that local and temporal conditions had a considerable impact on the perceptions, preferences and choices of stakeholders. This made it more difficult to compare the outcomes. At the same time, we found out that the involvement of stakeholders in the process of defining and applying indicators for sustainable development proved to be a very good tool to improve the communication and cooperation between actors with different opinions and interests, often coming from very dissimilar backgrounds: from the field of science, via policy-making or the NGO-world to the arena of business. According to the stakeholders this (communication) process was as promising, and according to some even more promising, than the concrete assessment the method was developed for. We now are in the middle of improving both aspects of our approach. We want to ameliorate the possibility to compare outcomes over time and between different regional contexts, and we want to reinforce the participatory approach, by defining more precisely where, when and how stakeholders, and what kind of stakeholders, should be involved. The focus of this paper is on the last aspect. The purpose is to present our findings thus far, and even more so, the questions we have come across and lessons we've learned.

Capacity Building Project for Public Participation in Southern Africa

Peter Croal, *Canadian International Development Agency*, peter_croal@acdi-cida.gc.ca

The Johannesburg Plan of Implementation describes "good" governance as being essential for sustainable development. Coupled with this is NEPAD and the Commission for Africa report which views good governance as an essential element of poverty reduction in Africa. Most consider good governance to mean: transparent decision-making, access to information and justice, public participation, coherence, subsidiarity, respect for human rights and accountability. A well-planned and implemented SEA does respect all these conditions for good "environmental" governance. However, in Africa, one of the elements of the SEA process, which is quite weak, is public participation. This has large opportunity costs in terms of community empowerment, environmental performance and displaying true democratic reform. Africa and other developing nations are in an excellent position to take advantage of the benefits of SEA to avoid problematic issues made by developed countries in the application of EIA. The Southern African Institute for Environmental Assessment has undertaken a 2-year capacity development project (World Bank and Canadian CIDA supported) to address the SEA and public participation process in the SADC region. The programme has developed a suite of practical PP/SEA tools and methodologies, appropriate to the developing country context, which ensure that all stakeholders involved in an SEA derive full value from the PP process. Calabash outputs are also applicable to the Poverty Reduction Strategy Process (PRSP).

Public Participation in Master EIS Processes for Land-Use Plans

Hilary Schaffer, *Stanford University*, hilschaf@stanford.edu

The California Environmental Quality Act (CEQA) requires strategic environmental assessments in the form of Master Environmental Impact Reports (EIRs). Three of the six goals of CEQA involve public participation, but few studies have assessed the Act's effectiveness in meeting those participation goals. This research, which investigates Master EIR processes for three recent land-use plans in the San Francisco Bay Area, examines whether and how these processes enhanced the ability of citizens, nongovernmental organizations (NGOs) and government agencies to affect planning decisions. Information has been collected via interviews with participants, including decision makers and representatives of government agencies, NGOs, individual citizens, consultants, and attorneys. In addition, EIR documents and public hearing transcripts have been analyzed. The study emphasizes the influence of Master EIRs on

the information citizens, NGOs, government agencies and decision makers have available to participate in land-use planning, and it also concerns the timing of the Master EIR process relative to key land-use decisions. Results provide useful information for both practitioners and policy makers, in terms of appropriate methods and procedures, to achieve effective public input into land-use plan making.

Environmental Assessment Systems in USA and Japan

Yoko Furigori, Sachihiko Harashina; Tokyo Institute of Technology, sahara@depe.titech.ac.jp

Strategic Environmental Assessment (SEA) has become an important tool to integrate environmental consideration into a decision-making process. It is generally understood as a process for assessing the environmental impacts caused by a proposed policy, plan and program. SEA should be recognized as a supportive method to conduct appropriate decision-making for sustainable development. However, a successful implementation of SEA depends much on a fair and considerate decision-making process based on positive disclosure and public participation. In this paper we review the environmental assessment system of the United States, enacted as the National Environment Policy Act (NEPA), which is the first SEA system in the world, and discuss the decision-making processes concerned and the public participation in them. We, then, make a comparative study on the legal structure of the U.S. and Japan related to or supportive of environmental endeavors that reflects social differences between the two countries. Finally, we consider a realizable and effective SEA system by which Japan could establish a democratic decision-making process.

New Technologies Promoting Public Involvement: An Interactive Tool to Assist SEA

Ainhoa Gonzalez, A. Gilmer; Dublin Institute of Technology, ainhoag@yahoo.com; R. Foley, National University of Ireland; J. Sweeney, J. Fry, University College Dublin, Ireland

Information technologies (IT) are advocated as a key tool to enhance public participation. Distribution of information through IT systems such as the internet is gaining popularity as a rapid and, in most cases, accessible way of informing and involving the public. Concerns associated with technology-aided public participation derive from the apparent division of computer-skilled and 'traditional' citizens. Moreover, while it is perceived that public participation and feedback is enhanced through IT systems, feasible methods for effective inclusion of public concerns and interests in environmental assessment have rarely been explored and defined. This research study is currently developing a holistic and interactive method applying Geographic Information Systems as a tool to assist different stages in the Strategic Environmental Assessment (SEA) process. Public involvement is a vital component of this approach. The software contains a user-friendly public consultation tool (that can be distributed through the internet or used at public displays) that systematically queries, gathers and processes submitted comments, proposals and complaints related to the proposed actions, plans and programmes. The software derives results from a statistical analysis of inputs. Consequently, the outcomes of public consultation are added as a value factor to the spatial (and temporal) analysis of environmental, social and economic features relevant to the SEA. This method will help to address inclusion of public perception which represents an important part of the social element in the SEA process.

Aesthetic and Ethical Values and Public Participation in SEA

Bo Elling, Roskilde University, be@ruc.dk

In my presentation I will argue for an SEA practise, based on a so-called communicative reflection, and renewed compared to current practice in environmental assessment. Empirical works as well as theoretical studies will shortly be presented. Theoretical arguments are based on the German philosopher and sociologist Jürgen Habermas' theories on different types of rationality linked to the differentiation of society into systems and lifeworld. In systems, such as the economic system and the bureaucracy, reflections are based on cognitive-instrumental rationality. In the lifeworld some holistic elements still exist based on mutual understanding and reproduced in communicative everyday practice. It includes ethical and aesthetical rationalities and not just cognitive instrumental rationality.

In the communicative reflection approach to SEA, as proposed, there should be a clear-cut separation of the assessment process, in which the citizens are actively involved, and the political decision-making process, for which the politicians are responsible solely. In the assessment process different types of reflection and rationality can meet and the environment can be considered as a value that should be protected and not just a medium to realize an original proposed action. Conflicts, interests and environmental impacts can be exposed in full instead of being balanced and made invisible in a

proposal for a final decision. Thereby the involved citizens can have real influence on subjects for assessment and the content of the assessment actually carried out.

Thus, I will argue, public participation is not solely a matter of democratisation, but a necessity for the inclusion of ethical and aesthetical values in the planning process.

Public Participation within the UNDP/REC SEA Pilot Project in Armenia

Sona Ayvazyan, Center for Regional Development/Transparency International, sona@transparency.am

Public participation in the SEA process plays a critical role not only in the monitoring of the environmental effects of plans/programs/policies, but also in stipulating more cautious enforcement of those by the relevant authorities. During transition to a market economy many cities and towns in Armenia experienced extensive violations of the existing urban development plans and policies, which contributed to the environmental degradation of those areas as well as to social frustration. As a matter of fact, the concerned public was not able to monitor and constructively react to breaches due to the lack of access to information on the content of respective plans and policies. Public participation efforts, proposed within the UNDP/REC SEA Pilot Project in Armenia, which focuses on the Master Plan of Yerevan City, anticipate awareness-raising of the concerned public on the content of this plan, in order to build up benchmarks for monitoring of implementation of this as well as other related documents. It is assumed that more informed public can better observe the enforcement and environmental impact and more adequately respond to problems. It's important to highlight the necessity for capacity building of the non-governmental organizations in monitoring and participation in policy implementation processes.

Public Consultation at the Regional Level Facilitates Decision-Making at the Project Level: An Example from the Victoria Nile

Lee D. Doran, Ecological Writings #1, Inc., lee.doran@sympatico.ca

Effective public consultation during a strategic assessment played a critical role in optimising the Bujagali hydroelectric and transmission line project concept on the Victoria Nile River in Uganda. This case study shows how the engagement of key stakeholders provided a framework for decision-making that expedited project approvals. The methodology used was comprehensive, holistic and qualitative. It trusted key stakeholders to identify, prioritise and rate the criteria that mattered to them for the future of 'their' ecosystem. The scale was regional; the timeframe was medium-to-long term (20 years). The approach was grounded in the Limits of Acceptable Change concept that has been used successfully since the 1970's in somewhat different contexts. It recognizes that human and ecological systems change (they are not static) and aspires to manage such change within acceptable limits. The results of the strategic assessment informed specific decisions by the project financiers (led by the International Finance Corporation of the World Bank Group) to protect biodiversity as an 'offset' to the project's impacts. The case study explains how these events unfolded and highlights 'lessons learned' and best practice implications.

SEA and Public Participation Experiences in Russia

Polina Agakhanyants, Technical University Berlin, polina@vexp8.lpb.org

The presented results are based upon investigation of 38 case-studies of environmental decision-making in Soviet Union and Russia. Russian legislation provides possibilities for public participation in strategic decision-making. Institutional forms of public participation in Russia are linked to two administrative procedures - assessment of environmental impacts and environmental review. These procedures are conducted not only for project-level activities but for strategic actions as well. Only one of 38 considered cases demonstrated public participation in strategic decision-making on level higher than "informing". Good practices of NGO participation in law-making in St. Petersburg and Irkutsk were revealed. Many conflicts in considered cases resulted from lack of public participation at strategic stages. Main reasons for poor public participation in SEA are:- often no environmental assessment procedures were conducted for strategic actions at all;- strategic decision-making is not a transparent process;- project-level activities often do not correspond to strategic plans or are implemented in differing conditions, which leads to conflicts and environmental violations;- state authorities lack institutional and professional capacities to provide for PP in strategic decision-making. Recommendations to improve the situation are given, including legislation development and increasing institutional capacities both of public and state power bodies.

Session D3 Addressing Health in SEA - Current situation and trends

Topic chairs: Ben Cave, Ben Cave Associates Ltd. ben.cave@totalise.co.uk; Alan Bond, University of East Anglia - Norwich, alan.bond@uea.ac.uk; Marco Martuzzi, World Health Organization; Suphakij Nuntavorakarn, Health System Research Institute, suphakijn@yahoo.com / suphakij@hsri.or.th

The session will address the consideration of health in SEA practice. Its main focus will be how the strategic character of SEA makes preventative health planning a real possibility, whilst - on the other hand - engagement between health professionals and the other stakeholders involved in SEA may be problematic.

Key issues for consideration at the session will be:

- Ways of strengthening the cross-sectoral application of health in SEA.
- New ways and opportunities for integration of HIA and SEA.
- How to improve the engagement of health professionals in SEA.
- Are there case example of consideration of health in SEA having real benefits?
- Is integration of HIA and SEA desirable?

The session will include four workshops. Workshop D3.1 will take the point of departure in a presentation of the position paper and also of the WHO Europe position on health in SEA. This workshop will take views on addressing health in SEA by panelists and paper contributors. The second workshop will be a panel discussion of the issues raised in Workshop D3.1 and will define a general framework for discussions at the remaining workshops. Workshop D3.3 will present specific papers mainly responding to the position paper issues. Workshop D3.4 will conclude on the session findings and will put in place a plan for future action.

Workshop D3.1 Presentation of session issues, panelists and paper contributors

Presentation of position paper by Alan Bond and Ben Cave

Presentation of paper by Marco Martuzzi describing strategic policy context in SEA and health from WHO Europe's point of view

Short comments and statements

Presentation of Panel Members and participants' submitted abstracts

Planning of Workshop 3.2 and Workshop 3.3

Panelists and paper contributors:

Alan Bond, University of East Anglia
Wiput Phoolcharoen, Suphakij Nuntavorakarn Health Systems Research Institute
Frans van Zoest, National Institute for Public Health and the Environment
Ben Cave, Ben Cave Associates Ltd.
Marco Martuzzi, WHO Rome Office
Paul Tomlinson, TRL Limited

Comfort Hassan, Nigerian Environmental Study/Action Team (NEST)

Workshop D3.2 Panel discussion on health in SEA

Panelists:

Alan Bond (chair)
Wiput Phoolcharoen
Frans van Zoest
Marco Martuzzi
Paul Tomlinson
Ben Cave
Nick Bonvoisin

Comments on position paper issues from panelists
Comments on WHO Europe's position
Health in the SEA Protocol (UNECE)
Responses and comments on questions from participants

Workshop D3.3

The Effectiveness of SEA in Addressing Health Problems - An Ecosystem Approach to Human Health. Comfort Hassan
Models for Addressing Health in SEA: Experiences from Thailand. Suphakij Nuntavorakarn and Decharut Sukkumnoed
SEA and Health Case Studies: Lessons Learnt, and Issues Arising from, Work in Progress in the UK. Ben Cave
Conclusion on workshop 3 by Tharald Hetland and Marco Martuzzi

Workshop D3.4 Conclusion of session

Chair: Ben Cave, Ben Cave Associates Ltd.
Rapporteur: Suphakij Nuntavorakarn
Topic chair and panelists present their findings for conclusions of the session for discussion by participants
Final conclusions

Session D3 abstracts (in order of presentation)

The Effectiveness of SEA in Addressing Health Problems - An Ecosystem Approach to Human Health

Comfort Hassan, Nigerian Environmental Study/Action Team (NEST), fortlara@yahoo.com

The strong interaction and interrelation of economic, social and cultural determinants present a challenge for developing a holistic comprehension of environmental degradation and its impact on human health. Understanding human health in terms of its inter-action with the human environment has traditionally been strongly colored by the experience of medical and to a lesser extent, environmental approaches. Over the last quarter century, thinking about public health have evolved towards a much more global, more ecologic approach. Similarly, natural resource management thinking has progressed and now includes environmental and social factors as well as economic parameters. Both fields have seen a move to a more integrated approach to management (whether of the health or of the environment). These two current thoughts have given rise to the metaphor of the "health ecosystem". The ecosystem approach to human health is a, new, holistic approach that flows from this metaphor - it places human beings at the center of considerations about development, while seeking to ensure the durability of the ecosystem of which they are an integral part. The Niger Delta region of Nigeria therefore portends to showcase a reference point for this type of approach.

Models for Addressing Health in SEA: Experiences from Thailand

Suphakij Nuntavorakarn, Decharut Sukkumnoed; Health Systems Research Institute, tonklagroup@yahoo.com

Since the national health system reform started in 2000, Thai society increasingly perceives health as an ultimate goal for development. Health Impact Assessment has been developed as a learning tool for all stakeholders to analyze health impacts and to support the participation in the policy process. The development and experiences of HIA has contributed to the EIA system reform, which was started in 2003, and this led to, among others, the necessity of SEA development in Thailand. Therefore, the issue of addressing health in SEA has to be explored. Based on the Thai HIA experiences, there are four models for addressing health in SEA:

1. EIA Model: health as the consequences of environmental impacts
2. Eco-system Model: health as a main component in the eco-system
3. Healthy Public Policy Model: health as a comprehensive impact or an integrated assessment
4. Health Inequalities Model: health as a way of living healthy together

It is important to emphasize that these models are not mutually exclusive and thus, more than one model can be applied to a policy process. This depends on the analysis of each public policy process that should focus on the specific policy situation, various policy networks, and different policy framings. However, the consequences from the four different models have to be studied further.

SEA and Health Case Studies: Lessons Learnt, and Issues Arising, from Work in Progress in the UK

Ben Cave, Ben Cave Associates Ltd., ben.cave@totalise.co.uk

Identifying the significant impacts on human health is one of the requirements of the European SEA Directive. This raises a number of questions about how these potential impacts should be identified. It also raises questions about the status of health input within the context of a larger environmental report. It also casts a searching light over the ways in which the health sector contributes to the plan-making process. This presentation will look at some case-study examples of ongoing work in England. The author worked on each of the HIAs of the regional strategies for London and is currently engaged in providing health input to the SEA of a number of regional strategies and to a Local Transport Plan.

Session D4 Assessment of Cumulative Impacts in SEA

Topic chair: Jenny Dixon, University of Auckland, j.e.dixon@auckland.ac.nz

This workshop will explore how cumulative effects assessment (CEA) can become more integrated with SEA at the policy-making and planning level. It comprises paper presentations and a round table discussion.

While significant progress has been made in the past in respect of building a substantive base of theory and methodology in respect to CEA, a crucial impasse point has been reached which needs to be addressed in order to move forward. For example, for a number of years now, a constant theme in the CEA literature relates to the difficulties of working across jurisdictions and across stakeholder groups. Lack of resources, lack of skills on the part of practitioners, poor quality national guidelines and so on, also feature prominently. A further dominant feature has been a focus on the assessment of multiple projects in regions rather than grappling with how assessment of cumulative effects per se might be integrated within relevant planning processes, not just at the regional level but at lower tiers as well. It is only relatively recently that attention has turned towards how CEA might be incorporated more intentionally in SEA and plan making.

Similarly in SEA, methodologies do not often address the assessment of cumulative effects in a substantive way, or acknowledge the sharp realities of political decision-making where addressing cumulative effects adequately can challenge jurisdictional agendas and sensitivities. In many respects, it is the decision-making context that is so problematic in addressing cumulative effects and is often under-rated in our focus on methodologies and practice.

Key issues for consideration at the session:

- A) At a methodological level, can SEA be improved to include more emphasis on the assessment of cumulative effects and in what ways?
 - Does this mean that land use and spatial plans need to be strengthened?
 - If so, in what way?
 - Within plans, what mix of regulatory and non-regulatory approaches are most useful for addressing cumulative effects within SEA?
 - How might integration between relevant plans be achieved, particularly where these plans are the responsibilities of different agencies?
- B) In strengthening SEA for cumulative effects, does it require that SEA is most effective where it can be addressed through land use or spatial planning processes?

- Or are there other forms of institutional arrangements and instruments that are just as, if not more, useful?
- Are there successful examples of where SEA has addressed cumulative effects well and what have been important factors in achieving results?
- At a more fundamental level, the assessment of cumulative effects, and how likely outcomes might be addressed and overcome, raises questions about the 'how-to'. In this regard, underlying philosophical approaches to planning and environmental management come under scrutiny. For example, many governments have shifted from an emphasis on regulation and prescription towards a mix of regulatory and non-regulatory measures in achieving environmental outcomes sought.
- How does SEA with a focus on the assessment of cumulative effects 'fit' in these models?
- What is likely to work best in mixed models?
- Where and how might we get 'best value for our dollar'?

Workshop D4.1 Presentation of session issues, paper contributors and participants

Coming on Heavy: The Need for Strategic Management of Cumulative Environmental Effects.
Jenny Dixon, Marjorie van Roon

Hindrances and Opportunities to Consider Cumulative Impacts. Antoinette Oscarsson

Roundtable discussion to consider key issues

Participants

Morgan Williams, New Zealand Parliamentary Commissioner for the Environment

Martin Ward, Environmental Consultant

Tony Jackson, University of Dundee

Jenny Dixon, University of Auckland

Antoinette Oscarsson, Swedish University of Agricultural Sciences

Session D4 abstracts (in order of presentation)

Coming on Heavy: The Need for Strategic Management of Cumulative Environmental Effects

Jenny Dixon, University of Auckland, j.e.dixon@auckland.ac.nz; Marjorie van Roon

The paper uses an example of the incidence of two heavy metals, Zinc (Zn) and Copper (Cu), in two catchments in a major New Zealand city, to explore the relationship between strategic planning processes and cumulative environmental effects. The paper outlines the planning regime in place within which decision-making occurs and identifies what needs to change in order to ensure that cumulative effects are adequately addressed and managed through policies, plans and practices.

Hindrances and Opportunities to Consider Cumulative Impacts

Antoinette Oscarsson, Swedish EIA Centre, Antoinette.Oscarsson@lpul.slu.se

The paper clarifies hindrances to and opportunities for consideration of cumulative effects in the EIA/SEA process in Sweden. Preliminary results from a case study are presented.

Research on cumulative impacts has shown that small cumulative impacts may result in greater environmental disturbances than a single particular action. Cumulative impacts are mentioned both in the European directive on the assessment of certain projects, 97/11EC, and in the Directive on the assessment of certain plans and programmes, 2001/42/EC. However, two recently performed studies have shown that cumulative impacts are seldom described in Swedish environmental assessments.

A case study has therefore been initiated to investigate different EIA/SEA actors' views and opinions regarding cumulative effects. The aim of the study is to clarify hindrances and opportunities to consider cumulative effects in the EIA/SEA process in Sweden. International studies have presented several suggestions on why cumulative effects are not considered satisfactory in the EIA process.

This research study is investigating whether some of these suggested reasons are also valid for Swedish conditions or if there are other reasons that cause the insufficient handling of cumulative effects. The method used is half structured explorative interviews. The interview questions cover the themes 1) why

should cumulative effects be considered? 2) opportunities and hindrances, 3) how? 4) definition and understanding and 5) examples of cumulative effects from implemented EIA/SEA. In this contribution, preliminary results from the case study are presented.

Session D5 SEA Follow-up

Topic chair: Aleg Cherp, Central European University, cherpa@ceu.hu

There is a growing recognition that SEA should be accompanied by “follow-up” activities adjusting its predictions and recommendations in light of the information obtained during the implementation of the policy, plan or programme (PPP).

The current thinking on SEA follow up has been largely derived from that on EIA follow up. It focuses on monitoring and evaluation more than on management and communication. Conceptual frameworks appropriate for the specific nature of SEA (focus on objectives, complex casual links between PPPs and their impacts, complexity of potential management responses) as well as documentation of practical experience are still lacking.

The exploration of potential links between SEA follow up and other environmental policy and management tools, such as EMS in public authorities may be fruitful in dealing with key challenges of SEA follow up. The session will welcome papers dealing with conceptual or empirical perspectives on SEA follow up, especially with identifying key elements of SEA follow up, discussing its specifics in relation to EIA follow up, addressing management and communication components of SEA follow up and exploring its links with other environmental management tools.

Workshop D5.1 Presentation of position paper, contributions and discussions

Presentations of participants

Presentation of position paper by Aleg Cherp

Short comments and statements

Exploring the Concept of SEA Follow-Up. M.R. Partidário and J. Arts

SEA monitoring of spatial plans in Germany. M. Hanusch

Strategic Environmental Management as a Follow-Up to SEA. S. Emilsson, O. Hjelm, A. Cherp

Concluding discussion and developing recommendations for the session.

Workshop D5 abstracts (in order of presentation)

Exploring the Concept of SEA Follow-Up

M.R. Partidário, DCEA/FCT-UNL, mp@fct.unl.pt; J. Arts, Ministry of Transport Public Works & Water, e.j.m.m.arts@dwv.rws.minvenw.nl

Strategic Environmental Assessment (SEA) is thriving, but there has been relatively little attention on what happens to SEA once a policy, plan or programme is approved; that is, monitoring, evaluation and management following adoption of their respective strategies. The purpose of this paper is to explore the concept of SEA follow-up. It addresses first the complexity of follow-up at strategic levels and the specific nature of the strategic decision-making context. A strategic initiative may spread effects in many directions, like a “splash,” which has to be taken into account when doing follow-up. Although the complex nature of strategic decision-making may hamper SEA follow-up in practice, it also stresses the need and usefulness of SEA follow-up. In order to deal with complexity of follow-up at strategic decision-making levels a multi-track approach is proposed. This will allow for the use of those methods, moments and information that prove to be useful and relevant in a specific case. Finally some preliminary guidance is provided on how to devise a SEA follow-up programme using a stepwise approach. Far from attempting to provide any prescriptive direction into how to carry out follow-up activities at strategic levels of decision-making, the paper seeks to articulate key concepts and lessons gained with SEA follow-up. It is concluded that SEA

follow-up is basically about managing the policy and planning implementation processes or, more generally, about managing the implementation of strategic level decisions.

SEA Monitoring of Spatial Plans in Germany

M. Hanusch, UFZ-Center for Environmental Research, marie.hanusch@ufz.de

SEA follow-up may have different forms. One of them is the obligation 'to monitor the significant environmental effects of the implementation of certain plans and programmes' laid down in Article 10 of the EU SEA Directive. This monitoring obligation challenges the European Member States to come up with intelligent concepts and mechanisms for SEA monitoring. The Directive leaves it to the Member States to decide upon the specific monitoring provisions, like the bodies responsible for monitoring, the time and frequency of monitoring, and the methods to be used. The paper will present how Germany faces this challenge. The legal set in terms of SEA monitoring, guidance documents, as well as some practical approaches will be presented. The main focus will be on monitoring in terms of the environmental assessment of spatial plans, considering procedural issues (responsible bodies, parties involved, time frequency) and methodological issues (indicator based, checklist based), taking into account different requirements due to different planning levels. Concluding, the ways taken by Germany could be juxtaposed to approaches envisaged by other states, highlighting that a proper SEA monitoring is crucial to close the loop of impact prediction and condition setting.

Strategic Environmental Management as a Follow-up to SEA

S. Emilsson, O. Hjelm; Linköping University, sarem@ikp.liu.se, olohj@ikp.liu.se. A. Cherp, Central European University, cherpa@ceu.hu

This contribution aims to explore the management component of SEA follow up. It argues that strategic environmental management is capable of addressing various effects of strategic actions including those which are difficult to predict or attribute. Such management can be most directly related to Environmental Management Systems (EMS) routinely practiced in authorities in some countries. The key of linking an EMS to an SEA is determining the SEA's organizational context, i.e., identifying organizations - actors in the strategic initiative undergoing SEA. A weakness of traditional use of EMSs in authorities, consistently pointed by current research literature, is the problem of addressing strategic environmental issues, e.g., those arising from authorities' decisions rather than those directly affected by their operations. SEA can be the first step in addressing this deficiency by identifying environmental implications of strategic decisions. The next steps might be reformulating, in more strategic terms, some concepts of EMS use, starting with re-definition of organizational fields and re-placing circular machine-like management tools with a strategy formation and implementation approach. The presented paper is the first step in the research project Strategic Environmental Assessment and Management in Local Authorities in Sweden (SEAMLESS) launched with the MiSt research program.

Session D6 SEA Review

This session is designed to explore the role of review in SEA and provide a forum for discussing the different approaches available. Other approaches to the quality control of SEA reports and processes will also be discussed. As part of the session, review criteria for SEA reports and a protocol for the review of SEA processes, prepared by the Institute of Environmental Management & Assessment will be tabled for discussion.

Workshop D6.1 Quality Control & SEA Review

Opening discussion

- What are the opinions of participants of the quality of SEA reports and processes?
- What approaches to quality control of individual SEAs are currently in use?
- Does SEA review form have a role within quality control of SEA?

Presentation by Karl Fuller: IEMA Approaches to SEA Review

Presentation by Tadgh O'Mahony, EPA Approaches to Quality Control in SEA

The Development and Application of SEA Process Evaluative Criteria. Fiona Walsh

Wrap-up discussion

- Approaches to review and quality control presented
- How can the effectiveness of SEA review be improved?
- Should the role and approach to SEA review change according to the level of SEA being addressed?

Recommendations

- For the role and approach to SEA review
- For the development of review tools

Session D6 abstract

The Development and Application of SEA Process Evaluative Criteria

Fiona Walsh, Open University, Fiona.Walsh@seia.freeseve.co.uk

Although the development and application of criteria to evaluate the quality of SEA Reports is described in the literature, little information is available for analysing the content of the SEA process. This is a significant omission because adherence to certain content requirements can help ensure compliance with legislative provisions and production of a good quality SEA Report

This paper describes the development of SEA Evaluative Criteria for analysing the content of the SEA process. These criteria were developed during a research programme undertaken in Scotland and take into account requirements introduced by the SEA Directive and thinking about good SEA practice.

This paper also describes the results of applying the SEA Evaluative Criteria to examples of three Scottish SEAs from three different sectors—land use planning, renewable energy and transport planning. Two are plan-level SEA prepared by public authorities and the third is a programme-level SEA prepared by a private business. This analysis reveals a number of features relevant to the development of SEA practice, namely:

- Identification of the actual and perceived benefits of SEA
- An indication of the difficulties faced by public and private organisations when undertaking SEAs
- Examples of initiatives to assist in the successful implementation of SEA