Stream B SEA Practice in Key Sectors

Coordinated by Rob Verheem, EIA Commission, The Netherlands, rverheem@eia.nl

Session B1 SEA in Poverty Reduction Strategies

Topic chair: Linda Ghanime, UNDP, linda.ghanime@undp.org

Poverty Reduction Strategies are a key instrument of development cooperation. The background paper "How Can SEA Improve Poverty Reduction Strategies?" outlines key challenges for SEA to reinforce the quality of poverty reduction efforts for sustainable development. The paper invites contributions on the lessons from practice in refining strategy and programme outcomes, facilitating the comparative analysis of options, assessing cross-sectoral effects, as well as in improving transparency and public participation in Poverty Reduction processes.

The session on SEA in Poverty Reduction Strategy is a complement to the Development Cooperation Event and related Sessions. The session format is a panel brief followed by a facilitated discussion on SEA in improving the quality of the Poverty Reduction Strategy process outcomes. Panel members will each outline the conclusions emerging from their experiences. The focus of the session will be on the following questions:

- How has SEA helped in refining outcomes of PRS and in contributing to improved pro-poor policies and actions?
- How have SEA approaches been adapted to country and context-specific capacity development needs?
- Have SEA processes been successful in bringing together various analytical processes and tools?

Workshop B1.1

Facilitated by Linda Ghanime and Peter Nelson

How can Strategic Environmental Assessment improve Poverty Reduction Strategies? Summary of discussion paper by Linda Ghanime.

Panel response:

- Experiences from the PRSP process: Laura Tlaiye, Sector Manager Environmental and Socially Sustainable Development Division, World Bank
- Experiences in MDG Based Poverty Reduction Strategies: Dorothy Rosenberg, Poverty Group United Nations Development Program
- Experience of Ghana: Mr. Evans Darko-Mensah Consultant
- Strategic Environmental Assessment and Poverty Reduction in Tanzania: Hussein Sosovele, Consultant (University of Dar es Salaam)
- Success factors in integrating environment in Poverty Reduction Strategies: John Horberry, Consultant
- Open Discussion: Strengths and weaknesses of SEA practice in PRS, main contributing factors, role and contribution of SEA to planning and poverty reduction and environmental outcomes
- Conclusions

Summary of panel briefs:

Experiences from the PRSP Process

Laura Tlaiye, Sector Manager, Environment Division, The World Bank, ltlaiye@worldbank.org

The presentation will highlight the extent to which Strategic Environmental Assessments (SEAs) can be made effective in strengthening the inclusion of environment in the governments' policymaking pro-

cesses. To better understand the poverty-environment nexus in the context of country specific situations, SEAs as an analytical tool can play an important role in aligning environmental concerns with Poverty Reduction Strategies. Through SEAs, environment and poverty issues can be identified across the different sectors and at different government levels to further align with budget needs and donor funding. When such information is available in a timely manner to all stakeholders of the PRSP process, better clarity and inclusiveness of environmental issues can be achieved. One such good practice example is the Ghana SEA, where a strong integration between national policy goals and practical delivery of these goals on the ground, is being realized.

Experiences in MDG Based Poverty Reduction Strategies

Dorothy Rosenberg, Poverty Group United Nations Development Program

Over the past few years, UNDP has worked to advocate and monitor the Millennium Development Goals (MDGs) in national development, which includes a series of mutually reinforcing development goals, targets, and related indicators. An MDG-based development strategy is defined as a long-term vision consistent with the Millennium Declaration, based on nationally-determined priorities, that is supported by medium-term cross-sectoral strategies, which are measured against progress towards concrete MDG outcomes. Countries increasingly seek practical guidance on how to integrate the MDGs into existing poverty reduction and development strategies. Inclusive and integrated approaches are needed if the MDGs are to be achieved by 2015, a major milestone on the path to fulfilling the commitments undertaken in the Millennium Declaration. The brief will outline how outcome-based poverty reduction strategies supported by instruments, such as SEA, offer a means to improve poverty reduction and environmental sustainability and overall development effectiveness.

Experience of Ghana

Evans Darko-Mensah, Consultant, edmrefast@yahoo.com

The Ghana Poverty Reduction Strategy was launched by the National Development Planning Commission (NDPC). Consisting of strategies—policies, programmes and priority projects aimed at promoting economic growth and achieving sustainable poverty reduction in the medium term. Benefits of SEA included refinements to development policy, alterations of district level plans as well as revision to planning guidelines to include focus on environmental considerations in planning at Sector and District levels. SEA also resulted in changing of attitudes of officials responsible for planning and budgeting to see the "win-win" opportunities in integrating environment in PPPs. Emphasis of SEA in Ghana is on the processes. Accordingly, capacity building has mainly been through the "learn-by-doing" method of key stakeholders. Sustainability criteria include issues of Governance or Institutions. The main advantage has been in its utility in the process of mainstreaming Environment and sustainability in PPPs at all levels. This requires that a wide range of stakeholders and not just 'experts' be engaged in the processes. The analytical tools used in the SEA process in Ghana are based on simple matrices that can be understood and applied by a wide range of stakeholders. Some of the methods such as impact identification have been borrowed from the EIA approach. All the tools are similar to those used in other analytical processes - including the use broad qualitative methods when dealing with policies (e.g., at sector level) whilst assessments of plans (e.g., at District level) use more quantitative methods.

SEA and Poverty Reduction in Tanzania

Hussein Sosovele, Consultant (University of Dar es Salaam), Sosovele@udsm.ac.tz

The paper reviews the development of SEA in Tanzania and its potential as a tool for sustainable development in the context of the country's new National Strategy for Growth and Reduction of Poverty (NSGRP). This is known by its Kiswahili acronym MKUKUTA. It is outcome focused and has mainstreamed environment. It has identified the need to mainstream environment into sector and local level planning, and SEA is seen as one of the tools to achieve this. There have been several recent studies on SEA to determine its potential for poverty reduction, and most recently an SEA was undertaken on the World Bank's poverty reduction strategy credit. The 2004 Environmental Management Act includes a section that makes it mandatory for all new government bills, plans, policies and programmes to be subject to SEA. However, the limited experience to date on the use of SEA presents challenges to the development of SEA regulations and guidelines. Awareness amongst many stakeholders is still limited, with many only now starting to learn about the use of environmental impact assessment let alone SEA. Thus in the development of SEA, Tanzania faces challenges on awareness and capacity building, and on the development of appropriate guidelines.

Success Factors in Integrating Environment in Poverty Reduction Strategies

John Horberry, Consultant, john.horberry@ntlworld.com

The paper is based on a review of recent and current programmes supported by DFID and the UNDP Poverty Environment Initiative to integrate environment into poverty reduction strategies processes in a sample of countries in Africa and Asia. The review has collected comparative data on the individual initiatives – including the entry point, the type of activities (process or technical), the partner government institutions, the stakeholders involved, the stages in the process included, the degree of donor harmonisation and the outcomes that have resulted. On the basis of this data, the review has analysed the key elements of the support, the challenges of implementation and the success factors that appear to have influenced the outcomes achieved. The analysis provides pointers for future programmes aimed at both the early stages in integrating environment in new PRS processes and also the need to implement the poverty environment priorities in the subsequent stages in budget allocation and programme implementation that follow PRS drafting and revision.

Session B2 SEA and Transport Planning

Chaired by Paul Tomlinson, Centre for Sustainability, TRL, UK, ptomlinson@quista.net

This session is orientated towards identifying common issues, threats and opportunities focusing upon SEA and transport planning. Consequently, papers and discussions draw upon individual experiences to highlight principles of general application. The following methodological, procedural, technical and cultural issues will be debated:

- Devising and assessing alternative strategies in transport plans: How are strategies devised, what detail, who is involved, how the boundaries with other plans and jurisdictions are handled?
- Integrating SEA into other assessment activities: How to bring economic, social, health and environmental assessments together at the same plan level and provide integration between SEA and project EIA?
- Stakeholder involvement in defining the problem and objectives: How to engage the public when they tend only to become involved in transport planning when projects directly affect their interests?
- Assessment tools for SEA: Are we properly equipped with tools and techniques for SEA? How to avoid reliance upon GIS? What rules are needed for significance criteria and how to aggregate impacts for strategies with multiple transport measures? Can environmental capacity be defined?
- Communicating the assessment: How to keep the assessments meaningful for the different audiences yet technically robust.
- Quality control in SEA: Is it an issue when the plan maker is also judging the SEA and its mitigation/monitoring requirements?
- Changes to transport planning: How will SEA change the culture of transport planning, will the American model be followed?

The main debate on the issues facing the transport sector will be the final session within workshop B2.2.

Workshop B2.1

Transport Planning: Towards A Common Agenda. Paul Tomlinson

Linkage between SEA and Urban Planning Through an Example of Road Construction. Mu-choon Lee

System Models for SEA of Transport Plan. Rodrigo Jiliberto Herrera

Strategic Evironmental Indicators for Transport and Their Evaluation - Applying ELECTRE III on TERM. Jens Borken

Transport Sectoral Plan – Switzerland. Niklaus Hilty

Socio-Economic Indicators For a Performance Assessment of an SEA for A Diesel Policy Banning. Mutasem El-Fadel

SEA for the Integrated Systems of Transport Project for the Development of the Abruzzo's Mountain Districts. Magro Giuseppe

Discussion and conclusions

- How are strategies devised, what detail, who is involved, how the boundaries with other plans and jurisdictions are handled?
- How to bring economic, social, health and environmental assessments together at the same plan level and provide integration between SEA and project EIA?
- How to engage the public when they tend only to become involved in transport planning when projects directly affect their interests?
- Are we properly equipped with tools and techniques for SEA?
- How to keep the assessments meaningful for the different audiences yet technically robust.
- How will SEA change the culture of transport planning?

Session B2 abstracts (in order of presentation)

Transport Planning: Towards A Common Agenda

Paul Tomlinson, Centre for Sustainability, TRL Ltd., ptomlinson@trl.co.uk

The approach to transport planning has been changing towards a more integrated approach as a result of a number of forces across most countries. Such an integrated approach treats transport more as a means to promoting the explicit political objectives of government (growth, equity, employment, protecting health and the environment), than as a self-contained sector. In operational terms, projects are assessed in terms of their contribution towards sustainable development (jobs, communities, etc.) instead of growth in mobility. This has been reinforced by an emphasis on identifying how transport projects are to deliver these wider benefits and exactly how regional development benefits are to be achieved. The importance of good cost benefit analysis, effective strategic environmental assessment and guidance is important to improve decision making. Improved decision making is seen as being key to integrating transport and environment policies.

It is within this array of new paradigms facing transport that Strategic Environmental Assessment (SEA) must function. While SEA may be seen as a burden, its integration into planning and effective tiering is needed to avoid its rejection. Similarly, its tools must be fit for the particular plan. They may become superficial assessments that are "add-ons" to the transport planning process. Apart from failing to add value such assessments also bring the process into disrepute and create opportunities for legal challenge.

Linkage between SEA and Urban Planning Through an Example of Road Construction

Mu-choon Lee, Yonsei University, muchoon@dragon.yonsei.ac.kr

Since 1993, an environmental assessment system called the "Pre-EIA," which is comparable to the program EIA, exists in South Korea. The "Pre-EIA" is going to be expanded in terms of the SEA because of changes in the environment foundation act. The necessity that the Pre-EIA had to change in the form of the SEA was due to yesteryears events: significant infrastructure projects which underwent the EIA, such as road construction and high speed rail trains, had to be interrupted. The reasons of the intermission were insufficient and ecological aspects were realized too late, even though nature conservation act foundations already existed.

Through an example of road construction, the Korean environmental assessment system is going to be represented from the point of SEA and landscape planning view. With this article, the following aspects should be discussed:

- Existing and prospectively legal bases of the SEA
- Current practice of ecological assessment by road construction planning
- Problematic of the SEA and landscape planning
- Perspectives of the SEA

System Models for SEA of Transport Plan

Rodrigo Jiliberto Herrera, Taugroup, rjiliberto@taugroup.com

The SEA of the Strategic Infrastructure and Transport Plan (PEIT), is the first SEA at national level in Spain. Despite the fact that it wasn't a legally requested SEA, it has been used as a test probe for the transposition of the SEA Directive into the national legislation.

The PEIT is an ambitious multimode Plan with a horizon of 2020, involving investment for approximately 241 thousand million euros. It is therefore an extremely strategic decision. In this frame and in order to face the challenge of assessing the environmental profile of the plan's alternatives, a qualitative systemic environmental model was developed (Transport Environment Territory-system, TET). The model was used for the diagnosis of the current situation and for the assessment of the strategic alternatives, and for the assessment of the more operative developments of the PEIT.

The TET model is designed to cover the whole strategic environmentally relevant policy issues that such a plan faces. It enables to link policy tools, like taxes, or investments, with elements of the transport systems, like intermodal split, with environmental effects, like air emissions, or fragmentation. This model design allows environmental assessment of policy options at the very early strategic levels of the decision process, ensuring a full strategic integration of environmental dimension at the very early stages.

Strategic Environmental Indicators for Transport and Their Evaluation - Applying ELECTRE III on TERM

Jens Borken, DLR - Institut für Verkehrsforschung, Jens.Borken@dlr.de

This paper explores to what extent the ordinal multi-criteria decision aid method ELECTRE III can help in strategic assessments of transport's environmental performance. We use the indicator set TERM of the European Environment Agency as a test case. The set is systematically reviewed, redundancies are eliminated, key indicators are identified and their reliability is assessed. It is possible to focus on seven indicators only and thus reduce data demand and increase communication substantially, as is needed for strategic assessments.

The overall environmental performance of Europe's road transport, as measured by these indicators, is assessed for the first time. We apply ELECTRE III for both an ex-post as well as an ex-ante evaluation. The method is particularly well suited when data are poor, when heterogeneous input has to be treated, and where strongly different value judgements occur. The qualitative assessment logic appropriately reveals and facilitates compromise on the important issue, but also clearly identifies its limits. Thus the relevant issues for a subsequent quantitative analysis can well be selected. We propose to consider this approach for a first ranking of environmental issues or planning alternatives to identify issues and options that merit detailed investigations.

Transport Sectoral Plan - Switzerland

Niklaus Hilty, Swiss Agency for the Environment, Forests and Landscape (SAEFL), Nikolaus.Hilty@buwal.admin.ch

In Switzerland we are currently drafting a transport sectoral plan. In a first step, we elaborate a program that addresses the aims, principles and priorities of our transport infrastructure policy. For this program a sustainability appraisal including an environmental report will be elaborated. We do this on a voluntary basis since we do not have any legal requirement to do so. This is a pilot project we do in our country.

A sustainability appraisal was done for a very first draft of the program (February 2005). The results shall influence the strategy of Swiss transport infrastructure planning. The appraisal concluded that there are important conflicts among the different principles of the sectoral plan and that solutions to mitigate the conflicts must be found.

A key problem we face is due to the fact that we currently have to judge the contents of the sectoral plan at a very high level of abstraction (principles and no defined projects). In addition, the government

bodies in charge (spatial planning, traffic) are working together with the regions (cantons) and other bodies of the government (energy, environment, finance).

Socio-Economic Indicators for a Performance Assessment of an SEA for A Diesel Policy Banning

Mutasem El-Fadel, American University of Beirut, Mutasem El-Fadel mfadel@aub.edu.lb

Diesel exhaust contains various gaseous and particulate pollutants, which, at high concentrations, pose adverse health effects. This paper presents a socio-economic assessment of a diesel policy ban in Lebanon examined in the context of the main element of a strategic environmental assessment of a transport related policy setting with a post evaluation of the policy one year later. For this purpose, particulate levels in the air were measured after the ban and compared with concentrations reported prior to the ban. Similarly, the effect of this ban on asthma-related morbidity in children in the same representative urban area were examined.

Health-based socio-economic benefits associated with improvement in air quality were then estimated using the long-term decrease of particulate matter as an indicator. The comparison between pre and post-ban Particulate Matter levels revealed a reduction ranging from 12.0 to 84.2 %, depending on location, with an average of 44.9%. Similarly, the number of asthma-related visits in children was reduced by an equivalent of 28.7%. The improvement in PM levels is expected to result in significant socio-economic benefits reaching 1 percent of GDP depending on the economic approach adopted.

SEA for the Integrated Systems of Transport Project for the Development of the Abruzzo's Mountain Districts

Magro Giuseppe, Magroengineering Ltd, Italy, Magiuseppe@Tin.It

The paper is about the new methodologies adopted for the realization of a Strategic Environmental Assessment on the Integrated Systems of Transport Project for the development of the Abruzzo's Mountain Districts (Art.37 second L. 109/94 Project Financing 2002/S-142111941).

The domain of the project involves different protected areas near by the border of the Abruzzo's National Park (one of the largest in Europe) and so they are characterized by a certain vulnerability under the naturalistic profile because of several biological cumulative effects.

The regional environmental policies foresee that, for the projects involving protected zones, it is necessary to proceed with an Incidence Evaluation Assessment.

The vast areas interested by the project need a preliminary analytical screening in order to find the different impact levels generated by each action of the project, so the Risk Assessors have decided to adopt a specific protocol deriving from the participated project experiences and the risk assessment tools.

The technique is based on the definition of a software java tool generating an interaction matrix with different biological impact levels and biodiversity function levels.

In defining the protocols, Risk Assessors have involved local Environmental Associations and Municipalities in order to explain each detail of the project in a non conflictual way.

Session B3 SEA & Energy Management

Session chairs: Peter Leonard, Hydro Quebec, leonard.peter@hydro.qc.ca; Ross Marshall, UK Environment Agency, ross.marshall@environment-agency.gov.uk

Sustainable energy development is increasingly recognized as a key component of the sustainable development agenda. Greater access to energy, increased energy efficiency and a much wider use of energy sources and practices that least contribute to environmental degradation are among the core issues to be addressed to move forward the WSSD Plan of Implementation and achieve the goals of the Millennium Development Goals (MDG). Furthermore, at a time when climate change is becoming one of the most important environmental challenges we face, the management and rational use of energy is becoming one of the priority issues for governments, industry, decision-makers and civil society.

A series of questions related to issues for sustainable energy development will be addressed during the session, such as:

- Can SEA assist in applying better policy, control, and measurement of energy management?
- Is there a role for SEA in the public reporting on energy management?
- What role is SEA playing in public and industrial strategic planning for energy management?
- At what level and through what national offices in different country contexts has SEA been applied as a tool top assist in aiding responsibility for energy management?

The session on SEA and energy management is structured around two workshops. The first workshop will provide participants with a series of case study presentations followed by discussion periods. The second workshop will be entirely devoted to discussion on the key issues and recommendations on the contribution of SEA to achievement of sustainable energy development.

Workshop B3.1 SEA Case Studies in the Energy Sector

Power, Planning and Politics: The Effectiveness of SEA in Sustainable Energy Planning for Thai Power Sector. Decharut Sukkumnoed

SEA in Regulating Oil and Gas Exploration in Atlantic Canada. Norval Collins

SEA as a Mechanism for Incorporating Political Economy Variables into Policy Design: The Case of Colombia's Energy Policy. Angela Armstrong, Ernesto Sanchez-Triana, Paula Posas

Strategic Environmental Assessment (SEA) in the Brazilian Energy Sector. Heliana Vilela de Oliveir Silva, Izabella Monica Teixeira, Emilio Lèbre La Rovere

Establishing the Adequacy of SEA Directive 2001/42/EC Implementation in the UK and the Extent to Which it is Benefiting the Practice of Preparing Renewable Energy Plans and Programmes. John Phylip-Jones

Workshop B3.2 SEA Contribution to Sustainable Energy Development

Discussion workshop on issues, processes, mechanisms and tools to increase the contribution and effectiveness of SEA in energy management. Assessment of challenges and opportunities as well as recommendations on how to increase the contribution of SEA to sustainable energy development.

Session B3 abstracts (in order of presentation):

Power, Planning and Politics: The Effectiveness of SEA in Sustainable Energy Planning for Thai Power Sector

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

The higher risks from imported fuel prices, environmental degradation and social conflicts have urged the Thai power sector to move to more sustainable energy direction. Although the potential of sustainable energy is considerably huge, only the minority of renewable energy resources has presently been explored and utilized.

SEA has played an active role in promoting sustainable energy development in the Thai power sector. Several SEA and other impact assessment studies have been conducted, from the local to the national levels, and showed the possibilities and benefits of integrating sustainable energy technology in Thai power development. Investing in sustainable energy technology can help Thailand to reduce its balance of payment burden, future fuel risks, GHG emissions, and social conflicts and, at the same time, can lead to job creation and higher value added of its agricultural productions.

However, the policy impacts of SEA do not seem promising. Although SEA can facilitate public discussions on this issue, the effectiveness of SEA in influencing Thai power policy depends very much on the centralized institutional and power structure, political situations, and communication strategy. Therefore, in the future, SEA should provide stronger linkages between SEA and institutional and governance reforms, deliberative policy analysis and more comprehensive policy-oriented communication.

SEA in Regulating Oil and Gas Exploration in Atlantic Canada

Norval Collins, President CEF Consultants Ltd., ncollins@cefconsultants.ns.ca

In 1986, mirror legislation established a unified federal/provincial administrative and fiscal regime to regulate Nova Scotia offshore petroleum exploration and development. Leases are put out for bid within large regional areas; industry may nominate offshore parcels to be included in future calls for bids. The first SEA for an exploration lease area was completed in 1999 following public complaint about lack of prior consultation on a lease award in a sensitive coastal area. Economic benefits are considered separate from the SEA process.

In 2005, a SEA for a 16,123 km2 Misaine Bank off northeastern Nova Scotia incorporated public comment on a draft scope for the first time. The SEA considered if the area should be opened to exploration, and if so, under what conditions. Other exploration areas were compared to identify unique conditions, and mitigation reflecting the limited environmental data identified. Primary concerns were proximity to the coast and fishing activity. Recent environmental reports had been growing; the size of this SEA was reduced by focusing on mitigation of regional issues. Clearer separation between the roles of EIA and SEA also helped to reduce unnecessary information. Climate change was incorporated in project design requirements and the assessment of cumulative impacts.

SEA as a Mechanism for Incorporating Political Economy Variables into Policy Design: The Case of Colombia's Energy Policy

Angela Armstrong, Ernesto Sanchez-Triana, and Paula Posas. Angela Armstrong: World Bank, Environmentally and Socially Sustainable Development Latin America and the Caribbean Region, AArmstrong@Worldbank.org

In 1999, the Colombian government began developing an environmental strategy for its National Energy Policy for the oil and gas, electricity, coal, and other fuel sectors. To ensure a thorough examination of environmental considerations, an inter-sectoral working group was formed, comprising the National Planning Department, the Ministry of Mines and Energy, and the Ministry of Environment. The working group chose SEA as the mechanism to structure this process, in order to evaluate not only the likely environmental effects of the policy, but also to ensure consistent policy objectives among different decision making tiers and across sectors. As part of the SEA process, the inter-sectoral working group issued a series of recommendations that included restructuring the country's EIA system and economic instruments (e.g., pollution fees), as well the need to develop hazardous waste management regulations and an indoor air pollution control program. In addition, a thorough stakeholder analysis was conducted that demonstrated how policy decision making and implementation could be streamlined and thus, the feasibility of carrying out the recommended reforms.

As a result of the SEA, Colombia's National Council of Economic and Social Policy incorporated many of the working group's recommendations in a policy for improving environmental management in the electricity sector (CONPES 3120, dated June 2001).

Strategic Environmental Assessment (SEA) in the Brazilian Energetic Energy Sector

Heliana Vilela de Oliveir Silva, Izabella Monica Teixeira, Emilio Lèbre La Rovere, Pesquisadora Laboratório Interdisciplinar de Meio Ambiente-LIMA/COPPE/UFRJ, heliana@lima.coppe.ufrj.br

The environmental variable is part of the set of variables which should be strategically and previously approached in the planning of the energy sector regarding the minimization of uncertainty of the environmental viability of the process of public concession for electric energy generation. This aim of this paper is to discuss the two existing approaches of SEA application considering the indicative planning of electric energy expansion in the scope of Federal Government Energy Sector Planning and an integrated programme of electric energy generation promoted by the State Government of Minas Gerais.

The goal is to assess these two methodologies identifying their specificities, critical points in terms of the applicability and the analysis of optimization opportunities regarding the current model of Brazilian energy sector, and the role of the Energy Research Department (EPE), whose purpose is to assist studies and researches that support the energy sector planning.

Establishing the Adequacy of SEA Directive 2001/42/EC Implementation in the UK and the Extent to Which it is Benefiting the Practice of Preparing Renewable Energy Plans and Programmes

John Phylip-Jones, University of Liverpool, john.phylip-jones@liverpool.ac.uk

The UK government is currently committed to producing 10% of electricity demand from renewable energy sources in order to achieve the ideal of a low carbon economy for the UK. A main contributor to the generation of renewable energy is that of the wind turbine in the form of both off and onshore windfarms.

As a result, research will be conducted over the next three months leading up to September 2005 which looks into whether the SEA Directive is being implemented as effectively as it could be in the UK by examining the practices of electricity developers and companies when applying the terms of the Directive to proposed wind farm developments. The empirical data shall be collected in the form of interviews with SEA practitioners in the energy industry and also through the selection of specific wind farm case studies located in North West England.

A review of relevant SEA documentation relating to the case studies selected will also be performed through the use of a specially adapted SEA review package with the aim of assessing the overall adequacy of the SEAs produced within the energy sector.

It is hoped that the overall aim of establishing the adequacy of Directive 2001/42/EC implementation will thus be satisfied along with conclusions being drawn on whether or not SEA can deliver any tangible environmental benefits and improvements which can inform the preparation of renewable energy plans and programmes in the future.

Session B4 SEA and Water Management

Session chairs: Ross Marshall, UK Environment Agency, ross.marshall@environment-agency.gov.uk; Sibout Nooteboom, DHV, Sibout.Nooteboom@dhv.nl

This topic session will compare national approaches to the application of SEA in water management, in particular water supply management and flood risk control (see position paper). Papers have been invited on the application of elements of SEA, for example assessment studies and public participation in specific water catchments, tidal and coastal areas. The following preferred paper outline has been specified, hoping that comparable lessons can be drawn:

- Context (problem description)
- Management policies that may have been influenced by SEA
- Actual implementation of management policies (does it work?)

Workshop B4.1 SEA for Quality Management and Integrated Management

SEA in Basin Planning in India. L Panneer Selvam, N. Harshadeep

SEA and Hydrological Planning: Two Synergetic European Directives. Natalia Gullón

Integrated Strategic Assessment for the Water Sector. Roel Slootweg, Safwat Abdel-Dayem

Workshop B4.2 SEA for Quantity (Flood) Management and Reservoir Management

Management of a Reservoir by Means of SEA (Russia). Nicole Kovalev

Implementing SEA for Flood Risk Management Plans - The Experience of the UK's Environment Agency. Martin Slater, Jo Murphy

Has SEA Influenced the Development of the Humber Estuary Flood Risk Management Strategy (UK). Richard Ashby-Crane

Issues Identified and Lessons Learnt During the Fluvial Trent Strategy (UK). Emma Collyer, Ross Marshall

Workshop B4.3 SEA for Water Management from a Perspective of Social Learning and Complex Decision-making

Using Strategic Environmental Assessments for Environmental Mainstreaming in the Water and Sanitation Sector: The Cases of Argentina and Colombia. Ernesto Sanchez-Triana, Santiago Enriquez

Controversies in Water Management: Frames and Mental Models (Netherlands). M.J. Kolkman

Session B4 abstracts (in order of presentation)

SEA in Basin Planning in India

L. Panneer Selvam, Quality Assurance and Compliance Unit, and N. Harshadeep, South Asia Region Environment and Social Development Unit, The World Bank, Lpanneerselvam@worldbank.org, harsh@worldbank.org

Strategic Environmental Assessment (SEA) can become an effective tool for internalizing environmental considerations in water resources planning in a Basin framework. In this paper, this will be illustrated through an interesting process initiated in the Palar Basin (18,000 km2) in Tamil Nadu, India, where serious water resource (scarcity, competition across sectors and regions, sustainability) issues are inextricably intertwined with environmental (industrial and domestic pollution and natural resources management) issues.

SEA is being used as a tool to analyze these issues and identify interventions at policy and project levels to contribute to overall economic, environmental and social improvement. The combination of analytical and participatory approaches has helped in developing a common vision for the Basin, which is shared by different stakeholders (including government, farmers, industry association, academia, research institutions, and NGOs). Through a structured consultative process, Basin stakeholders have identified supporting objectives, strategies and tactics and finally a set of tasks or actions that are essential to realize the common vision. These interventions include both software (knowledge management, training, research) and investment elements. This paper will outline the analytical and participatory process followed in Palar basin and outline the benefits of SEA in internalizing environmental aspects in a Basin planning framework.

SEA and Hydrological Planning: Two Synergetic European Directives

Natalia Gullón, Ministerio de Medio Ambiente, nataliagullon@hotmail.com

Within the water sector, strategic environmental assessment of decision-making is crucial, not only due to the specific nature of the resource, but also because of the peculiar characteristics of hydraulic projects. We are facing a key moment in which the efforts to implement both the Directive on SEA and the Water Framework Directive (WFD) coincide.

The purpose of the WFD is "to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater," and it requires—among other things—the preparation of river basin management plans and programmes of measures. What are the links between this Directive and the SEA Directive? Do they overlap? Have we lost the opportunity to incorporate environmental criteria into hydrological planning?

This paper explores the contribution that SEA could make towards a sustainable planning and management of water resources, with particular reference to the Water Framework Directive.

Integrated Strategic Assessment for the Water Sector

Roel Slootweg, SevS natural and human environment consultants, sevs@sevs.nl (contact) and Safwat Abdel-Dayem, World Bank

A two-year study was conducted by the World Bank's Agriculture and Rural Development Department on the impacts of drainage interventions in 6 countries. The main outcome of the study was a Drainage Integrated Analytical Framework (dubbed Drainframe) to look at and act upon agricultural drainage from an integrated natural resources management perspective.

The framework provides for discussion and negotiation of trade-offs related to the different functions and values of natural resources influenced by water resources management interventions. It is therefore applicable to natural resources management in general rather than to drainage only. It is a tool for inte-

grated analysis and assessment, embedded in a participatory planning process. The instrument has already been field-tested in integrated strategic assessments of three WB funded projects: irrigation improvement in Egypt, the Pakistan national drainage master plan, and a planned public-private partnership project for surface water supply to the West Delta region of Egypt.

Management of a Reservoir by Means of the SEA

Nicole Kovalev, Technical University Berlin, kovalev@ile.tu-berlin.de

The Krasnodarskoye Reservoir in southern Russia covers an area of approximately 420 sq. km. It was established in 1972 and served primarily for flood protection and irrigation, in addition to power generation. Since the demands upon the reservoir changed greatly over the course of the last three decades, three water management environmental reviews were conducted during that period – in 1979, in 1991 and in 2005. Two of these reviews were embedded in the Russian EIA system, and qualified as SEAs. The 1991 Strategic Environmental Assessment was to determine which of six proposed management concepts would serve as a basis for the further development of the reservoir. The choice of the SEA for the most environmentally friendly option, from its view, was binding. Since 2005, a public SEA has addressed the question of whether and under which conditions a reduction of the size of the reservoir might be possible. This exemplary case permits the following conclusions:

1. SEAs can be decision-making aids for the assessment of water-management concepts; this case provides a methodological approach for this.

2. SEAs initiated by the public are a means for politically addressing the conception of water-management facilities under changed basic conditions.

Implementing SEA for Flood Risk Management Plans - The Experience of the UK's Environment Agency

Martin Slater, Jo Murphy; National Environmental Assessment Service, Environment Agency, martin.slater@environment-agency.gov.uk, jo.murphy@environment-agency.gov.uk

Brian Empson, Environment Agency Kingfisher House, brian.empson@environment-agency.gov.uk

The Environment Agency of England & Wales is the UK's leading regulator of the water sector and acts as both a responsible authority, a consultation body and a proponent in the preparation of SEA for water management plans under the UK's SEA regulations.

In the preparation of its flood risk management plans and programmes, the Agency has developed and devised its own particular approach to SEA. This approach places the emphasis on an objective led approach to SEA and the relationship with EIA of subsequent projects.

This paper explores how the application of SEA of flood risk management (FRM) plans from the North East region of England has been implemented. A region dominated by important industrial areas, high population demands, a high concentration of designated sites and an extensive network of ageing FRM infrastructure. Challenges that the Agency has faced, and that which the paper will discuss are 1) SEA Tiering - experience of using SEA and EIA to go down the Plan, Programme and Project hierarchy; and 2) Objective Setting in SEA - managing stakeholder expectations in SEA through effective consultation

The paper will outline how these issues have been addressed through cases studies, and discuss what the Environment Agency has learnt from its experience of SEA.

Has SEA Influenced the Development of the Humber Estuary Flood Risk Management Strategy (UK)?

Richard Ashby-Crane, Halcrow Group Ltd., ashbycranerw@halcrow.com

The Humber Estuary drains one-fifth of the land surface of England and approximately 300,000 people live within the floodplain which also supports nationally important port and industrial complexes. In the mid 1990s the Environment Agency was responding to deteriorating flood defences in the Humber Estuary through the piecemeal development of "urgent" refurbishment and improvement projects which were justified locally and did not provide a coherent approach to standards of protection and economic justification. At the same time, the Habitats Directive was changing our understanding of the management needs of the Estuary and the designation as a Special Protection Area (SPA), possible Special Area of Conservation (pSAC) and Ramsar site placed new legislative requirements on projects be-

ing promoted. The failure of individual flood defence schemes to address this and the needs of other stakeholders led to a loss of confidence amongst the consultees and severe delays in the approval and promotion of urgent flood defence work.

As a consequence, the Environment Agency commenced the development of the Humber Estuary Flood Defence Strategy to provide a long-term plan (100 years) for sustainable flood protection in the Estuary. The Strategy is based upon sound technical, environmental and economic studies and comprises a range of approaches to flood defence that meet the needs of the population living in the floodplain, nationally important industry and infrastructure and the nature conservation interests of the estuary.

This paper shows how SEA has informed the development of the Strategy at all stages and discusses the lessons learned in relation to objective setting, appraisal of 'strategic' impacts, stakeholder involvement and management of environmental risks/opportunities through the hierarchical decision-making process

SEA of Water Management: Issues Identified and Lessons Learnt During the Fluvial Trent Strategy

Emma Collyer, Ross Marshall; National Environmental Assessment Service, Environment Agency, ross.marshall@environment-agency.gov.uk

Flooding events in 1998 - 2000 prompted the UK's Department for Environment, Food and Rural Affairs (DEFRA), the body responsible for funding flood and coastal defences, to issue the 2001 Flood and Coastal Defence Project Appraisal Guidance Series (FCDPAG). The guidance set out best practice to be followed in the appraisal of flood and coastal defence projects, including a broad approach to Strategic Planning and Appraisal, which included SEA. The Fluvial Trent Flood Risk Management Strategy was one of the Environment Agency's first projects to apply FCDPAG & SEA.

The fluvial Trent River drains approximately 8228km2, from the Staffordshire moors to its tidal limits with the North Sea. The catchment study area considered flood risk along a 200 km stretch of the Trent between the head of the main river at Baddeley Green, Stoke on Trent and Cromwell Weir, downstream of Newark on Trent. There were 27 identified flood risk locations, the majority of which are situated in Nottingham, affecting over 15,000 households.

The SEA therefore covered an extensive area with wide ranging environmental issues and often conflicting public interests. This paper sets out a summary of the issues encountered and how they were addressed in the SEA. In addition to an objective appraisal of the lessons learnt, both positive and negative, and their importance to practitioners seeking to drive continuous improvement in water management SEA.

Using Strategic Environmental Assessments for Environmental Mainstreaming in the Water and Sanitation Sector: The Cases of Argentina and Colombia

Ernesto Sanchez-Triana, Santiago Enriquez; The World Bank, Esancheztriana@worldbank.org, Senriquez@worldbank.org

This paper reviews the Strategic Environmental Assessments (SEA) that were prepared to incorporate environmental considerations in Water and Sanitation Sector (WSS) reforms supported by the World Bank in Argentina and Colombia. In both cases, various stakeholders engaged in a social learning process that led to the development of an innovative approach that shifted policy-maker's attention from the environmental impacts of civil works to more significant environmental impacts that could only be addressed through institutional reforms.

Based on the reviewed experiences, the paper proposes a SEA methodology with the potential to enhance the sustainability of water and sanitation sector reforms in Latin America, consisting of: i) Identification of sector priorities; ii) Incorporation of the perspectives of multiple stakeholders, including the most vulnerable groups; iii) Identification and assessment of institutional weaknesses and failures that hinder effective environmental management; iv) Development of public policies that incorporate environmental considerations; and v) Mechanisms that promote social learning for continuous policy improvement.

Controversies in Water Management: Frames and Mental Models

M.J. Kolkman, University of Twente, m.j.kolkman@utwente.nl

In a specific EIA case in the Netherlands, the frames and mental models of stakeholders were elicited to explain controversies. The case concerns the construction of a storm surge barrier to comply with national regulations on short term. Long term plans are initiated to improve the water management in the region. A complicating factor is the interaction between national dike safety norms and local water management problems.

Revealed controversies mainly concerned disputes between an administrative and a technical perspectives. But also disputes on distribution of responsibilities between different institutes, legal and political liability, and funding issues, involving persons of both perspectives, existed.

Political feasibility appeared to be the decisive factor. Technical factors were discussed extensively, but had limited effect on the final decision. The EIA report was completed several years after the intended deadline, an integrated problem solution was not reached. The solution was limited to the well structured part of the problem by deliberately separating it from its broader context.

The case reveals a lack of possibilities to search for an integrated solution involving all levels of authority, and possibilities for discussing the additional problems that were raised by the integrated approach in the initial phase of the EIA project.

Session B5 SEA Practice in Coastal Zone Management

Topic chairs: Kogi Govender, CSIR South Africa, kgovender@csir.co.za; Ivica Trumbic, UNEP PAP-RAC Croatia, viica.trumbic@ppa.htnet.hr

The background paper for session B5 extended an invitation to SEA practitioners to present their experiences and share knowledge towards a more effective and informed application of SEA in the coastal zone.

The aim of this session is to enable SEA practitioners to:

- Share experiences related to SEA in the coastal zone
- Discuss various SEA approaches that can be used for effective and efficient coastal area management
- Present tools and techniques that are being used in SEAs
- Present SEAs prepared in different coastal geographic (regional, urban, protected areas etc.) and thematic (tourism, recreation, industry, industry, fish farming etc.) contexts
- Present SEAs where specific coastal issues have been integrated (coastal erosion, sea level rise, protection of coastal land etc.)
- Present where follow up to SEA has been carried out (monitoring, indicators, evaluation etc.)

The first workshop focuses on application of SEA to ports and will address various aspects relating to port planning, operations and management and key lessons can be drawn out for SEA application to ports.

The second workshop focuses more broadly on issues of coastal management. The papers that have been included in workshop 2 have varying themes but contribute nonetheless to the broader issue of coastal management and how to deal effectively with issues within this sensitive environment. The workshops will contribute to understanding some of the key challenges faced generally within SEAs, e.g., how to assess economic impacts, dealing with issues of climate change and understanding the impact of policy and investment decisions within the coastal zone.

The final thirty minutes of each workshop will be spent in a facilitated discussion on the key issues arising from the presentations. Key points from each session will be captured and presented by the topic chairs at the end of each session as an overall summary and conclusion of the topic.

Workshop B5.1 An SEA Approach for Ports

Land Cover Changes in SEA of Port Developments in the Vung Tau Area (South Vietnam). Cindy Rutten, D.K.N.T. Binh and L. Hens

Strategic Environmental Assessment of Port Planning in China. Xu He.

Strategic Environmental Assessment: The Key to Incorporating the Ethos of Sustainable Development into Port Planning, Operations and Management? Kogi Govender, Stuart Heather-Clark, Fezile Ndema and Bhekimpilo Nkomo.

Workshop B5.2 SEA in the Coastal Zone

Strategic Environmental Assessment and coastal shrimp farming in Thailand. Brian W. Szuzter

Strategic Environmental Assessment in the Atlantic Canadian Coastal Zone. Norval Collins and Ann Wilkie

Integrated policy impact assessment for water use benefit in the GBR region. Alexander Smajdl

Session B5 abstracts (in order of presentation)

Land Cover Changes in SEA of Port Developments in the Vung Tau Area (South Vietnam)

Cindy Rutten, D.K.N.T. Binh, L. Hens; Vrije Universiteit Brussel, cindy.rutten@vub.ac.be

The Vung Tau area, especially the area near the Thi Vai River downstream of Ho Chi Minh City and Vung Tau City, in the South of Vietnam, is one of the fastest growing and developing areas of the country. Many ports and infrastructures (steel industry, food industry, etc.) are developed and are planned in the near future according to the master plan. This has major consequences for the land use in the area.

On the basis of SPOT images of 1995, 2000 and 2005 an analysis is performed with ENVI 3.6 and ArcGIS 8.1. Different classifications are used to determine the land use changes, such as aquaculture, settlement, plantation and nature forest, annual crops etc.

The most important results are the following: A big increase of the urbanisation is apparent, especially near the national road, which lead to the developments, but also in Vung Tau City. There exists a shift from agricultural land to specialized land (industry, ports etc.). A loss of mangrove forest is also visible, but this decrease is not that much as expected. These results are the main preliminary results, which will be checked by fieldwork.

Strategic Environmental Assessment of Port Planning in China

Xu He, Nankai University, hexu@publicl.tpt.tj.cn

Strategic environmental assessment (SEA) is gaining widespread recognition as an effective tool for integrating environmental considerations in policy, plan and program (PPP). In recent years, this tool has developed rapidly and been applied to many decision-making processes, such as land-use planning and transport planning. However, there have been very few SEA practices used in sea port planning. In fact, port layout, construction and operation make great negative impacts on the coastal zone, which include habitat disturbance, contamination of water, sediment and fauna, and oil spill risks. In order to avoid more serious environmental issues on the coastal zone, environmental concerns should be considered in the port planning process. Based on a case study of the Yingkou port general plan SEA in China, this paper provides a framework for SEA practice in port planning. It seeks to present a full analysis in a clear and concise way and assess cumulative impacts. We also discuss the difficulties in the port planning SEA such as limited data and uncertainties, and explore appropriate solutions.

Strategic Environmental Assessment: The Key to Incorporating the Ethos of Sustainable Development into Port Planning, Operations and Management?

Kogi Govender, Stuart Heather-Clark; CSIR Environmentek, kgovender@csir.co.za, shclark@csir.co.za. Nkomo Bhekimpilo, Ndema Fezile

Commercial ports are strategic national assets of any country. While ports worldwide share a common mission as facilitators of sea borne trade, in order to remain a functional port region, the broader global

environmental issues as well as the local ecological, social, economic and political influences on the port must be considered during the planning, operation and management of the port. In the past, planning of South African ports was undertaken with little public participation and with limited consideration of the surrounding natural and social environment. With an increase in environmental awareness both locally and internationally, consideration of natural and social environmental issues and the participation of interested and affected parties are now important elements of planning and decision-making. The key issues related to sustainable port development are the need to integrate environmental and social issues during port planning processes, the need to understand the linkages between port planning and land use planning and the need to use environmental and social data in the same way as economic data is used to plan future port developments and to track sustainable port development.

Strategic Environmental Assessment (SEA) has proven to be an assessment and decision-making tool that can facilitate the integration of sustainability issues into planning and higher-evel decision making. SEA aims to consider the entire system through looking at the spheres of sustainability and proactively considers the opportunities and constraints that the environment places on development. The merits of SEA for port planning, operation and management have been recognised nationally and the White Paper on the National Ports Policy (2002) states that"SEA should be used for the proactive integration of the biophysical issues with the social and economic issues at the policy and planning level." Whilst national guidelines are available for the application of SEA, these guidelines are conceptual in nature and not prescriptive. From international SEA experience it has been found that the principle of flexibility in the SEA process is best at this stage until a better understanding of the process and outcomes is obtained. It has been stated that this flexible nature of SEA can leave the process open to abuse, with little guidance for quality control and uniformity which could possibly be one if the biggest barriers to the success of the SEA. Given these reservations regarding SEA, this paper will focus on the application of the South African view of SEA within the complexities of the port environment, as the tool for providing a framework to facilitate long-term sustainable port development. Examples will be drawn from the SEAs conducted for the Port of Cape Town and Port of Richards Bay.

Strategic Environmental Assessment and Coastal Shrimp Farming in Thailand

Brian W. Szuster, University of Hawaii, szuster@hawaii.edu

Strategic environmental assessment (SEA) can provide an effective framework for assessing the environmental implications of economic development activities in the coastal zone. This case study describes the use of SEA to assess the impacts of shrimp farm expansion in a coastal deltaic region of eastern Thailand. Direct and cumulative environmental effects related to water consumption, water quality degradation, and agricultural land conversion were investigated using a spatial analysis approach. Shrimp farming was found to be a major consumer of freshwater, but impacts are likely negligible as a result of ample rainfall and similar water consumption rates for both rice and shrimp crops. The assessment of water quality effects focused on organic nutrient loading. This is a critical environmental issue in coastal Thailand, and shrimp farming was identified as a significant new source of organic pollution. Agricultural land use effects were evaluated using land conversion and soil suitability ratings. Approximately 16,000 hectares of irrigated rice paddy were converted to shrimp ponds during the study period. Soil productivity was degraded as a result of the direct salinization of shrimp pond bottom soils, and indirect salinization may affect a substantially larger area.

SEA in the Atlantic Canadian Coastal Zone

Norval Collins, Anne Wilkie; CEF Consultants Ltd., ncollins@cefconsultants.ns.ca

This paper reviews SEA's role in ocean planning and coastal community development. Climate change concerns are integrated into the analysis. Two SEA case studies are contrasted: the suitability of opening a coastal ocean area to offshore oil and gas; and building infrastructure in an area of dynamic coastal change.

An SEA reviewed the 16,123 km2 Misaine Bank off northeastern Nova Scotia to determine if oil and gas exploration should be allowed, and under what conditions. The Bank falls within Canada's Eastern Scotian Shelf, itself undergoing an innovative federal planning process for integrated ocean management. How the two processes relate is an important issue in the SEA.

The second SEA clarified issues from residents' demands for infrastructure to save their port community, adjacent to the popular Prince Edward Island National Park. Safe navigation in and out of the

harbour was the fundamental issue; the heavy storms from the Gulf of Saint Laurence cause extensive erosion and silting. Climate change—sea level rise, more frequent and clustered storms, and storm surges—affects the long-term cost and maintenance of a new breakwater. Climate Change also affects how the actions or inactions of federal departments were assessed in the SEA.

Integrated Policy Impact Assessment for Water Use Benefit in the GBR Region

Alexander Smajgl, CSIRO Davies Laboratory, Alex.Smajgl@csiro.au

The GBR catchments are a zone of economic and population growth. Some economic activities within these catchments have been recognised as posing a potential threat to the ecological integrity of the GBR. As a consequence, the Queensland and Commonwealth governments have initiated a partnership with each other and with industry and community within the region to seek to mitigate impacts on the reef without undermining regional economies and communities. Maximising the impact of policy and investment decisions across the GBR region and the triple bottom line will be facilitated by effective understanding of the current and potential future behaviour of the region as a system. So, for example, the Reef Water Quality Protection Plan acknowledges that "While the focus of this plan is on decline in water quality entering the reef, there is a range of other risks faced by the reef, including climate change, shipping, accidents, tourism impacts, urban development and fishing. … The degree to which multiple risks may interact to create an even greater challenge should not be underestimated." Within the CSIRO flagship Water for a Healthy Country a policy impact assessment model was developed to analyse water use benefit. Scenarios show inter-regional and inter-sectoral effects along the GBR region and report on hydrological, ecological and socio-economic indicators.

Session B7 Regional-Sectoral Assessments (RSA) and Extractive Industries

Topic chairs: Jill Baker, Environment Canada, jill.baker@ec.gc.ca; William Veerkamp, Shell, William.Veerkamp@shell.com

Increasingly, early and regional consideration is being given to the impacts of extractive industries prior to the development of new areas. Broad-scale assessments can be employed to achieve a number of objectives. For example, they can be used to determine if a given area is appropriate for the development of a particular industry taking into account sustainability criteria. In addition, they may facilitate the canvassing of public perspectives and their consideration in decision-making. This session will consider the experience of extractive industries with regional-sectoral assessments (RSAs). Objectives include (1) accounting for some experience with RSA to date; (2) highlighting benefits and challenges of this experience; and (3) reflecting on innovative practice and lessons learned. Key themes for consideration include the role of RSA in enhancing sustainable development.

Speakers will provide overviews of respective RSA processes, focusing on key themes. Following the presentation of case studies, general discussion of key issues will be encouraged between speakers and the audience (in Workshop 2).

Workshop B7.1 Role of Regional-Sectoral Assessments in Enhancing Sustainable Development: Lessons Learned, Questions for Further Consideration and Way Forward

Presentation of Case Studies

SEA of the Mining Sector in Mali. Michel André, Keita Seydou

Regional-Sectoral Assessments in the Norwegian Offshore Petroleum Industry. Sigurd Juel Kinn

Integrated Management Plan for the Barents Sea: A Norwegian Initiative for Ecosystem Management and Conflict Resolution. Gunnar Sandar

Workshop B7.2 Role of Regional-Sectoral Assessments in Enhancing Sustainable Development: Lessons Learned, Questions for Further Consideration and Way Forward (Continuation of Workshop B7.1)

Presentation of Case Studies and Panel Discussion

WWF Perspective on RSAs for Extractive Industries. James Leaton

The Social Dimension of the Mining Sector in Peru. Alonso Zarzar

Panel Discussion

Sesson B7 abstracts (in order of presentation):

SEA of the Mining Sector in Mali

Michel André Bouchard, École Polytechnique de Montréal and Centre des Technologies de 'Environnement de Tunis (CITET), michel.a.bouchard@cogeos.com

Seydou Keita, Promotion de l'Artisanat Minier et de la Protection de l'Environnement, Bamako, Mali. pampe@cefib.ml

A Strategic Environmental Assessment of the mining sector in Mali was performed (2004) with the purpose of integrating the development of this sector into long-term national plans for achieving sustainable development and poverty reduction. The mining sector in Mali is characterized by (1) the fast growing development of industrial gold mines, with the result that Mali is now the third largest African gold producer, and (2) a persistent sector of small and ancestral artisanal mining, of some cultural value but with relatively dense environmental impacts. The Integrated Assessment was based on the examination of the institutional and legal framework pertaining to the extractive industry, the assessment of the major economic outcomes and environmental downfalls of mining, including impacts related to cyanide and acid mine drainage, and has led to specific recommendations on capacity building, institutional assistance, and integration of the mining development into the energy, water and land-use national policies. Building upon increasing self-regulation of the extractive industry worldwide, a significant part of the development and monitoring strategy calls upon transparency, consultancy, effective use of Environmental Impact Assessment rules and tools, efficient controls on mining practices and careful and long term planning of mine closures.

WWF Perspective on RSAs for Extractive Industries

James Leaton, WWF – UK, Panda House, jleaton@wwf.org.uk

Considering sustainability. It has also been noted that RSAs often fall down on some elements that would be expected of an SEA, such as being "sustainability led." For example, the inclusion of climate ,change concerns into a hydrocarbon SEA would shift the approach to more of an energy options assessment. Were the UK North Sea SEAs driven by which areas the DTI want to open up for hydrocarbon exploration, or which might be most suitable for renewable energy? These decisions whether to incorporate wider environmental policies into SEAs affect stakeholder participation, if the scope of the SEA and therefore the issues open for consultation being restricted.

Tiering. Whilst most individual projects are small enough that they do not require an individual SEA, they should be framed within the context of such a process. It is also the case that larger projects set can have strategic implications for the development of further regional resources. For example pipelines may open up access to a previously isolated area of hydrocarbon resources. These mega-projects have highlighted the issue of sequencing for international financial institutions, who struggle to co-ordinate RSAs with project finance.

Environmental protection. The benefits of addressing planning issues before opening up areas for development are significant for protecting natural resources and livelihoods. The approach taken in Norway contrasts markedly with the situation on the Russian side of the Barents Sea and highlights how different outcomes can be for biodiversity protection and other industry sectors such as fisheries. WWF is concerned to see frontier areas being opened up to hydrocarbon development without adequate planning or capacity to deal with a very powerful industry. We are currently promoting assessments in a number of regions, including Nepal, West and East Africa Marine regions, and the Arctic.

The Social Dimension of the Mining Sector in Peru

Alonso Zarzar, Environmentally and Socially Sustainable Development, Latin America and the Caribbean Region (LCSES). azarzar@worldbank.org

Peru is the world's second largest producer of silver, third largest producer of zinc, fourth largest producer of lead, fifth largest copper producer, and the sixth largest producer of gold. Richly endowed with other natural resources as well, Peru is, nevertheless, a poor country. The mining industry, in that context, both raises and dashes hopes. Macro economically, it is extremely important, accounting for 57 percent of all Peru's exports and 6.6 percent of the Gross Domestic Product in 2003. Despite being a capital-intensive industry, employs over 70,000 people directly and 350,000 people indirectly, many of them in Peru's poorest rural areas. It is a fast-growing sector.

The expectations fired by these developments are dashed by environmental damage and by limitations in the use of the proceeds of mining. Both are exacerbating social conflicts, to a point that could deter investors or delay new projects. The mining sector is thus characterized by mistrust among its key stakeholders, and is prone to social conflicts.

It is against that backdrop that this report analyzes the current major social issues associated with the mining sector. It examines the social impacts and the existing policy and institutional frameworks as they contribute to current constraints, and provides recommendations at strategic options for better management of key social challenges based on international experience and best practices.

Regional-Sectoral Assessments in the Norwegian Offshore Petroleum Industry

Sigurd Juel Kinn, Statoil ASA, sjk@statoil.com

Criticism from several Norwegian authorities recent years due to lack of holistic assessments has led to introduction of Regional Environmental Impact Assessments (REIA) which has significantly improved the quality and efficiency of the EIA-work. As a part of the development of REIA, new methods for impact predictions on a regional scale have been developed.

The Norwegian Continental Shelf is divided into three main regions. REIAs have been prepared for the North Sea and the Norwegian Sea. Because of the high sensitivity in the third region, the Barents Sea, the authorities are now preparing an Integrated Management Plan for this area. Similar plans are planned for the North Sea and Norwegian Sea. The REIA is taken into consideration all existing, planned and expected activity within the region. The work is being conducted by the operators and the assessment is approved by the authorities.

The presentation will describe the overall EIA system in Norway for offshore projects. The structure and content of REIA will be described more detailed including the new methods for impact prediction. The presentation will include preliminary experiences with the revised EIA system and some considerations about the links between the REIA and the Integrated Management Plans.

Integrated Management Plan for the Barents Sea: A Norwegian Initiative for Ecosystem Management and Conflict Resolution

Gunnar Sander, Norwegian Polar Institute, gunnar.sander@npolar.no

In its white paper "Clean and Rich Seas" from 2002, the Norwegian government launched a new initiative for the management of our marine areas. The basic idea is to follow an ecosystem approach, moving away from sectoral assessments and decisions and into a more holistic management system. The initiative is complying with the EUs marine strategy.

The Barents Sea was chosen as the pilot area due to its and rich and vulnerable marine resources and the plans for increased oil and gas activities, including shipping, and the resulting political sensitivity. Similar initiatives are planned for the Norwegian Sea and the North Sea based on an evaluation of the pilot in the Barents Sea.

The technical reports from three years of work are now finished. Based on these, a new white paper containing the management plan will be published in spring 2006. When the plan is adopted by the Parliament, it will establish a framework for the sector's activities, including further oil- and gas development.

The presentation will give an overview of the political background, the planning process, the structure and the different elements of the management plan including the scenario based methods applied and the main results so far.

Session B8: Application of SEA to Policy or Institutional Reforms

Topic chair: Jean-Roger Mercier, World Bank, jmercier@worldbank.org

The aim of this workshop is to enable SEA experts to discuss the following:

Substance

- Methodological advances in SEAs of policy/institutional reforms
- Case studies illustrating successes and difficulties of developing SEAs of policy/institutional reforms
- Comparison of requirements and/or guidance for the preparation (and implementation/monitoring) of SEAs of policy/institutional reforms

Process:

- How to measure success and progress in the development of SEAs of policy/institutional reforms?
- How to share information and knowledge in real time about good (and less good) practices in SEAs of policy/institutional reforms

The first two workshops are case study-based. The first will focus on low-and middle-income countries. It will deal with the application of SEA to policy and institutional reforms in Sub-Saharan Africa and in Latin America and the Caribbean. After the formal presentations, time permitting, there will be a discussion on application of SEA to policy or institutional reforms in low- and middle-income countries with specific emphasis on local capacity constraints.

The second workshop will focus on middle- to high-income countries. It will deal with the application of SEA to policy and institutional reforms in Europe. After the formal presentations, time permitting, there will be a discussion on application of SEA to policy or institutional reforms in European countries with specific emphasis on the role played by the 2001 European Directive.

The third and last workshop will focus on generic approaches as well as on distilling the lessons from the B8 workshop as a whole. These papers highlight the experience with specific approaches and make recommendations on the application of SEA to policy and institutional reforms which aim at being as universal as possible. After the formal presentations, there will be a discussion and synthesis on success stories and pitfalls to avoid in the application of SEA to policy/institutional reforms.

Following the presentations, the remaining time will be spent in a facilitated discussion on the key issues arising from the presentations. Key points from each session will be captured and presented by the topic chair at the end of each session as an overall summary and conclusion of the topic. This will also be submitted to the conference organisers.

Workshop B8.1 Application of SEA to Institutional Reforms, Case Studies Based, Low- and Middle-Income Countries

SEA as a Tool for Mainstreaming Environmental Considerations in Design and Implementation of Sectoral Strategies. Yewande Awe, Ernesto Sanchez-Triana, Carolina Urrutia Vasquez, Juan David Quintero

Workshop B8.2 Application of SEA to institutional reforms, case studies based, Europe

Using SEA to Examine Environmental Implications of Development Policy Lending by the World Bank to Bosnia and Herzegovina. Ronald Hoffer

Procedural and Methodological Aspects of SEA for Lublin Region (Poland) Development Strategy. Witold Wołoszyn

European Structural Funds as a Vehicle, SEA as an Engine, in Integrating Environmental Issues into Sector Policies. Panu Kontio

Workshop B8.3 Application of SEA to Institutional Reforms, Proposed Generic Approaches

Using SEA to Establish Policy Under Cooperative or Adverse Settings. Charles Alton

Integrating Environmental Considerations in Policy Formulation: Suggested Elements for a New Framework for Conducting Policy-Based SEA. Kulsum Ahmed and Ernesto Sanchez-Triana

SEA as a Tool for Mainstreaming Environmental Considerations in Design and Implementation of Sectoral Strategies

Yewande Awe, Ernesto Sanchez-Triana, Carolina Urrutia Vasquez, Juan David Quintero; Juan David Quintero: The World Bank, jquintero@worldbank.org

This paper illustrates, based on case studies, the effectiveness of Strategic Environmental Assessments (SEAs) in incorporating environmental considerations in the design and implementation of national tourism policies in Mexico and Honduras.

SEA was used in the design and implementation of an environment strategy for the Mexican tourism sector. In Mexico, an Inter-sectoral Technical Working Group (ITWG) comprised of representatives of various sectoral ministries has the function of defining the scope of work required for the design and implementation of the tourism sector's environment strategy. Furthermore, the group provides a mechanism for cross-sectoral consensus-building regarding environmental policy design and implementation in the sector. The SEA undertaken during the first semester of 2005 provides the ITWG with an analytical basis for identifying the environmental priorities of Mexico's tourism sector. A program of consensus-building is underway, the output of which will be a proposal for an environment strategy for the sector.

In Honduras, a pilot-scale SEA was used to develop a methodology for identifying the sector's environmental priorities and policy recommendations to address them. An ad-hoc inter-sectoral working group was established and played a key role in a highly participatory and iterative process, involving rapid consultations with stakeholders, to identify environmental priorities of the sector. In addition to the consultative process established, outputs of the SEA include individual Issues Papers that examine in detail specific sector challenges, and outline policy options. These papers focus on frameworks for sustainable tourism development in selected regions of Honduras, solid waste management, wastewater management, socio-economic aspects, legal and institutional frameworks for environmental management, and guidelines for environmental and social best practice.

Using SEA to Examine Environmental Implications of Development Policy Lending by the World Bank to Bosnia and Herzegovina

Ronald Hoffer, The World Bank, rhoffer@worldbank.org

The first of three annual Programmatic Development Policy Credits (PDPCs) is under preparation by the World Bank for Bosnia and Herzegovina (BiH). These are being designed under the new Operational Policy 8.60 on Development Policy Lending (DPL) which mandates that the Bank formally consider environmental and natural resource implications. To meet this obligation, an SEA was carried out which: (i) screened policies and sectors that will be supported by the DPLs regarding environmental implications; (ii) assessed progress in due diligence, (iii) analyzed the consequences of expected reforms on the environment and (iv) examined capabilities in BiH for reducing risks.

The SEA identified Enterprise Sector Restructuring and Privatization as the most environmentally significant component. Extensive field interviews, site visits, and file reviews were conducted to ascertain progress in this area. The SEA also examined other major DPL components, including business environment, health, and pension reforms. These were found to pose smaller environmental risks.

As a result of the SEA, the World Bank will partner with BiH and others to remedy gaps in sectors supported by the DPLs. Monitorable benchmarks to guide decisions on future policy lending and capacity-building support will also be set.

Procedural and Methodological Aspects of SEA for Lublin Region (Poland) Development Strategy

Witold Wołoszyn, University of Maria Curie-Sklodowska, witwol@biotop.umcs.lublin.pl

The aim of this paper is to present and discuss the SEA for Lublin Region Development Strategy. Lublin Region is situated in the eastern part of Poland and it is one of the 16 main Polish administrative units (voivodships). The region covers some 25,114 km^2 and has population about 2.2 m. The strategy will guide a number of important development decisions (some of them are to be supported by the EU funds) extending to the year 2020.

This paper first provides an overview of the formal Polish SEA requirements and then confronts the 'spirit' of the existing legislation with practice experience. The appraisal process for the Lublin Regional Development Strategy was carried out between December 2004 and June 2005. The paper discusses some procedural aspects and methodological problems associated with the practical SEA implementation concerning broad and general in scope policy documents such as strategies. The influence of SEA on a final formulation of development policies is presented as well as suggestions as to possible methodological solutions are outlined.

European Structural Funds as a Vehicle, SEA as an Engine, in Integrating Environmental Issues into Sector Policies

Panu Kontio, Finnish Environment Institute, panu.kontio@vyh.fi

The study focuses on a comparative analysis of preparation of three EU Objective 1 Structural Funds programs, namely in Lithuania, Latvia and Finland. In Lithuania and Latvia the Structural Funds programs were prepared for the first time and in Eastern-Finland the program was prepared for the second round. Simultaneously with the program preparation, the institutional structures for implementing and managing the programs were developed.

The Structural Funds (SF) programs were not covered by the EU SEA directive, however the SF regulations set requirements for an environmental assessment. This study is looking at how the assessments in the three cases were organized, how the assessments managed to express the environmental concern and how the results of the assessments were taken into consideration in the final programming document.

Using SEA to Establish Policy Under Cooperative or Adverse Settings

Charles Alton, Bonneville Power Administration, charles.alton@comcast.net

The need for policies in any area of government or private business is most often due to lack of agreement on the direction to follow. If perfect agreement were evident in a subject area then no policy would be needed. Very few times regarding the human environment (physical or social) is there complete agreement about data and impacts. Additionally, governments and private businesses find themselves with conflicting directives and mandates inside and outside their organizations. Thus, policies become the guiding principles for implementing actions paramount to successful governance and business practice.

So how does good policy account for conflicting directives and mandates? Using a fish and wildlife case study will illustrate one way of making policy whether under cooperative or adverse conditions. It involves nine federal agencies, four state governments, one regional planning organization, over 50 Indigenous Peoples (Native American Tribes), and a host of interested parties. This project was difficult because: different groups had different values and priorities; no clear and agreed-upon scientific answer to the problem; and, conflicting directives and jurisdictions. This case study will show how using Strategic Environmental Assessment (SEA) coupled with participation can make a transparent structured decision making process out of the normal chaos.

Integrating Environmental Considerations in Policy Formulation: Suggested Elements for a New Framework for Conducting Policy-Based SEA

Kulsum Ahmed and Ernesto Sanchez-Triana; The World Bank, kahmed4@worldbank.org

Economic growth is crucial for development and poverty reduction, but recent experience reveals that how we grow matters. Millennium Development Goal (MDG) Number 7, which aims to ensure environmental sustainability, includes Target 9, which requires countries to "integrate the principles of sustainable development into country policies and programs and reverse loss of environmental resources." Put simply, economic growth that is not environmentally sustainable can degrade the health of current and future generations, as well as deprive them of their homes and livelihoods. Today, SEA is the main tool that exists to integrate environmental considerations into policies. We therefore review past experience of application of SEA to policies and draw lessons from it. In order to get a better understanding of how to improve the effectiveness of SEA to influence policy design and implementation, we then turn to an analysis of different policy formulation models, that are representative of the way that policy-making happens in practice. This analysis provides some insights to a new framework for conducting policy-based SEA that could be a more successful approach to designing and implementing sustainable public policies.