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Appendix 1: SEA legal and policy benchmarks

- 1970 U.S. *National Environmental Policy Act* (1969) -- requires “proposals for legislation and other major federal actions significantly affecting the...environment” to include a “detailed statement...on the environmental impact” (Sec. 102 (2)(c));
- California Environmental Quality Act* -- modelled after NEPA and applies to activities proposed or approved by state agencies, including programmes, plans & staged projects (Guidelines Sec. 15165 - 15168)
- mid-1970s Public inquiries and environmental reviews of major proposals -- consideration of policy issues (e.g. Mackenzie Valley Pipeline Inquiry, Canada, 1974-1977, Ranger Uranium Environmental Inquiry, Australia, 1975-1977)
- 1978 NEPA *Regulations* issued by Council on Environmental Quality -- specify actions subject to programmatic EIS as those that can be grouped generically, geographically or by technology (Sec 1052.4 (b))
- 1987 Netherlands *EIA Act* (amended 1994) -- applies to specified national plans and programmes, including all those fixing the locations of projects for which an EIA is mandatory
- 1989 Australia *Resource Assessment Commission Act* – establishes independent inquiry body on resource policy issues (Commission disbanded in 1993, legislation retained);
- World Bank *Operational Directive 4.00* (amended 1991, 1999) -- refers to preparation of sectoral and regional EA (Annex A 6-8)
- UNECE (Espoo) Convention on EIA in a Transboundary Context (came into force 1997) calls on the Parties “to the extent appropriate ...shall endeavour to apply” the principles of EIA to policies, plans and programmes (Article 2(7))
- 1990 Canada *Environmental Assessment Process for Policy and Programme Proposals* by Order-in Council (amended 1999) -- applies to proposals submitted to Cabinet
- 1991 New Zealand *Resource Management Act* -- landmark sustainability law combining policy, planning and regulatory functions into omnibus regime;
- UK Guide on *Policy Appraisal and the Environment* -- advice for central government agencies (updated by good practice guidance, 1994; amended 1997)
- 1992 UNECE pilot study of EIA of Policies, Plans and Programmes -- recommends its application by member countries;
- Hong Kong *Environmental Implications of Policy Papers* by decision of then Governor – applies to proposals to Executive Council (later development plans)
- 1993 Denmark *Environmental Assessment of Government Bills and Other Proposals* by Prime Minister’s Office (PMO) circular (amended 1995, 1998 when it became legally binding) -- applies to draft legislation to Parliament and to strategic proposals on which Parliament must be consulted;
- European Commission *Environmental Assessment of Legislative Programme* by Internal Communication – applies to legislative proposals and other actions by Commission
- 1994 UK Guide on *Environmental Appraisal of Development Plans* – advice to local authorities on how to carry out their responsibilities under planning legislation (updated 1998);
- Norway *Assessment of White Papers and Government Proposals* by Administrative

- Order -- contains provisions relevant to environment but applies primarily to economic & administrative consequences
- Slovakia *EIA Act* – contains requirement to assess basic development policies, territorial plans in selected areas and any legislative proposal that may have an adverse impact on the environment (Art. 35)
- 1995 Netherlands *Environmental Test* by Cabinet Directive – applies to draft legislation, part of comprehensive review of enforceability, feasibility and impact on business
- 1996 *Proposal* by European Commission for a Directive on the assessment of the effects of certain plans and programmes (COM (96) 511, amended by COM (99) 73), hereafter SEA Directive finalised in 2001 (q.v.)
- 1998 Finland *Guidelines on Environmental Impact Assessment of Legislative Proposals* by Decision-in-Principle -- apply to law drafting, also decrees, resolutions and decisions
- UNECE (Aarhus) *Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters* -- provisions for public participation in Articles 7 & 8, respectively, refer to plans, programmes and policies and to laws and regulations relating to environment;
- Declaration* by the Environment Ministers of the UNECE region on Strategic Environmental Assessment (ECE/CEP/56) -- inviting countries and international finance institutions to introduce and/or carry out SEA “as a matter of priority”
- 1999 Australia *Environmental Protection and Biodiversity Conservation Act* – introduces provisions enabling SEA of policies, plans and programmes;
- Finland *Act on Environmental Impact Assessment Procedure* applies to policy, plans and programmes;
- UK *Proposals for a Good Practice Guide on Sustainability Appraisal of Regional Planning Guidance*
- 2000 Canada *Guidelines on Implementing the Cabinet Directive on SEA*
- 2001 *SEA Directive 2001/42/EC adopted; all member states to be in compliance by 31 May 2004*
- Decision* to negotiate an SEA Protocol by the Parties to the Espoo Convention -- for possible adoption at fifth Ministerial "Environment for Europe" Conference (2003)
- 2002 World Summit on Sustainable Development *Plan of Implementation* calls for more, integrated and strategic approach to implement sustainable development (no explicit reference to SEA)
- 2003 SEA Protocol to the Espoo Convention adopted at fifth Ministerial "Environment for Europe" Conference, Kiev [CHECK]

Appendix 2:

Some Key Questions for Assessing the Utility of SEA in Developing Countries

Given the interest in promoting the use of SEA in developing countries, some countries might find it useful to undertake a preliminary stocktaking to capture current experience, identify opportunities and constraints to SEA, and draw lessons. This could take the form of a two-part approach:

- a ‘survey’ component to gather some basic information about SEA (and parallel) experience and the institutional and other conditions within which it applies or might apply; and
- a less rigid component which could be based on one-to-one discussions/interviews, meetings, roundtables and other appropriate mechanisms to generate a (critical) analytical perspective on SEA and on its utility and appropriateness in the country.

Direct experience of SEA at the level of plans, projects and policies should be covered, as well as experience in undertaking environmental assessments at these levels that may not have been actually called SEA, but which nevertheless conform to the general concept of SEA.

In some cases, there may have been little or no such direct experience of SEA or of processes akin to SEA, but different approaches may have been followed. Thus, it would be useful to examine experience in parallel areas that are close to the SEA concept or others that could lend practical experience that could inform the direction that SEA might usefully take in developing countries. Such parallel areas could include environmental action plans (national, district and local levels), regional plans, sector plans and assessments, spatial planning, environmental overviews, state of the environment reporting, etc., etc.

Analysis of both direct experience of SEA and related or different experience in other areas will be key to considering the utility of the SEA approach.

Below we set out some suggested questions and issues that could be explored as part of such an exercise to examine the context in which SEA is applied or could usefully be applied in any country

1 Setting for SEA in the Country/Region

Consider:

- Any formal provisions for SEA, noting that the term SEA may not be used, and that other terms may be used: e.g.
 - environmental appraisal
 - policy appraisal
 - sustainability analysis
 - EIA of plans, programmes and policies
 - EIA of activities (to include plans, programmes and policies)
- If there is a legal/administrative basis for this provision (or proposed provision) for SEA in the country, e.g.
 - separate law
 - part of EIA law
 - included under other regulations
 - policy directive/decreed
 - required by donor or funding agencies
- If there are institutions with actual or potential responsibility for SEA, and with competence to undertake SEA
- If there is compliance with the process mandatory or voluntary
- If the main objectives and/or key principles of SEA are stated in the legal/administrative provision(s) for SEA (e.g. “the proper integration of environmental considerations into the plans and programmes which are adopted within member states as part of the land use decision-making process ..”)

- If SEA provisions apply to:
 - policies
 - programmes
 - plans
 - plans and programmes (if these are differentiated)
 - all sectors with environmental effects
 - only particular sectors, e.g. energy, tourism
 - etc.

- Which activities/sectors SEA has been applied to (or is proposed to be applied to), e.g. all cabinet decisions, land use plans, transport infrastructure programmes, etc.).

- The stages in the policy/plan etc. formulation process in the countries concerned (e.g. by a simple flow diagram) and where in this process SEA is or could be applied, and how.

- Whether the findings of SEAs are provided in writing and, if so, whether the contents of reports are specified in any provisions for SEA.

- When there is formal provision for SEA, what factors an SEA is required to address, e.g.
 - environmental
 - social
- economic
- cumulative effects
- global effects
- sustainability
- etc.

- Where any formal SEA provisions exist, who is responsible for the following aspects of the SEA process ?
 - conducting the SEA
- administering the process
 - decision-making

- The main steps in an SEA process usually include:
 - scoping
 - comparison of alternatives
 - impact identification and analysis
 - mitigation
 - public involvement
 - review
 - reporting for decision-making

For these steps, it might be helpful to consider which aspects are (a) required by any formal provision for SEA and (b) those which are undertaken in practice.

It could also be helpful to consider which parties are © responsible for and which are (d) involved in the various aspects of the SEA process (e.g. environmental agency, policy formulating body, the public, local government, nature conservation agencies.

- Is any a) procedural and b) methodological guidance provided by government, agencies or others for SEA processes or for any stage of such processes, e.g. guidelines, checklists, matrices, criteria, etc. ?

Identify whether there is none, if it is limited or extensive; and whether it is clear and provides explicit directions on the steps/approaches to be followed.

For these forms of guidance, what status do they have ?, e.g. statutory/formal, non-statutory/non-formal (i.e. widely accepted and adopted), or discretionary.

2 *SEA in Practice*

It will be helpful to capture actual experience of undertaking SEAs (whether called SEAs or known by some other name, or near equivalents to SEA) in the country. Consider the approaches adopted and their effectiveness and influence on outcomes, e.g. policies, plans, decisions, securing inputs across sectors and from different institutions, etc. If known, it could be useful to secure some of the following information:

- the total number of SEAs that have been undertaken in each country, and how many per year
- the main sectors addressed by these SEAs, e.g. waste, transport, wildlife, national budget, etc.
- the times (months) taken to conduct SEAs
- the costs of undertaking SEAs
- policies, programmes, plans or other provisions changed (indicating whether often, sometimes, occasionally or never), as a result of SEAs
- whether such changes have been recorded or notified
- whether voluntary SEAs have been undertaken by government agencies or other organisations

3 *SEA case study profiles*

Detailed SEA case study profiles could be developed. For each, the following information is likely to be useful:

- the name of the SEA (or equivalent process);
- the name the sponsoring/commissioning agency;
- an indication of who conducted the SEA;
- a description of the background (location, problem concerned, when undertaken, etc.);
- discussion of the methodology or approach used;
- a description, if known, of who participated and how - i.e. who were the stakeholders and which of these were involved;
- an indication (if known) - or a 'best judgement' estimate - of what was the purpose and role of the SEA. Was it an end in itself or did it actually inform or influence policies, plans, programmes or decision-making ?
- a description of the main problems and successes of the SEA process

4 *Utility of SEA, Opportunities and Constraints*

Whilst the 'survey' information will be important, mere information gathering will not be adequate to assess the potential utility of SEA. It will be important to address critically and objectively the opportunities that are being met by SEA or equivalent or parallel processes, or that SEA could potentially provide in the country, and also the constraints that might be attached to adopting an SEA approach. For example, there may be no existing EIA regime or no official EIA procedures, or those that exist may not function well or effectively. In such circumstances, would SEA provide an alternative approach that might overcome such problems ? Would SEA, by being undertaken at a higher level (e.g. policy, programme or plan level) and thus upstream of potential projects, obviate or reduce the need for EIAs ? Or would the introduction of SEA merely add to existing burdens such as insufficient operational budgets, limited capacity or skills, institutional bureaucratic inertia, etc., etc. And what efforts (including external assistance) might be needed to overcome the constraints or to promote uptake of SEA ? In some cases, e.g. for transboundary river basins, further complications are introduced by competing political or transfrontier considerations; or by the lack of institutional coordination.

Consideration should be given to:

- the main strengths and weaknesses (actual or potential) of SEA application: procedurally, methodologically, and with particular reference to public involvement;
- the features/aspects of SEA that are the most and least valuable, and why ?

- the needs and priorities for introducing and/or improving SEA performance, e.g. capacity-building, institutional strengthening, training, professional exchange, research and development, etc.

Methodological Approach

A variety of different approaches might be used to address the issue of the utility of SEA and the associated opportunities and constraints. It will be important to use the approach(es) that best suit the context and/or circumstances of the country/region concerned. Some possible approaches are:

- meetings with a range of key players or groups to discuss SEA experience, awareness, opportunities and constraints;
- semi-structured interviews with key individuals;
- one or more roundtable meetings to discuss these issues, and to surface different perspectives as held by different players and stakeholders. Participants could involve representatives from different government departments and agencies, different sectors, business and industrial communities, NGOs, academics, and other potential stakeholders. They might include people who have been involved in EIA/SEA, those who have (or might have) formal responsibilities for EIA/SEA, and others with an interest or potential interest in SEA.

In most cases, a combination of such approaches might be the most appropriate. It might also be possible to 'piggy-back' such interviews, meetings and roundtables on some other workshop or event.

Appendix 3

The Situation regarding SEA in Countries in Transition prior to 1997

SEA trends and developments in transitional countries have evolved rapidly since 1996. Research by Riki Therivel provides a basis of comparison with the situation prior to 1996 and that discussed in Chapter 5.

Therivel (1997) reviewed how SEA is conducted in the Czech Republic, Hungary, Poland and the Slovak Republic. Three case studies are presented: for an express motorway network in Hungary; agricultural ownership transformation in Poland; and drinking water policy in East Slovakia. Examples of SEAs carried out to date in these countries are listed in Table A10.1.

Poland

In Poland, formal EIA regulations were adopted in 1990, but the only formal regulation of an SEA type is the requirement for environmental assessment of land use plans (Poland has a well-established system of national, provincial (*voivodship*) and local land-use plans) introduced in the 1994 Land-Use Management Act (Rzeszot, 1997). The Act was implemented in 1995 by an executive order of the Minister of Environmental Protection, Natural Resources and Forestry, which states that such an SEA should:

- evaluate and assess the environmental consequences of the proposed action;
- consider previous land uses;
- describe the baseline environment (including total environmental capacity);
- consider the maintenance of biodiversity and the potential environmental effects of the proposed activity; and
- propose alternatives if the proposed activity is unsatisfactory.

Therivel notes that:

“a range of (not formally agreed) methodological guidelines has been published [in Poland], which has been to a large extent inspired by the British guidelines on development plan appraisal. They suggest that the SEA results should be summarised in a matrix form ... and include provisions for public consultation. Unfortunately, local authorities are given no direction regarding when an SEA is needed, so even minor modifications to plans have been subject to SEA: to date, several dozen have been carried out for new plans and plan modifications. The average length of these SEAs is about ten pages”.

and records that various voluntary forms of EA of different plans and policies have been carried out in the country, e.g.

- application of EIA methods for the selection of physical planning strategy in the case of the Green Lungs of Poland area;
- assessment of a number of government and national policies by various authors, on behalf of NGOs; and
- an overall study of the impact of the motorway network on the natural environment in Poland.

Therivel also points to a problem in central European countries in carrying out SEAs that is also common in many developing countries - the lack of relevant baseline information:

“Although SEAs, especially those that compare alternative PPPs, can be carried out with little environmental information, it is impossible to set environmental targets, limits or carrying capacities without such data, nor is it possible to identify particularly problematic issues (such as whether the PPP will exacerbate the loss of an already scarce habitat type”.

Table A10.1: SEA Examples in Central Europe (Source: Therivel 1997)

Country	SEA Examples	Date	Type, Scale and Tier of PPP*	Proponent
Czech Republic	Landscape protected area Zelezne hory (Iron Mountains)	1996	a, r, plan	Min. of Environment
	Landscape protected are Moravsky kras (Moravian Karst)	1996	a, r, plan	“ “ “
	Litomericko region	1996	a, r, plan	“ “ “
	Landscape protected area, Jizerské hory (Isere Mountains)	ongoing	a, r, plan	“ “ “
Hungary	Express motorway network	1993	a, r, plan	UVATERV
Poland	Green Lungs management ⁺	1992	a, r, plan	Inst. for Sustainable Devel.
	Privatisation of industry ⁺	1993	s, n, policy	“ “ “
	Privatisation of agriculture ⁺	1995	s, n, policy	“ “ “
	Privatisation of energy ⁺	ongoing	s, n, policy	“ “ “
	National transport policy ⁺	1996	s, n, policy	“ “ “
	National motorway network ⁺	ongoing	s, n, programme	National Fund for Envir. Protection.PHARE
	Bogdanka coalfield area	1996	a, l, plan	Bogdanka Coal Mine
	New local plans and plan modifictaion (20-30/year)	1992 - present	a, l, plan	local authorities
Slovak Republic	Territiral development policy	1994	a, n, plan	Min. of Environment
	Water management policy	1994	s, n, policy	Min. of Land Management
	Drinking water policy for Eastern Slovakia	1995	s, r, policy	Water Mgmt. State Co.
	Actualisation of energy policy 1995 – 2010	1995	s, n, policy	Min. of Economy
	Spatial planning strategy: Zahorsha Bystica, Bratislava, Zilina, Lucenec	ongoing	a, l, plan	Min. of Environment

Notes: Type: a = area-wide PPP which applies to all activities in the area
s = sectoral PPP which applies to a specific sector

+ carried out separately from the decision-making process

Scale: l = local
r = regional
n = national

Tier: policy, plan or programme

Slovenia

An SEA of major transport routes has been undertaken as a pilot project. The environmental effects of proposed changes to the National Physical Plan to accommodate new road and rail transport links were assessed, including alternative locations to and within the project. However, the plan was adopted without change by Parliament (Koblar, 1998). The methodology used to assess regional scale impacts may be of wider interest (see Part II, case 7).

Latvia

EIA is a voluntary process in Latvia. It is used informally, including SEA type approaches, e.g. to both review and develop land use plans (see Part II, case 8). Although experience is limited, it appears that incorporating SEA into the planning process is likely to achieve better results than the separate or parallel application (Rotberga, 1998).

Slovakia.

The EIA Act (1994) provides the basis for the application of SEA. A draft SEA Regulation is under preparation pursuant to Article 35 of the Act. Recently, a simplified form of SEA was applied to the updated version of the National Energy Policy (see Part II, case 9). On the basis of this experience, it is clear that the draft SEA Regulation are in sufficient to secure an effective process (Kozova, 1998).

Appendix 4

Millennium Ecosystem Assessment

(Source: www.ma-secretariat.org)

Scope and purpose

The Millennium Ecosystem Assessment (MA) is a four-year international process designed to meet the needs of decision-makers and the public for scientific information concerning the consequences of ecosystem change for human well-being and options for responding to those changes. Leading scientists from more than 100 nations are conducting the assessment with oversight by a Board comprised of representatives of four international conventions, five UN agencies, international scientific organisations, and leaders from the private sector, NGOs, and indigenous groups. The MA is designed to meet some of the assessment needs of several Conventions (Biological Diversity, Combating Desertification, and Wetlands) as well as the needs of other users in the private sector and civil society. It was launched by UN Secretary-General Kofi Annan in June 2001. The first products will be released in 2003, and the main products will follow in 2004. It is anticipated to repeat the MA every 5 to 10 years.

The specific aims of the MA are listed in Box A4.1.

Box A4.1: Aims of the Millennium Ecosystem Assessment

- Significantly increase understanding of the linkage between ecosystems and the goods and services they provide;
- Build human capacity and the capacity of global, regional, national and local institutions to undertake integrated ecosystem assessments and act on their findings;
- Strengthen international environmental agreements and improve environment-related decisions of national governments by improving access to the best scientific information;
- Support regional, national, and local integrated assessments that will directly contribute to planning and capacity-building needs;
- Enhance civil society efforts to promote sustainable development by enabling ready access to peer-reviewed data and information;
- Increase the incentives and information available to guide change in private sector actions;
- Develop methodologies to undertake cross-sectoral assessments and to effectively integrate information across scales;
- Identify important areas of scientific uncertainty and data gaps that hinder decision-making and deserve greater research support.

A purpose of the MA is to provide the scientific underpinning to a wide range of national and international efforts to address environment and development challenges. These environmental challenges are interwoven, and thus an integrative assessment process is needed (Box A4.2) to highlight for decision-makers the linkages among climate, biodiversity, freshwater, marine and forest issues.

Box A4.2: Integrated ecosystem assessment

An integrated ecosystem assessment (IEA) is an analysis of the capacity of an ecosystem to provide goods and services (not a single product such as a crop, but an entire array of products ranging from food to clean water) important for human development. An IEA includes both ecological and economic analysis and it considers both the current state of the ecosystem and its future potential. It should be both place-based (ie focus on a particular area or location) and multi-sectoral. A benefit of an IEA is that it provides the information necessary to weigh trade-offs among various goods and services

and to identify opportunities to increase the aggregate development benefits obtained from ecosystem goods and services. Sectoral assessments for water, food production, carbon sequestration, timber, etc., do not provide decision-makers with the information needed to identify “win-win” opportunities or to avoid potential negative trade-offs.

Ecosystem assessment are not entirely new. Many features are evident in a number of existing approaches, eg. community resource assessments, national environmental assessments which address a wide range of factors influencing ecosystems and a wide range of products of those ecosystems. By contrast, national assessments for biodiversity, forests and agriculture have tended to have a sectoral focus.

A major difficulty is that the information needed to conduct an IEA is often lacking, and the most readily available ecosystem “indicators” (those that have shaped our current understanding of ecosystems) are far from complete and give us only a partial description of the ‘big picture’.

Multiple-scale approach

The MA is being undertaken at multiple spatial scales. The design consists of a global assessment as well as assessments of conditions and change in ecosystems in individual communities, nations, and regions. Numerous assessments will be undertaken at scales ranging from local villages to river basins. The process will enable findings at any given scale to be informed by the assessment components undertaken at other scales. A multi-scale cluster of assessments will be undertaken in southern Africa, to examine multiple issues of scale within a region. Other assessment activities also may become components of the MA.

The sub-global assessments have been designed to foster and build capacity for widespread adoption of integrated assessment approaches in other regions and nations. As at March 2003, the following sub-global assessments had been approved or are being planned:

- Alternatives to ‘slash and burn’ (ASB) sites: a network of benchmark sites (managed by a consortium of CGIAR¹ centers) that span the humid tropics: Brazil, Peru, Cameroon, Indonesia, the Philippines, and Thailand;
- Integrated assessment of Western China;
- Local assessments (Mala villages) in India;
- Norway: national assessment (pilot study complete)
- Small islands of Papua New Guinea;
- Southern African Millennium Ecosystem Assessment (SAfMA);
- Local assessments in Sweden;
- South-east Asia assessment
- Central America assessment.

Audience

A primary audience for the global findings of the MA will be the parties to the ecosystem-related conventions. The MA will synthesize information of particular relevance to each of the conventions. A “Summary for Policymakers” will be prepared for these conventions, approved by the MA Board, and then submitted to the conventions’ scientific bodies. Parties to the conventions will then determine which findings will be formally accepted into the individual convention process, based on their specific information needs.

Other important audiences include national governments, NGOs, civil society, business, indigenous peoples, and the media. Representatives of the conventions and other audiences have been actively engaged in determining the specific focus and products of the MA through their representation on the Board and participation in the design process. An Advisory Group of some 90 individuals from 35 countries has been established and the MA will also establish links to the national focal points for the ecosystem-related conventions in all nations.

¹ CGIAR: Consultative Group of International Agricultural Research Centres.

A response to needs

The global assessment and each of the sub-global assessments will respond to decision-makers' needs by:

(i) Providing information requested by decision-makers. More specifically, by:

- Assessing condition, pressures, trends and change in ecosystems and the current economic and public health consequences of those changes;
- Assessing the state of scientific knowledge;
- Assessing the ecosystem (and consequent economic and public health) impacts of plausible future scenarios of change in "driving forces," such as population, consumption, climate, technology and economic growth;
- Assessing the strengths and weaknesses of various policy, legislative, technological, or other actions that have been taken or proposed to improve the management of ecosystems.

(ii) Building human and institutional capacity. The specific capacity needs were identified during the first year of the MA, but capacity-building is likely to take place through at least the following basic approaches:

- Increasing skills and expertise of the individuals and institutions involved in all scales of the MA;
- Increasing access to technical tools and scientific models for undertaking integrated assessments;
- Increasing access to data and indicators for use in local and national assessments;
- Developing and disseminating new approaches for linking local level expertise and assessments with national, regional, and global expertise and assessments;
- Increasing experience with the design of assessments that fully involve "stakeholders" at the local, national, and regional scale;
- Increasing international stature and access to international sources of support.

Assessment Process

Technical Experts. Four expert working groups, focused on conditions, scenarios, response options, and sub-global assessments, are undertaking the MA. Each working group is co-chaired by leading natural and social scientists from industrialized and developing countries. The working groups comprise a geographically balanced group of experts from universities, the private sector, government, and civil society.

Design and Methods. In its first year, the MA will focus on the development of an internally consistent set of methodologies for conducting the assessment at local, national, regional, and global scales. The methodology for the MA will be presented as the first product of the MA in 2002. The methodology defines the information that will be produced, questions that will be answered, and capacity needs that will be filled. The methodology presents common design elements to be applied at all scales and features unique to different scales.

Peer Review. All of the assessment findings will undergo extensive peer review. Reviewers from all countries will be nominated by scientists, governments, business, and civil society. The review process will be developed and overseen by the MA Board and an independent review body. The review process will be tailored to the unique characteristics of the different scales of the assessment, thereby enabling incorporation of unpublished local expertise and knowledge.

Linkages with Research and Assessment Activities. The MA will be closely coordinated with other global assessments, including the UNEP Global Environmental Outlook, the Global International Waters Assessment, and the Intergovernmental Panel on Climate Change. It will be designed to strengthen planned and ongoing assessment activities and sustainable development planning activities at regional and national levels. The MA will include new analyses, but it is not a research project. Instead, the MA is a mechanism to bring the findings of research and monitoring to bear on decision-makers' needs. The MA will work closely with research programs such as the International Geosphere

Biosphere Programme (IGBP) and the International Human Dimensions Programme on Global Environmental Change (IHDP) and with monitoring activities, including the Long Term Ecological Research Network and the Global Observing System.

Products

The first product (due in 2003) will be the Conceptual Framework and Methodology for undertaking the MA, which will describe the rationale for the Goods and Services approach used in the MA and provide users with a useful methodological tool. Other reports on Condition, Scenarios, Response Options, and Sub-Global Assessments (prepared by expert working groups) will be published in 2004. A Summary for Policy-makers will also be prepared along with synthesis reports focused on biodiversity, wetlands, desertification, private sector, and human well-being. All of the MA findings will undergo extensive peer review. In addition, reports and summary documents will be produced by each of the sub-global assessments. All printed materials will be complemented by a website with information and data, capacity-building activities, and briefings and workshops designed to help communicate the findings, tools and methods to users. The reports and summaries will be widely disseminated and available in multiple languages.

Institutional Arrangements

Six different institutions will provide core administrative, logistical, and technical support to the working groups that will undertake the assessment:

- UNEP will administer the majority of the core financial support and - employ the Director, who will be based at ICLARM – The World Fish Center, in Malaysia.
- The coordinator of the Sub-Global working group (#1) will also be based at the World Fish Center.
- The Institute for Economic Growth in Delhi will support Working Group #4 (Response Options).
- The World Resources Institute, in partnership with the Meridian Institute, will support the outreach and engagement activities.
- Collectively, the staff assigned to the MA at these various support institutions will form a "distributed" secretariat.

Appendix 5

Recommendations for SEA of regional development plans in CEE countries

Source: Conclusions of the 4th Regional Workshop of the Sofia EIA Initiative, Bratislava, May 19-21, 1999

Regional Development Plans and related programming documents (i.e. Rural Development Plans) in CEE are drafted under considerable financial and time constraints. Relatively easy and transparent SEA approaches should be used in order to effectively carry out SEA during the preparation of these plans. Within these simplified SEA procedures, the following principles should apply (it is understood that SEA quality is largely pre-determined by the capacities of the participating stakeholders).

General principles for SEA of CEE Regional and Rural Development Plans (RDPs):

1. SEA should be carried out by a multi-disciplinary and multi-stakeholder team of experts. The SEA team should be provided with a mandate which is sufficient to access information on materials generated by the elaboration of RDPs and for the proposal of changes in their formulation.
2. The SEA team should be formed as soon as possible in the elaboration of RDPs and should work in parallel, and in continuous interaction with, the planning team—its goal is to provide an independent environmental review of all documents leading to the elaboration of RDPs.
3. SEA should be based on thorough public participation held in accordance with the requirements of the Aarhus Convention.

SEA focus:

4. SEA should focus mainly on impacts that have been identified as priority concerns by the affected public administration and concerned public (i.e. NGOs, academics, citizens).
5. SEA should address both national and transboundary/global issues.

Impact Assessments:

6. Given the lack of resources, time and information available for the elaboration of complex prognostic models, SEA should use collective expert judgements undertaken by qualified multi-disciplinary and multi-stakeholder teams (see Principle 1 above).
7. Impacts should be evaluated on the basis of:
 - A. Their conformity with formally adopted governmental goals in environmental and health protection (e.g. national strategies in the fields of environment and health, global conventions, transboundary issues and EU standards),
 - B. The degree of public concern associated with the forecast impact.

SEA outcomes

8. SEA should suggest environmentally friendly modifications of RDPs: this information can be most effectively used during the elaboration of RDPs. Therefore SEA should be undertaken, where possible, in parallel with the elaboration of these development plans

(see Principle 3 above).

9. Assessment findings should be documented in a SEA report, which should be made available to the public. The SEA report can be effectively used for monitoring the actual environmental impacts of development plans and for the elaboration of further programming documents.

Appendix 6

Principles, their implications for CIDA and key factors for SEA

(Source: CIDA Nov 2003, adapted from DEAT 2000)

PRINCIPLE	IMPLICATIONS	ACTION
(A) SUBSTANTIVE/CONTENT PRINCIPLES		
1. SEA is driven by the concept of sustainability.	<p>The focus of SEA is on integrating the concept of sustainability into the objectives and outcomes of plans and programmes (PPP).</p> <p>Sustainability objectives are applicable to the level, scale and sector of the PPP as well as to the environmental resources to be sustained. The sustainability objectives should be developed with the participation of interested and affected parties.</p> <p>Targets and measurement tools are defined to guide development towards sustainability.</p>	Ensure the concept of sustainability is integrated into different levels of decision-making, within the spatial context of the PPP.
2. SEA identifies the opportunities and constraints which the environment places on the development of the PPP.	<p>The environmental resources (eg potable water, forests, fertile soil) needed to achieve the sustainability objectives are identified. These resources are maintained and enhanced through the PPP. The resources are prioritised through effective participation procedures.</p> <p>The environmental resources form the basis for the identification of opportunities and constraints, which guide the formulation of PPP..</p>	Identify environmental resources which should be maintained and/or enhanced in the PPP.
3. SEA sets the criteria for levels of environmental quality or limits of acceptable change within an ecosystem (e.g. maintain 'x' hectares of rain forest)	<p>The levels of acceptable change of the environmental resources are determined. This process reflects public views and scientific information.</p> <p>The PPP is developed in such a way as to maintain and enhance the level of environmental quantity and quality of these resources. This includes an iterative process of developing alternatives and predicting whether the resources will be maintained and enhanced.</p> <p>Management programmes are developed to respond to potential negative environmental effects are identified. These are implemented should the limits of acceptable change of the environmental resources be exceeded, or are threatened to be exceeded.</p>	Identify level of acceptable change of the environmental resources.
4. SEA is a flexible process which is adaptable to the PPP or development cycle.	<p>SEA is integrated into existing processes for PPP formulation and implementation.</p> <p>There is not one SEA process to be</p>	Integrate sustainability objectives into existing context-specific processes for PPP.

PRINCIPLE	IMPLICATIONS	ACTION
(A) SUBSTANTIVE/CONTENT PRINCIPLES		
	<p>used in all contexts, but different processes for various contexts and strategic tasks.</p> <p>The focus is on understanding the context-specific decision-making and PPP formulation procedure. The objectives of sustainability are then integrated into this process at key decision points, throughout the various levels and scale of PPP development. The SEA consistently interacts with the PPP procedure in an iterative way.</p>	
(B) PROCEDURAL PRINCIPLES		
5. SEA is a strategic process, which begins with the conceptualisation of the PPP.	SEA introduces sustainability objectives at the earliest stage in the PPP process; from conceptualisation through to the many stages of decision-making.	Integrate sustainability objectives into the PPP, starting from the stage of conceptualisation.
6. SEA is part of a tiered approach to environmental assessment and management.	<p>SEA addresses higher levels of decision-making in order to provide the context for lower levels.</p> <p>Linkages are established between the various levels of decision-Making.</p>	Identify PPP which influence the maintenance and enhancement of the environmental resources identified_.
7. The scope of an SEA is defined within the wider context of environmental process. SEA needs to encompass local, regional, and national considerations.	SEA is not limited to a particular site, but considers significant local, regional, national and international linkages.	What are the political, socio-economic, and biophysical processes influencing the maintenance and enhancement of the environmental resources identified?
8. SEA is a participative process.	<p>Participation processes are adapted to the specific socio-political context of the PPP.</p> <p>The public participation process should inform and enhance the entire SEA process, in particular the scope and sustainability objectives of the SEA.</p>	Identify level and type of participation is most appropriate to enable role players to engage in the process at a level that is appropriate to their needs and resources.
9. SEA is set within the context of alternative scenarios using the concept of cost benefit analysis.	<p>Scenarios, visions and alternative PPP options are developed in a participatory way.</p> <p>Alternative PPP are evaluated in terms of their ability to maintain and enhance the environmental resources identified.</p>	Identify PPP alternatives which will most effectively maintain and enhance the environmental resources identified.
10. SEA includes the concepts of precaution and continuous improvement.	<p>A risk-averse and cautious approach is applied, which recognizes the limitations of current knowledge about the consequences of decision-making. This approach should be linked to a commitment to continuous learning and improvement. This link between a cautious approach and continuous learning contributes to an increasing understanding of sustainability for a region or sector.</p> <p>SEA must lead to a process for:</p>	Identify SEA risk analysis mechanism, as well as SEA monitoring and evaluation protocols.

PRINCIPLE	IMPLICATIONS	ACTION
(A) SUBSTANTIVE/CONTENT PRINCIPLES		
	<ul style="list-style-type: none"> ● Monitoring and continuous improvement; ● Improvement of baseline information; and understanding of sustainability objectives. 	

Appendix 7: Sub-national economic and environmental planning (E-c-E) in Asia

In the early 1980s, the Asian Development Bank started working on ways to integrate environmental concerns into decision-making, and began to promote economic and environment planning (E-c-E), particularly at sub-national levels, building on a model developed by the Organisation of American States (OAS) (Box A7.1). E-c-E planning integrates socio-cultural, economic, natural resource, and environmental objectives, incorporates stakeholder participation, and develops an integrated package of policies, programmes, and plans to achieve those objectives in a sustainable manner. So it has much in common with sustainable development strategy approaches discussed in Chapter 7.

Box A7.1: Refined sub-national E-c-E planning model used by the Asian Development Bank

Analysis of the Existing System

The boundaries of the planning area may be a river basin, an island or group of islands, sea or lake region, an administrative region, an ecosystem or biosphere reserve, or some other ecologically defined "bio-region".

Ideally, the study region should be defined as one of a series of plans which together would cover the entire nation. The planning study generally starts with a comprehensive description of the existing social, cultural, economic, natural resources and environmental systems, in sufficient detail to gain a thorough understanding of how all these dimensions interact. This description provides a synthesis of all previous investigations in the study area. Generally based on available data, the description may include some mathematical models, which can be used for subsequent projections or predictions. Included in the description of the study area is an inventory of projects which have been planned, approved, or are waiting in the pipeline of sectoral agencies.

Policy Framework

The next step is to document all relevant policies in the study area, both explicit and implicit. These policies are analysed to highlight any overlaps or conflicts between policies applied to different sectors. Generally the multi-disciplinary study team must stick to broad dimensions of the policy debate as detailed refinements may take much longer than the study period to resolve. Policy instruments such as legislation, regulations, planning guidelines, and standards are also documented. To the extent possible, decision making processes in the study area, including political systems and influences, are investigated and reported.

Scenario Formulation

Once the study area is well understood and the policy framework is clear, then alternative development scenarios are constructed. Three or four scenarios are formulated to provide an envelope around realistic development options, rather than representing unachievable extremes. The scenarios are projections from the baseline derived in the description of existing conditions, and cover social, economic, natural resource, and environmental dimensions. The social, economic, and environmental implications of each scenario are then presented in terms that decision-makers can understand. In consultation with the Government and stakeholders, a preferred development scenario is chosen as a consensus vision for the long-term future of the study area. Revised projections are then made for various key aspects of the preferred scenario, such as economic growth rates, population growth, employment generation, natural resource depletion rates, pollutant loads etc.

Plan Formulation

The study team then prepares detailed plans consistent with the preferred scenario, comprising a socio-economic development plan, natural resources development plan, and an environmental management

plan. The interactions between the plans are documented to illustrate the integrated approach that is needed to attain the vision encompassed by the preferred development pathway.

Spatial and Sector Strategies

The spatial context of the preferred scenario is presented so that the impact on specific locations or groups of beneficiaries can be identified. Similarly, for each sector (agriculture, mining, forestry etc.) the various plan components are amalgamated to give a comprehensive sectoral view. For example, an agriculture `sector plan will contain social, economic, and environmental strategies consistent with the preferred scenario. At this stage, refinement of the strategies and plans may be desirable following consideration of separate sector studies and presentations to sectoral agencies and interest groups.

Selection of Priority Projects

During preparation of the scenarios, a range of project ideas is discussed. To be included in the ultimate development plan, each project concept must pass through a screening mechanism which assesses economic viability, resource demands, social and environmental impacts. Along with economic evaluation at the pre-feasibility study level, preliminary environmental impact assessments and social impact assessments are undertaken for all selected projects. Terms of reference are drawn up for full SIAs and EIAs for socially or environmentally sensitive projects included in the Action Plan. These SIAs and EIAs are undertaken as part of the feasibility studies for these projects in Phase II of the planning process.

Action Plan and Implementation Arrangements

The various plan components are amalgamated and presented as a synthesis development plan, covering the goals, objectives, strategies, and vision for the future. To enable the vision to be attained, an action plan of all priority projects and programmes, is presented as a consolidated public investment plan. The action plan demonstrates the scale and phasing of investment required over the plan period. The administrative arrangements and responsibilities are documented and linkages to the national and local levels are established. The synthesis development plan is presented in draft form for public comment and consultation. Seminars and workshops may be needed for specific sector groups or groups of stakeholders affected by the plan.

Maintaining Momentum

A constant battle in any integrated planning effort is to avoid the tendency for carefully integrated project packages to fall apart, often due to intervention of special interest groups after the plan is finalised. Short-term "do-able" projects, which can proceed even before the plan is finally accepted, help to maintain the momentum. Arrangements are made for the feasibility studies and detailed design in Phase II. Consideration may also be given to strengthening the regional and local implementation agencies. Arrangements for monitoring implementation progress and plan revision are made so that the plan remains a process, rather than a static exercise with a defined end point. Additional effort may be needed to present the plan in a format that facilitates its incorporation into national economic development plans and/or local plans.

Expected Outputs

A synthesis development plan for the study region is made up of a Socioeconomic Development Plan, Natural Resources Development Plan, and Environmental Management Plan, all of which are linked. These, in turn, are presented as a consolidated Action Plan, divided into short-term, medium-term, and long-term phases. At this stage, the selected short-term, priority projects of the Action Plan go forward into detailed feasibility studies in Phase II. To maintain momentum, funding must be arranged for the Phase II feasibility studies.

Source: King et al. (2000)

King *et al.* (2000) compare case studies of sub-national E-C-E in Asia against the OAS model to determine key success factors and constraints:

- Songkla Lake Basin Planning Study, Thailand;
- Klang River Valley, Malaysia;
- Hainan island, South China Sea;
- Haihe River Basin, China;
- Coastal Environmental Management and Planning Project, Indonesia.

They found that reforms are needed before a cohesive, integrated E-c-E planning approach can be uniformly applied at the sub-national level in the Asian region. However, experience is starting to emerge which can provide the basis for an integrated economic and environmental planning system involving improved planning at all levels. Recommendations to improve the E-c-E process at the sub-national level included a mix of administrative process and technical content reforms:

- *Administrative process improvements* included: establishing political support for E-c-E planning; boosting stakeholder participation; securing cross-agency involvement; obtaining commitments from Governments to fund implementation projects; training for Government staff in E-c-E planning; and, a phasing of the planning process.
- *Technical content improvements* include: more extensive baseline data to enable better description of existing social, economic, and ecological systems; more reliable models that link environmental and economic parameters and that generate results that can be monitored and verified, or fed back into further refinement of the models; more effective use of the scenario approach so that decision makers and stakeholders can easily envision alternative futures; increased use of environmental economics and social impact assessment in project screening; further development of cumulative environmental assessment and strategic environmental assessment; implementation of short-term projects to assist in maintaining momentum; and, development of sound monitoring systems.

Appendix 8: Legal requirements for SEA in selected Spanish regions

BOX A8.1 – CASTILLA Y LEON - LEGISLATIVE DECREE 1/2000 OF MAY, 18TH	
<p>Environmental Impact Assessment and Environmental Audits of <i>Castilla y León</i> scope</p> <ul style="list-style-type: none"> • environmental impact assessments, • strategic assessments of plans and programmes, • environmental audits in the Autonomous Community of <i>Castilla y León</i> 	<p><u>Article 1st</u> - <i>Junta de Castilla y León</i> is responsible for strategic assessment:</p> <ul style="list-style-type: none"> • before the environmental impacts of regional development’s plans and programs, • before their approval and • specifically of those that have a sector-based content and are applied to determined geographic areas, having in view to prevent potential environmental effects along the several sectors and to study the proper alternatives. <p><u>Article 19th</u> – details the sectors considered (e.g related with forest, tourism, agricultural, industrial)</p> <p><u>Article 20th</u> – establishes the content of strategic assessments of plans and programs:</p> <ul style="list-style-type: none"> • Description of the plan or program and their main objectives; • Explanation of how the plan or programme objectives take into account the environmental impacts. • Description of the main alternatives. • Description of the environmental characteristics and, if possible, of the area that could be affected, including a description of sensitive areas. • Description of significant direct and indirect effects over the environment, and especially over the ecologically sensitive areas, that the plan could give rise to and their principal alternatives. • Description of compatibility of the selected alternative with suitable environmental legislation. • Description of monitoring measures of the activity effects over the environment. • Outline the difficulties found by responsible authority along the information search. • Non-technical summary.

BOX A8.2 – BASQUE TERRITORY – LAW 3/1998 OF FEBRUARY, 27TH	
<p>Environmental Protection of Basque Territory</p> <p>Determine the rights and duties of physical and legal entities to guarantee a sustainable development, to preserve biodiversity, to make better life quality, to protect the environment, to minimise environmental impacts, to promote research in environmental area, to promote environmental education.</p>	<p><u>Title 3rd</u> – It regulates the management of activities impacting on the environment.</p> <p><u>Chapter 2nd</u>– Environmental Impact Assessment.</p> <p>Establishes a system that enables estimation of the potential effects that could occur on the environment, due to carrying out plans and projects established in Attachment 1st. Presents an administrative procedure of environmental impact assessment of plans (before their approval) that appraises the possible alternatives and estimates accumulated environmental impact of projects included in the plans. However, it doesn’t establish the assessment content.</p> <p><u>Attachment 1st</u> – It lists the plans that have to be submitted to environmental impact assessment, all territorial based, including guidelines, norms, urban development plans and special plans.</p>

BOX A8.3 – ANDALUCIA – LAW 7/1994 OF MAY, 18TH	
<p>Environmental Protection</p> <p>To prevent, minimise and correct or, when necessary, stop the effects, which some public or private activities can have on the environment and life quality, through the measures established in this law.</p> <p>To define the legal scope and activity of Autonomous Community of <i>Andalucía</i>, in terms of atmospheric protection, waste in general and water quality, to achieve an improvement to environmental quality, with the application of prevention, correction and monitoring techniques.</p>	<p><u>Article 3rd</u> - This law is applied to:</p> <ul style="list-style-type: none"> • Plans, programs and construction projects, or installations of public or private works included in attachments 1st, 2nd, 3rd. • Industries, activities, and in general, any infrastructure or activity that could cause atmospheric contamination. • Urban solid waste produced by several activities listed in Article 3rd. <p><u>Title 2^{sd}</u> - Environmental Protection</p> <p><u>Chapter 2^{sd}</u> - Environmental Impact Assessment</p> <p><u>Article 13th</u> – It refers that the environmental impact assessment of plans and programs must assemble their global effects and consequences of their strategic options.</p> <p><u>Section 2^{sd}</u> – It establishes the procedure of environmental impact assessment.</p> <p><u>Attachment 1st</u> – It includes General Plans of Urban Planning, Complementary Rules of Planning, and their revisions and modifications.</p>
- DECREE 292/1995 OF DECEMBER, 12TH	
<p>Regulation on Environmental Impact Assessment of the Autonomous Community of <i>Andalucía</i>:</p> <p>Execute Law 7/1994 of May, 18th as far as it's concerned to Environmental Impact Assessment.</p>	<p><u>Article 2^{sd}</u> – It is applied to all public or private activities that involve plans, programs, construction projects, installations and works included in Attachment 1st of Law 7/1994 of May, 18th. In the same way, this is required to their extensions, modifications.</p> <p><u>Chapter 2^{sd}</u> – Environmental Impact Assessment</p> <p><u>Article 8th</u> – Regarding the content, it refers that the environmental impact assessment of plans and programs will appraise their global effects and consequences of their strategic options.</p> <p><u>Chapter 3rd</u> – Environmental Impact Study</p> <p><u>Article 11th</u> – It presents the content detailed of environmental impact study of projects.</p> <p><u>Article 12th</u> – It describes the content of environmental impact study of urban plans, organized in four main groups:</p> <ul style="list-style-type: none"> • Schematic description of structural determinations; • Environmental study and analysis of affected territory; • Impacts identification and evaluation; • Measures of correction, monitoring and environmental development of planning. <p><u>Article 13th</u> – It describes the content of environmental impact study of plans and programs of physical infrastructures organized in five main groups:</p> <ul style="list-style-type: none"> • General description of the Plan or Program; • Territorial and environmental analysis in entire special ambit of plan or program development; • Environmental analysis of strategic options, confronting the information obtained in previous groups; • Monitoring criteria of the development of plan or program to facilitate the control of environmental factors. • Synthesis document. <p>The environmental impact study of plans or programs is simpler than the EIS of projects.</p> <p><u>Chapter 5th</u> – It describes general procedure of environmental impact assessment.</p>

Appendix 9: Principles, their implications for CIDA and key factors for SEA

(Source: CIDA 2003, adapted from DEAT 2000)

PRINCIPLE	IMPLICATIONS	ACTION
(A) SUBSTANTIVE/CONTENT PRINCIPLES		
1. SEA is driven by the concept of sustainability.	<p>The focus of Sea is on integrating the concept of sustainability into the objectives and outcomes of plans and programs.</p> <p>Sustainability objectives are applicable to the level, scale and sector of the plan or program as well as to the environmental resources to be sustained. The sustainability objectives should be developed with the participation of interested and affected parties.</p> <p>Targets and measurement tools are defined to guide development towards sustainability.</p>	Ensure the concept of sustainability is integrated into different levels of decision-making, within the spatial context of the plan or program.
2. SEA identifies the opportunities and constraints which the environment places on the development of plans and programs.	<p>The environmental resources needed to achieve the sustainability objectives are identified. These resources are maintained and enhanced through the plan or program. The resources are prioritised through effective participation procedures.</p> <p>The environmental resources form the basis for the identification of opportunities and constraints, which guide the formulation of plans and programs.</p>	Identify environmental resources which should be maintained and/or enhanced in the plan or program.
3. SEA sets the criteria for levels of environmental quality or limits of acceptable change.	<p>The levels of acceptable change of the environmental resources are determined. This process reflects public views and scientific information.</p> <p>The plan or program is developed in such a way as to maintain and enhance the level of environmental quantity and quality of these resources. This includes an iterative process of developing alternatives and predicting whether the resources will be maintained and enhanced.</p> <p>Management programs are identified. These are implemented should the limits of acceptable change of the environmental resources be exceeded, or are threatened to be exceeded.</p>	Identify level of acceptable change of the environmental resources.
4. SEA is a flexible process which is adaptable to the planning and sectoral development cycle.	<p>SEA is integrated into existing processes for plan and program formulation and implementation.</p> <p>There is not one SEA process to be used in all contexts, but different processes for various contexts and strategic tasks.</p> <p>The focus is on understanding the context-specific decision-making and</p>	Integrate sustainability objectives into existing context-specific processes for plans and programs.

PRINCIPLE	IMPLICATIONS	ACTION
(A) SUBSTANTIVE/CONTENT PRINCIPLES		
	plan or program formulation procedure. The objectives of sustainability are then integrated into this process at key decision points, throughout the various levels and scale of plan and program development. The SEA consistently interacts with the plan and program procedure in an iterative way.	
(B) PROCEDURAL PRINCIPLES		
5. SEA is a strategic process, which begins with the conceptualisation of the plan or program.	SEA introduces sustainability objectives at the earliest stage in the plan or program process; from conceptualisation through to the many stages of decision-making.	Integrate sustainability objectives into the plan or program, starting from the stage of conceptualisation.
6. SEA is part of a tiered approach to environmental assessment and management.	SEA addresses higher levels of decision-making in order to provide the context for lower levels. Linkages are established between the various levels of decision-Making.	Identify plans or programs which influence the maintenance and enhancement of the environmental resources identified_.
7. The scope of an SEA is defined within the wider context of environmental process	SEA is not limited to a particular site, but considers significant local, regional, national and international linkages.	What are the political, socio-economic, and biophysical processes influencing the maintenance and enhancement of the environmental resources identified?
8. SEA is a participative process.	Participation processes are adapted to the specific socio-political context of the plan or program. The public participation process should inform and enhance the entire SEA process, in particular the scope and sustainability objectives of the SEA.	Identify level and type of participation is most appropriate to enable role players to engage in the process at a level that is appropriate to their needs and resources.
9. SEA is set within the context of alternative scenarios.	Scenarios, visions and alternative plan and program options are developed in a participatory way. Alternative plans and programs are evaluated in terms of their ability to maintain and enhance the environmental resources identified.	Identify plan and program alternatives which will most effectively maintain and enhance the environmental resources identified.
10. SEA includes the concepts of precaution and continuous improvement.	A risk-averse and cautious approach is applied, which recognizes the limitations of current knowledge about the consequences of decision-making. This approach should be linked to a commitment to continuous learning and improvement. This link between a cautious approach and continuous learning contributes to an increasing understanding of sustainability for a region or sector. SEA must lead to a process for: <ul style="list-style-type: none"> ● Monitoring and continuous improvement; ● Improvement of baseline information; and ● Understanding of sustainability objectives. 	Identify mechanism for the monitoring and evaluation of the SEA analysis that isintegrated into the plan or program?

Appendix 10: Sustainability Impact Assessment of WTO Multilateral Trade Negotiations

Sources: Documents and reports for this initiative are available for review and comment on the project website (<http://idpm.man.ac.uk/sia-trade>). Additional information provided by Clive George, University of Manchester

Phase One (July-September 1999): literature review of potential methodologies, evaluation of specific trade policies and agreements; and development of SIA methodology.

Phase Two (September-November 1999)

(a) Broad, qualitative, preliminary appraisal of a specified range of trade-related measures to identify where these might have potentially significant sustainability impacts to be taken into consideration when formulating and finalising the agenda for the Seattle inter-ministerial meeting in December 1999; and development of proposals for further measures to enhance the impact of the New Round outcomes on sustainable development. The preliminary appraisal involved:

Information checklists to assist in applying the methodology

- *Possible measures for negotiation which may be included in the New Round Agenda*
- *Possible scenarios to be analysed for each measure*
- *Groupings of countries for which appraisals are to be undertaken*
- *Sustainability impact indicators and significance criteria to be used in the appraisals*
- *Methods, consultation procedures and information sources to be used in the appraisals*

Main stages

- *Screening: to determine which of the measures, listed in A. above, require SIA*
- *Scoping: to establish the appropriate coverage of each SIA*
- *Preliminary sustainability assessment: to identify potentially significant effects, positive and negative, on sustainable development*
- *Mitigation and enhancement analysis: to suggest types of improvements which may enhance the overall impact on sustainable development of New Round Agenda measures*

(b) Development and refinement of the SIA methodology for Phase Three - building on the findings of the first phase – through an open dialogue (continued through the project) with interested stakeholders via an email address (chk@man.ac.uk). The SIA methodology being used in Phase 3 aims to assist negotiators and other interested parties in the post-Doha WTO trade negotiations, and to help those involved in identifying the likely economic, social and environmental consequences for their region or country, of one negotiated set of outcomes compared to another.

Phase Three (commenced April 2002):

A preliminary overview assessment has been undertaken of the Doha Development Agenda (DDA) to identify major impacts on sustainability of proposed measures:

Existing negotiation mandate: Agriculture, market access for non-agricultural products, services, trade and environment, dispute settlement, trade related aspects of intellectual property rights (TRIPS), WTO rules (anti dumping and subsidies; regional trade agreements), implementation issues in developing countries;

Measures introduced at the 1996 Singapore Ministerial Conference: trade and investment, competition policy, trade facilitation, transparency of government procurement;

Measures subject to discussions under the Doha agenda: electronic commerce; small economies;

trade, debt and finance; technology transfer; technical cooperation and capacity-building; least-developed countries; special and differential treatment;

taking into account potential impacts associated with inter-sectoral linkages, and identifying those areas where more detailed assessments should be carried out at the next stage in the process.

In parallel, three sectoral SIA studies have been completed: (a) market access (with special emphasis on pharmaceuticals, non-ferrous metals, textiles); (b) environmental services (with special emphasis on water and waste treatment); and (c) competition policy. A further three sectoral SIA studies were selected on completion of the overview study and are in progress: (d) agriculture; (e) forestry; and (f) distribution services.

The final report on the overview assessment (George and Kirkpatrick 2003) presents a review of international trade, sets out the SIA methodology used, provides preliminary sectoral findings and recommendations for further sectoral SIA studies, and proposes refinements to the SIA methodology framework for these detailed studies and for completing the overall SIA of the DDA.

Methodology for preliminary overview SIA of the Doha Development Agenda

The assessment was undertaken within a broad screening and scoping update of the earlier preliminary SIA study of the pre-Seattle broad agenda. It involved screening the Doha agenda as a whole, including cross-sectoral linkages and cumulative impacts likely to result from the implementation of the Doha agenda measures. The components included:

- Specification of the content and scope of the *trade measures*;
- Elaboration of *negotiation scenarios* – a *base scenario* (full implementation of existing agreements); and a *further liberalisation scenario* (representing the strongest probable implementation of the negotiations agreed at the 4th Ministerial Conference in Doha);
- Focus on *country characteristics* which influence potential impacts. The subsequent detailed SIAs will assess impacts in four *country groupings* (EU, non-EU developed countries, developing countries, least developed countries);
- Assessment methods – based on *causal chain analysis* using information from econometric modelling and case studies where appropriate:
 - Identification of effects of market incentives and opportunities resulting from negotiated change to a trade agreement;
 - Assessment of significance of linkages (from effects – long- and short-term - on production relationships to sustainability impacts);
 - Evaluation of cumulative effects of trade measures on sustainable development processes and outcomes;
- Assessment of the *significance of impacts*;
- Use of core *sustainability indicators* (complemented by second tier and process indicators for detailed SIA studies):
 - Economic*: real income, fixed capital formation, employment;
 - Social*: poverty, health and education, equity;
 - Environmental*: biodiversity, environmental quality, natural resource stocks;
 - Process*: sustainable development principles, sustainable development strategies;
- Assessment of *cross-cutting issues* (classified in five broad groups: scale, technology, structural, location and regulatory) and *overall impact*;
- Preliminary indication of *mitigation and enhancement measure*, e.g. trade-related measures that might be built into WTO agreement, side or parallel agreements, collaborative agreements, international and regional agreements, and measures by national governments;

- *Consultation process* (dialogue with stakeholders, comments by network of experts, published reports on dedicated website with facilities for comment, civil society meetings)

The preliminary overview SIA involved only limited analysis, with detail added in the individual sectoral SIAs. These aim to inform and assist negotiations up to their conclusion – originally targeted for January 2005, but delayed following the 2003 WTO inter-ministerial conference in Cancun.

Appendix 11: Examples of Integration Mechanisms and Role of Environmental Assessment from Selected EU Member States (Sheate et al, 2001)

*Status of SEA
(at time of adoption of SEA
Directive 2001/42/EC in
2001)*

Examples of Integration Mechanisms

Commentary: extent of integration and role of environmental assessment

Austria

SEA not a legal requirement. Progress towards strategic environmental assessment e.g. the right of the environmental Ombudsman in the province of Styria to comment on all laws that are likely to have environmental effects and to propose alternatives.

- Austrian National Environment Plan (NEP, 1995) contains clearly defined objectives and proposes more than 300 measures to achieve them.
- Federal Ministry of Agriculture, Forestry, Environment and Water Management and the provincial ministries for environment deal with the task of integrating the environment in strategic decision-making. Provincial level: re comprehensive environmental programmes with a high degree of integration, using environmental quality targets and corresponding indicators. But only a few provide for monitoring or auditing issues (e.g. LA 21 Graz).
- Sustainability roundtables and other communication tools as well as awareness raising methods are in place, but there is a weakness concerning guidance and training both for SEA and integration of the environment.

Though not yet formal SEA, there is reasonably strong integration of environmental issues into decision-making through comprehensive system of environmental reporting and environmental communication (e.g. “sustainability roundtables”, councils on climate change, sustainable development, and public participation procedures e.g. in spatial planning legislation). The National Environmental Plan (1995) acts as a comprehensive framework for Austria’s environmental policy; parallel to the federal level environmental programmes for provinces or municipalities (often in a Local Agenda 21 context). The differentiated and detailed environmental legislation, eco-labelling, voluntary agreements and many other tools contribute to the fact that there is a high amount of environmental awareness.

Belgium

SEA not a legal requirement. Main progress towards SEA being carried out in region of Flanders; proposals to introduce environmental assessment of plans and programmes into present EIA Decree;

- Three regions each with its own framework for integration, for example the regional governments of Flanders and Wallonia have adopted regional laws as frameworks for integration. Also, each region has several bodies responsible for the environment.
- The overall law relating to sustainable development (SD) was adopted in 1997 (Law on co-ordination of federal policy on sustainable development) at the Federal level. Annual reporting on LA21 issues.
- Development of SD indicators; environmental indicators required for regional environmental reports.
- At federal level an interdepartmental Commission for SD is responsible for formulating the Federal Plan and promoting SD. There is inter-regional co-ordination amongst Environment Ministers for development of SD indicators.

Each region provides its own framework for environmental integration particularly with regards to EIA, environmental management, sustainable development and Local Agenda 21. Both sustainable development and Local Agenda 21 have in recent years become priority areas in each region. A number of bodies are responsible for the implementation of sustainable development at policy level while Municipal authorities work at local level implementing Local Agenda 21. While no mandatory SEA in Belgium; voluntary SEA of transport plan, and voluntary SEAs in Wallonia.

Denmark

SEA a legal requirement for: Bills and government proposals. Ministerial guidelines on SEA in place since 1995. No public participation in assessment procedure although chance to participate in preparation of Bill during customary consultation process under Danish legislation. State Budget proposals are assessed for environmental impacts in selected areas.

- Sector action programmes on sustainable development
- 'Danish Nature and Environment Policy' presented to Parliament every four years
- Danish environmental legislation lays down organisational and procedural rules requiring communication between different authorities and stakeholders.
- After elections the Minister for Environment and Energy reports to Parliament on national land use planning, and produces State of Environment Reports.
- The National Protection Board of Appeal and Environmental Protection Board of Appeal - monitoring of environmental framework laws.
- The main environmental framework laws have sustainable development as a stated objective in the preamble of the laws.

Sector action programmes on sustainable development define quantitative and qualitative objectives and list initiatives to be carried out. Various systems allowing the integration of environment into decision-making at different levels of government; degree of decentralisation is high. The Spatial Planning Department under the Ministry of the Environment co-operates with the National Association of Local Authorities and the Association of County Counties in Denmark in encouraging counties and municipalities to undertake Local Agenda 21. Voluntary SEA of National Land Use Plan carried out. Also research and voluntary SEA of County and Municipal plans. Environmental indicators are being developed as parts of SEA systems within the fields of national and regional land use planning.

Finland

SEA a legal requirement for: State action plans and economic strategies; policies on taxation and subsidies; plans and programmes for energy, environment, transport, industry, forestry and agriculture; Committee reports; Government proposals. Guidelines in place since 1999.

- Finnish Action for Sustainable Development (1995), includes measures that vary from sectoral programmes of different ministries and governmental bodies to information campaigns of NGOs..
- National Commission on Sustainable Development
- Sectoral programmes on sustainable development.
- Annual Ministry of Finance regulation requiring the investigation of environmental effects of state budget and proposed action plans.
- Land Use and Building Act of January 2000 emphasises a more open and interactive approach to planning and local authorities are given more power in decision making.

France

SEA a legal requirement at policy level for proposed laws and also at regional levels for Master and Zoning plans. Voluntary SEAs have taken place since 1980s in areas of land use planning. SEA methodology recently developed for transport infrastructure and applied to plans and programmes at regional level.

- Environmental integration responsibility of the Ministry of Environment (MoE).
- 1976 Law on Protection of Nature enabled the MoE to integrate environmental policy into socio-economic planning.
- Several other bodies with responsibility towards promotion and implementation of Agenda 21 with some working directly with the MoE to help increase inclusion of environmental considerations in development programmes and decision-makers.
- Environmental integration occurs through a number of different laws (mainly related to EIA) and a sustainable development strategy exists with LA21 being implemented.
- Requirement during the development of urban zoning plans for the provision of ‘state of environment’ reports.

Germany

An ‘Action Plan on Sustainable Development’: strategy document with short-term definitions and proposals and long term scenarios. Environmental impacts investigated and assessed to a sufficient degree when an authority is preparing policies on taxation, payment, and subsidies and when plans and programmes related to the environment, energy, transport, industry, forestry and agriculture are prepared. Environmental impacts assessed in preparation of policies as well as plans and programmes related to environment, energy, transport, industry, forestry and agriculture. National Commission makes recommendations on preparation of sectoral programmes on sustainable development.

France the first country to introduce EIA in Europe. The environment is integrated to a fair extent and mainly takes place with regards to land-use planning and the environmental appraisal of programmes. EIA, environmental regulations, planning documents, zoning plans and strategic impact assessment (SIA) all contribute to environmental integration. Environmental assessment takes place at policy level for those laws deemed to have an impact on the environment. Also, proposed laws must demonstrate that they are environmental and sustainable. Sustainable development and Local Agenda 21 are also priority areas and a sustainable development strategy exists. Since 1990 SIA has been mandatory at policy level for proposed laws, but voluntary SIAs have taken place since the 1980s. There is also evidence that SIA is being applied to plans and programmes at a regional level.

SEA not a legal requirement. Spatial and sectoral planning procedures have made provision towards SEA particularly with regards to landscape planning and zoning/building planning.

- Federal Ministry of Environment, Nature Protection and Nuclear Safety responsible for environmental integration
- National sustainable development (SD) strategy and a national climate protection programme (comprehensive framework with clear objectives and measures to reach these) exist, both support the integration of the environment on different decision-making levels and serve as co-ordinated strategies.
- Environmental ministries of the “Laender”.
- Environmental quality goals are in place e.g. in many cities, often connected with LA 21 plans.
- Various environmental concerns are integrated in numerous laws; proposal for a homogeneous National Environmental Code with the intention to summarise, adjust and harmonise the environmental legislation. Different reporting (e.g. certain Enquete Commissions for the Parliament), co-ordination (e.g. regular conferences of all environmental ministers of the “Laender”) and awareness raising measures exist and are able to support the integration of the environment.

Germany is a federal country with 16 “Laender” and has detailed, comprehensive and differentiated environmental legislation, although, as yet there is no mandatory SEA. But a mandatory requirement for plan and programme-making activities of public authorities requires all relevant concerns (including the environmental ones) to be considered and weighed against each other. A large number of commissions and councils deal with the integration of environmental concerns into strategic decision-making, especially at local level. Considerable experience with Local Agenda 21: environmental reporting (including environmental data), the development of environmental indicators, tiered decision-making systems e.g. within spatial and landscape planning and other measures support the task to integrate environmental issues into policy making. Due to a high amount of environmental consciousness and awareness NGOs often play a key role by strengthening environmental integration.

Netherlands

SEA a legal requirement. E-Tests (environmental tests) applied to existing and proposed legislation, policy plans and regulations. Recent assessments include an inventory of policy areas at national level and an E-Test of the 5th national spatial plan. Strategic level EIA applied to decisions relating to spatial planning. Voluntary SEA methodology for application at most strategic levels developed in 1995 (SEAN).

- National Environmental Policy Plans (NEPPs) are largely responsible for environmental integration into government policies.
- Four government Ministries responsible for environmental policy with the Ministry of Housing, Spatial Planning and Environment being the lead body and which is also responsible for co-ordination.
- The Netherlands has a tiered system of planning and there is a requirement that the environment be incorporated into each level.
- Commission on EIA for the provision of advice to local authorities and the assessment of the adequacy of environmental information.

Long history of environmental planning; 1980s saw the introduction of planning strategies and environmental policy plans including EIA regulations and strategic level EIA. The environment is integrated to a strong extent. A tiered system of planning is in place with the environment being integrated throughout. National environmental policies are the main systems for integrating the environment into government policies, and for laying the foundation for environmental regulations and sustainable development. All government policies are subject to a review process to assess their level of contribution to sustainable development. SEA is mandatory in the Netherlands and takes the form of an E-Test (introduced in 1995) for proposed legislation. A number of government ministries are responsible for environmental policy with a quality control system in place for the strategic assessment process. At regional level environmental integration takes place through a series of planning and environmental projects and involves a number of bodies including municipal authorities and environmental groups.

Spain

SEA a legal requirement at regional level in the communities of Castilla-La Mancha, Castilla y León and the Basque Country. Other regions include certain PPPs within the list of activities that require EIA. Environmental assessments occur during the preparation of regional development plans under EU Structural Fund regulations.

- Integration occurs mainly through consultative bodies at national and regional levels. At national level, the Ministry of Environment is responsible for developing national environmental plans and strategies.
- Regional level is of primary importance for integration in Spain.
- SEA occurs at national level only through the Regional Development Plan (as required by the EC) for Objective 1 regions, and in those regions where SEA legislation has been passed (Castilla y León, Castilla-La Mancha and the Basque Country).
- Otherwise, integration only takes place through consultative bodies (at national and regional level) and through the (unofficial) efforts of the National Network of Environmental Authorities. The Network is also the only body to issue guidance on integration.
- At regional level, consultative bodies (regional Environmental Assessment Councils) exist.

Spain has a pseudo-federal structure with 17 Autonomous Communities that have wide competencies in environmental policy development and implementation. At national level integration is very limited, mainly through a consultative body (which has been widely criticised and boycotted by NGOs). The other mechanism is the informal Network of Environmental Authorities, with inter-sectoral representation and that has played a role mainly in establishing SEA guidance for the Regional Development Plans, falling under the EC structural funds regulations. Three regions have passed SEA legislation (Castilla y León, Castilla-La Mancha and the Basque Country). At local level many municipalities have established LA 21s.

Sweden

SEA a legal requirement. EIAs included in Government Bills and other proposals of comprehensive decision-making. Progress underway to include EIAs at early stage of political process under the Planning and Building Act. Research project also taking place on SEA case studies.

- National Environmental Quality Goals for development in Sweden are elaborated within various areas and sectors and have been adopted by Parliament. National Boards are responsible for formulation and implementation of action programmes for achieving the goals.
- The overall legislative framework for implementation of goals and action programmes is the Environmental Code from 1999. The guiding principles on implementation of the Environment Code are applicable to all sectors.
- National and local level Agenda 21.
- Environmental Protection Agency presents annual report on environmental policy work in Sweden to Parliament.

The Government has formulated National Environmental Quality Goals for development in Sweden within various areas and sectors. National Boards are responsible for formulation and implementation of action programmes for achieving the goals. The overall legislative framework for implementation of goals and action programmes is the Environmental Code from 1999. The Code, which is a result of a major review of environmental legislation, brings many specific laws together in one code. The Swedish Government has for a long time put sustainable development very high on the political agenda and adopted a National Agenda 21. The Environmental Protection Agency supports Local Agenda 21 activities and local governments employ Local Agenda 21 co-ordinators.

United Kingdom

SEA not a legal requirement. Environmental appraisals of development plans required under an administrative procedure. Government guidance on sustainability appraisal being extended to the regional planning level. Guidance on environmental appraisal of policies has also been published. Voluntary forms of SEA are also carried out on water resources strategies and multi-modal studies.

- “Greening Government” is a 10-year-old government strategy to integrate environmental considerations into Government decision making. A cabinet level committee on the environment (ENV) as well as the presence of a Green Minister (GM) appointed in each Government department are responsible for providing leadership and co-ordination to the strategy.
- The parliamentary Environmental Audit Committee (EAC) has been set up to audit national policy; and four statutory environmental agencies are responsible for monitoring pollution, biodiversity, national heritage and the landscape change on the ground.
- A Sustainable Development Unit (SDU) to provide civil servant support and co-ordination to GMs and ENV. The GMs are responsible for producing yearly departmental reports and the GM committee publishes an annual report to ENV and the EAC.
- A Sustainable Development Commission to provide a platform for key stakeholders (Business and NGOs) to engage with the Government.
- 15 headline indicators as part of its National Sustainable Development Strategy, monitored annually.

As part of the “Greening Government” strategy a weak form of policy SEA was introduced in 1991 known as Policy Appraisal and the Environment (PAE). Other mechanisms within Greening Government have included setting up cross departmental bodies at the highest level, identifying individuals with responsibilities for Greening Government and setting up institutions and strategies with an environmental or sustainable development remit, including LA 21 in local authorities. Despite the institutions and mechanisms of “Greening Government” having been running for a decade it has not been particularly effective. Moreover PAE has been the least used mechanism. The SDU has published guidance on the role of green ministers and on undertaking SEAs of government policy. SEA type processes have been introduced within regional planning (sustainability appraisal), local planning (environmental appraisal), water resources planning (SEA) and multi-modal transport planning. Generally SEA has been introduced through a mechanism of disseminating best practice guidance rather than specific regulations.

A tiering procedure may be inferred in the requirement of the Directive for an SEA of a plan or programme that, inter alia, provides a framework for consent of a project subject to an EIA. However, there is no explicit reference to the use of information contained in an SEA report in a subsequent EIA. **CHECK**

Appendix 12:

Step-by-step guidance on application and use of procedures and methods in SEA good practice

Source: Sadler (2001).

Proposal:

Establish the need for and objectives of the proposed action

Before SEA is initiated, the responsible agency defines the basis for a proposed policy, bill, plan or programme. A preliminary statement should be made of the need, purpose and objectives to be achieved. These aims are not subject to review by an SEA, but the justification of a proposal is conditional on its environmental impact. The SEA process itself must be objectives-led in order to fully evaluate the environmental impacts of a proposal. Preparatory methods of identifying environmental objectives include policy and legal review (e.g. goals, standards and targets outlined in government strategy, obligations under international environmental agreements).

Screening:

Determine if an SEA is required and at what level of detail

Formal screening procedures can be divided into two types. Listed proposals subject to SEA are specified in legislation or guidelines. Case-by-case screening applies to all proposals to determine which ones have potentially significant environmental effects and warrant full assessment. Screening criteria and checklists from EIA can be readily adapted to this purpose, supplemented, as necessary, by policy tree diagrams and stakeholder consultation. Use of these methods also helps to indicate the type of approach and level of detail required for an SEA (e.g. policy appraisal versus impact assessment). For certain proposals, timing and tiering are important considerations in SEA screening decisions (e.g. at which level is SEA best carried out, how to relate it to any successive SEA and/or EIA process).

Scoping:

Identify the important issues and impacts that need to be examined

EIA scoping procedure can be adapted to the different types of proposal subject to SEA. An early, transparent and systematic process should be followed to focus on the impacts that matter for decision-making and set terms of reference for further study. Modified EIA methods, such as matrices, overlays, and case comparisons can be used to scope the environmental dimensions of specific plans and programmes, e.g. to identify inconsistencies in their objectives, issues that require attention and/or the potential impact of implementing the proposal. Where environmental considerations are generalised and less immediate (e.g. proposed immigration, fiscal or trade policies), appraisal methods can be used, such as environmental scanning to clarify the implications, and/or issue tracking to a stage when key impacts become clarified (e.g. immigration projections linked to housing demand, nationally or regionally).

Information:

Assemble environmental information

The general content of information to be gathered in an SEA can be specified in legislation or procedure. The data that need to be gathered for a specific proposal will be clarified during screening and scoping. SEA is carried out against a baseline or profile, typically a description or characterisation of the affected environment or media (e.g. air or water quality). Useful sources of background information include state of the environment reports and country environmental profiles. For plans and programmes with a spatial dimension, the baseline can be recorded as environmental stock and critical natural assets. Key indicators are used to measure change in terms of global sustainability, natural resource management and local environmental quality. Appropriate indicators for sector-specific proposals will depend on the key environmental impacts (e.g. emissions-based air quality indicators for energy, transport strategies).

<p>Consideration of alternatives:</p> <p><i>Identify and compare the range of alternatives, including a best practicable environmental option</i></p>	<p>Formulation of alternatives in the SEA process is central to integrating environment considerations into sector policy and plan-making. A first step is to identify the range of alternatives that meet the objectives of the proposal, and summarize their economic, social, and environmental aspects. The alternatives should include a do nothing alternative and best practicable environmental option (BPEO). Where potentially a large number of alternatives are open, methods used to systematically compare them include environmental benefit-cost analysis and multi-criteria evaluation (e.g. formulation of national energy or water policy). The BPEO helps clarify the environmental trade-offs that are at stake, and the basis for choice. Objectives-led SEA is critical for this purpose, and also can empower risk and benefit negotiation (e.g. to reduce NO_x emissions as part of transport strategy).</p>
<p>Impact analysis:</p> <p><i>Identify, predict and evaluate the effects of the proposal and the main alternatives</i></p>	<p>Usually, there is greater uncertainty to contend with in SEA compared to EIA of projects. Often, the relationship of policy-level proposals to environmental effects is indirect or difficult to locate in time or space, mediated by intervening factors. Indicator-based methods can show “direction of movement” for an impact, e.g. increase in habitat loss, reduction in volume of hazardous waste. Projection methods that are used to deal with uncertainty include trend extrapolation and scenario development. For plans and programmes that initiate projects, environmental impacts are more readily identified and predicted. EIA methods that are used with varying modification include impact matrices, GIS and comparative risk assessment. No single method is likely to be sufficient to cover the range of impacts in such cases.</p>
<p>Significance:</p> <p><i>Determine the importance of the residual impacts, and if appropriate, relate these to other benefits and costs</i></p>	<p>To determine significance, predicted and residual impacts (that cannot be mitigated) are evaluated against selected environmental criteria and objectives. As in EIA, this test gives decision-makers a key proxy of the environmental acceptability of a proposal. If appropriate, a balance sheet of gains and losses from a proposal also can be drawn up, e.g. in monetary or descriptive terms, to show their distribution among groups, and/or to illustrate the range of uncertainty (worst/best case). If major policy options or critical outcomes are at stake, sensitivity analysis can be used to test the effect of changed assumptions and the robustness of assessment. Alternatively, this test can be based on expert judgement and case comparison with similar actions.</p>
<p>Mitigation:</p> <p><i>Identify measures to avoid, reduce and offset the main impacts identified</i></p>	<p>The EIA mitigation hierarchy should be followed in SEA but with eye to the greater opportunities for its creative application. So first avoid, then reduce, and next offset adverse impacts, using specific measures and actions that are appropriate to their significance and specificity. A precautionary approach should be taken when information is incomplete but analysis indicates the risk or possibility of large scale, serious or irreversible environmental change. This may entail not going ahead with certain proposals or replacing them with no regrets alternatives. For low-threat situations, standard mitigation measures can be used to minimize an impact to ‘as low as reasonably practicable’ (ALARP level), e.g. using ‘best available technology not entailing excessive cost’ (BATNEEC) or contingency policies and plans to cope with low probability but highly damaging risks.</p>
<p>Reporting:</p> <p><i>Describe the Environmental impacts of the proposal and how they are to be addressed</i></p>	<p>Typically, a separate SEA report or statement must be prepared and made available to the public. Other than certain prescribed information content, there is no common format. Depending on the context, a report can be an environmental paragraph in a policy memorandum, a <i>section or chapter</i> in a plan or strategy, or a separate document or annex ranging from a few to several hundred pages. The proposal itself should contain or be accompanied by a brief explanation of the SEA process and a summary of findings, e.g. key impacts, preferred alternative, mitigation measures and outstanding issues. Use of impact display and trade-off matrices help to focus decision-making. Change already made to a proposal as a result of an SEA should be noted on a policy record sheet.</p>

Decision-making:

Approve, reject or modify the proposal, with reasons for decision

On submission to the final decision-making body, a proposal can be approved, rejected or modified (e.g. as a result of condition-setting). When doing so, the decision-making body has a duty or obligation to take account of the results of an SEA, including public consultation. Despite adverse environmental impact, a policy, bill or plan often will be accepted because the economic and social benefits are considered to outweigh the impact. Reasons for decision should be issued, specifying the terms of approval and any follow up requirements.

Monitoring:

Check to see implementation is environmentally sound and in accordance with approvals

Monitoring the implementation of a policy, bill or plan can be a simple check to see if environmental objectives are being met, or a systematic programme to measure its impact. Information tracking systems can be used to monitor issues and progress, and to focus and streamline any subsequent SEA or EIA process. Cumulative effects monitoring may be appropriate for plans and programmes that will initiate regional-scale change in environmental stock or critical natural assets. Methods and indicators for this purpose are not well developed.

Appendix 13: Considerations for UNDP quality programming

(Annex 2F: UNDP Programming Manual, December 2000)

(Source: available at www.undp.org/bdp/pm/chapters/progm2.pdf)

The following considerations alert the manual user to quality dimensions in programming and are generic to all phases of the programming process. They serve as a reference in the preparation of cooperation frameworks, in programme and project design, in appraisals and in monitoring and evaluating actual performance.

1. Relevance

- (a) How relevant are the programme or project objectives in relation to national priorities, Poverty Reduction Strategy, Millennium Development Goals, and to the Country Programme, United Nations Development Assistance Framework, and Common Country Assessment?
- (b) How relevant are the programme or project objectives to United Nations conference agreements and to the goals of the global and regional conventions to which the country is a signatory.
- (c) How relevant are the objectives in relation to aspirations and needs of the target groups and the UNDP mission to promote sustainable human development?
- (d) Has the programme or project context with its social, economic, political and environmental dimensions, and the problems and their root causes, been properly understood?

2. Stakeholder participation and partnership-building

- (a) Have all the relevant stakeholders been identified, including government and civil society organizations, local communities, beneficiaries, donors and private sector?
- (b) To what extent did the main stakeholders of the programme or project participate in the identification and design stages?
- (c) Is the situation conducive to participation by all relevant stakeholders, and could the participation mechanisms be improved?

3. Contribution to poverty reduction

- (a) Have the poor been identified and does the programme contribute to poverty reduction and, at a minimum, not make the poor worse off than before?
- (b) Does the programme address the multidimensional nature of poverty at three fundamental levels: (i) macro-economic policy; (ii) institutional change; (iii) micro-level interventions?
- (c) Is the intervention creating an enabling environment for pro-poor economic growth?
- (d) Are employment opportunities and jobs being created?
- (e) Does the programme or project build on the assets and strengths of the target population and contribute to strengthening their livelihoods through access to productive assets?

4. Gender equality and the advancement of women

- (a) Has all relevant gender information – with gender-disaggregated background data – been identified and have gender issues relevant to impact and anticipated outcomes been systematically identified and pursued?
- (b) Is the participation of gender specialists or representatives from women's stakeholders groups ensured in all steps of the programme cycle?
- (c) Has the proportion of TRAC and other resources allocated to the advancement of women been clearly indicated?
- (d) Have all possible steps been taken to ensure gender equity in the recruitment of project staff and consultants?

5. Protection and regeneration of the environment

- (a) Does the programme build on an adequate understanding of the biophysical dimensions, ecosystems, and existing environment-related issues in the programme area?
- (b) Is the management of land, forest, water, and biological resources being improved in ways that ensure their protection and sustainable use?
- (c) Does the programme improve the physical, social and economic access to food, water and energy services by impoverished people in rural and urban areas?
- (d) Have the Environment Management Guidelines been applied and is the proposed intervention environmentally sustainable?
- (f) Does the programme have implications for the global environmental areas of climate change, loss of biodiversity, pollution of international waters, land degradation, or ozone depletion?

5. Governance

- (a) Does the programme or project take into account the policy environment and the necessary inter-relationships between the Government, civil society and the private sector, which underpin sustainability and achievement of objectives?
- (b) Are governing institutions being strengthened for people-centred development?
- (c) Is decentralization being promoted to support local governance and empower communities and local institutions?
- (d) Is an efficient and accountable public sector being promoted that serves all citizens?

7. Most promising strategy

- (a) Have a variety of potential strategies been identified and considered?
- (b) Does the chosen operational strategy represent the most promising approach to address the development problem?
- (c) Have the following issues been addressed:
 - Social and environmental impacts and opportunities;
 - Risks and external factors;
 - Opportunities for synergies with other programmes;
 - Opportunity costs and trade-offs between various SHD (sustainable human development) dimensions?

8. Incorporation of lessons learned

- (a) Has a review of relevant experiences of other development institutions within and outside the programme country been undertaken?
- (b) Does the programme or project, in design and implementation, build upon lessons learned from experience?

9. Capacity development and sustainability

- (a) Does the intervention contribute to capacity development, by which individuals, groups, organizations and communities develop their abilities to perform functions, solve problems, and set and reach objectives?
- (b) Have the different dimensions of capacity at the systems, entity and individual levels been examined in defining the most promising operational strategy? (see capacity assessment guidelines at <http://www.undp.org>, (Democratic Governance) [Technical Advisory Paper #3.](#))
- (c) Have the management capacities been reviewed, and can be capacity-building measures for management be improved?
- (d) Do elements crucial to ensuring the sustainability of the programme or project results exist, for example:
 - Enabling policies;
 - Financial support and mechanisms;
 - Individual and institutional capacities to carry on;
 - Sustainable resource management.

- (e) Does the project, programme, or CPD build national capacity to follow-up United Nations conference agreements

10. Feasibility and technical soundness

- (a) Is there a logical relationship among the different programme or project elements, i.e., objectives, outputs, activities, inputs, and related indicators?
- (b) Does the programme or project build on correct assumptions?
- (c) Have risks and other external factors been identified and necessary safeguards incorporated into the design?
- (d) Have risks been properly identified, including the potential for economic crisis, natural disasters, conflict and civil strife?
- (e) Does the intervention allow adequate flexibility for redefinition and improvement of programme or project components to respond to complex and changing realities?

11. Management arrangements

- (a) How effective are the proposed management arrangements?
- (b) If national institutions or NGOs are designated to carry out certain activities without competitive bidding, has the justification for waiving competitive bidding been documented?
- (c) If a management support unit is to be set up, has its cost-effectiveness as well as its impact on sustainability and capacity-building been documented?
- (d) Where country office support is proposed, have cost-effectiveness, capacity-building measures and an exit strategy been documented?
- (e) Are the implementation arrangements adequate and prior obligations and respective responsibilities clearly defined?

12. Integration, synergies, complementarity

- (a) Does the intervention use the programme approach to the degree possible?
- (b) Have linkages (poverty, gender, environment, governance, etc.) with other projects and programmes been identified and pursued?
- (c) Does the programme support the mobilization of additional resources for development?
- (d) Have opportunities for aid coordination been explored?
- (e) Does the intervention provide added value while complementing the work of other development partners?

13. Results orientation

- (a) Are adequate baseline data available to allow monitoring of progress and results?
- (b) Are adequate indicators, benchmarks and means of verification identified to measure results, including the efforts on participation and partnership-building, gender, environment, etc.?
- (c) Have adequate mechanisms for monitoring and evaluation been established?
- (d) Are the objectives clear, precise and measurable?
- (e) Is it clear who is responsible for achieving the different results and undertaking the activities?

14. Resources and inputs

- (a) Does the envisaged benefit justify the resources to be spent?
- (b) Does the budget adequately cover the envisaged activities and are the respective inputs by the Government, UNDP and other partners defined?
- (c) Does the PSD or project document raise any policy issues concerning inputs?
- (d) If the programme or project is to be partly or wholly funded by a contribution from the private sector, have adequate steps been taken to ensure that the association of UNDP with the private entity will be legal and beneficial?

Have the procedures for financial management and reporting been described in the PSD or project document?