



Strategic Environmental Assessment (SEA) as a tool for mainstreaming Sustainable Land Management

Training course at CSD-16 Learning Centre
New York, 12 May 2008

What is Strategic Environmental Assessment (SEA)?

What is SEA?

- **Analytical** and **participatory** approach
- that aims to **integrate environmental considerations** into policies, plans and programmes (P/P/P)
- and **evaluates inter linkages with economic and social considerations.**

Key international developments in SEA

- **OECD/DAC Good Practice Guidance on SEA (2006)** – endorsed by key donor agencies, and International Financial Institutions
- **SEA Protocol to UNECE Convention on EIA in Transboundary Context (2003)** – signed by 37 countries
- **SEA Directive in EU (2001)** – implemented in 25+ EU member states and accession countries.

SEA can

- Evaluate an existing P/P/P or the one that is about to be revised (to highlight its sustainability consequences which should be considered);
- or
- Provide inputs into developing a P/P/P (so that it addresses sustainability dimensions effectively).

Outcomes of SEA

SEA provides:

- Suggestions for optimising P/P/P (so that it effectively addresses key sustainability issues)
- SEA Report (for decision-makers and key stakeholders - to facilitate transparency of the whole process)



SEA may have different forms

It may:

- focus on environmental impacts or integrate all three dimensions of sustainability;
- engage a broad range of stakeholders or be limited to expert evaluation;
- be conducted in a short time frame or over a long period;



SEA is not necessarily....

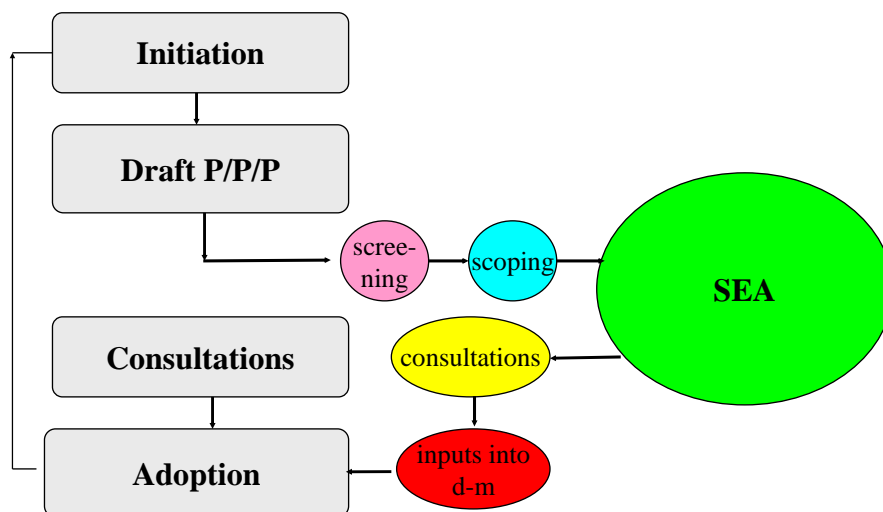
- a 'stand alone' procedure - it can be also carried out as part of the P/P/P formulation
- 'mega-EIA' - it also may be based on quick appraisal techniques

Key entry points for SEAs

Key entry points for SEA: Country level

- National-level overarching strategies, programmes and plans
- National Policy reforms and Budget support programmes
- National sectoral P/P/P, e.g. energy or health sector reform
- National and sub-national spatial development plans and programmes
- Trans-national plans and programmes (including multi country plans and investment programmes)

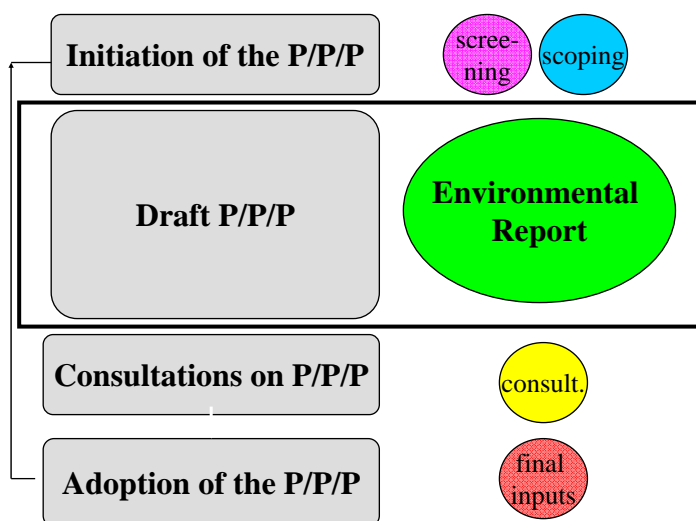
SEA once draft P/P/P is ready



SEA parallel to P/P/P elaboration

- SEA experts work **separately but concurrently** with the planners.
- Various **assessments/inputs presented** to the planning team **during elaboration of P/P/P** - briefing notes in the various stages of the P/P/P formulation
- **Does not necessarily prolong** elaboration of the P/P/P.
- **Requires effective communication** between planning team and SEA team (e.g. leader of the SEA participates as observer on the sessions of the planning team and vice versa).
- SEA report brings all this information together and **summarizes key open issues for decision-making**

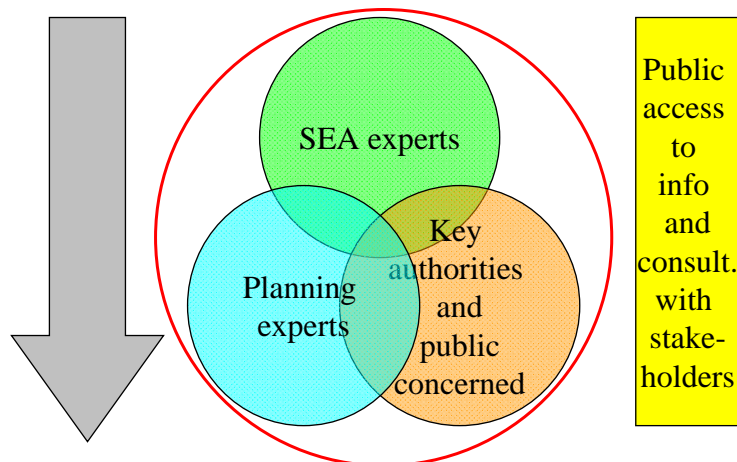
SEA parallel to P/P/P elaboration



SEA fully integrated into P/P/P formulation

- SEA experts are an **integral part** of the planning team.
- SEA experts draft key questions – they **jointly carry out various assessments with planners**
- **Facilitates elaboration** of the P/P/P
- **Increases understanding of SEA** among planners
- SEA experts need a **clear mandate and role within P/P/P team**
- Systems for review of **conflicting views** need to be in place
- Requires **effective internal communication** with the planning team.
- SEA report **documents the entire assessment process**

SEA fully integrated into P/P/P formulation



SEA is definitely not...

...a 'blueprint approach'

**Why is SEA important,
what benefits it brings and
how much does it usually cost?**

Why is SEA important

Many key decisions are no longer made on project level:

- Decision-makers increasingly cope with **multiple** and often **closely interlined** development interventions and projects
- **Shrinking natural resources** and **sustainability challenges** call for strategic management
- **Strategic interventions** and **specific projects** need to be coordinated

Benefits of SEA at glance

SEA can:

- **support sustainability-based evidence to decision-making**
- **identify new opportunities and win-win options**
- **prevent costly mistakes**
- **build public engagement in decision-making**
- **facilitate trans-boundary co-operation**

The institutional dimension of SEA

„Effective SEA depends on an adaptive and continuous process focused on strengthening institutions, governance and decision-making processes rather than just a simple, linear, technical approach focussed on impacts, as is often found in EIA“ (OECD-Guidance, p.51)

Steps to address institutional considerations in SEA

1. Institutional and governance assessment

- Review of country environmental management and governance systems
- Review of analytical capacity
- Gain access to decision-making

2. Institutional and governance strengthening

- Support to increase social accountability and improve governance
- Adaptive learning – ensuring continuity in SEA processes

Costs of SEA

- **Costs vary** depending on the complexity of the P/P/P and the approach taken to SEA
- In Europe, **SEA usually adds 3-15%** to the total planning costs
- These **costs are marginal** when compared with benefits of SEA

Tasks in SEA, its analytical, logic and critical issues for application

Basic stages in SEA (1)

(accord. OECD/DAC)

1. Establishing the context for the SEA
 - Screening
 - Setting objectives
 - Identifying stakeholders
2. Implementing the SEA
 - Scoping (in dialogue with stakeholders)
 - Collecting baseline data
 - Assessment
 - Identifying alternatives
 - Identifying how to enhance opportunities and mitigate impacts
 - Quality assurance
 - Reporting

Basic stages in SEA (2)

3. Informing and influencing decision-making
 - Making recommendations (in dialogue with stakeholders)
4. Monitoring and evaluating
 - Monitoring decisions taken on the P/P/P
 - Monitoring implementation of the P/P/P
 - Evaluation of both SEA and P/P/P

Common Tools for SEA

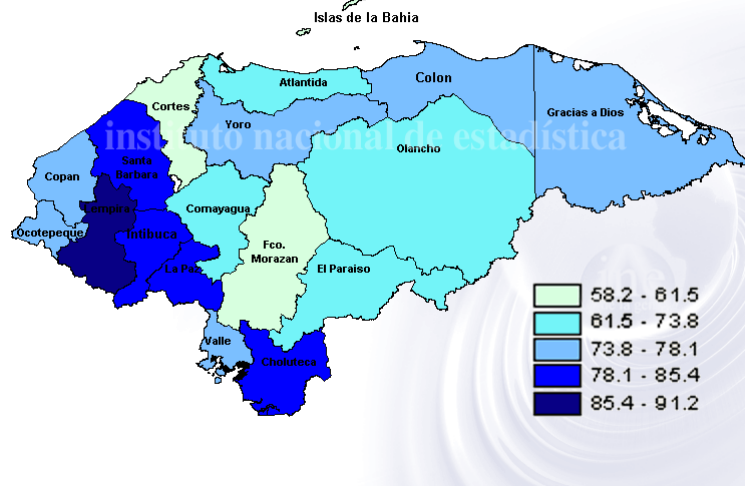
SEA Step	Common Tools
Scoping of SEA	Checklists /matrices Expert judgements
Baseline assessment	Review of State of Environment reports and similar documents Inventory of physical environmental conditions & primary data collection through monitoring and analysis Structured interviews
Development and comparison of options (alternatives)	Public or expert consultation Review of case studies, Multi-criteria analysis; Sensitivity analysis
Impact analysis	Expert judgements Matrices, GIS; Decision trees Case comparisons, Scenario development; Risk assessment; Predictive and simulation models; Benefit cost analysis or other economic valuation techniques;



Benefits of SEA: Example of Honduras



Mapa de pobreza de Honduras según metodología línea de pobreza



CONTEXT

- In Honduras, SEA is linked to the review of Strategic Municipal Development Plans
- 12 municipalities are grouped in 2 associations
- 8 municipalities are in areas severely affected by desertification (degradation of natural resources such as soil, water, forest and biodiversity)



Objective

**Integrate the environmental
dimension into municipal planning**



INVOLVED INSTITUTIONS

- **German Development Cooperation (GTZ)**
- **International Union for Conservation of Nature (UICN)**
- **Ministry of Governance and Justice**
- **Ministry of Environment and Natural Resources**
- **12 municipalities**
- **2 municipal associations**

Progress of SEA in Honduras

- **Scoping carried out**
- **Environmental Baseline established**
- **Business-as-usual-scenario established**

This has enriched the first step of municipal planning i.e. through the assessment of territorial and land-use alternatives.



Progress of SEA in Honduras

Currently we are at the stage of defining

Vision

Mission

Strategic objectives and

Priority projects

of the Strategic Municipal Development Plans

Benefits of SEA in Municipal Planning

Due to the fact that the application is still ongoing the following conclusions are preliminary:

- **SEA improves overall quality of planning processes**
- **Provides systematic guidance of environmental assessment of local-level investments from the beginning**
- **Facilitates well informed decision making among different alternatives combining socio-economic and environmental selection criteria**

Benefits from SEA

- **Improves efficiency and speed up processes compared to traditional project level environmental impact assessment which represent a bottleneck for investments in Honduras**
- **Contributes to disaster prevention (ex. Hurricane Mitch) through assessment of medium and long time impacts**
- **Allows sectoral planning as opposed to isolated project approaches**



gtz
Region
Environmental Policy and Promotion of
Strategies for Sustainable Development

Corners of Idea

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Corners of Idea

SEA should provide especially the following services:

1. **Expert analysis:** Thoroughly analyse positive and negative environmental impacts
2. **Participatory process:** Involve key stakeholders
3. **Plan improvement:** Provide early and „user-friendly“ inputs into elaboration of the P/P/P (e.g. alternatives, mitigation measures, etc.)
4. **Support sustainable development:** Comprehensive overview of key environmental, economic and social implications of proposed developments



Introduction to the training course

Target groups

In developing and transition countries:

- Administration officials and planners in environment, planning, sector ministries.
- National SEA consultants/experts
- NGO representatives

Within donor agencies:

- planners and consultants in environment, planning, and other sectors.

Training approach

- Based on the OECD Development Assistance Committee (DAC) "Good Practice Guidance for Development Co-operation: Applying Strategic Environmental Assessment"
- Uses Harvard Business Case Methodology
 - Focuses on practical 'case work'
 - Allows discussion on locally/regionally appropriate SEA approaches (based on insights brought forward by trainees)
 - Conclusions formulated through joint debate – rather than providing 'ready-made' teaching messages

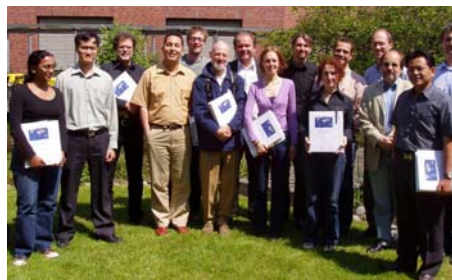
Examples of Applications (I)

- **Tunisia:** Cumulative impact assessment regarding Infrastructure Programme
- **Benin:** Greening the Poverty Reduction Strategy Paper
- **Namibia:** Elaboration of regulations for the Environmental Management Bill
- **Mauritania:** National assessment approach on emerging extractive industry (gas sector)



Examples of Applications (II)

- **Indonesia:** Strategic advice on Tsunami-reconstruction measures, trainer pool for SEA; lessons learnt provide source for infrastructure programmes at national level
- **Vietnam:** Integration of protecting interests of the National Park Tam Dao in District / Province-socioeconomic development planning; national road map



Train-the-trainers in Bonn 06/2006:
Participants from South Africa, Vietnam,
Indonesia, Tunisia, Morocco, Australia,
Slovakia, Czech Republic, Germany

Examples of Applications (III)



- **International Association for Impact Assessment (IAIA):** Official training prior to annual conference 2007 in Seoul



- **McGill University Canada :** McGill-UNEP Intern. Master Programme in Environmental Assessment will use materials in Winter term 2007 and beyond



AFRICAN DEVELOPMENT
BANK GROUP

- **African Development Bank:** Mid-term objective: structured learning programme on SEA in order to internalise procedures



- **Asian Development Bank:** "Core Environment Program" in the greater Mekong Subregion (including transnational SEAs); joint Capacity development program in Vietnam;



- **EASY-ECO 2005-2007:** EU's Sixth Framework Programme for Research and Development - Marie Curie Actions, UNEP, University of Manchester, REC...and GTZ

Training elements

Most modules based on:

- Individual reading and preparation
- Short introductory lecture
- Case Work
- Wrap-up sessions to formulate conclusions
- Facilitated debate on "how does this relate to our context?"
- Games/Exercises ('Action learning')

Modules of the training

Introduction to SEA

Case works

- Link P/P/P and SEA, design appropriate strategy for SEA
- Determine the right issues and scope of assessment
- Analyze the baseline trends (zero alternative)
- Assess proposed development objectives and elaborate their alternatives
- Assess proposed actions and consider their alternatives
- Use effective means of participation
- Ensure sufficient management and monitoring in implementation of the P/P/P
- Manage SEA efficiently within budgetary and time constraints

Evaluation and Follow-up of the GTZ/InWent SEA Training

+ Further inputs, resources and reading

Case materials

- Fictional country Ganama. Factsheet gives background information.
- Case work on SEA for formulation of the Land Use Plan for Munto River Area
- There is a 'chronology' in the case with new information and development coming in.
- New cases will be added in the future

Information on Ganama



Screenplay of the case

- 5 major development proposals – need to revise old Land Use Plan to see if they can be accommodated, and on what terms
- Gov. decided to do SEA as part of the LUP revision
- No legal requirements for SEA in the country
- SEA will be carried out parallel to the envisaged LUP period of 10 months
- You are hired by the government as a team of external advisors



Development programme proposed by the Framework LUP

Programme	Programme objective
Food security and land tenure programme	Development of 50 000 hectares of irrigated land
Ganama bio-diesel programme	Development of 50 000 hectares of jatropha seedlings from on-site nurseries (irrigation needed for the first 6 months)
Lundu Boria eco-tourism programme	Development of a 50 ha lodge area including an Exclusive Use Zone with a 20 kilometre radius
Munto River hydro scheme	Increased energy supply through construction of weir, generation plant and transmission lines
Ganama Export Processing Zone	Establishment of an EPZ of an area of 100 ha



Steps undertaken so far

- You have elaborated a scheme to link the necessary tasks of the SEA with the envisaged planning procedure.
- You analysed the quite fragmented relevant data in the country and deducted a number of highly relevant environmental and social issues:

Results of scoping

Key issues of sustainable development in
Ganama

- Increasing land pressure
- Water depletion and water quality problems
- Biodiversity
- Increasing deforestation
- Increasing demographic pressure
- Increasing food insecurity resulting from
population growth, degraded arable lands and
mismanagement of water resources

You are entering the next step:

**Analyzing the baseline trends
(zero alternative)**

Aim

- Describe the **past trend** (overall trend and key concerns) for all environmental/SD issue that SEA focuses on
- Outline the **likely future evolution** of this trend if the proposed P/P/P would not be implemented (i.e. consider impacts of already approved development initiatives)
- Identify any **constrains** and **opportunities** that these trends pose for the respective P/P/P
- Document any **serious lack of information**

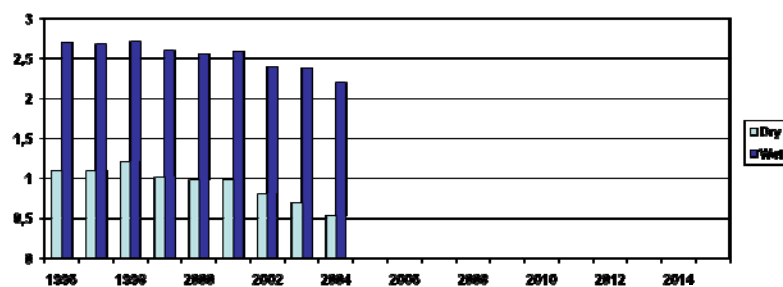
Why is it important

- Describes **“zero alternative” (no P/P/P)** outlining ‘future environmental context’ in which the P/P/P will operate
- Helps to determine whether certain environmental trends pose serious **threats** or **opportunities**
- Provides input for determination of key impacts on this “future environment” and helps to assess positive or negative impacts of proposals contained in the P/P/P
- Provides **basis for assessment of cumulative impacts**

Tools

- **Quantitative data** available – it is possible to **analyze key trends and extrapolate them**
- **No quantitative data available** – **expert assessment** of past and current trends (strengths and weaknesses) and explanation of key future issues (threats and opportunities) – this can be done by ‘story line’ for each issue or within the overall analysis of the development context (e.g. SWOT)

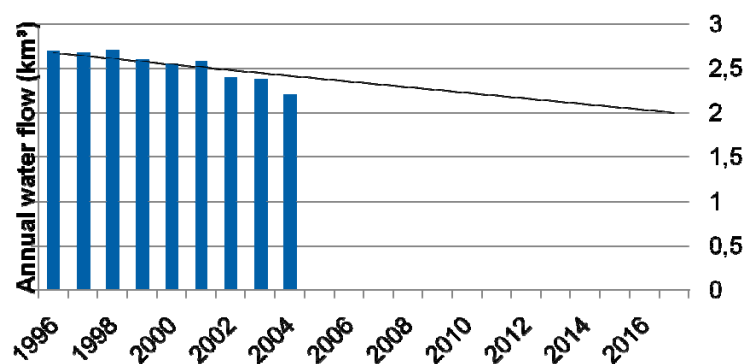
Issue no. 2: Mean annual water flow (km³) measured at a flow gauge station 5 km upstream of Munto River Mouth



Discussion for the case work

- Predict water flow by 2015.
- How would you flag the key concerns?
- Is projection accurate enough / is information sufficient for predictions?
- What conclusions would you draw?

Result of linear extrapolation

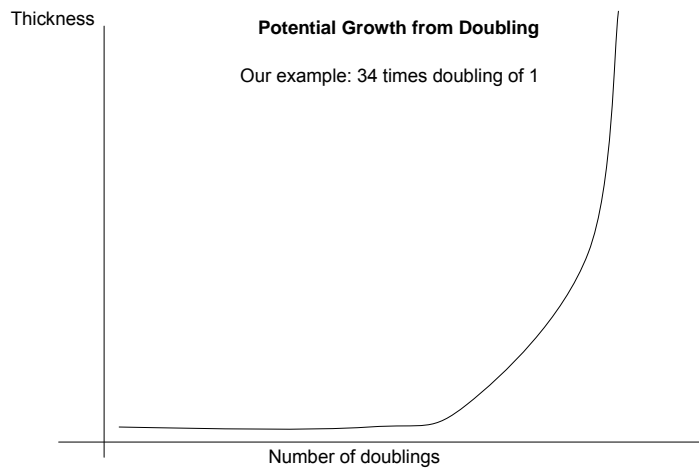


Concluding remarks

- Analyzing future trends without the P/P/P is **difficult** but **very important** part of any strategic assessment
- **SEA experts** and **planners** can consider these threats/opportunities when (re)formulating objectives of the P/P/P or its actions
- It will provide how **useful insights** it gives and it will make your **further tasks in the SEA easier**
- Do not be afraid of **uncertainties** – just properly **acknowledge** them
- Where possible, **review** your baseline analyses **with planning team and key stakeholders** (authorities, academia, NGOs or even business) – they may provide very useful data or insights

Paper Fold

Logics of exponential growth



Case work 4

Assess proposed development objectives and their alternatives



Aim

- To analyze **positive** and **negative** impacts of proposed development objectives, priorities or scenarios on the main environmental trends
- To check whether **opportunities** are sufficiently used
- To check whether **risks** are properly understood
- Recommend how the **proposed development objectives, priorities or general scenarios** may be **optimized**



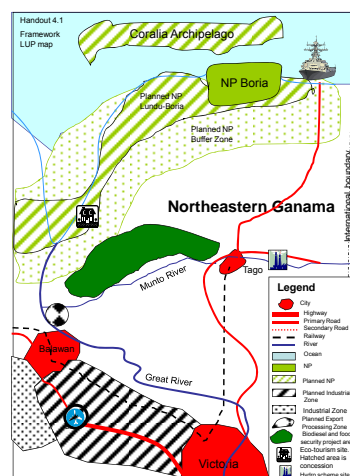
Why is it important

- Enables optimizing proposed development objectives or priorities of the P/P/P (through different approaches for achievement of objectives or suggestions for adaptation of objectives)
 - When done concurrently with the P/P/P elaboration, it may recommend orientation or conditions for elaboration of future activities (i.e. conditions for further elaboration of the P/P/P)
- ! **Not a formality – proposed objectives/priorities/ scenarios are important since they orient and influence future thinking about proposed activities**

Situation for case work

- The programming process moved forward and the planning team has formulated overall objectives and proposed priorities for the Land Use Plan.
- You are invited to review these.
- You have also been given an alternative proposal by a NGO that tries to participate in the SEA.

Framework LUP map



Instruction for the case work

- Outline environmental implications of generally formulated objectives and priorities of proposed alternatives of the LUP. For simplicity, please use only the environmental issue of water management.
- If necessary, recommend changes to these strategic directions of the programme which were presented to you. Please try think creatively but also realistically – e.g. consider economic implications/limitations of proposals that you make.
- What additional analysis would you undertake to analyse these strategic impacts properly?

Tools

Impact matrices

	Relevant environmental issues/objectives				
Proposed objective, priorities, scenarios in the P/P/P	--	-	N/A	+	++
Key features of impact					
Impact features: Direct/indirect; Magnitude (local, regional, national); Severity (very negative – very positive), Duration (long-term, short-term); Reversibility					



Practical suggestions

- In certain cases you might not use only symbols – try to explain main features of impacts
- Where possible involve:
 - planners (it may influence their future thinking in the formulation of the P/P/P) and
 - key stakeholders in this analysis (they may provide useful insights)
- Do not forget that the purpose of this analysis is to provide suggestions for optimizing development objectives and priorities



Wrap-up - questions

- Were the relevant environmental issues/objectives clear enough for an assessment?
- Was there enough scope for better alternatives?
- Did you find the technique in the case work appropriate – what would work better in your practice?



Example of Honduras



Alternatives in Strategic and Territorial Planning

- **Alternative strategies for each municipality are analyzed with regard to their impact on sustainable land management and natural resources in general**
- **Alternative projects and measures are prioritized according to their resource use efficiency**
- **Environmental safeguards are established**
- **The instrument used for this purpose is a questionnaire for relevant staff of the city administration.**
- **Expert knowledge will be sought in case of the need for indepth technical assessments**



Relevance of SEA in supporting Sustainable Land Management; institutional dimension of SEA



Questions for discussion

- Which challenges did you experience in Sustainable Land Management and do you consider SEA helpful in this respect?
- What are the concrete potentials which SEA might offer?
- How to support institutional capacities and governance in the context of Sustainable Land Management?



Thank you very much!

