Ecosystem Services (ES) Inclusive Strategic Environmental Assessment (SEA)

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Overview

- Why linking SEA & ES and relevance at municipal spatial planning levels;
- Methodological Approaches to SEA & ES;
- SENSU Method (work in progress).
One of the most important drivers is **Land Use changes** (MEA, 2005), critical at municipal planning levels.

- Inequity
- Poverty
- Social conflicts
- “Threat” to future generations
- “Threat” to MDG compliance
SEA

- Powerful and important tool;
- Assessment of environmental effects of certain plans, programs and policies (European Directive 2001/42/CE of 27 June concerning plans and programs that set the context for development projects requiring EIA);
- Incorporates environmental issues and principles of sustainability in policy-making and planning processes;
- Offers holistic and long-term perspectives and promotes strategic and integrated approaches;
- Discusses alternatives while development options are still open.
Two main approaches to SEA:

- EIA-based approach - earlier form of SEA, follows closely environmental impact assessment approaches, driven by the assessment of environmental effects of proposals

- Strategic-based approach - alternative form of SEA, takes a strategic approach to development choices, integrating environment and sustainability, rather than looking at the effects of plan and program (Partidário, 2007)
Strategic-based model for SEA
Framework of key elements and activities

Critical Decision Factors (clusters)
Strategic Issues
Environmental/Sustainability factors
Strategic Reference Framework
Trend analysis (SWOT, scenarios - not predictions)
Opportunities and Risks
Institutional governance
Communication and Facilitation
Follow-up and guidelines

Partidário, 2007
http://www.seatastkteam.net/library.php
International Review

Convention on Biological Diversity (article 14)

Consequences of PPP’s on biodiversity should be taken in consideration

- Prevent & Minimize impacts
- Allow Public Participation

- “Strategic Environmental Assessment and Ecosystem Services” – OCDE (2008)

- “Biodiversity in Environmental Assessment: Enhancing Ecosystem Services for Human Well-Being” (Slootweg et al., 2010)
International Review (Cont)

- Environment (Biodiversity included) supplies goods and services that cannot be attributed to one geographical area or sector;

- Increasing integration of biodiversity as supplier of livelihoods through ecosystem services;

- In general SEA is not taking advantage of the opportunities and potential of ES.
Why linking SEA & ES?

- Safeguarding livelihoods is a major driver in SEA (promote trajectories for sustainability);

- Human strategic decisions are the crucial SEA targets (influence drivers – turn problems into opportunities);

- SEA can influence strategic changes and prevent increased pressures;

- Increase transparency and commitment in decision-making (valuing ES and put it on decision makers agenda);

- Identify win-win outcomes from development options (equity and poverty issues, for future generations).
SENSU Methodology Proposal

1. Identification of ES and Stakeholders
   - Mapping Stakeholders' interests
   - Quantification / Qualification of ES

2. Priorization of ES
   - ES trends analysis in relation to the identified problems for the area/region
   - Prioritization of ES

3. ES Assessment
   - ES Valuation
   - Opportunities and risks assessment of Strategic Options for the ES

1. CDF Identification & Analysis
   - Definition of the ES as a CDF or CDF criteria

2. Analysis & Assessment
   - CDF Trends assessment
   - Assess opportunities & risks
   - Territorial Model Assessment
   - Planning, monitoring, management, and assessment guidelines

3. Follow-Up

Consultation of identified Stakeholders

Participation & Involvement of the Interested Parties

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### 1. Identification of ES and Stakeholders

<table>
<thead>
<tr>
<th>Ecosystem Service</th>
<th>Provisioning Services</th>
<th>Regulating Services</th>
<th>Cultural Services</th>
<th>Supporting Services</th>
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- Identification of stakeholders with interests in some ES or whom their well-being depends on

- Mapping *Stakeholders* interests
- Quantification / Qualification of ES
2. Priorization of ES

**ES trends analysis in relation to the identified problems for the area / region:**
- Identify actual & tendencial state of ES;
- Analyze the evolution of ES in relation to evolution scenarios;
- Identify drivers and how they will contribute to the supply trends of ES.

**Priorization of ES:**
- Establish prioritization criteria (stakeholders options & sensitiveness).
3. ES Assessment

**ES Valuation:**
- Establish a grid of valuation that allows comparison;
- Establish trade-offs criteria’s (stakeholders & prioritization);
- Final ES-Values table.

**Opportunities and risks assessment of Strategic Options for the ES:**
- Analyse how the strategic options or strategic proposals can affect ES (+ or -);
- Assess the strategic options or strategic proposals taking into account ES values.
Stakeholders are crucial in outlining the importance of ecosystem services;

Engage stakeholders in collaborative identification of critical decision factors, and strategic options, and in their assessment based on opportunities and risks;

SEA and planning processes are enhanced by the identification and quantification of ecosystem services;

Valuation of ecosystem services is more tangible to decision makers.

Possible Difficulties:
• Stakeholders engagement & capacity building;
• Valuation methods constraints (one of the inputs to decision-making).
Municipal Spatial Planning

• Agenda 21: Many of the environment problems & solutions have their roots in local activities;

• Local level is the closest to people(education/mobilization);

• Local governments are responsible for land use planning (important driver for ES).
Municipal Spatial Planning

Local Authorities

Ecosystems Services Conservation

“Income”

Natural Resources Economy “Valuation”

Ecosystems Services

People

Activities

Drivers of Change

Public Policies “Legal Framework”

Municipal Spatial Planning

Local Communities Sustainability

“Legal Framework”

Different approaches

Different scales

Different sectors

• Equity
• Poverty Alleviation
• Win-Win solutions
• Safeguarding livelihoods

• Land-use options
• Local Decision-making
• Biodiversity in Policy choices

SEA

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Final Remarks

- SEA is a key impact assessment instrument not yet used to its full potential;
- Growing international relevance;
- SEA is a strategic process to ensure the integration of the ES in decision-making;
- Can contribute to avoid impacts of human actions on ecosystem services;
- Link SEA & ES is a new field of study still in development;
- Particularly potential for municipal spatial planning;
- Proposed methodology is a contribute to the growing knowledge in this area.
Questions?

Thank You for Your Attention

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