



# Practical aspects of SEA

Matthew Cashmore and Martin Smutny  
Consultants to UNECE  
Tbilisi, 27 April 2017

# Overall design of SEA

## Preparation of plan or programme

- Internally by planning agency
- Outsourced (e.g. to urban planning studio)

## Preparation of SEA

- Internally by planning agency
- Prepared by environmental authorities
- Outsourced (to consultancy company)

# Costs of SEA

Costs largely depend on

- How detailed is strategic document and number of its alternatives
- Data availability
- Length of the planning process

Most SEAs require 70-80 person days to complete (**UK study**)

Czech survey: about 50% of SEAs required about 2 – 10 person days time allocation from the planning authority side

# Costs of SEA in EU Member States

*Table 7: Estimated costs of preparation and procedural steps of the SEA process*

Member State	Estimated costs
Denmark	20.000 - 70.000 DKK per SEA (~ 2,700 - 9,400 EUR)
Estonia	4.000-30.000 EUR per SEA
Hungary	20.000-40.000 EUR per SEA*
The Netherlands	Total costs: 570.000 EUR per year, of which 372.800 EUR for municipalities, 164.400 EUR for provinces and 32.800 for the state.
Slovenia	EUR 5,000–100,000 per SEA. The environment reports are EUR 2,000 or more, and suitable assessment reports are more than EUR 30,000
The United Kingdom	35.000-80.000 EUR for typical SEAs (See text below)

\* figures only relate to the preparation of the environmental report and only to cases of nation-wide plans and programmes.

Source: Study concerning the report on the application and effectiveness of the SEA Directive, European Commission, 2009

# Costs of SEA

Main costs usually associated with initial applications of SEA when

- appropriate approaches & tools have to be tested & developed
- basic data sets need to be compiled

Subsequent SEAs are less costly

- build on previous experience
- may require only standard analytical work & process management

**Costs for SEA are marginal compared with costs of strategic document implementation!!!**

# Budget for SEA – process management

- Costs of
  - Management of the procedure
  - Client interface and inputs to the planning process
  - Coordination of consultations
  - Drafting the scoping and SEA reports
  - Responses to comments obtained

# Budget for SEA – costs of expertise

## Costs of

- Detailed studies
  - Targeted consultations – expert panels, problem solving workshops, etc.
- 
- Specialized experts are needed – optimally, the SEA team should have Team Leader + core specialist + a ‘pool of experts’ that can be called upon

**The costs and composition of SEA team can be determined within scoping by the planning authority in consultation with the Ministry (and the Ministry of Health)**

# Case example: SEA NDP 2007 – 2013, Czech Republic

- National Development Plan
  - key planning documents for distribution of the EU funds in the Czech Republic
  - 25 890 000 000 EUR for the period 2007 – 2013
  - sets priorities for Operational Programmes
- SEA
  - June 2005 – December 2006
  - Altogether 10 experts (team leader, nature and biodiversity, public health, waste management and energy, transport, public participation etc.)
  - Over 200 person-days input
  - SEA team hired by the Ministry of Regional Development



# Case examples: SEA SEDP Con Dao, Vietnam

- SEDP
  - General strategic development document for the archipelago
  - Stipulates main three development goals focused on the tourism development
- SEA
  - Carried out within GEF / UNDP project
  - 2 experts (international and local) + UNDP supporting staff (administration, communication with authorities)
  - Rapid assessment: 1 month in Vietnam + email communication

# Case examples: SEA Land-Use Plan Krasna Hora, Czech Republic

- Amendments of land-use plan with purpose to “define new localities for building, for additional service functions in municipality, and other areas for small businesses and manufactures, which will provide new working places in the area. Important is also recreational function”.
- SEA
  - July and August 2007
  - Approx. 14 person-days
  - SEA team: consultancy company
  - 3 experts (waste, biodiversity, public health)

# Tendering SEA – general options

1. Separate bids for preparation of the strategic document and for SEA
  - More transparent for the stakeholders and public, roles and responsibilities are clearly distinguished
2. Single bid both for preparation of the strategic document and for SEA (however with separate responsibilities and separate accountability)
  - Single bid facilitates cooperation on:
    - Gathering and use of data
    - Integrating SEA inputs to the PP
    - Finalizing the assessment
    - Consultations with the relevant authorities and public

# Tendering SEA – ToR

## ToR needs to specify

- Steps and timeline of the strategic document
- Expected inputs by the SEA team

## Important to agree and specify with the planning agency on:

- Provision or gathering of data
- Feedback of the assessment results i.e. optimizing the strategic document based on the SEA inputs
- Consultations with other relevant authorities and public

# Tasks to be assigned to SEA consultants

- Inputs to screening form mainly regarding the environmental and/or health problems relevant to the strategic document, and the likely impacts of the strategic document
- To draft the scoping report
  - Identify the key environmental and health issues to be further addressed in SEA,
  - Outline possible alternatives or options which should be addressed within SEA,
  - Indicate territorial dimension of likely impacts,
  - Suggest analyses and surveys to be further conducted as well as methods and tools to be used,
  - Identify stakeholders to be involved in further steps (including environmental and health authorities as well as public).

# Tasks to be assigned to SEA consultants

- To prepare draft and final versions of the SEA report including relevant analyses i.e.:
  - Analyse the baseline for relevant environmental and health issues
  - Evaluate likely effects
  - Formulate relevant migration measures
  - Propose monitoring scheme
- Coordination of the stakeholders involvement including public participation throughout SEA process including consideration of comments and suggestions received in the scoping and/or SEA reports
- Communication to and coordination with the planning team to achieve proper integration of SEA inputs in the strategic document

<b>Main SEA tasks and analyses</b>	<b>Proposed number of workdays for analysis</b>	<b>Proposed number of workdays for consultations</b>	<b>Possible constraints (e.g. lack of data)</b>

# Topics for discussion

- How demanding can SEA be in terms of
  - Person days
  - Total time
  - Expertise
  - Data
- Are usually available resources for performing SEA adequate to expected scope of tasks and deliverables?
- If not, how does the SEA approach need to be adjusted to available resources?
- What are the important issues to be reflected in ToR for SEA?



# Addressing alternatives

## Aims of planning and SEA

- Maximise positive effects of the plan
- Optimise proposed measures to minimize adverse environmental effects
- Enhance cumulative positive effects
- Seek the best solutions for implementation of development measures
- Minimise the need of mitigation measures

# Addressing alternatives

- Primarily, planning experts should develop alternatives as a part of the plan-making and SEA should evaluate them from likely environmental and health effects point of view
- SEA may generate additional alternative options i.e. elaborate new alternatives or recommend new alternatives to be developed by planning team
- **However, intensive communication and cooperation between planning and SEA teams is essential (otherwise integrating SEA suggestions in the strategic document will not happen)**

# Case example: SEA of the Offshore Renewable Energy Development Plan (OREDPA) for Ireland

- The OREDPA sets out scenarios (low, medium, high) for offshore renewable energy development in Irish waters up to 2030 and a longer-term vision for the growth of the offshore renewable energy sector.
- Rather than identify a preferred alternative from the scenarios, the SEA aimed to identify the maximum amount of renewable energy development of different types – fixed wind, wave, tidal and floating wind – that could be accommodated in six assessment areas without causing significant adverse environmental impacts.

# Case example: SEA of the Offshore Renewable Energy Development Plan (OREDPA) for Ireland

- SEA Results indicated there was potential to achieve the high development scenario without causing significant environmental impacts, and expand beyond this level in the future. It also helped identify the most promising areas for future developments.

## Achieving Development Scenarios for Fixed and Floating Wind

Overall, the scenario for offshore wind set out in the OREDPA is to develop 4,500MW by 2030. This includes both fixed and floating wind. Based on the results from Chapter 11 of the ER (the assessment of the assessment areas) and the assessment of cumulative effects (Chapter 12 of the ER) it has been identified that in total there is potential to develop between **9,200MW** and **12,000MW** from fixed wind and at least 27,000MW from floating wind.

## Achieving Development Scenarios for Wave and Tidal Energy

Overall, in terms of wave and tidal energy, the scenario set out in the OREDPA is to develop 1,500MW by 2030. The results from the assessment conclude that overall the potential developable wave resource, in both shallow (10m to 100m depth) and deeper water (100m to 200m depth) is significant, totalling between 27,500MW and 31,100MW across all areas, with at least 12,500MW in shallower waters. In comparison, the overall potential tidal energy resource is much more constrained, ranging between 1,500MW to 3,000MW across Assessment Areas 2 and 6.

# Case example: SEA Master Plan for City of Orhei, Moldova

1. 'Zero' or 'no-development' option
2. Alternative proposals for the bypass road in the framework of 2015 Master Plan
3. Comparison of the Master Plan Orhei 2015 and Master Plan of 2008



No. of the zone	Functional designation of land of the previous Master Plan 2008	Functional designation of land of the current Master Plan 2015	Impact on the environmental components				Comments (arguments for level of impact identified)
			Air	Water	Soil	Biodiversity	
1	2	3	4	5	6	7	8
1	Industrial production zone	Complex recreation zone with sport and touristic elements and water bodies	<b>+2</b>	<b>+1</b>	<b>+1</b>	<b>+2</b>	<b>+1,+2</b> Elimination of the impact of the pollution from the industrial units on the atmospheric air, reduction of floods, reduction of pollution of water bodies. Due to the collection of funds from the recreation sites improvement of landscape and of recreational functions of the area
2	Zone of living areas with block apartments buildings	Complex recreation zone with sport and touristic elements and water bodies	<b>+1</b>	<b>+1</b>	<b>+1</b>	<b>+1</b>	<b>+1</b> Elimination of the impact of the pollution from the industrial units on the atmospheric air, reduction of floods, reduction of pollution of water bodies. Due to the collection of funds from the recreation sites improvement of landscape and of recreational functions of the area

# Case example: SEA for National Waste Management Plan of Montenegro for 2015 – 2020

- Original plan:
  - 5 waste management regions with 5 sanitary landfills be constructed.
  - It includes the existing landfill in Podgorica, Bar and proposed landfills in Berane, Nikšić and Herceg Novi



# Strategic alternatives

**Alt 1: 5 waste management regions with 5 sanitary landfills** be constructed - it includes 2 existing landfills in Podgorica, Bar and proposed landfills in Bijelo Polje, Nikšić and Herceg Novi.

**Alt 2: 3 waste management regions with 3 sanitary landfills** be constructed - it includes 2 existing landfills in Podgorica, Bar and one proposed landfill in Bijelo Polje for the north region area.

**Alt 3: 1 waste management region which would cover the entire country and it would also include a thermal waste treatment plant (waste-to-energy plant),** which will be located in the municipality that shows initiative regarding the construction of thermal waste treatment and preparation of all necessary conditions.

# Local alternatives



# Comparison of local alternatives

Impacts / Risks	Sanitary landfill - Bijelo Polje						Clarifications and recommendations (e.g. The best option, mitigation measures)
	Čelinska Kosa 1	Čelinska Kosa 2	Kumanica	Zaton	Ramčina	Goja	
<b>Biological and landscape diversity, protected areas</b>	Close to biocorridor of southeast Dinarides, proximity to the Emerald net Dolina Lima, visible from the mountain routes	Within the Emerald Network of Lim Valley, visible from the road	The vicinity to the Emerald Network, partially visible from the road	proximity to the Emerald Network of Lim Valley	proximity to the Emerald Network of Lim Valley	proximity to the Emerald Network of Lim Valley, seen up close	In terms of biodiversity, the best options are Zaton and Ramčina considering they are outside of the biocorridor and outside the Emerald Network, and the least acceptable is Čelinska Kosa 2 because it is located within the area of the Emerald Network. Given the importance of the landscape, favorable locations are visually hidden and they cannot be seen from frequent traffic routes. Unfavourable locations are Kumanica and Goja.
<b>Population, public health</b>	Rural area	Rural area	Rural area	Rural area	Rural area	Rural area	Since there were no significant differences in the distance from residential buildings (up to 1000 m), the locations are equally favorable. Location Goja is nearest to residential buildings and is considered the least favorable.

# Comparison of local alternatives

Impact / risk	INITIAL PROPOSAL						OPTION 1						OPTION 2	
	Sanitary landfill - Vasov Do (Berane)		Sanitary landfill - Budoš (Nikšić)		Sanitary landfill - Duboki Do (Herceg Novi)		Sanitary landfill - Bijelo Polje (Ramčina, Zaton)		Sanitary landfill - Budoš (Nikšić)		Sanitary landfill - Duboki Do (Herceg Novi)		Sanitary landfill - Bijelo Polje (Ramčina, Zaton)	
	Reg. operation	Accident	Reg. operation	Accident	Reg. operation	Accident	Reg. operation	Accident	Reg. operation	Accident	Reg. operation	Accident	Reg. operation	Accident
Air		Orange		Orange						Orange				
Climate factors	Yellow	Orange				Orange						Orange		
Water	Orange	Red		Yellow	Orange	Red				Yellow	Orange	Red		
Land, soil	Yellow	Orange				Yellow						Yellow		
Biological and landscape diversity	Yellow	Orange		Yellow	Orange	Orange		Orange		Yellow	Orange	Orange	Yellow	Orange
Population, public health	Orange	Red			Orange	Red					Orange	Red		
Cultural heritage						Yellow						Yellow		
Material assets						Yellow						Yellow		