

## Module 8: Practical examples CEE

- SEA of Czech Energy Policy
- SEA of Czech Sectoral Operational Program for Tourism
- SEA of Land-use of Naisar Island, Estonia
- SEA of Waste Management Plan of Plzen Region, CR
- SEA of Waste Management Plan of Ostrava Region, CR
- National Development Plan of Czech Republic
- National Development Plan of Estonia
- National Development Plan of Poland

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## SEA for Czech Energy Policy 1998



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## Context and key issues

- First comprehensive document for development of entire energy sector (electricity, coal and gas) – decisions on:
  - gradual closure of main coal mines in the country
  - future of the second nuclear power plant
  - state support for energy savings and alternative energy sources
  - internalisation of environmental costs in energy prices
- EP drafted in 1997 - MoE requests SEA
- first large scale SEA in Czech Republic

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## SEA process

- Independent think-tank hired + supported by
  - Scoping team (13 experts - various stakeholders)
  - Modelling team (feasibility of 3 alternatives)
  - Assessment team (19 experts - various stakeholders)
- 12 months, total 600 person days
- SEA process:
  - Scoping (80 participants)
  - Draft SEA Report
  - 6 regional reviews by NGOs (approx 150 people)
  - Public review (Czech Senate – 170 participants)
  - Final SEA Report

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## Alternatives - presumptions

- Annual GDP growth is 2-4%
- Energy demand of the economy (expressed by index of primary energy sources per GDP unit) steadily decreases
- Czech Republic meets all international obligations, including Kyoto targets
- All alternatives are fully aligned with EU legislation

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## Alternative A

- Based on locally available sources of black and brown coal
- Limits of coal mining are not enforced (increase of mines)
- No further internalisations of external costs (i.e. carbon tax and energy tax are not introduced)
- Second nuclear power plant partly finalised by 2004-2005.

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### Alternative B

- Based on locally available sources of black and brown coal + limits of coal mining are enforced.
- This is compensated by import of electricity and gas.
- Partial internalisations of external costs will trigger changes in structure of existing energy sources.
- More use of energy saving schemes and alternative energy sources will increase as well.
- Growing use of cogeneration units (growth in gas import).
- Second nuclear power plant partly finalised by 2005.

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### Alternative C

- Based on energy savings schemes and rapid increase of alternative energy sources.
- Previously established limits of coal mining enforced.
- Second nuclear power plant not finalised.
- Major energy savings in state-own facilities,
- Funding and technical assistance programs for technological changes in private enterprises).
- Alternative energy sources - biomass, small water plants, wind, solar collectors + limited use of photovoltaic cells.
- Energy prices fully internalise external environmental costs – growing use of cogeneration units.

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### Impacts

- Environmental
- Social
- Economic
- 25 categories of major impacts – each with one indicator

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## Environmental impacts - I

### Air emissions

- CO2 (tons)
- CH4 (tons)
- SO2 – total (tons)
- SO2 – local (tons)
- NOX – total (tons)
- NOX – local (tons)
- Particulate matters (tons)

### Water pollution

- waste waters from mining (m3)
- other waste waters (m3)

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## Environmental impacts - II

### Impacts on soil

- Land occupation by mining (km2)
- Land occupation by flooding (km2)
- Land occupation by landfills (km2)
- Land occupation by new installations (km2)

### Annual production of waste

- Ash from power plants (tons)
- Unused gypsum (tons)
- Used nuclear fuel (tons)
- Radioactive waste (tons)

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## Social and economic impacts

### Social impacts

- Number of people to be reallocated
- Employment changes by energy savings
- Employment changes by energy production
- Employment changes by changes of mining

### Economic impacts

- Investment costs per 1GJ unit
- Running costs per 1GJ unit
- Costs of energy saving schemes
- Costs of measures to offset and mitigate adverse environmental impacts

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### Initial comparison of alternatives

- Alternative A was used as a baseline - alternatives B and C were compared against alternative A.

Example - "CO2 emissions":

- CO2 emissions for alternative A were classified as 100%,
- alternative B - 95% of CO2 emissions compared with alternative A,
- alternative C - 87% CO2 emissions compared with alternative A.
  
- Alternatives C and B score much better on almost all indicators than Alternative A
- (the only exception were economic indicators where Alternative A scored best)



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### Detailed comparison of alternatives

- Multi-criteria analysis
- A survey among sample of 32 representative respondents to define social importance (weight) of each impact category.
- Multi-criteria analysis (incl. sensitivity analysis) resulted in very similar conclusion as the original simple analysis of alternatives.
- MCA however prolonged the SEA process by 3 months – SEA team missed the deadline - final SEA report never considered.



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### Lessons for practice

- SEA had very good quality but it could have been concluded much quicker, if additional complicated analyses (i.e. multi-criteria analysis) were not performed.
- The main environmental issues and trends connected with possible implementation of each alternative were evident already from first evaluations.
- Always use the simplest technique available to carry out the given task. It saves time and money,
- SEA does not replace political decision-making. It is only decision-support document that can be ignored.



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**SEA for  
Czech Sectoral Operational  
Programme for Tourism**

  
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**Process management**

- Ex-post SEA based on intensive consultations with the planning team, Ministry of Regional Development and Ministry of Environment
- 4 months, SEA team – 3 experts, total 70 person days
- SEA broken down into individual environmental assessment of
  - current state of the sector
  - specific objectives of the programming document
  - proposed activities
  - implementation plan
  - monitoring plan

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**Env. assessment of the current state of the sector**

- Review of env. issues in the analytical part of the programming document (situation analysis and SWOT analysis):
  - Key environmental problems arising from intensive tourism (individual car transport, impacts in protected areas, etc.)
  - Key environmental issues affecting attractiveness of destinations (air, noise and water pollution, loss of biodiversity and attractiveness of countryside, etc.)

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### Env. assessment of objectives

- Review of env. objectives of the programming document and suggestion of specific env. goals for the programming document:
  - No env. objective found in the programming document
  - SEA team developed a set of 10 specific env. goals for tourism (based on National Environmental Policy and environmental criteria for tourism developed by the World Tourism Organisation and the 7th Session of CSD)
  - SEA team agreed on these objectives with Ministry of Regional Development and Ministry of Environment (to ensure that both authorities support their use to optimise the programming document)



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### Environmental objectives for Tourism

- Support adoption of environmental management systems (ISO 14000, EMAS) in tourism industry,
- Regulate number of tourists in areas heavily affected by tourism,
- Disperse tourism in time and space,
- Support environmentally friendly means of transport in areas attractive for tourists, including city centres,
- Improve local env. quality (e.g. local air quality, water quality, noise levels and attractiveness of urban areas),
- Maintain biodiversity and attractiveness of landscape,
- Protect local cultural heritage,
- Inform visitors about key features of local environment and how to protect it,
- Enhance community participation in management of tourist sites.



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### Categories of environmental impacts

- Impacts on inhabitants
- Impacts on ecosystems, their components and functions
- Impacts on man-made systems and on the use of the territory
- Large-size impacts on the landscape
- Other impacts



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### Env. assessment of proposed activities

- Assessment of relationship between env. goals for tourism and proposed measures/activities:
  - 2: very negative impact,
  - 0: indifferent
  - +2: very positive impact
  
- Evaluation used to suggest:
  - reformulations of measures
  - conditions for their implementation

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### Evaluation of proposed activities

Proposed activities	Environmental objectives for tourism				Categories of environmental impacts				Reformulations and conditions

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### Env. assessment of implementation arrangements

- EIA Terms of Reference recommended for major proposed projects
  
- Environmental scoring sheets for all projects that will be supported by the program:
  - preliminary scoring (to guide design of projects)
  - formal scoring (to guide selection of projects),
  
- Responsibilities of environmental authorities in review of environmental scoring and selection of projects

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### Env. assessment of monitoring plan

- **Aim:** to measure whether the program meets its specific environmental objectives
- **Indicators:** 10 specific indicators proposed (one indicator per each environmental objective)
- **Gathering of data:** monitoring data obtained through environmental evaluation of each implementation project

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### Strengths

- ☺ SEA influenced the entire programming process – from problem analysis to design of monitoring system
- ☺ Majority of suggestions from SEA fully incorporated into the text of program
- ☺ SEA improved previously very tense relations between governmental departments
- ☺ SEA changed attitude of Tourism Department to treatment of environmental issues

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### Weaknesses

- ☹ Frequent input of SEA team into programming process very demanding for SEA team
- ☹ Environmental goals and targets for tourism poorly formulated – need to define them within SEA process
- ☹ Public participation was organised only in the last stage of the SEA process

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## SEA for Comprehensive Planning of the Naissaar Island (Estonia, north coast)



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### Key issues

- Island was previously used as a Soviet army base - a number of areas severely polluted with oil products and heavy metals.
- Rest of the island - nearly virgin natural environment (80% covered with forest, numerous dunes, mire landscapes and species-rich plant communities).
- No comprehensive planning before

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### Features of plan

- Comprehensive plan aims to define the main uses of the territory and provide restrictions to building activities.
- SEA carried out in parallel to the planning - pilot project without formalised procedures
- The whole planning/SEA process took 17 months – extensive participation of future land-owners, associations of scientists, entrepreneurs, professional societies/unions, movements, and other private or legal persons

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## Planning, SEA and participation - I

Planning	SEA	Joint public participation
<ul style="list-style-type: none"> <li>ToR for planning</li> </ul>	<ul style="list-style-type: none"> <li>ToR for SEA</li> </ul>	<ul style="list-style-type: none"> <li>Identification of stakeholders</li> <li>Notification about initiation of planning/SEA</li> </ul>
<ul style="list-style-type: none"> <li>Development strategy</li> <li>Baseline data and investigations</li> <li>Development objectives</li> </ul>	<ul style="list-style-type: none"> <li>Env. surveys</li> <li>Env. objectives</li> </ul>	<ul style="list-style-type: none"> <li>Public discussion on SWOT analysis</li> </ul>

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## Planning, SEA and participation - II

Planning	SEA	Joint public participation
<ul style="list-style-type: none"> <li>Design of five planning alternatives</li> </ul>	<ul style="list-style-type: none"> <li>Scoping of key impacts</li> <li>draft matrices</li> <li>public discussion</li> <li>final matrices</li> </ul>	<ul style="list-style-type: none"> <li>Public meeting to review draft matrices</li> </ul>
<ul style="list-style-type: none"> <li>Draft planning proposal</li> </ul>	<ul style="list-style-type: none"> <li>SEA report on preferred alternative (draft planning proposal)</li> </ul>	<ul style="list-style-type: none"> <li>Public discussion on esp. mitigation measures</li> </ul>
<ul style="list-style-type: none"> <li>Planning proposal</li> </ul>	<ul style="list-style-type: none"> <li>SEA report</li> </ul>	<ul style="list-style-type: none"> <li>Public display and consideration of the comments by the public</li> </ul>

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## Alternatives

Alt. 0-	The island is left by itself, without any concrete action plan developed ( <i>No-action alternative</i> )
Alt. 0+	Necessary cleaning + small-scale building activities and use of the island is possible
Alt. 1	Small increase of local population and tourism/recreation activities
Alt. 2	Considerable increase of local population and tourism/recreation activities. Construction of new roads in the island.
Alt. 3	Theoretical alternative of settlement of tens of thousands of people in the south and north ends of the island.

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### Evaluation matrix for each alternative

	Duration	Scope and magnitude	Significance	Mitigation possibilities
Nature and landscape (biodiversity; ground and surface water)				
Man-made environment (infrastructure; buildings; historical heritage)				
People and society (health; safety; work opportunities)				

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### Key conclusions for practice - 1

- Public involvement was the most important element.
  - helped to avoid the arising of conflicts,
  - find new creative solutions and
  - receive information concerning the preferences of interested parties and inhabitants.
- Division of the planning and EA process into stages:
  - made it easier to scope the topics to be considered.
  - focused attention on the key problems in each stage of the planning

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### Key conclusions for practice - 2

- Integration of SEA into the very process of development of planning is the optimal means of carrying out SEA
- SEA carried out in parallel to planning considerably facilitated the process of approval of the planning and decision-making.

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## SEA for Waste Management Plan of Plzen Region, Czech Republic



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### Focus

- Plzen region – 450 000 inhabitants
- Integrated management of 17 types of waste
- Focus on: communal waste, biodegradable waste (incl. those from agriculture), waste-water sludge, wrappings, construction waste, hazardous waste (sanitary and veterinary waste, waste with freons, batteries, old cars, tires, industrial oils, oils with PCBs, etc,..)
- Suggests organisational and investment measures
- Strong emphasis on citizen awareness raising and participation (during elaboration and implementation of the plan)

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### Goals for waste prevention

- Minimise amount of generated industrial and communal waste:
  - general measures in industry (EMS accreditation, BAT technologies, support of reusable wrappings, etc.)
  - raising of awareness of public and SMEs about waste management issues

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## Goals for management of communal waste

- Decrease amount of biodegradable waste which is deposited at land-fills:
  - to 75% hm. to year 2010,
  - to 50 % year 2013 and
  - to 35 % to year 2020 against amounts in 1995
- Increase separation and re-use of waste
- Ensure energetic use of untreated or unsorted waste
  
- Four alternatives to meet these goals

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## Common elements of communal waste management system

### Separation of communal waste

- Separation of waste at its sources
- Mechanical sorting of communal waste through ballistic separator and sorting lines near all major cities
- Stimulation of demand for separated waste – esp. glass, metals, etc.

### Treatment facilities for communal waste

- Centralising of waste treatment facilities in the region (4 waste treatment sites near major cities) and ...
- Gradual closure of small waste disposal facilities near smaller cities

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## Key alternatives

- **Alternative 1a** – strategy based on waste separation and its further re-use combined with deposition of unusable materials to landfills
- **Alternative 2** - strategy based on incinerator for communal waste with capacity 100.000 tons/year. Optional energy use of communal waste from the entire region
- **Alternative 3** – strategy based on separation of communal waste at its source, transport of remaining unusable communal waste into low-capacity pyrolysis line with capacity of 60.000 tons of communal waste per year
- **Alternative 4** – strategy based on based on increased separation of communal waste at its source and treatment of residual communal waste through thermal shrinking (up to 30% of its original bulk)

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### Matrix of general env. risks of various waste management approaches

- 30-35 waste management approaches (waste use and waste treatment) impossible to evaluate
- Waste management approaches divided into 8 general categories:
  1. collection, separation and transport of waste
  2. use of waste as sources of secondary materials
  3. incineration of waste for production of energy
  4. chemical and biological treatment of waste
  5. composting
  6. incineration of waste without production of energy
  7. landfills
  8. permanent depository of waste



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### Alternative 1a

- Main focus: waste separation and its further re-use combined with deposition of unusable materials to landfills
- *Separation of waste at its sources – mechanical sorting of communal waste through ballistic separator and sorting lines at selected locations*
- *Use of separated waste – esp. glass, metals, etc.*
- Depositing of unusable fractions at landfills
- Incineration of waste with burnable fractions (paper, plastics, etc.)
- Composting of biologically degradable waste



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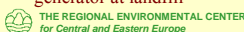
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### Alternative 2

- Main focus: development of incinerator for communal waste with capacity 100.000 tons/year. Optional energy use of communal waste from the entire region:
- *Separation of waste at its sources – mechanical sorting of communal waste through ballistic separator and sorting lines at selected locations*
- *Use of separated waste – esp. glass, metals, etc.*
- *Composting of biologically degradable waste*
- Incineration combined with cogeneration of heat and electricity
- Depositing of communal waste generated outside of area served by incinerator at landfills and depositing of ash from generator at landfill



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### Alternative 3

- Main focus: separation of communal waste at its source, transport of remaining unusable communal waste into low-capacity pyrolysis line with capacity of 60.000 tons of communal waste per year.
- *Separation of waste at its sources – mechanical sorting of communal waste through ballistic separator and sorting lines at selected locations + Use of separated waste – esp. glass, metals, etc. + Composting of bio-waste*
- Incineration at gasification facility combined with cogeneration of heat and electricity (secondary product: coke)
- Depositing of unusable fractions from sorting lines and of caught combustion emissions from gasification facility at landfills

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### Alternative 4

- Main focus: increased effectiveness of separation of communal waste at its source and treatment of residual communal waste through thermal shrinking (up to 30% of its original bulk).
- Waste treated through thermal shrinking is re-used (waste fractions that fell through screen are used for alternative fuels and composting).
- Waste fractions that stayed above the screen are again separated or deposited at landfills (the remaining waste fractions deposited at landfills = 10% of the original waste volume).
- *Separation – general preventive measures for effective separation of waste at its source, use of sorting/separating lines + Use of separated waste + Composting ...*

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### Matrix of general env. risks of various waste management approaches

- 30-35 waste management approaches (waste use and waste treatment) impossible to evaluate
- Waste management approaches divided into 8 general categories:
  1. collection, separation and transport of waste
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  4. chemical and biological treatment of waste
  5. composting
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  7. landfills
  8. permanent depository of waste

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## Categories of possible env. impacts

1. climate
2. air quality
3. geology and geomorphology
4. water
5. soil
6. ecosystems
7. landscape
8. archaeology, history and culture
9. health and well being at workplace
10. health and well being of general public
11. impacts on the past environmental liabilities

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## Evaluation scale

Symbol	Impact
-3	very negative
-2	negative
-1	partly negative
0	indifferent
+1	partly positive
+2	positive
+3	very positive

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## Evaluation of specific alternatives

Alternative 4	Clim	Air	Geo-	Hydr	Soil	Eco-	Land	Arch	Occu	Publ	Env.	Total
	1	2	3	4	5	6	7	8	9	10	11	
Collection, sorting and transport	-1	-1	0	0	0	0	-1	0	0	0	0	-3
Theoretical reduction of volume (autoklav)	-2	-2	-1	-2	-2	-2	-2	0	-2	-2	-1	-18
Pyrolysis	-1	+2	+1	0	+1	0	0	0	0	0	0	+3
Landfills S-NO	-1	-2	-2	-1	-1	-2	-2	0	-1	-1	-1	-24
Composting	-1	-1	-1	-1	-1	0	0	0	-2	-2	-1	-9
Landfill S-OO	-1	-1	-2	-2	-2	-2	-1	-1	0	-2	-2	-16

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## Evaluation of specific alternatives

Alternative 1a	-45
Alternative 2	-75
Alternative 3	-64
Alternative 4	-67

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## Key neglected issues

### SEA ignored management of other waste:

- biodegradable waste (SEA concluded that all proposed treatment options – composting, anaerobic digestion, anaerobic fermentation to produce fuel or incineration - are of similar environmental risks)
- waste-water sludge (preferred disposal on agricultural lands as fertilisers or anaerobic fermentation to produce fuel – SEA is silent about problems with toxicity of waste-water sludge for agricultural lands)
- hazardous waste (sanitary and veterinary waste, industrial oils (including oils with PCBs), waste with freons, batteries, old cars, tires, construction waste, etc.,... - SEA did not review since no new measures were proposed)

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## SEA for Waste Management Plan of Ostrava Region, Czech Republic



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### Focus of the plan

- Ostrava region – over 1,000,000 inhabitants
- Integrated management of 17 types of waste
- Focus on: communal waste, waste from mining, waste from extensive steel works, hazardous waste (industrial oils, oils with PCBs, etc.) waste-water sludge, ...
- Suggests organisational and investment measures



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### Focus of the assessment - I

Assessment whether:

- all components of the plan direct the waste management in the region towards environmentally sound management
- the plan properly links with related regional strategic plans - air protection (incl. transport), energy policy, resource management and mining policy,
- Carried out by 4 experts during elaboration of the draft plan - 5 months (approx. 60 workdays)



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### Focus of the assessment - II

Separate assessments of:

- Current situation of waste management in the region
- Proposed specific targets for management of different types of waste
- Proposed actions in waste management
- Proposed implementation system
- Did not comment on locations/technologies to be used in specific waste treatment processes (claim: this the role of EIA)



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### Assessment of current situation - I

SWOT analysis completed by the following environmental threats:

- Emphasis on old-fashioned waste treatment (landfills) instead waste prevention and recycling
- Inappropriate recultivation of old landfills (of communal waste and mining)
- Health risks due to poor waste collection and waste treatment
- Contamination of soil and underground water due to poor deposition of industrial wastes in old industrial estates in urban areas
- Preference towards green-field investments instead of regeneration of brown-fields



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### Assessment of current situation - II

Links to other strategic documents for the region:

- Energy policy (waste production – ash, use of waste for incineration),
- Transport (env. problems of current transport routes for various types of waste)
- Resources management and mining policy (use of composted bio-waste for reclamation of old mines, re-use of waste from mining and thermal power plants)
- Air protection (emissions from incineration and other thermic treatments, emissions from land-fills and composting)



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### Assessment of WM targets - I

■ 11 referential env. objectives for waste management in the region - selected by SEA team on the basis of: 6<sup>th</sup> Env. Action Plan of the European Union, State Env. Policy, State Action Plan for Health and Environment

- Decrease green- house emissions (CO2 and methane)
- Improve local air quality
- Contribute to savings of energy and natural resources
- Minimise production of waste
- Minimising toxic substances in waste waters
- Decrease contamination of soil and under-ground waters
- ... Improve public awareness and support citizen participation in waste management



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### Assessment of WM targets - II

- plan proposed 26 specific binding objectives (covering all types of waste)
- all proposed targets screened and 10 “questionable” targets selected for detailed review (e.g. targets for minimising of land-fills, application of sludge on fields, etc.)

Relevant env. objectives	Proposed WM objectives	
	0	-2
	+1	-1
		+2

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### Assessment of proposed activities - I

**94 proposed specific activities evaluated against:**

- their contribution to 11 relevant environmental objectives
- their possible impacts on:
  - Population and public health
  - Fauna, flora and ecosystems
  - Landscape
  - Soil and geology
  - Water
  - Air and climate
  - Anthropological systems and cultural heritage

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### Assessment of proposed activities - II

Proposed activities	Environmental objectives for waste management in the region	Categories of environmental impacts	Con- ditions for imple- mentation

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## Assessment of implementation system

- Detailed environmental scoring sheets for all projects that will be supported by the program:
  - preliminary scoring (to guide design of projects)
  - formal scoring (to guide selection of projects)
- Comments on capacities of regional environmental department to supervise waste management – suggestions of training of staff

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## SEA for National Development Plan of the Czech Republic (2004-2006)



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## Presentation outline

1. Introduction
2. Assessment procedure and outcomes
3. Public participation
4. Conclusions and lessons learned

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## National Development Plan: Purpose

- NDP is the basic strategic document for receiving support from the Structural Funds and the Cohesion Fund.
- Drafted on basis of Government Resolution No. 120, of 23<sup>rd</sup> January 2002, on finalizing programming documents for the use of Structural Funds and Cohesion Fund of the European Union
- Funding framework for EUR 2,5 billion

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## Preparation of the NDP - Who is who

- Proponent (Government)
- Management and Coordination Committee (NPC-ESC)
- Planning teams (national-sectoral)
- Ex-ante team (socio-economic analyses)
- SEA team (env. analyses)

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## Stages of preparation of the NDP

- First draft in 1999-2000
- Submission to the EC: mid 2001
- EC response: beginning 2002
- Final version: February – December 2002
- SEA: April – November 2002

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## Content of the NDP

- Analysis of current situation
- Strategic objectives
- Priorities
- Orientation of the OPs
- Management and monitoring system
- Financial frameworks

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## Legal & methodological basis for the SEA

- Relevant Czech legislation: Art.14 of the Czech EIA Act (No.244/1992 Coll.)
- Requirements of the EA evaluation on the operations of the EU Structural Funds: Art.42.2.(b) of Council Regulation (EC) No. 1260/1999 and the follow-up guidelines of the EC ("Handbook")
- Methodology for the environmental assessment of regional development concepts (MoE CR, 2001)

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## SEA Approach

- Ongoing assessment of individual parts of the draft versions of the NDP → recommendations for modifications / amendments
- Outcomes of the assessment provided to the proponent and consulted on working meetings with the proponent and the MoE
- Modifications, reformulations and supplements incorporated in the draft text in the form of revision
- Development of SEA documentation
- Public consultations

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### Assessment step by step

1. Assessment of the analytical part of NDP (state of environment, sectoral linkages)
2. Defining referential environmental objectives for NDP
3. Assessment of the consistency of goals of NDP (general and specific) and its priorities
4. Assessment of the implementation plan → suggestion of a system of environmental assessment of the projects
5. Assessment of the monitoring system of the NDP implementation → suggestion of a system of monitoring of environmental impacts



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### Outputs of the assessment

- 📄 Revision of the text of the NDP
- 📄 SEA report (documentation)



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### SEA documentation

- Background for the assessment
- Description of the process
- Reference objectives of the environmental protection
- Assessment of individual parts of the NDP (tables, comments)
- Proposal of system of environmental monitoring and evaluation
- Final statement of the SEA evaluators



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### Relevant env. protection objectives - I

1. To reduce emissions causing change in climate;
2. To reduce emissions causing local air pollution;
3. To limit point pollution of water and soil;
4. To limit area pollution of water and soil;
5. To reduce exploiting of non-renewable sources of energy raw materials;
6. To reduce exploiting of non-renewable sources of raw materials and minimizing hazard waste production;



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### Relevant env. protection objectives - II

7. To preserve natural diversity of fauna, flora and habitats;
8. To protect and improve the condition and functions of eco-system;
9. To protect and improve the condition and functions of cultural landscape;
10. To protect and improve the conditions of settlements;
11. To improve environmentally responsible behaviour of inhabitants



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### Env. evaluation of future projects

- Preliminary environmental evaluation**
  - Voluntary evaluation of possible impacts of the proposed project on the relevant environmental objectives
  - Recommendations for modifications or prevention or mitigation measures
- Formal environmental evaluation**
  - Compulsory evaluation of impacts of planned project on relevant environmental objectives
  - Does not substitute EIA – summarise information for the selection process
  - Setting obligatory conditions for the implementation



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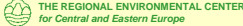
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### Proposed monitoring system

- 3-6 possible indicators to measure attainment of referential env. objectives
- This basic set of indicators to be further developed for the follow-up Operational programs (Infrastructure, Agriculture, Tourism, ...)



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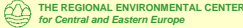
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### Public discussion

- ⌘ Organized by a proponent
- ⌘ Accessibility of information on Internet (all documents and basic information about the process – over 50.000 visitors in 1,5 years)
- ⌘ Public notification (e-mail conference with over 300 persons, no direct addressing)
- ⌘ 2 public hearings (each about 60-80 persons)
- ⌘ Comments collected and processed by the proponent



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### Public participation process – shortcomings

- Accessibility and use of the document (problems in size, maps, marking)
- Poor clarity of the announcements
- Weak management of the hearings
- Limited mechanisms for due account of comments



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## Strengths

- ⊙ SEA started at early stage
- ⊙ Ongoing optimizing of the document from the environmental point of view
- ⊙ Acceptance of the recommendations and suggestions of the SEA evaluators (mainly the system of monitoring the NDP implementation)

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## Weaknesses

- ⊙ Planning process – unplanned changes in time schedule
- ⊙ Coordination of communication among the planners and other evaluators
- ⊙ Public participation

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## What makes SEA successful

1. Proper management of the planning process
2. Developing a proper methodology
3. Understandability to public concerned
4. Feedback control (monitoring and evaluation)

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# SEA for National Development Plan / Single Programming Document of Estonia (2004-2006)



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## Purpose of the SPD

- Single Programming Document is a development plan for activities which are financed from State Budget of the Republic of Estonia and co-financed from EU Phare programme and from EU Structural Funds
- Objective: Fast, socially and regionally balanced sustainable economic development



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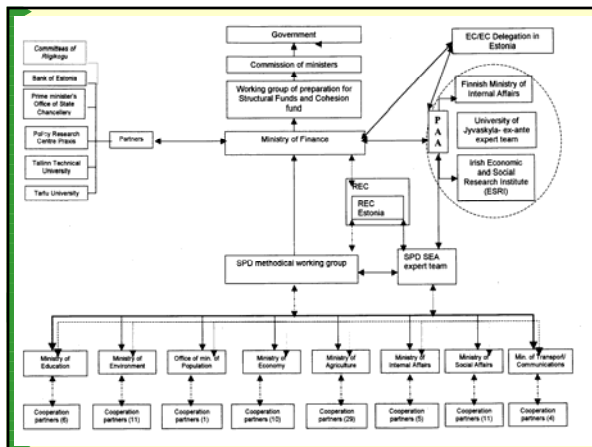
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### SEA team

	<i>Expertise area</i>
Team leader	Water management; natural resources
Team member	Ambient air, transport; criteria and indicators
Team member	Assessment methods; indicators and criteria; waste management
Team member	Biodiversity; criteria and indicators

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### Methodology

- ⇒ Integrated to the planning process
- ⇒ Objective-led assessment
- ⇒ Expert opinion and qualitative analysis
- ⇒ General environmental management principles
- ⇒ Flexible methodology - can be changed when necessary

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### Relevant env. objectives: Group I

- Promotion of environmental awareness
- Safety of environment (air, water, landscapes, built environment) regarding people's health and wildlife
- Prevention of environmental accidents, ensuring solving of such accidents and reduction of environmental risks
- Implementation of environmental management systems and best available technology
- Survival of valuable landscapes and habitats.

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### Relevant env. objectives: Group II

- Achieving a good state of environment
- Reconcile emissions with EU and Estonian requirements
- Saving of energy and using renewable sources of energy, if possible
- Sustainable use of natural resources (forest, water, fish, natural resources)

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### Achievements - I

- Ensured inclusion of some environmental considerations in SPD:
  - the proposal for adding the section on past pollution;
  - as recommended in the environmental assessment, regarding the mitigation measures of environmental impact, the measure of developing transport infrastructure was considerably complemented.
- Increased coherence of SPD

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### Achievements - II

- ⇒ Focused attention of sector ministries to their responsibility towards environmental issues
- ⇒ increased communication between governmental authorities responsible for different socio-economic sectors.
- ⇒ Pointed out shortages in tackling environmental issues in national plans and programmes.

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### Lessons learnt – I.

- ⇒ SEA should be **initiated at a same time with the PPP**.
- ⇒ It is beneficial to organize **preparatory meeting for planners** to introduce the purpose and procedure of SEA.
- ⇒ **Good communication** between the SEA expert team and planning team is a key factor for ensuring influence of SEA to the PPP. It is beneficial to use various tools for passing information.

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### Lessons learnt – II.

- ⇒ All stakeholders should be discussed at **selection of environmental objectives**.
- ⇒ SEA experts should determine **conflicting (environmental) issues** and try to facilitate the discussion for finding solutions.
- ⇒ The importance of **public participation** should not be overlooked. Public participation should be organized in accordance with the logic of the development of plan.

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### Lessons learnt – III.

- ⇒ In case of strategic documents it is necessary to produce a short version of easily understandable explanation/summary of planning document for public use.
- ⇒ SEA activities need to be coordinated with other assessments that are carried out for the PPP.

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**Framework SEA  
for the  
National Development Plan  
of Poland  
(2004-2006)**

  
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**Initiation**

- Assessment Team:
  - Krzysztof Kacprzyk
  - Zbigniew Karaczun
  - Andrzej Kassenberg – Team Leader
  - Urszula Rzeszot
  - Bożenna Wójcik
- Initiated and co-financed by REC:
  - Jiri Dusik, Małgorzata Koziarek
- Co-financed by Polish Ministry of Economy:
  - Co-operation with planning team(s)

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**Subject of the assessment**

- A draft version of NDP;
- SOP not included in formal assessment (but in fact taken into account);
- Regional Programme NOT included.

- No formal requirement for SEA of NDP;
- Co-operation with programming teams;
- Limitations were due to time and finance.

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### The aim of assessment

- The place and significance of environmental issues in NDP as a whole;
- Assessment of the environmental consequences of proposed actions;
- Formulation of recommendations which would improve the NPR document (i.e. „greening” of NPR, making it more sustainable).

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### Focus of the assessment

- Assessment of NDP as a document and of the sector contents of NDP;
- General and detailed recommendations to whole of NDP and to each sector part;
- Methods applied, uncertainties encountered, sources of information used.

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### Stages in the work of the assessment team

- I – selection of assessment criteria
- II – initial assessment
- III – integration of selected criteria and sustainability criteria
- IV- preparation of the (final) version of the assessment
  
- (N+1) review of final version of NDP

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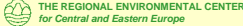
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### Selection of assessment criteria

- Major legal Acts, national and international – a total of over 100 (brainstormed)
- Initial selection of acts to be used for formulation of criteria – 14 acts (expert scoring system)
- Formulation of criteria – 250 detailed criteria
- Grouped criteria – 52 criteria



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### Groups of criteria (1)

**Resources management:**

- General and horizontal issues
- Transport
- Energy
- Agriculture
- Nature and landscape
- Forestry
- Water management and fisheries



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### Groups of criteria(2)

**Changes in the environment:**

- Air
- Noise and radiation
- Soil and wastes
- Water
- Nature
- Other



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### Initial assessment

- Criteria and proposed actions  
– a matrix approach
- Consultations with programming teams
- Corrections and initial assessment
- Informing the programming teams

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### Integration of selected criteria and sustainability criteria

- Comparison of the sets of criteria
- Formulation of 23 mega-criteria  
– formal/procedural and issue-oriented

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### Formal/procedural criteria (1)

- Were diagnosis and SWOT prepared taking into account sustainable development?
- Were environmental aims and goals suggested?
- Are proposed actions in accordance with environmental policy documents?
- Were negative environmental impacts quantified?
- Is publicly accountable EIA envisaged for proposed activities?
- Are sustainability indicators taken into account?

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### Formal/procedural criteria (2)

- Is „green purchasing” promoted?
- Did the document undergo public consultations and were the results taken into account?
- Are sustainability aims in different sectors coherent?
- Are environmental criteria for the choice of project suggested?
- Are diagnosis, aims, proposed activities and monitoring indications coherent and sustainable?
- Is the role of environmental protection authorities made clear?

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### Issue –oriented criteria (1)

- Will proposed activities result in effective use of resources (production, consumption, management)?
- Will proposed activities result in decreased use of non-renewable resources?
- Is eco-innovation promoted?
- Do proposed activities promote sustainability (including mitigation measures and monitoring)?
- Will proposed activities improve state of the environment?
- Is nature and landscape protection taken into account (in particular NATURA 2000)?

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### Issue –oriented criteria (2)

- Do proposed activities reduce environment-related health risks?
- Do proposed activities maintain cultural values?
- Do proposed activities create conditions for fair competition in the use of the environment?
- Do proposed activities raise environmental awareness?
- Do proposed activities improve spatial management structure?

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### Final assessment

- NDP assessed according to mega-criteria. Assessment and comment for each criterion.
- Over 60 general and detailed recommendations were formulated
- Draft version of assessment was made available for public consultations
- Final version incorporated comments received



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### Uncertainties encountered

- No „ready made and formally approved“ set of criteria
- Only draft NDP assessed
- SOP and Regional Programme NOT included in the assessment
- Weak (very!) public participation in SEA



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### Uncertainties of a „strategic document“ assessment

- Types and location of action uncertain – locally both strong and weaker effects are possible
- Lack of environmental criteria for project selection
- Long-term and multi-sectoral effects of activities undertaken in accordance with NDP



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### Environment in draft NDP (1)

- Environment perceived as liability and cost
- Environmental protection activities not considered as separate issue, no cross sectoral approach
- Sustainability not considered
- Monitoring indicators weak

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### Environment in draft NDP(2)

- Most target values were EU average
- Lack of long term perspective (beyond dates of the plan)
- Lack of integration of aims between sectors
  - transport
  - agriculture

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### Environment in draft NDP(3)

- Some recommendations
  - Sustainability rather than „end-of –pipe” solutions
  - Environmental aims in NDP and sectors
  - Environmental limitations in sectors
  - Steering Committee (working group)

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### Key changes in NDP (1)

- Broader approach to environment
- Better structure and coherence of document
- Changes in diagnosis (i.e.):
  - Organic farming seen as a chance
  - Polish environment considered as asset
  - Environmental aspects of competitive economy
- New „axis” in the NDP: promoting of sustainable development (limited )
- SOP “Environment” removed/split



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### Key changes in NDP(2)

- A number of detailed provisions (i.e.):
  - Environmental impact assessment
  - Environmental requirements in project implementation
  - Environmental Monitoring Sub-Committee
- Environmental issues more considered by sectors (i.e.):
  - „green jobs” perceived (not everywhere)
  - Support for renewable energy sources (insufficient)
  - Changes in flood control approach



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### What could be „even greener”

- Aims: overall and sectoral
- Monitoring of implementation – lack of sustainable/sustainability indicators
- Innovation promotion – increase effectiveness of resource use, reduce impacts



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### Issues that are „not green enough”

- Education and staff training – understanding the idea of sustainability
- Environmental preferences in project criteria – yes- to environmental gain; no- to environmental impact
- Development of transport infrastructure – lack of environmental and economic justification for strong preference of road building (in particular motorways)

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### Lessons for this planning cycle

- Method used for internal assessment of SOP by Ministry of Economy
- 250 criteria available
- Lessons from „trial run”

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### Next programming cycle

- Start early – assumptions and aims first
- Effective and early public involvement
- A broad consensus on the aims
- Continue for all of NDP and all of the programming cycle, including lessons for next cycles

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## General Conclusions (1)

**Team**

- Do not underestimate co-ordination, logistics and communication
- In relation to the programming team :
  - Co-operative
  - Independent

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## General Conclusions (2)

**Criteria:**

- No problem to **generate**
- Need to **limit** the number
- Lack of a set of „**politically**” **approved** objectives and targets
- **Choice** will always be controversial
- Need for **active consultations**

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## General Conclusions (3)

- SEA is by definition a process:
  - purposeful**
  - flexible
  - relative
  - iterative**
- Experience from NDP may be used for the assessment of other strategies
- No need for formal requirement in order to have effective practice

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