SEA monitoring of spatial plans in Germany

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Outline

1. SEA monitoring in the big picture of SEA follow-up
2. Legal SEA monitoring provisions
3. Different SEA monitoring approaches
4. SEA monitoring of regional plans
5. Challenges of SEA monitoring

(1) SEA monitoring in the big picture of SEA follow-up

What is SEA monitoring?

- **Monitoring, auditing and other tools are used to 'close the loop' of impact prediction and condition setting.** UNEP/ Sadler & McCabe (2002)
- **An activity of following the development of the parameters of concern in magnitude, time and space.** European Commission (2003)
- **From a procedural point of view, monitoring may be split into:**
  - **the collection/gathering of environmental information,**
  - **the processing of the information and**
  - **the interpretation or evaluation of the information.**

  IMPEL Report (2002)

(1) SEA monitoring in the big picture of SEA follow-up

Components of EIA/ SEA follow-up

Morrisson-Saunders and Arts (2004)

1. Monitoring
2. Evaluation
3. Management
4. Communication

Elements of SEA monitoring

(2) Legal SEA monitoring provisions

The SEA Directive requires Member States

- ✓ **to prepare an environmental report, including a description of the measures envisaged concerning monitoring in accordance with Article 10 (Art. 5/ Annex I (f))**
- ✓ **to monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action (Art. 10 (1))**
- ✓ **to establish**
  - **the responsibilities**
  - **the methods**
  - **time and frequency**

  of monitoring.

WHAT

WHY

WHO ?

HOW ?

WHEN ?

(2) Legal SEA monitoring provisions

Implementation of SEA Directive in Germany by

- ✓ **amended building code from 24 June 2004**
- ✓ **amended EIA law from 25 June 2005**

Monitoring specifications according to German legislation:

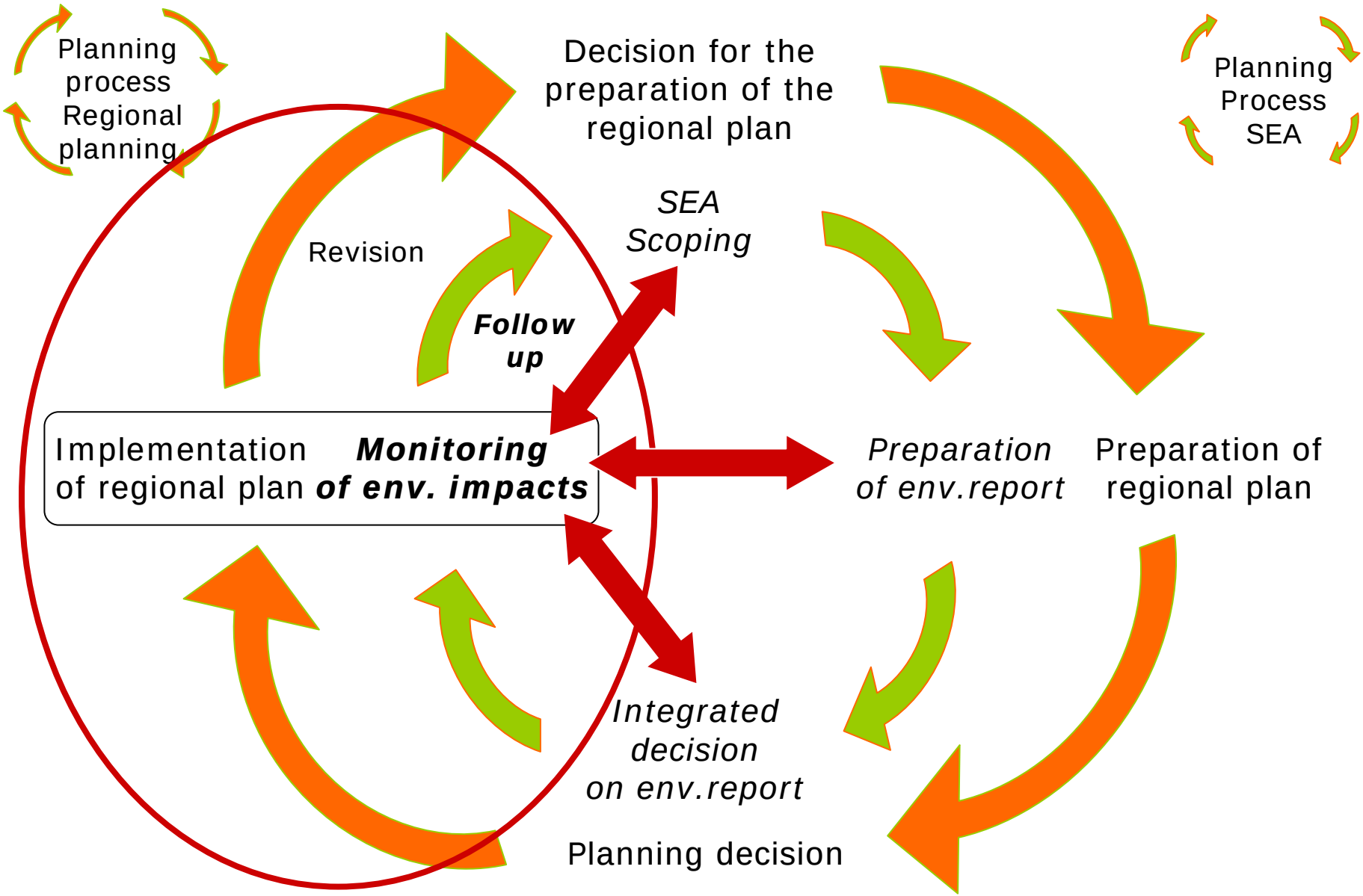
- **The authority responsible for preparing the SEA is also responsible for SEA monitoring, unless federal or *Lander* law make other provisions; land use plans: municipalities.** — **1. WHO**
- **Other authorities have to give all environmental information that is relevant for monitoring to the competent authority when required.** — **2. WHO**
- **Existing monitoring mechanisms, sources of data and information can be used to fulfil the monitoring tasks.** — **HOW**
- **The results of monitoring have to be made available to the public/ authorities and have to be considered when the plan or programme is changed/ revised.**

(3) Different SEA monitoring approaches

- **Project-related monitoring**
- **Area-wide monitoring**
- **Implementation control**
- **Objective-related monitoring**
- **Mixed forms**

Roder (2004)

(4) SEA monitoring of regional plans



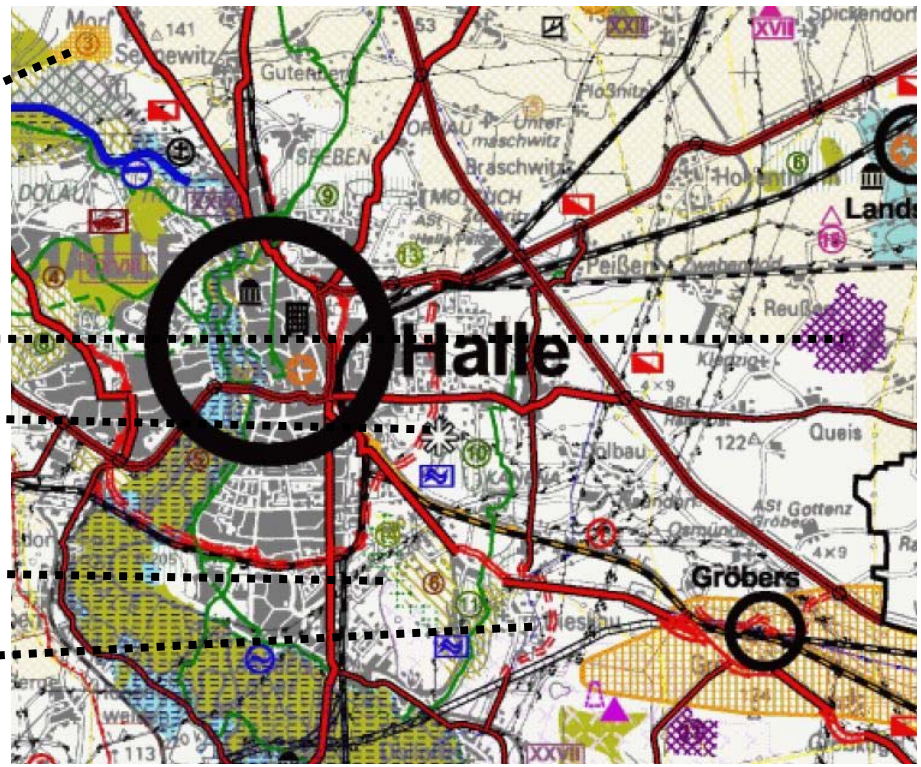
(4) SEA monitoring of regional plans

Regional Plan Halle: Scoping

Likely impacts of plan implementation?

Following topics should be considered in more detail in SEA:

1. **Priority areas for the extraction of resources**
2. **Specified areas for the use of wind energy**
3. **Regional significant sites**
4. **Reservation areas for reforestation**
5. **Lines for technical infrastructure**



(4) SEA monitoring of regional plans

Regional Plan Westpfalz: description of monitoring measures in the environmental report (pilot study)

The significant impacts of the implementation of the plan shall be monitored in the context of the revision of the plan; the following data shall be consulted:

- **Spatial planning reports (national and regional level)**
- **Baseline data for the revision of the *Rheinland-Pfalz* development program**
- **Habitat mapping results of *Rheinland-Pfalz* (up-date every six years)**
- **Monitoring results of the core areas of the biosphere reserve *Pfälzerwald* (up-dated every six years)**
- **Monitoring results of the SPAs/ SACs according to the Habitats/ Birds D.**
- **Sustainability indicators for regional planning and corresponding developments in land use plans (to be developed).**

Source: Environmental Report Westpfalz 2002

(4) SEA monitoring of regional plans

Regional Plan Nordthüringen: monitoring indicators concerning traffic infrastructure

Environmental objective		Monitoring indicator	Data
1. Area- and resource-efficient traffic network			
The road and railway network should be developed in a way that			
1.1	reduces traffic-related noise and pollutants incl. CO_2	Development of traffic-related noise and pollutants (emissions or immission) in the region	Environmental observation, Statistics
1.2	large, not fragmented areas are kept open	Development of the degree of fragmentation in the region	Sectoral transport planning, Spatial observation
1.3	the continuity of biotope networks is maintained or recovered	Length of selected traffic ways in particularly sensitive areas / in areas with high env./ techn. risks (e.g. flooding areas)	Spatial observation
1.4	the traffic density in ecologically sensitive areas is reduced		
1.5	it sustains a high stability against environmental and technical risks	Development of selected species with a particular sensitivity against fragmentation	
1.6	it results in a lower increase of traffic areas including the share of sealing	Development of the share of traffic areas in the region	Statistics, Sectoral transport planning

Source: Schmidt, C., 2004

(5) Challengens of SEA monitoring

- **Uncertainty**
- **Identification of causal links**
- **Addressing different types of plans/ programmes**
- **Data availability and compatibility**
  → INSPIRE Directive **Vanderhagen/ Muro, 2005**
- **Addressing cumulative effects**
- **Limited financial and personal capacity**
- **Long implementation periods and dynamic planning processes**
- **Tiering of monitoring**

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Thank you for your attention!