



The consideration of health in strategic environmental assessment (SEA)

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ABSTRACT

Following the requirements of the European Directive 2001/42/EC on strategic environmental assessment (SEA) and the Protocol on Strategic Environmental Assessment (Kiev, 2003) to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991), health is one of the aspects to be considered in SEA. In this paper, results of an evaluation of eight SEAs from Austria, the Czech Republic, Germany, the Netherlands and the United Kingdom (England and Wales) regarding the consideration of health are presented. This includes SEAs for five spatial plans, as well as one SEA for each, a transport, a waste management and an economic development plan. It is found that while all SEAs cover important physical and natural aspects that are related to health, social and behavioural aspects are considered to a much smaller extent. Based on the results, facilitating factors and barriers for health inclusive SEA are identified. Overall, good baseline data can be seen as an important starting point for effective health inclusive SEA, while an effective monitoring system is crucial for effective implementation of the measures and recommendations brought forward in health inclusive SEA. Crucially, health authorities/health experts need to engage more with SEA, as this provides a key platform for cross sectoral dialogue on a range of issues. SEA presents the health sector with an opportunity to influence the policy and decision-making process to improve people's health and well-being.

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1. Introduction

According to [European Directive 42/EC/2001](#) on strategic environmental assessment (SEA), human health is one of the substantive aspects to be considered in SEA, next to biodiversity, fauna, flora, soil, water, air, climatic factors, material heritage (including architecture and archaeology), landscape, and the population. The interrelationship between the above factors is also to be considered. Similarly, the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (United Nations Economic Commission for Europe (UNECE) SEA Protocol) asks for the consideration of health. Once ratified, this will extend formal SEA requirements for health considerations to European Union (EU) and other countries.

In this paper, the extent to which health aspects are considered in EU Directive based SEAs is discussed. This is based on an evaluation of existing SEAs, which was completed for the World Health Organization (WHO) who is supporting the application of health inclusive SEA. It is widely acknowledged that health is being affected by policies, plans and programmes that are implemented in all sectors. Therefore, the integration of the wider aspects of health into SEA provides the health sector with an opportunity to take on a stewardship role and gives considerable scope for action outside the health sector to prevent ill health and promote good health.

2. Methods

SEAs were reviewed that did more than simply mentioning health in passing. In order to identify suitable SEA cases, a screening process was conducted at the beginning of April 2009, consisting of three main elements, as follows.

- (1) E-mails were sent around professional SEA related list-servers (International Association of Impact Assessment – IAIA, German speaking EA Association – UVP Gesellschaft, and the Ireland – United Kingdom branch of IAIA), asking participants for European SEA examples of good practice regarding the consideration of health aspects; about 500 list-server members were thus reached, of which 10 sent a reply.
- (2) A World Wide Web search was carried out, using the key words SEA, health, HIA (health impact assessment), policies, plans, programmes; this resulted in a total of 3 860 hits.
- (3) A web-based search of SEA systems the authors were familiar with was conducted, including the United Kingdom (England, Scotland, Wales and Northern Ireland), Ireland, Germany, Austria, the Netherlands, Belgium, Switzerland and Denmark; this mainly focused on practice in spatial and transport planning.

Only one case was identified based on element 1 (case 8 in [Table 1](#)). Seven of the 10 listserver subscribers that did reply said that they did not know of any SEAs which considered health aspects well. Two cases were identified, based on element 2 (cases 5 and 6 in [Table 1](#); for the latter see also the [Welsh Health Impact Assessment](#)

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Table 1
SEA case studies.

Country/Region	Spatial planning	Transport planning	Waste management planning	Economic development planning
Austria			7 (local)	
Czech Republic				8 (national)
England	1 (local)	2 (local regional/county)		
Germany	3, 4 (local and regional)			
Netherlands	5 (local)			
Wales	6 (local)			

Support Unit, 2009). Five SEAs were found, based on element 3. Here, case 7 had been introduced in the international literature as a good practice SEA, applying a communicative assessment ('round table') approach. Furthermore, case 1 had been previously identified as an SEA that considered health aspects well (Fischer, 2008, 2009a). The eight SEAs selected for review represent practice in five EU Member States, including Austria, the Czech Republic, Germany, the Netherlands and the United Kingdom (England and Wales). Cases represent SEA application in four sectors, including spatial planning, transport planning, waste management planning, and economic development planning. Table 1 shows the various types of SEAs, along with a review number, which is subsequently used in this paper.

Due to the comprehensive and integrative nature of spatial planning, five of the reviewed SEAs are from this field. In theory, these should integrate health with other aspects, e.g. transport, economic development, environmental management particularly well. The eight SEAs include:

1. Sustainability appraisal (SA) for the Peterborough City Council Development Plan Documents (DPDs) scoping report of December 2006 and core strategy preferred options report of May 2008;
2. SEA of the Peterborough Local Transport Plan (LTP) 2 of January 2006; and the associated Health Impact Review (HIR);
3. SEA for the Regional Plan (*Regionalplan*) of Western Saxony of 2008;
4. SEA for the local statutory land use plan (*Flächennutzungsplan – FNP*) of Leipzig of 2005;
5. SEA (*plan EIA; plan-mer*) for the structure vision (*structuurvisie*) of the town of Emmen of December 2007;
6. Sustainability appraisal (SA) of the scoping report and the key issues and strategy options of the Wrexham Local Development Plan (LDP) of December 2006; and the associated 'rapid HIA' of March 2008;
7. SEA of the Vienna Waste Management Plan of July 2001;
8. SEA of the Czech Operational Programme Enterprise and Innovation of June 2006.

The SEAs selected can be seen to reflect current areas and levels/tiers of application well. Most current SEA practice is happening in spatial/land use planning and transport planning at local and to a lesser extent at regional levels; in the United Kingdom alone, over 1000 post-Directive SEA exercises are likely to have been conducted in spatial and transport planning at the local level with another 12 regional plan SEAs, representing the nine English regions, as well as Wales, Scotland and Northern Ireland (Fischer, 2009a). Since the introduction of formal SEA requirements, national plan/programme level SEA examples frequently stem from EU operational programmes, similar to the reviewed case 8 (see also Fischer, 2003).

Documentation for the Peterborough DPD (1), the Peterborough LTP (2), the Wrexham LDP (6) and the Czech SEA (8) was available in English; for the Western Saxony SEA (3), the Leipzig SEA (4) and the Vienna Waste SEA (7) documentation was available in German and for the Emmen SEA (5) in Dutch. The rationale for choosing two cases in

Box 1**Questions for analysing SEAs regarding the inclusion of health/HIA**

1. Who provides the health expertise?
2. What definition of health is used? How broad is the health concept used (natural, physical, social, behavioural¹)?
3. Is HIA mentioned or used?²
4. What health data are used? Are they readily available/routinely or newly collected?
5. Is there a mix of quantitative and qualitative methods in SEA?
6. Are health impacts quantified? If so, how?
7. Are health stakeholders (apart from the general public) participating in the SEA?
8. Did health inclusive SEA influence the decision-making process?
9. Is there any system set up for monitoring health impacts after the decision has been taken?
10. Which of the following health related issues/ aspects are considered:
 - access to health activities/services/social care;
 - health inequalities (e.g. in different neighbourhoods);
 - open and green space (recreation);
 - biophysical aspects:
 - soils;
 - weather/climate/flooding;
 - air;
 - water;
 - flora and fauna/ biodiversity;
 - social/economic aspects:
 - education;
 - satisfying employment/work from home ;
 - unemployment;
 - affordable housing ;
 - poverty;
 - inequality;
 - social exclusion;
 - crime rates;
 - noise and light pollution, vibrations, smell ... ;
 - human behaviour:
 - healthy lifestyles (cycling);
 - leisure activities (open areas, sport);
 - food;
 - waste;
 - houses and buildings: healthier environments;
 - health of minorities (e.g. travelling people);
 - health and safety.

each, England and Germany was to be able to look at the connections made between different tiers/levels and sectors, and to establish potential consistencies/inconsistencies. Cases 1 to 7 represent routinely prepared statutory spatial, transport and waste management plans that are prepared in the respective planning systems many times over. Case 8, on the other hand, was prepared outside the established

¹ Natural = connection of health with e.g. flora, fauna biodiversity, soils, air, water
Physical = connection of health with e.g. the built environment, noise, emissions
Social = connection of health with e.g. education, unemployment, social exclusion, crime
Behavioural = connection of health with e.g. lifestyles (smoking, alcohol, sport), healthy forms of transport.

² All procedural elements of HIA are reflected in every Directive based SEA process (i.e. screening, scoping, assessment, consultation and participation, decision-making and follow-up; see e.g. WHO, 2001 and Fischer, 2007); here, HIA therefore means a section in the SEA report, which is dealing explicitly with health, preferably not just physical and natural, but also social and possibly behavioural terms.

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