Health and Strategic Environmental Assessment (paper ID 120)

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This paper reflects on how human health is dealt with in strategic environmental assessment (SEA). It is shown that in current practice, whilst aspects affecting physical aspects of health (e.g. pollution, emissions) are routinely considered, social and behavioural aspects are only occasionally covered. An important question arising is whether and if, how, all health determines should be considered in SEA.

1 Introduction

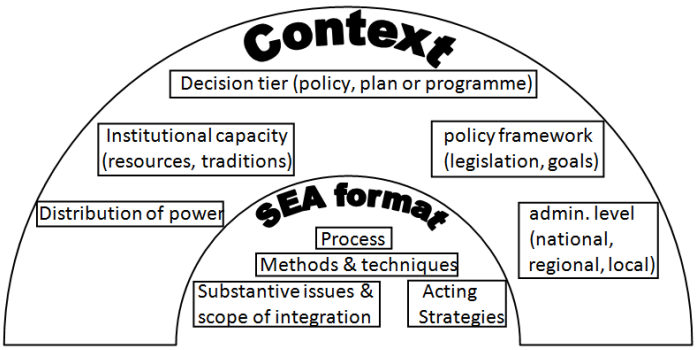
Most SEA systems globally formulate requirements for how SEA is to be conducted, in particular in terms of the process applied and the substantive issues addressed. Next to biophysical aspects, 'human health' is an issue which is often included. What is of particular importance with regards to SEA's potential for improving the consideration of health in policy, plan and programme making procedures is its statutory status in over 40 countries and development bank requirements in many developing countries. This means that for many initiatives there are formal requirements to use it, thus making it different from many other impact assessment instruments which are often applied voluntarily. Negative health impacts could thus be systematically avoided in many policies, plans and programmes and positive health outcomes be enhanced though SEA.

When the term SEA was first discussed in the second half of the 1980s it was understood to mean the use of project EIA process principles to strategic initiatives (Fischer and Seaton, 2002), consisting of a number of distinct stages. Importantly these are identical to those that are often said to make up an effective health impact assessment (HIA) process (see e.g. WHO, 2001). Procedural stages include screening, scoping, impact assessment and report preparation, consultation and participation, decision making, monitoring and follow-up.

Today, it has become widely accepted that the specific context within which SEA is applied needs to be considered before deciding on the specific format of SEA. In this context, a range of aspects are important for determining the most effective way of SEA application, including in particular (following Fischer, 2013) the specific decision tier, the distribution of power in the decision process, the specific administrative level, the existence of a policy framework with compatible policy objectives and on the institutional capacity to integrate. Importantly, the specific cultural context may have a bearing on the way in which the instrument is used (Fischer and Gazzola, 2006). With regards to choosing suitable methods and techniques, aspects to be considered include (following Partidario and Fischer, 2004) time scales, types of data, levels of uncertainty, types of impacts, problems with consultation and participation at higher tiers, and choosing appropriate alternatives.

In line with the different situations described above, the role of the assessors is also likely to differ (see Fischer, 2003). In project related and structured situations, for example, an assessor is more likely to act as a problem solver. Furthermore, if there is consensus on goals, the assessor may act as an advocate of those. In more strategic situations with high degrees of uncertainty, an assessor is likely to act as a problem recognisor. Finally, if an assessment is striving to integrate different aspects, an assessor may also act as a mediator of different interests (see e.g. Runhaar and Driessen, 2007; Fischer et al, 2010). Figure 1 summarises current thinking with regards to various contextual issues influencing the specific format of SEA.

Figure 1: The format of SEA as determined by contextual factors



Source: the author

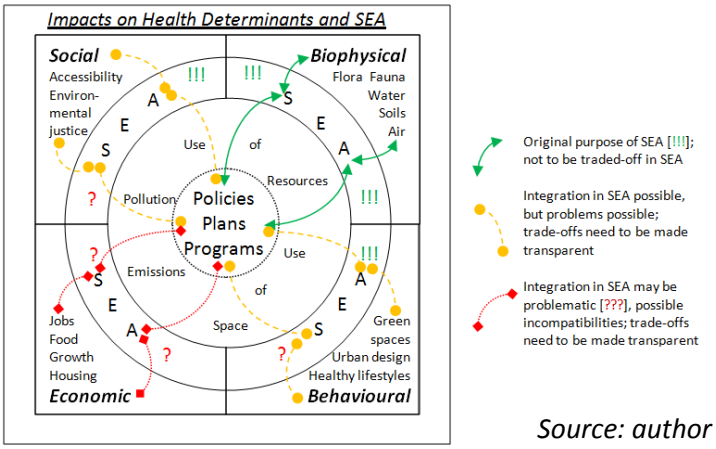
2 Health in SEA: conceptual thinking and empirical evidence

Human health is an integral part of the different aspects to be considered in SEA, disregarding whether the substantive focus is environmental only or on wider sustainability issues. This is frequently acknowledged in SEA legislation and guidelines world-wide. In this context, the World Health Organisation (WHO) has committed itself to support the improved consideration of health in SEA, e.g. through its London and Budapest ministerial conferences on environment and health. In the Budapest Declaration of the WHO (2004), for example, health was explicitly mentioned as being an integral part of SEA.

Following Whitehead and Dahlgren (1991), important health determinants are connected with (a) biophysical, (b) social, (c) economic, (d) behavioural and (e) other 'fixed' personal attributes. Whilst it is possible to influence (a) to (d), personal physical attributes are not normally changeable. However, it is still possible to exert an influence on associated health implications. For example, a person with hereditary high blood pressure and heart problems may alleviate potential impacts by e.g. exercising regularly. As the built and natural environments can either encourage or discourage certain exercises (such as cycling or walking to work), health determinants can be influenced through policies, plans, programmes and their associated SEAs and behavioural aspects are thus important.

Whilst in theory at least, nothing should keep SEA from supporting the consideration of various health aspects in policy, plan and programme making, whether this is happening in current practice to date has been researched in a few studies only. Figure 2 provides for a conceptual idea of how health determinants should be approached, if addressed in SEA.

Figure 2: Approaching the consideration of health determinants in SEA: a conceptual model



Source: author

What is important is that whilst in principle, all can be considered, there may be problems in terms of compatibility. In this context, SEA as a decision support instrument should never make trade-off decisions in the absence of clear trade-off rules and in the presence of powerful interests. Whilst the main role of SEA has been seen by some as being an instrument of power mediation, there is currently no empirical evidence that this can be successfully achieved. Therefore, a cautious approach to integration should be taken (see e.g. Devlin and Yap, 2008). It is acknowledged that incompatibilities may not only be in existence between different health determinants, but also amongst them. Regarding biophysical environmental aspects, for example, climate change mitigation and adaption measures may turn out to be incompatible (see e.g. Moser, 2012). However, here, an important role of SEA would be to weigh impacts of different options and to give recommendations for the most environmentally sustainable solutions.

3 Empirical evidence for the consideration of health in SEA

To date, there have only been few studies explicitly looking at the empirical evidence for the consideration of health in SEA. What is of particular importance here is that these normally have not limited their scope to biophysical health aspects, but have also considered social and behavioural aspects. Carmichael et al (2012) summarised the literature on the integration of health into urban spatial planning through impact assessment and Bond et al (2013) reflected on 'the separation of spatial planning and health planning' and the associated roles of SEA and HIA. Furthermore, Douglas et al (2011) reflected on how well health was being considered in

Scottish SEA practice, suggesting that health impacts were better considered in SEA than EIA, but that there was scope for improvement. Also, in 2011, Schmidt looked at the consideration of health and climate change in UK and German spatial plans and associated SEAs. A year earlier, Nowacki et al (2009) reflected on health in SEA guidelines and Fischer et al (2010) explored the consideration of health in eight SEAs from Austria, the Czech Republic, England, Germany, the Netherlands and Wales. Furthermore, in 2009, Kørnøv looked at the role of health in Danish SEA guidance and practice. In 2008, Fischer looked at the existing evidence and the potential of SEA to address health impacts. Finally, in 2006, Tomlinson established the extent to which health was considered in SEA of local transport plans in the UK.

Some more conceptual papers on the integration of health in impact assessment were provided by e.g. Morgan (2011), who argued from a New Zealand perspective in favour of bringing 'health concerns into formal IA processes' (p410), and by Wright et al (2005) who discussed whether coupling of health impact assessment (HIA) and SEA would be the best way forward. Furthermore, Mindell and Joffe (2003) looked at the linkages between HIA and other impact assessments, amongst which SEA. Finally, in 2001, the WHO released a report on the potential linkages of health impact assessment and strategic environmental assessment.

What is clear from those works that have looked into the consideration of health in SEA is that in current practice, the only aspects that consistently feature are those that are of a biophysical nature. This includes in particular issues surrounding soils, weather, air, water, flora, fauna and biodiversity. SEAs also normally routinely consider issues such as noise and light pollution, vibration and smell. Furthermore, most SEAs consider some other non-physical health aspects, including those related to human behaviour, connected with e.g. food provisions and services or leisure facilities.

4 Strengths, weaknesses, facilitating factors and barriers for health inclusive SEA

Empirical evidence for strengths and weaknesses of current SEA practice overall has recently been generated in a number of research studies (see e.g. Fischer (2010; 2012); Therivel et al (2009) and EC (2009)), covering practice in various sectors, including spatial, transport, waste management and energy planning. Generally speaking, strengths of existing practice include a systematic and structured presentation of baseline data and of the overall results of the assessment. Similarly, practice tends to do well with regards to the description of consultation and participation exercises. Observed weaknesses of many SEAs include a poorly established and ill-explained integration of plan and SEA processes. Similarly, alternatives/options are often poorly defined, and there are frequently problems in developing feasible and realistic alternatives. Furthermore, the impact of both, SEA and public participation on the plan is at times unclear and poorly explained. Similarly, this is also the case with regards to the identification of impact significance and the relationships with other policies, plans, programmes and assessments which is rarely fully elaborated on. Tiering – both between different administrative levels and between different policies, plan, programme and project tiers – is usually not well established and uncertainties are only rarely mentioned or addressed. Finally, the assessment of interrelationships between different aspects as well as cumulative impacts has been found to be challenging.

A number of shortcomings have been observed with regards to the consideration of health in current SEA practice. Importantly, in many SEA systems, health stakeholders do not get engaged in SEA processes. One reason is that frequently they are not statutory consultees. Another is that health professionals are often uncomfortable to getting involved, as SEA is not a platform they are familiar with. Furthermore, spatial and other policy, plan and programme makers often appear to lack understanding of health issues and may, as a consequence only consider biophysical determinants of health. Getting health stakeholders involved in SEA and increasing capacity amongst policy, plan and programme makers and assessors is therefore key to improving practices. Finally, it is important that despite of the rapidly growing practice of SEA globally, empirical evidence produced so far for health and SEA is still thin and that only a tiny fraction of the now substantial body of professional literature on SEA explicitly deals with health.

Regarding facilitating factors and barriers for the consideration of health in SEA, based on the evidence established so far, it is clear that there do not appear to be any differences between health and other assessment aspects, including e.g. biodiversity or climate change. Facilitators and enablers can be divided into those connected with the process of a specific SEA and those connected with the overall context within which the instrument is applied. The former include e.g. the application of a suitable assessment procedure (EIA based / non-EIA based) and the use of suitable methods and techniques. The latter include e.g. provisions for the consideration of health, a clear understanding of the issues to be addressed and the roles of those involved in assessment, clear ideas about the expectations and values of stakeholders and their effective involvement in

SEA, as well as issues of appropriate funding, time and support (see e.g. Bina, 2008; Fischer, 2005; Marsden, 1998).

Whilst integration of different environmental, social and behavioural health determinants in SEA is possible, empirical evidence suggests that this needs to be approached with care and that in certain situations, different assessment aspects are better kept separate (e.g. in dedicated assessment instruments). An important reason for applying a cautious approach is power differences between the various contributors to an 'integrated' SEA. For example, integrating transport assessment into SEA in the presence of a powerful road building lobby is unlikely to result in reduced environmental impacts from less road construction. In the absence of strong vested interests, however, integration of different impact assessments may be more unproblematic. Furthermore, problems may be reduced in the presence of formally established trade-off rules. Another important barrier which may be in the way of effective integration includes technical, human and financial resource limitations. Finally, responsibilities for health issues may not be with the authority preparing a specific policy, plan or programme, but may lie with a different body which possibly prepares their own policies, plans and programmes. In this case, achieving effective co-ordination is important. However, institutional barriers may be high, and effectively co-ordinating activities may be a challenge. Despite of these potential barriers, it is important that Integration can succeed, though, if those contributing to SEA are open to different outcomes.

5 Conclusions

Overall, SEA is an instrument which can work effectively towards a better consideration of health in policy, plan and programme making. It is clear that requirements to consider health through SEA have shown to make policy, plan and programme makers and assessors more likely to reflect on issues that they otherwise would not have. Whilst in current practice globally, it is mainly the biophysical determinants of health that are advanced through SEA, social and behavioural determinants may also be included. However, this is only likely to become more widespread in the presence of associated government policy, legal mandates or official guidance. Whether or not a multitude of aspects should be integrated in SEA very much depends on the specific situation of its application. Whilst at times, it may be advisable to do so, in other instances it may be preferable to keep different aspects being represented by different assessment instruments, which are applied in parallel processes.

References

Bina, O. 2008. Context and systems: thinking more broadly about effectiveness in strategic environmental assessment in China, *Environmental Management* 42: 717-733.

Bond, A., Cave, B. and Ballantyne, R. 2013. Who plans for health improvement? SEA, HIA and the separation of spatial planning and health planning, *EIA Review*, in press.

Carmichael, L., Barton, H., Gray, S., Lease, h. and Pilkington, P. 2012. Integration of health into urban spatial planning through impact assessment. *Environmental Impact Assessment Review*, 32 (1): 187-194.

Devlin, J. F. and Yap, N. T. 2008. Contentious politics in environmental assessment: blocked projects and winning coalitions, *Impact Assessment and Project Appraisal* (26): 17-27.

Douglas, M. J.; Carver, H. and Katikireddi, S. V. 2011. How well do strategic environmental assessments in Scotland consider human health? *Public Health*, 125(9): 585-591.

European Commission DG Env.. 2009. *Study concerning the report on the application & effectiveness of the SEA Directive (2001/42/EC)*, Brussels. http://ec.europa.eu/environment/eia/pdf/study0309.pdf.

Fischer, T.B. 2013. Integration of SEA with other assessment tools, in: Sadler, B. and Dusik, J. *Handbook of Strategic Environmental Assessment II*, Earthscan.

Fischer, T. B. 2012. The quality of local transport plan (LTP) 3 SEA reports in North West England – a comparative review with English spatial and waste management planning related SEA practice, *Town and Country Planning* 81 (6): 281-286.

Fischer, T. B. 2010. Reviewing the quality of strategic environmental assessment reports for English spatial plan core strategies, *EIA Review;* 30(1): 62-69.

Fischer, T. B. 2008. *Addressing health impacts through strategic environmental assessment (SEA) – current evidence and potential*, keynote presentation at the 9th international HIA conference, 9 – 10 October 2008, Liverpool; paper can be obtained from fischer@liverpool.ac.uk.

Fischer, T.B. 2005 Having an impact? – Context elements for effective SEA application in transport policy, plan and programme making, *Journal of Environmental Assessment Policy and Management* 7(3): 407-432.

Fischer, T.B. 2003. Strategic environmental assessment in post-modern times, *EIA review*, 23(2): 155-170.

Fischer, T. B.; Matuzzi, M. And Nowacki, J. 2010. The consideration of health in SEA, *EIA review;* 30(3): 200-210.

Fischer, T.B. and Gazzola, P. 2006. SEA good practice elements and performance criteria – equally valid in all countries? – the case of Italy, *EIA Review* 26(4): 396-409.

Fischer, T.B. and Seaton, K. 2002. Strategic environmental assessment – effective planning instrument or lost concept? *Planning Practice and Research*, 17(1): 31-44.

Kørnøv, L. 2009. Strategic Environmental Assessment as a catalyst of healthier spatial planning: The Danish guidance and practice. *Environmental Impact Assessment Review* 29:, 60–65.

Marsden, S. 1998. Importance of context in measuring effectiveness of strategic environmental assessment. *Impact Assessment and Project Appraisal*, 16(4), 255-266.

Mindell J and Joffe M 2003. Health impact assessment in relation to other forms of impact assessment, *Journal of Public Health*, 25(2):107-12

Morgan, K. 2011. Health and impact assessment: Are we seeing closer integration? *EIA Review*, 31(4): 404-411.

Moser, S. C. 2012. Adaptation, mitigation, and their disharmonious discontents: an essay, *Climate Change*, 111(2): 165-175.

Nowacki, J and Fehr R 2009. Health in strategic environmental assessment (SEA) guidelines. http://www.lzg.gc.nrw.de/_media/pdf/service/vortraege/fehr_110414_Health-SEA-Guidelines_HIA11_jn-rf.pdf

Partidário, M. and Fischer, T.B. 2004. SEA, in: Arts, J. and Morrison-Saunders, A. (eds.). *Follow-up in Environmental Assessment*, Earthscan, London: 224-247

Runhaar, HAC and PPJ Driessen (2007). What makes strategic environmental assessment successful environmental assessment? *Impact Assessment and Project Appraisal*, 25(1): 2–14.

Schmidt, C 2011. *The consideration of health impacts from global climate change in UK and German spatial plans and their associated SEAs*, Institut für Geographie und Geologie, Ernst-Moritz-Arndt-Universität Greifswald and University of Liverpool.

Therivel, R.; Christian, G.; Craig, C.; Grinham,R.; Mackins, D.; Smith, J.; Sneller, T.; Turner, R.; Walker, D. and Yamane, M 2009: Sustainability focused impact assessment: English experiences, *Impact Assessment and Project Appraisal*, 27(2): 155-168.

Tomlinson P 2006. Consideration of health in SEA of LTP2s, www.sea-info.net/files/general/Health_in_SEA_LTP2s.PDF.

Whitehead, M. and Dahlgren, C. (1991). What can we do about inequalities in health. *The Lancet*. 338: 1059-1063.

WHO 2004. Budapest Declaration, http://www.euro.who.int/__data/assets/pdf_file/0008/88577/E83335.pdf.

WHO 2001. HIA as part of SEA, WHO, http://www.who.int/hia/network/en/HIA_as_part_of_SEA.pdf.

Wright J, Parry J and Scully E 2005. Institutionalising policy-level HIA in Europe: is coupling HIA with SEA the next step forward? *Bulletin of the World Health Organisation* 83(6): 472-7.