

SEA at a Crossroad: Trends in Austria's Transport Infrastructure Planning

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Abstract

Since the first implementation of the SEA Directive, Austria has always been a fascinating laboratory of SEA practice in strategic transport infrastructure planning. Austria's federal system encompasses transport planning competences on different levels and in different regions. Every entity has an own legal framework and they all have their planning culture and tradition of SEA for plans and programmes for transport infrastructure.

SEA for Austria's federal high-level transport network has shown to be one of the most effective in Europe. The SEA Directive was implemented in a law that focusses on general aims and processes of high-level transport infrastructure planning. According to this law, SEAs have always been fully integrated in the planning processes themselves. Therefore, the integrated assessment of economic, social and environmental aspects has always been at the heart of SEAs according to this law. The paper shows the best examples of this practice and highlights the advantages and shortcomings of this approach.

On the other hand, SEA legislation for transport infrastructure planning on Austria's regional level shows both very diverse specifications and outcomes. Mostly, SEAs show EIA-like approaches and the effect on the plan or programme is barely recognizable. The paper shows some of the very best and worst examples and discusses whether this supposed shortcoming does really matter.

The paper contains critical learnings from 15 years of SEA practice in Austria's transport infrastructure planning and provides ideas for the future of SEA practice in Europe.

Introduction and general background

Austria has one of the densest networks of high-level transport infrastructure in Europe. This is due, on the one hand, to Austria's status as an important transit country in the European economic area and, on the other, to the historically evolved structure of the economic and settlement areas.

The introduction of the Strategic Environmental Assessment (SEA) in the transport sector based on the implementation of Directive 2001/42/EC (henceforth SEA Directive) in the 2000s hit Austria in a very dynamic phase of the development of its transport system:

- The planning and establishment of efficient connections to its eastern neighbours as a result of the fall of the so-called Iron Curtain was just getting underway. In line with the priorities of the eastern neighbouring states, this primarily meant the construction and expansion of freeways and expressways.
- For the railroad network - after decades of relative neglect in favour of road construction - a new era of expansion was being prepared in connection with the establishment of the Trans-European Transport Networks.

Although the instrument of the environmental impact assessment (EIA) had already been successfully applied in this phase in Austria for a good ten years, the SEA as a new instrument was met with little enthusiasm and predominantly a lack of understanding when it was introduced. Particularly in the field of transport infrastructure planning, it was unusual and unimaginable for many stakeholders that environmental concerns had to be explicitly and extensively taken into account in early planning phases through to the fundamental decision-making process itself.

Although there is now a largely established practice of SEA in the field of transport infrastructure planning in Austria, SEA remains a little-loved, sometimes unambitiously practiced and often ineffective instrument.

Implementation of the SEA Directive in Austria's transport infrastructure planning system

Austria is a federally organized state with nine federal provinces, the *Länder*. The division of competences between the federal government and the *Länder* is precisely regulated by law, whereby the federal government only has those competences that are expressly assigned to it under Art. 10 of the Federal Constitution Act (Bundes-Verfassungsgesetz). In the area of transport infrastructure, the federal government is responsible for the high-level road network (freeways and expressways), the majority of the railroad network and navigable waterways.

The SEA Directive was implemented in the Austrian transport infrastructure planning system in accordance with this principle at two levels:

- A separate law was created for high-level transport infrastructure nationwide. The Federal Act on Strategic Assessment in the Transport Sector (SP-V-Gesetz) always provides for an SEA when a federal high-level transport infrastructure is adopted by law or ordinance or such a law or ordinance is substantially amended.
- For other transport infrastructure - i.e. primarily the subordinate road network - the *Länder* have chosen different ways of anchoring the SEA in existing state laws: Implementation directly in the road laws, implementation in the spatial planning laws (for keeping preferred corridors free) or no implementation at all.

All selected forms of implementation primarily concern connections between locations or nodes. None of the systems covers the entire network or relevant parts of it. The scope of SEA is therefore relatively similar to that of EIA from the outset. As will be shown later, this results in some fundamental shortcomings in SEA practice in Austria.

SEA for nationally high-level transport routes

Since the SEA Act came into force, a total of 10 so-called Strategic Transport Assessments (Strategische Prüfungen im Verkehrsbereich, SP-V), or SEAs for short, have been carried out in Austria. This relatively low number is due to the fact that the national high-level transport route network was essentially already defined in Austrian law before the implementation of the SEA Directive: The Federal Roads Act (Bundesstraßengesetz), the ordinances on high-level railroad lines (Verordnungen für Eisenbahn-Hochleistungsstrecken) and the Navigation Act (Schifffahrtsgesetz) already contained some very far-reaching plans in the 2000s and have only been extended or amended in isolated cases since then - and thus since the SEA Act came into force.

An initial group of additional freeways and expressways was included in the Federal Roads Act in the second half of the 2000s. These were road projects for which concrete planning had already been carried out before the SEA Act came into force. The SEAs were therefore carried out at comparatively short notice and in some cases shortly before the projects were implemented. These SEAs only complied with the basic idea of the SEA Directive to a rudimentary extent, as environmental assessments with a character similar to an EIA were carried out due to the advanced stage of planning and, in some cases, high implementation pressure. Another reason for the high degree of similarity to EIAs was the professional background of the planners and practitioners involved from the EIA sector. Based on this experience, the first guidelines for SEA were then published, which established this practice as the standard.

In the 2010s, a total of three SEAs were then carried out for the declaration of railroads as so-called high-level lines. The SEAs were carried out very early on in planning processes that were partly open-ended, which brought them much closer to the basic idea of the SEA Directive. The key feature of these SEAs was the complete integration of the environmental assessment into the legally standardized planning process itself. Environmental considerations were integrated as a decision-relevant component in multi-criteria analyses of equivalent alternatives. In retrospect, an influence of the consideration of environmental concerns in the narrow sense (nature) can be observed in isolated cases, even if the equivalent consideration offers no guarantee for the selection of a highly "nature-friendly" alternative. As experience with this completely different SEA practice progressed, the aforementioned SEA guidelines were fundamentally changed and republished.

Two SEAs are currently being carried out in the area of the high-level road network. It is not yet possible to draw any reliable conclusions from this experience.

SEA for provincial roads

Road projects under the responsibility of the *Länder* account for the majority of road construction projects in Austria. Although the networks in all federal *Länder* can be regarded as complete in their basic features, there are still some extensive and complex network connections, network extensions or network adaptations, in particular bypasses of individual or several villages. Whether an SEA is carried out depends on whether there is a legal basis for carrying out an SEA in the area of road planning in the respective *Land*. The two *Länder* of Vorarlberg and Upper Austria are used to illustrate two typical SEA systems:

The implementation that comes closest to the basic understanding of the SEA Directive can be found in the *Land* of Vorarlberg. There, SEA is enshrined in the Roads Act itself, not only for provincial roads, but even in some cases for municipal roads. However, as this *Land* is comparatively small, only a few SEAs have been carried out for provincial roads to date. The SEAs for municipal roads are handled together with the SEAs in the area of spatial planning on the basis of special provisions. For provincial roads, SEAs were carried out at early planning stages and fully integrated into the planning process. Here, the environmental report is part of the general explanatory report and thus serves fully as part of the basis for decision-making. However, as individual projects are always considered here too, a certain proximity to the EIA cannot be avoided.

In the *Land* of Upper Austria, corridors for provincial roads can be defined and kept free by spatial planning programmes. The provisions required for this - including for SEA - are enshrined in the Spatial Planning Act. In principle, this system allows for SEA as defined in the SEA Directive, as the law stipulates that SEA in the area of spatial planning must be carried out at an early stage and taken into account in the decision-making process. In this case, the restriction of the effectiveness of SEA is rather due to the actual SEA practice in the area of spatial planning: Open-ended assessments of alternatives are the exception. Particularly when creating the basis under spatial planning law for major projects or developments, a largely developed project is already available, which is then used as the subject of the assessments in the SEA. As a result, this again means SEAs that are largely similar in character to EIAs.

Learnings from 15 years of SEA practice in Austria

The most important prerequisite for the effective implementation of SEA in the field of transport infrastructure planning is the establishment of the instrument at the highest possible strategic level. Overall network planning, mobility strategies, transport concepts etc. are exempt from the obligation to carry out an SEA in Austria - both at federal and *Länder* level. Instead, SEAs are generally only to be carried out for specific routes. As a result, no meaningful consideration of system alternatives and thus no fundamental system decision

can be made within the framework of an SEA. There is often a lack of political will to change this and many practitioners also lack the imagination as to how an environmental assessment can be carried out satisfactorily at such an abstract level.

The SEA is most effective when it is fully integrated into the planning process. There is a broad consensus on this, but not on what this means in practice: Should the environmental assessment and the environmental report be understood and carried out as recognizably separate realities, or should they be fully integrated into the general planning process? Does the SEA have to force a maximum "nature-friendly" solution or does the full integration of environmental aspects automatically and "invisibly" achieve a sufficiently good level of environmental protection? There are clear indications that, in line with the broad concept of sustainability, the assessment of environmental aspects in the narrower sense as one of several impact dimensions ensures a greater influence on the final decision. Often, the transparent addressing of environmental impacts and thus the need for justification for decision-makers already has a greater effect than a rather decoupled environmental assessment outside the planning process.

The particular added value of SEA can be to introduce an element of open-ended consideration of alternatives into planning processes. Such a consideration of alternatives in turn facilitates the integration of environmental considerations into the decision-making process, because this increases the need for differentiating aspects. The central concern of the SEA Directive to give sufficient space to environmental concerns in planning processes is therefore automatically promoted by the promotion of the assessment of alternatives. However, this requires a deliberate focus in the SEA process: away from the unconditional quantitative measurability of the assessment results towards a coherent formation and similar assessment of several alternatives. In order to be relevant for decision-making, the impact assessment must above all depict the impact relationships in their essential characteristics.

The SEA Directive requires the presentation of "likely significant effects", which means that a one-to-one processing of the aspects according to Annex 1 lit. f is not necessarily expedient. When identifying, describing and assessing the likely significant effects, it is often sufficient to use qualitative methods in the sense of plausibility assumptions. The use of quantitative methods generally leads to fictitious accuracy or encourages the detailed elaboration of projects, which should have no place at the level of plans and programmes.

The SEA is most strongly accepted and reflected as an instrument when it can be clearly distinguished from other instruments, above all the EIA, in terms of function, process and type and depth of environmental assessment. While the character of an "end of pipe" assessment is rightly at the forefront of the EIA, the SEA shows its particular strength as a planning instrument. In such a system, so-called "tiering" also works well, whereby multiple assessments and redundancies can be avoided.

Recommendations for the future development of the SEA Guideline

Overall, the SEA Directive in its existing form has been successful in establishing SEA as an instrument. While the wording of the existing SEA Directive remains rather vague in some areas ("likely significant effects", "reasonable alternatives",...), other areas - also in terms of content - are strongly determined (in particular Annex 1). This is not problematic per se, but it is the cause of some of the misunderstandings, incorrect practices, etc. that have been outlined above. In the following, therefore, some recommendations are formulated as to how priorities can be changed, gaps in interpretation closed and (supposedly) too rigid specifications defused in a final-oriented manner.

The central starting point for a redesign should be a revised formulation of the objectives of the SEA Directive. The focus should be clearly on the process character, specifically the

requirement for adequate and comprehensible consideration of environmental considerations within planning processes and in decision-making. By contrast, the more substantive objective of a high level of environmental protection should be less important. Such a clarification of priorities should be made throughout, starting with the objectives in Article 1.

Linked to this - and particularly crucial for the German version of the SEA Directive - is a move away from the term "assessment" ("Prüfung"). The instrument now called SEA should be semantically sufficiently far removed from the EIA. A changed term would make it clear that the SEA is or should be primarily an environmental or sustainability-centered decision-making aid and not a methodologically isolated impact assessment.

The restriction of the scope of application to plans and programmes should be extended to policies. This closes a loophole that is all too often used to deny the need for an SEA for significant and far-reaching determinations, particularly at strategic level. In connection with this, there must also be a better and more far-reaching definition of what is meant by plans and programmes and that this also includes documents etc. that are not explicitly designated as plans or programmes.

The substantive focus should be shifted away from an environmental perspective in the narrow sense towards a broader sustainability perspective. This may well require far-reaching changes to the SEA Directive, starting with central key terms. In order to minimize the associated increased risk of so-called trade-offs between impact dimensions of sustainability, suitable transparency regulations must be created to ensure that specific impact information remains identifiable until the decision-making process.

The most important lever for distinguishing the SEA more clearly from explicit environmental assessment instruments such as the EIA lies particularly in Annexes 1 and 2, and especially in Annex 1 (f). The congruence in terms of content and semantics with important elements of the EIA tempts us to see the SEA as "EIA light" and to design it accordingly. By strengthening the scoping process, in which an assessment program must be developed, discussed and coordinated on an ad hoc basis, greater accuracy and relevance of the analyses can be achieved.

The further development of the SEA Directive alone is an important first step towards positively changing the SEA systems in the Member States - including Austria. Ultimately, however, success depends on how the Member States deal with a change in the objectives and focus of the SEA Directive. The decisive factor here is to encourage the Member States to interpret the SEA Directive in accordance with their national planning systems and planning traditions and to implement it with a view to creating added value for the respective national planning system. This begins with not adopting the SEA Directive in its essential parts word-for-word in national laws, but rather standardizing a tailor-made and autonomous SEA system as far as possible, taking into account the most important objectives and characteristics of the SEA Directive.