

LEGAL PRACTICES IN THE ASSESSMENT OF CLIMATIC FACTORS IN EIA AND SEA



Comparative study
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Introduction

Since the effects of climate change are becoming more severe, an effective assessment of climatic factors in environmental impact assessment (EIA) and strategic environmental assessment (SEA) is necessary. Both, the SEA Directive¹ as well as the EIA Directive,² require Member States to assess effects of a project or of certain plans and programmes on the climate.

Past studies conducted by Justice & Environment showed that the assessment of climatic factors in both, EIA and SEA procedures, was an abstract topic for participants in the procedures. Justice & Environment thus provided guidance in the document [Assessing the Impact on Climatic Factors in SEA and EIA](#). It concluded that for integrating climate content into all policies, the SEA constitutes an excellent tool for impact assessment of the highest strategic plans and programmes. Projects must contribute as much as possible to climate change mitigation and adaptation. At the same time, sufficient resilience of the project itself to the anticipated effects of climate change is important.

Against this background, this comparative study evaluates the transposition of the EIA and SEA Directive of member states. In particular, it analyses whether transposing provisions in nine Member States (Austria, Bulgaria, Croatia, Czechia, Estonia, Hungary, Romania, Slovenia and Spain) explicitly mandate the assessment of climatic factors; whether specific bodies exist which provide an opinion on the impact on the climate, whether mandatory instructions or trainings exist in that regard (see sections II. and III.); and whether carbon budgets play a role in this context (section IV.). Finally, recommendations for the improvement of the effective assessment of climatic factors will be provided.

¹ Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, OJ L197/2001, pp. 30-37.

² Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26, 28.1.2012, pp.1-21. Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, OJ L 124, 25.4.2014, pp. 1-18.



Climatic factors in EIA

According to the EIA Directive the EIA must 'identify, describe and assess [...] in the light of each individual case, the direct and indirect significant effects of a project' on different factors including 'land, soil, water, air and climate' (Article 3(1) lit. c). Other factors mentioned are e.g. human health, biodiversity, cultural heritage, landscape. Importantly, also the interaction between these factors must be assessed. The effects on these factors must 'include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned' (Article 3(2) Directive).

Article 5 EIA Directive demands that if an EIA is to be conducted, the developer must submit an EIA report which has to include certain minimum contents, e.g. a description of the likely significant effects of the project on the environment and of features of the project and/or measures envisaged to avoid, reduce or offset negative effects on the environment; a description of reasonable alternatives, indicating the main reasons for the option chosen. The developer must ensure that the EIA report is prepared by competent experts and the authority that it has (access to) expertise to assess the EIA report. Annex IV, which specifies required information from the developer, mentions regarding the description of the factor climate as examples greenhouse gas (GHG) emissions and impacts relevant to adaptation (item 4); and with regard to the description of the impact of the project on climate as example 'the nature and magnitude' of GHG emissions and the 'vulnerability of the project to climate change' (item 5 lit. f). The description should cover not only direct effects but also 'any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project' taking into account 'the environmental protection objectives established at Union or Member State level' (item 5). Also a description of the forecasting methods or evidence used including details of difficulties encountered when compiling information and main uncertainties (item 6) or measures to avoid, reduce or offset negative effects, proposed monitoring arrangements and the extent to which negative effects can be avoided or reduced; covering both the construction and operational phases (item 7), should be mentioned.

However, already at the screening stage it may be necessary³ to present how the project will contribute to achieving climate targets at different levels and how it will adapt to future impacts of climate change. Project planning can contribute to the achievement of climate goals. If necessary, the authority should critically evaluate expert assessment and possibly set

³ Art. 4(2) lit. a, together with Art. 4(3) and Annex III (1) lit. f EIA Directive.

additional requirements to ensure compliance of the project with climate mitigation and adaptation objectives.

THE REQUIREMENT TO ASSESS CLIMATIC FACTORS IN NATIONAL LEGISLATION

Regarding the screening state, in Bulgaria national legislation demands that the need to carry out an EIA is assessed on the basis of inter alia the risk of major disasters related to the investment proposal, including those caused by climate change.⁴ In Hungary, the consideration of impacts of the project on climate change in screening decisions is not expressly required but such an obligation can be deduced.⁵ In Romanian law, the criteria corresponding to Annex III Directive (characteristics of the projects) include 'the risks of major accidents and/or disasters relevant to the project in question, including those caused by climate change, [...]'. Authorities are required to consider certain aspects of the screening procedure relating to climate change: e.g. the project's vulnerability and the impact on the area's adaptive capacity (e.g. Hungary). Sometimes it was explicitly mandated that the activity's impact had to be assessed separately for various phases of the activity/project, i.e. its establishment, implementation and termination (e.g. Hungary).

In all nine countries, the assessment of climatic factors in the EIA itself is explicitly mandated by the respective national legislation⁶ or ministerial order⁷/governmental decree.⁸

National legislation demanded from the developer for instance information on impacts related to climate change such as the nature and quantity of pollutant and GHG emissions, the vulnerability of the project to climate change (e.g. Czechia,⁹ Spain, Romania, Slovenia,

⁴ Art. 93 (4) lit. (f) Environmental Protection Act (EPA) (2002, as amended).

⁵ It can be deduced from the broad wording of pts. 3.c) and i) of Annex 5 of Gov. Decree 314/2005, which requires the authority to assess the complexity of the project (especially the possibility of impact processes affecting several environmental elements and the synergy of effects) and any other characteristics relevant to the environmental impact.

⁶ In particular Art. 95 (4) item 3 Environmental Protection Act (Bulgaria); Sec. 2 EIA law (Czechia); Sec. 3'1 (2) Environmental Impact Assessment and Environmental Management System Act (Estonia); Art. 5.1 a) Law 21/2013 on environmental assessment (Spain); Art. 76(2) Environmental Protection Act (EPA) (Croatia); Art. 7(2) Law 292/2018 (Romania); Art 89 Environmental Protection Act (EPA) (Slovenia); Sec. 1(1) item 1 lit. b EIA Act (Austria).

⁷ E.g. order of the Minister of the Environment (Estonia).

⁸ Gov. Decree 314/2005 (Hungary).

⁹ According to an internal document (methodological explanation) the information submitted by the developer 'should include ... information on how the energy intensity and efficiency of the project is addressed in the design of the project, inter alia with regard to direct or indirect GHG emissions (CO₂, N₂O, CH₄ or any other GHG within the meaning of the UNFCCC), the use of renewable energy sources and measures to reduce emissions or improve energy, operational or logistical efficiency. Direct emissions of GHG should not only be considered as direct

Austria¹⁰), the vulnerability of areas to climate change impacts (Czechia) but also impacts related to adaptation to climate change (Slovenia, Spain). In Romania, also the types of vulnerabilities, quantification of trends in exacerbation of existing vulnerabilities in the context of climate change' were demanded.¹¹ Also the interaction of different factors including climate must be assessed (Spain, Slovenia), during the implementation, operation and abandonment phase (Spain). In Spain, an environmental inventory must contain a description, quantification and mapping of all factors which may be affected by the project. In Hungary, the developer is asked to provide an analysis of the vulnerability of considered alternatives (for screening and consultation procedures); exposure of the site and the potential areas of impact, possible effects on each climate factor, a risk assessment on the potential effects, description of adaptation to the effects of climate change for the planned activity, of how the proposed activity will affect the ability of the impacted area to adapt to climate change; the expected annual emissions of each GHG.¹² In Austria, the description of the project in terms of location, type and scope includes the type and quantity of expected emissions resulting from construction and operation; the increase in emissions resulting from the project; a climate and energy concept¹³ in which expected GHG emissions and reduction measures have to be presented.¹⁴ In Austria, the developer must also deliver a description of the project's 'vulnerability' to disaster risks and to the effects of climate change (in particular due to its location), a soil protection concept (of relevance to climate change adaptation); a description of the environment likely to be significantly affected by the project, including climate, and the interactions between other protected assets;¹⁵ a description of emission of pollutants, the interaction of the impacts with other existing or authorised projects, the project-related risk of disasters and climate change; relevant results of other environmental assessments, in particular a SEA, must be also taken into account. In Croatia, it is mandatory to include in an EIA study the description of the existing

production of GHG, but also changes in land use and forestry activities (e.g. deforestation), etc. Indirect GHG emissions should be considered as emissions related to increased demand for energy supply as well as increased demand for travel and transport, emissions from waste treatment and wastewater treatment, etc.' See Methodological explanation, page 3.

¹⁰ Austria: the project's vulnerability to the effects of climate change in particular due to its location.

¹¹ Annex 4, point 5.

¹² Annex 4 of Gov. Decree 314/2005.

¹³ Sec. 6(1) EIA Act.

¹⁴ The requirement to limit emissions in accordance with the state of the art only covers direct emissions from the installation itself or the effects directly attributable to it. Insofar as measures for the reduction of GHG emissions listed in the climate and energy concept are part of the submitted project, these become binding upon approval of the project and must be complied with by the project applicant. Further information on the energy and climate concept can be found in the guidelines of the Federal Climate Ministry.

¹⁵ E.g. people, biodiversity, land affected, soil, water, air, landscape and material assets including cultural assets.

state of the environment on which the intervention could have a significant impact, including climate.¹⁶

While in Estonia there is no provision explicitly transposing annex IV.3 EIA Directive, given the obligation of the EIA to carry out to assess climatic factors,¹⁷ the developer will be asked to provide such information.

The EIA itself must assess possible significant impacts of the proposed project on different environmental factors including climate (e.g. Bulgaria,¹⁸ Czechia,¹⁹ Estonia,²⁰ Romania²¹). Both direct and indirect effects (e.g. Estonia) must be taken into account. Mutual links of climate impacts with impacts on other environmental elements or their interaction or interrelationship must be considered (e.g. Estonia, Spain,²² Croatia²³). Thus in assessing impacts also context and cumulative effects must be taken into account. Impacts of the project on climate change include those expected as a result of the vulnerability of projects' to risk of climate change (Romania).

EIA reports must contain a detailed description of the elements expected to be significantly impacted by the project, including climate, the likely significant impacts (e.g. the nature and extent of GHG emissions, adaptation impacts) (e.g. Bulgaria, Hungary, Estonia) and the vulnerability of the proposed project to climate change (e.g. Bulgaria, Hungary). The EIA report also has to assess the sensitivity of the alternatives to climate change-related impacts (e.g. Hungary) and to indicate how the activity envisaged will affect the capacity of the presumed impact area to adapt to climate change (e.g. Hungary).

¹⁶ *Uredba o procjeni utjecaja na okoliš, NN 61/14 i 3/17*. Annex IV.3. of the Regulation on EIA, O.G. 61/14 and 3/17.

¹⁷ listed in Sec. 3'1 (2) Environmental Impact Assessment and Environmental Management System Act.

¹⁸ Art. 95 (4) item 3 EPA.

¹⁹ Sec. 2 EIA law. Compare also internal Methodological explanation, page 4: ... 'the impact of the project on climate change mitigation, [...] on climate change adaptation, but also the vulnerability of the project itself to climate change impacts must be described and assessed. The implementation of projects and their assessment in terms of climate change should be addressed, for example, in relation to relevant climate and energy objectives, in particular the objectives and measures of the Climate Protection Policy of the Czech Republic, the objectives of the Climate Change Adaptation Strategy [...] and [...] of the National Action Plan for Adaptation to Climate Change.'

²⁰ Sec. 3'1(2) Environmental Impact Assessment and Environmental Management System Act.

²¹ Art. 7(2) Law 292/2018.

²² Art. 5.1 lit. (a) Law 21/2013 on environmental assessment.

²³ Art. 76(2) Environmental Protection Act (EPA).

When deciding on a case-by-case basis, the authority is obliged to take into account e.g. the limitation of GHG,²⁴ project-related vulnerability to major disaster risks, including those caused by climate change, but also criteria indirectly of relevance to climate change, e.g. the location of the project and ecological sensitivity, potential effects of the project on the environment and changes in the effects on the environment if the project is realised compared to the situation without the project (e.g. Austria). In this context interactions between several impacts must be considered. Thus, in Austria, the impacts of a project on the climate (quantification of GHG emissions) must be documented, assessed and avoided or limited through appropriate measures.²⁵ Permits granted as the outcome of the EIA procedure, in Romania, include '[m]easures to minimise the climate impact of the project and/or ... adapted measures on the vulnerability of the project to climate change'.

Slovenia is currently adopting a new Climate Act, which will include (in its current version) a new methodology focusing on assessing climatic factors in EIA.

SPECIFIC AUTHORITY/BODY PROVIDING AN OPINION IN THE EIA PROCESS ON THE CLIMATE IMPACT?

In all nine countries, there is no specific authority or body that provides an opinion in the EIA process specifically on the impact of the project regarding climate (change). However, in all countries different bodies are authorised to provide an opinion on environmental impact which may include the impact on the climate. Such opinions are often non-binding, but sometimes authorities are explicitly required to take them into account.

In Spain, only the environmental authority reviews the climate impact of the project. In Slovenia, the Ministry of the Environment, Climate and Energy provides an opinion on climatic factors which is problematic since the same Ministry adopts the final decision on the EIA report. While the opinion of the Ministry on climatic factors can be negative, the final decision of the same Ministry can be positive, disregarding the negative opinion. In other countries independent experts, such as climatologists, as part of the team preparing the EIA report, can provide an expert opinion (e.g. Bulgaria). In Estonia, the climate impact of the project is assessed by the same team of experts that carries out the rest of the EIA. In Romania, the Technical Analysis

²⁴ This is explicitly mentioned as authorisation criterion and pollutants are defined. EIA Act amendment FLG I No. 26/2023, explanatory memorandum (Austria).

²⁵ Before the clarification in the amendment, Sec. 17 (2) item 1 EIA Act was sometimes interpreted differently. See EIA Act amendment 2023, explanatory memorandum.

Commission,²⁶ which does not have to include any climate experts, provides an opinion on the information submitted by the developer, issues opinions in the screening phase; formulates questions for the guidelines of the study in the scoping phase; submits comments in the analysis of the EIA study and participates in the decision-making process. The members have to reach consensus on whether a permit is to be issued and the authority has to 'take it into account'.

In Austria, an expert opinion on the environmental impact²⁷ or a 'summarised assessment of the environmental impact' based on the expert opinions²⁸ must be provided which have to be - together with the other results of the EIA - taken into account in the decision. In any case, conditions etc. must contribute to a high level of protection for the environment as a whole.²⁹ In Czechia, the authority can request an opinion of an independent expert on whether the EIA report correctly identifies the potential impacts of the project - this opinion being one of the materials on which the authority bases its decision.

Sometimes advisory bodies assess the quality of EIA reports. In Bulgaria such a body³⁰ proposes what decision the authority should take. In Croatia, the environmental impact of the project is evaluated by a Committee³¹ based on the EIA study which is - if the study is complete and expertly based - referred to a public debate. After this debate the Committee issues an opinion on the acceptability of the project and sends it to the authority for the adoption of a decision.³²

²⁶ It usually includes representatives of local / regional authorities, of the environmental guard, of the administration for protected areas (if needed), of the emergency situations and public safety authorities and others.

²⁷ For projects for which an EIA is mandatory listed in column 1 in annex 1; Sec. 12 EIA Act.

²⁸ Sec. 12a EIA Act. For other projects for which an EIA in a simplified procedures is mandatory (listed in column 2) or might apply (column 3).

²⁹ Sec. 17 (4) EIA Act. If the project and its effects are expected to have serious environmental impacts which cannot be prevented or reduced to a tolerable level, the application must be dismissed.

However, project modifications due to climate protection must not lead to unauthorised changes to the nature of the project. Compare case law of the Supreme Administrative Court (VwGH, 28 May 2020, Ra 2019/07/0081 to 0084-6).

³⁰ The Supreme Expert Environmental Council, the advisory body to the Minister of Environment and Water, could consist of scientists in fields related to climate change.

³¹ The Committee is appointed by the Ministry (if interventions are specified in the lists of projects from Annex I and Annex II of the Regulation on EIA) and the administrative body in the county, i.e. in the City of Zagreb (for projects from Annex III of this Regulations). Members of the Committee can be scientists and professionals, representatives of bodies and/or persons designated by special regulation, representatives of local and regional self-government units, and of the Ministry.

³² While in theory the authority could issue a decision opposite to the Committee decision, the author is not aware of such a case.

Sometimes also at regional level expert environmental councils exist which can provide opinions forming part of materials of the procedure to be taken into account in decision-making (e.g. Bulgaria³³).

MANDATORY INSTRUCTIONS, GUIDELINES, TRAINING, INFORMATION WEBSITES, OR OTHER MECHANISMS FOR ENSURING A QUALITY IMPLEMENTATION OF EIA REGARDING CLIMATE IMPACT ASSESSMENTS?

In most countries no mandatory instructions exist. Only in Czechia an internally binding methodological explanation issued by the Czech Ministry of Environment (2017)³⁴ is in place. It must be followed by the authorities applying the EIA law and aims at clarifying certain terms of the EIA law such as 'climate change' for authorities and at making the application uniform and predictable (see also above).

Several voluntary guidelines exist, which sometimes gain importance via binding case law: In Estonia, a voluntary guideline published in 2023 by the Estonian Environmental Law Center (EELC),³⁵ an independent expert organization, was cited by the Supreme Court.³⁶ In Hungary, a (non-binding) guide to evaluation and mitigation of climate related risks of projects prepared by Climate-policy Ltd. upon request of the Prime Minister's Office was successfully referred to in a court case as a minimum standard for evaluation of climate impacts both in EIA and screening procedures.³⁷

In Croatia, the Climate Change Adaptation Strategy O.G. 46/20 should be used in drafting environmental reports. The website of the Ministry of Environment Protection and Green Transition has guidelines for SEA regarding climate impact assessments or Guidelines for

³³ At the regional level, expert environmental councils are advising the Director of the Regional Inspectorate of Environment and Water. All these opinions are not binding but are part of the materials of the procedure (alongside the EIA report and information provided by the relevant public, other authorities or municipalities) based on which the authority makes its decision.

³⁴ Available at https://portal.cenia.cz/eiasea/dokumenty/dokumentSoubor/169/2017-10-20-Metodick%C3%BD%20pokyn-biologick%C3%A1%20rozmanitost%20a%20zm%C4%9Bny%20klima_fin.pdf?lang=cs

³⁵ Available at <http://media.voog.com/0000/0036/5677/files/Kliimamoju-hindamise-suunis%20K%C3%95K2023.pdf>

³⁶ Ruling no. 3-20-771, available at: <https://www.riigikohus.ee/et/lahendid/?asjaNr=3-20-771/103>

³⁷ The court pointed out that the table on climate changes attached to the environmental impact statement contains only yes-no answers, which is not satisfying the purposes of a lawful climate chapter of an environmental impact study. The authority should also have taken into consideration the Guiding Document on Climate Analyses in Environmental Impact Studies, which also suggests much more detailed professional data processing and analyses.

inclusion of climate change and biodiversity in EIA. In Romania, the manual issued by the Environmental Protection Agency with instructions on the implementation of the EIA procedures contains only the legal provisions regarding climate impact. In Slovenia non-binding general instructions, trainings and guidelines, also specifically oriented towards climatic factors, exist³⁸ but there are no explicit requirements for the contractors who prepare the EIA report. In Austria, guidelines of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (in the following: Climate Ministry) exist regarding e.g. the climate and energy concept;³⁹ the soil protection concept⁴⁰ or the environmental impact statement.⁴¹ There exists also a factsheet on dealing with climate change impacts and uncertainty in the EIA⁴² or other academic research output.⁴³

Climatic factors in SEA

Article 5(1) SEA Directive demands from Member States that, if an environmental assessment is required, an environmental report must be prepared. In such a report ‘the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated’. Among the information to be provided for

³⁸ They are more than five years old, see <https://www.gov.si/zbirke/storitve/usposabljanje-za-presoje-vplivov-na-okolje/>

³⁹ Federal Ministry of Agriculture, Forestry, Environment and Water Management (2010) Guideline on the climate and energy concept in the context of EIA procedures, available in German at: https://www.bmk.gv.at/dam/jcr:4c9f0343-cc49-4133-b894-9b0faa2dbae9/UVP_L_%20KlimaEnergiekonzept_2010.pdf They summarise the references on the state of the art regarding the limitation of GHG emissions and energy efficiency for EIA projects and supplement the general EIA guidelines of the Environment Agency Austria and the sector-specific guidelines.

⁴⁰ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (2023) The protected assets of land and soil in the individual case assessment and in the environmental impact assessment (in German).

⁴¹ https://www.bmk.gv.at/dam/jcr:ecaf18e1-a79c-4346-9f1e-5e2de2728ee3/UVF_Leitfaden_2019.pdf For other guidelines relating to the EIA see the website of the Climate Ministry see https://www.bmk.gv.at/themen/klima_umwelt/betrieblich_umweltschutz/uvp/uve_uvp_leitfaeden.html

⁴² UVP Klimafit Infoportal (2018) ‘Factsheet Umgang mit Klimawandelfolgen und Unsicherheit in der UVP’, available at: https://uvpklimafit.boku.ac.at/wp-content/uploads/2018/04/UVPKlimafit_Factsheet_methodische-Hinweise.pdf

⁴³ E.g. Jiricka-Pürerer/Wachter/Driscoll, ‘Perspectives from 2037—Can Environmental Impact Assessment be the Solution for an Early Consideration of Climate Change-related Impacts?’, in Sustainability 2019, 11, 4002, available at: <https://doi.org/10.3390/su11154002> ; Jiricka-Pürerer/Fischer, Climate change in environmental assessment in Europe: A lot of potential and a lot to do, in Hanna (ed) Routledge Handbook of Environmental Impact Assessment, London: Routledge 2022.

this purpose are according to annex I, lit. f) SEA Directive ‘the likely significant effects on the environment’. The non-exhaustive enumeration of factors lists apart from ‘climatic factors’ also biodiversity, population, human health, fauna, flora, soil, water, air, material assets, cultural heritage, or landscape. Also the ‘interdependence’ between these factors must be taken into account. Effects should also include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

THE REQUIREMENT TO ASSESS CLIMATIC FACTORS IN NATIONAL LEGISLATION

In most countries analysed, the provisions transposing Article 5 in connection with annex I.f of the SEA Directive, explicitly mandate the assessment of climatic factors. In several transpositions, the wording of the Directive is reflected (in a few cases instead a reference to annex 1 of the SEA Directive is made):

In Bulgaria,⁴⁴ the environmental assessment report must contain ‘likely significant impacts on the environment, including [...] climatic factors, [...] and the relationships between them; these impacts should include secondary, cumulative, concurrent, short-term, medium-term and long-term, permanent and temporary, positive and negative impacts.’⁴⁵ In Estonia, the strategic environmental assessment report must contain ‘an assessment of the potential significant direct, indirect, cumulative, synergistic, short and long-term, positive and adverse environmental impact, including impact on [...] climate change, [...] and a description of the methods for impact prognosis’. In Hungary, while during the examination of plans and programs climate is one of the points of evaluation, Annex II of the SEA Decree⁴⁶ regarding the criteria for determining significance only indirectly refers to climate (Point 1 let. c), through the requirements of sustainable development. Annex IV of the SEA Decree on the mandatory content of the environmental report lists climatic factors in line with annex I.(f) SEA Directive. In Croatia, Annex 1 of Regulation on SEA, O.G. 3/17 demands to include also likely significant impacts on the environment, including climate, taking into account interrelationships of different

⁴⁴ EPA, as amended by the 2022 SEA. Also among the selective criteria of the screening stage is the impact to, and the vulnerability of the plan or program to climate change. In order to determine the significance of the impact of the plan/programme in view of the assessment of the need to carry out SEA, Art. 85 (4) EPA: ‘The Minister of Environment and Water or the Director of the respective RIEW shall assess by decision the necessity of the environmental assessment for a proposed plan and program or for their amendment [...] according to the following criteria for determining the significance of their impact: 4. the impact of the plan or the program on climate and the vulnerability of the plan or program to climate change.’

⁴⁵ Art. 86 (3) item 6 EPA.

⁴⁶ Governmental Decree No. 2/2005. (I. 11.) on the environmental assessment of certain plans and programs. A general description of the legal institution of SEA can also be found in the environmental code, Kvt.

factors. In Romania the SEA directive is transposed by Govt Decision 1076/2004 and its Annex 2 describes the framework content of the environmental report. The formulation is the same as in the directive. In Slovenia, Article 77/1 EPA includes climatic factors in the assessed areas of the SEA procedure. Also the norm regulating the procedure⁴⁷ demands that in the environmental report the effect on climatic factors is assessed. However, Slovenia is currently adopting a new Climate Act, which will include (in its current version) a new methodology, focusing specifically on assessing climatic factors in SEA. In Austria, SEA is regulated in various laws at federal level and at the level of the provinces (dependent on distribution of competences).⁴⁸ At federal level, in areas in which SEAs are required, usually climatic factors must be taken into account in the environmental report, e.g. in the waste management law;⁴⁹ the Federal Ambient Noise Protection Act;⁵⁰ the Immission Control Act - Air;⁵¹ the Water Act;⁵² the Federal Act on Strategic Assessment in the Transport Sector;⁵³ Sec. 142 Radiation Protection Act;⁵⁴ the Renewable Energy Expansion Act.⁵⁵ Only in the energy sector (Gas

⁴⁷ Uredba o okoljskem poročilu in podrobnejšem postopku celovite presoje vplivov izvedbe planov na okolje, Uradni list RS, št. 73/05 in 44/22 – ZVO-2, <https://pisrs.si/pregledPredpisa?id=NAVO607>

⁴⁸ The implementation of the SEA Directive is fragmented and inconsistent. See Bußjäger (2016) 'Strategische Umweltprüfung in Österreich – Eine Bilanz', RdU 2016/3, 9. SEA provisions were not integrated into the EIA legislation. Alge/Kroiss/Schmidhuber (2019) 'Strategische Umweltprüfung', in Ennöckl/Raschauer/Wessely (Hg) Handbuch Umweltrecht, 677. At the level of the provinces, only Carinthia and Tyrol regulate the implementation of the SEA in separate respective laws.

⁴⁹ FLG I No. 102/2002, last amended by FLG I No. 66/2023. Regarding the federal waste management plan, annex 7 part 2 specifies mandatory contents of the environmental report including climatic factors: item 6, reflecting the wording of the Directive.

⁵⁰ FLG I No. 60/2005, noise protection action plans, demands an environmental report (Sec. 8(4)) referring to annex 7 waste management law (see above) where climatic factors explicitly feature.

⁵¹ FLG I No. 115/1997, last amended by FLG I No. 73/2018, demands in case of mandatory environmental assessment of programmes of measures (Sec. 9a) that climatic factors are taken into account; annex 7, part 2, item 6 (same wording as in waste management law).

⁵² FLG No. 215/1959, last amended by FLG I No. 73/2018. Secs. 55ff demands an assessment in relation to climatic factors e.g. regarding flood risk management plans – Sec. 55i, k, l.

⁵³ FLG I No. 25/2014, demands network changes to federal roads, waterways and high-capacity routes. Sec. 6(2) demands the assessment of climatic factors in the environmental report.

⁵⁴ FLG I No. 50/2020, demands a National Waste Disposal Programme which requires an environmental assessment which is to be made in accordance with Sec. § 8a(4)-(7) Waste Management Law (here annex 7 makes explicit reference to climatic factors – see above).

⁵⁵ FLG I No. 150/2021, last amended by FLG I No. 198/2023. demands with regard to integrated network infrastructure plans a SEA (Sec. 94, 95; annex 1, part 2). Annex 1, part 2 explicitly refers to climatic factors. See e.g. Climate Ministry (2024) SEA on the integrated Austrian net infrastructure plan: Environmental Report, available in German at: https://www.bmk.gv.at/dam/bmvitgvat/content/themen/energie/energieversorgung/NIP/Finale-Fassung/NIP_SUP.pdf

Industry Act⁵⁶ and the Electricity Industry and Organisation Act⁵⁷), SEAs are not demanded.⁵⁸ At the level of the provinces,⁵⁹ a SEA is mandatory particularly for spatial planning and planning in the areas of waste, noise, transport, nature conservation, hunting, fishing and agriculture. If a SEA is carried out, climatic factors must be regularly considered in the environmental report.

Sometimes, the transposition goes beyond the wording of the Directive. For instance, in Spain, the SEA report should contain '[t]he likely significant effects on the environment, including aspects such as [...] climatic factors, their impact on climate change, including an appropriate assessment of the carbon footprint associated with the plan or program, [...] and the interrelationship between these factors' which should include 'secondary, cumulative, synergistic, short, medium and long term, permanent and temporary, positive and negative effects' (no. 6).⁶⁰ Apart from that, also '[t]he environmental characteristics of the areas likely to be significantly affected and their evolution taking into account the expected climate change within the time frame of the plan or program' (no. 3) and '[t]he measures foreseen to prevent, reduce and, as far as possible, compensate for any significant negative effects on the environment of the implementation of the plan or program, including those to mitigate its impact on climate change and to allow for its adaptation to climate change' (no. 7) must be mentioned.

In Czechia, indirect reference to climatic factors is made: While Sec. 10e EIA law⁶¹ does not explicitly list the contents of the report, Annex 9 EIA law, listing information to be included in the environmental report, point 6 mentions that 'possible significant environmental impacts of the proposed variants of the strategy' must be included, and point 5 refers to 'environmental objectives set at international, Community or national level which are relevant to the strategy' and demands information on how these objectives have been taken into account during its preparation, in particular when comparing alternative solutions in the report.

⁵⁶ FLG I No. 107/2011, last amended by FLG I No. 74/2024.

⁵⁷ FLG I No. 110/2010, last amended by FLG I No. 145/2023.

⁵⁸ See Handbuch Umweltrecht, 677. See also Raschauer/Dworschak (2020) Defizitäre Umsetzung der SUP-Richtlinie im österreichischen Energierecht, Österreichische Zeitschrift für Wirtschaftsrecht (ÖZW) 2020, 19 Heft 1.

⁵⁹ Only two provinces (Carinthia and Tyrol) have uniform SEA laws. The other seven provinces implement the Directive in various laws. A list of relevant implementing norms can be found at <https://www.strategischeumweltpruefung.at/sup-grundlagen/sup-gesetze/umsetzung1>

⁶⁰ Art. 20 and Annex IV of Law 21/2013 (see above).

⁶¹ The same law is used both for the EIA and SEA. Interestingly, Sec. 2 transposing EIA Directive (see above) explicitly mandates the assessment of climatic factors.

SPECIFIC AUTHORITY/BODY PROVIDING AN OPINION ON THE CLIMATE IMPACT AND/OR 'ADVOCATING' FOR MITIGATION/ADAPTATION IN THE SEA PROCEDURE?

In none of the nine countries, there is a specific authority or body that provides an opinion specifically on the impact of the project regarding climate or that would advocate for taking mitigation or adaptation into account in the SEA procedure.⁶² However, in a few countries expert opinions on environmental impact which may include the impact on the climate could be provided: For instance, in Bulgaria, a special expert opinion could be provided by independent experts such as climatologists who are part of the team preparing the SEA report. In addition, an advisory body to the Minister of Environment and Water, the Supreme Expert Environmental Council (special interdepartmental commission on SEA), which could also consist of scientists in fields related to climate change, assesses the quality of the SEA report and proposes (in a non-binding way) the minister what decision he should take. At the regional level, expert environmental councils are advising the Director of the Regional Inspectorate of Environment and Water. In Romania, the environmental report is drafted by a working group that the plan or strategy holder needs to establish (including by hiring external experts) and then evaluated by the responsible environmental authority (in case of national documents, the Ministry of Environment). The authority needs to consult with other identified stakeholders and can also contract external experts for the evaluation.

In Hungary, if a central state administration body is responsible for elaboration, the draft plan or programme containing the environmental report must be sent to the National Environment Council for comments before submitting it to the authority. In the case of parliamentary adoption, it is sent to the Government. According to the SEA Decree, the opinions and comments received during the SEA have to be taken into account by adopting the plan or programme.

In Croatia, the head of the competent authority for the implementation of SEA at the national level, the county mayor, i.e. the mayor of the City of Zagreb at the regional (regional) level, and the mayor at the local level appoints a committee for strategic assessment.

⁶² E.g. in Estonia, the impact on climate change is assessed by the same team of experts that carries out the rest of the SEA. In Spain, the environmental authority has to take into account all impacts.

In Austria, usually the environmental report is forwarded to environmental authorities and the public so that they can comment on it. In arriving at a decision, authorities must consider the environmental report.⁶³

In Slovenia, the Ministry of the Environment, Climate and Energy provides an opinion on climatic factors which is problematic since the same Ministry adopts the final decision (see EIA procedure).

MANDATORY INSTRUCTIONS, GUIDELINES, TRAINING, INFORMATION WEBSITES, OR OTHER MECHANISMS FOR ENSURING A QUALITY IMPLEMENTATION OF SEA REGARDING CLIMATE IMPACT ASSESSMENTS?

In none of the countries analysed, mandatory instructions or guidelines exist for ensuring a quality implementation of SEA regarding climate impact assessments. However, non-binding guidelines and information are partly available.

In Czechia, the Ministry of Environment has issued a legally non-binding methodological recommendation on SEA in 2018,⁶⁴ which is a complex document concerning all steps of the SEA process. It contains a special chapter dedicated to climatic factors⁶⁵ and stresses the need to take into account national strategic documents on climate change and to assess the impacts of the proposed strategy in line with them. If important negative impacts are identified, minimisation measures need to be proposed to avoid these impacts.⁶⁶ The recommendation's goal is to support in particular the authority and project planners. Arguably not following this recommendation by the authority represents an arbitrary unlawful conduct. In Estonia, voluntary guidelines exist. One was published by the EELC in 2023, which the Supreme Court cited in its ruling no. 3-20-771 (see above footnote 36). In Spain, not at the national but at the Autonomous Community level, a Guidance prepared by the Regional Ministry of Agriculture, Fisheries and Development of Andalucía to include Climate change in the SEA for Land

⁶³ E.g. compare Sec. 10e(1) Vorarlberg Spatial Planning Act (the environmental report must be taken into account when adopting the spatial plan of the province); Sec. 10(7) Vorarlberg Road Act (a summarising statement must set out how the environmental report and comments submitted have been taken into account).

⁶⁴ Available at: https://portal.cenia.cz/eiasea/dokumenty/dokumentSoubor/117/SOTPR-Vestnik_leden_2019_priloha2-190206.pdf

⁶⁵ It stresses that 'climate change and its potential impacts as a result of the implementation of the documents under consideration need to be cross-cuttingly included in all phases of the SEA work. The current status, development trends and risk assessment should already be discussed in the context of the concept notification.'

⁶⁶ Climatic factors should also be considered when choosing specific projects during the implementation of the strategy and during the monitoring of the strategy's application.

Planning in Andalucia⁶⁷ exists. It is targeted to the developers of land plans and its evaluators. It aims at assisting municipalities in their planning activity. In Slovenia, non-binding general instructions, trainings and guidelines, also specifically oriented towards climatic factors, exist⁶⁸ but there are no explicit requirements for the contractors who prepare the EIA report. In Croatia,⁶⁹ the Climate Change Adaptation Strategy O.G. 46/20 should be used in drafting environmental reports and the website of the Ministry of Environment Protection and Green Transition has some guidelines for SEA regarding climate impact assessments.⁷⁰

In Romania, the Manual of the Ministry of Environment (2014)⁷¹ explains solely in a footnote that the description of potential significant effects on the environment (including on climate factors) has to 'include side effects, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative'. It also explains that 'significant effects on air and climatic factors may cause significant adverse effects on flora, fauna and biodiversity'. The most comprehensive information possible must be provided on the factors and their relationships.

In Austria, different sources on SEA exist, however, none of the them seems to focus on the role of climatic factors in SEA: e.g. a website of the Climate Ministry and the Environment Agency Austria⁷² contains information, materials, guidelines on the SEA in Austria including

⁶⁷ Available at: https://www.juntadeandalucia.es/medioambiente/portal/web/cambio-climatico/documento/-/asset_publisher/hdxWUGtQGkX8/content/gu-c3-ada-para-la-incorporaci-c3-b3n-del-cambio-clim-c3-a1tico-en-el-procedimiento-de-evaluaci-c3-b3n-ambiental-de-los-instrumentos-de-planeamiento-ur/20151

⁶⁸ They are more than five years old, see <https://www.gov.si/zbirke/storitve/usposabljanje-za-presoje-vplivov-na-okolje/>

⁶⁹ There exist Climate validation guidelines for preparing investments in the program period 2021-2027 available on website of the Ministry of Economy which mentions different environmental procedures including SEA but it cannot be used as assistance in ensuring a quality implementation of SEA regarding climate impact assessments https://mzozt.gov.hr/UserDocsImages/klimatske_aktivnosti/Smjernice-za-klimatsko-potvrdivanje-03042024.pdf

⁷⁰ Technical guidelines for preparation of infrastructure for climate change in period 2021-2027 (in Croatian), see above.

Guidelines for inclusion of climate change and biodiversity into SEA (in Croatian) [Smjernice za uključivanje klimatskih promjena i bioraznolikosti u strateške procjene utjecaja na okoliš](#)

Informal document - Guidelines for project leaders: How to increase the resilience of vulnerable investments to climate change (in Croatian), see above.

⁷¹ https://www.mmediu.ro/app/webroot/uploads/files/Manualul_SEA.pdf

⁷² <https://www.strategischeumweltpruefung.at/>

practice sheets and SEA examples⁷³ or a handbook on the SEA.⁷⁴ Apart from that, once a year, a SEA information and experience exchange takes place between the SEA offices of the federal government and the provinces at the Climate Ministry.⁷⁵ However, there is little academic literature focusing on the role of climatic factors in SEA in Austria.⁷⁶

Role of carbon budgets in EIA and SEA procedures

Bulgaria, Czechia, Slovenia, Estonia, Romania⁷⁷ and Spain⁷⁸ do so far not have any carbon budgets, nor do they refer to other internationally determined carbon budgets. Thus, carbon budgets are not considered in the EIA and SEA. However, in Bulgaria, the introduction of sectoral carbon budgets is being discussed and a draft law is prepared by NGOs to achieve national climate targets by introducing sectoral budgets. Similarly, in Estonia, as of July 2024, the government is drafting the first Climate Act (now titled 'Climate Resilient Economy Act'). However, it seems unlikely that it will base binding GHG reduction targets on any carbon budgets in line with the Paris Agreement.⁷⁹ In Czechia, the introduction of a national carbon budget was debated when preparing the newly revised Climate Protection Policy but was finally

⁷³ <https://www.strategischeumweltpruefung.at/sup-grundlagen/material>

⁷⁴ Arbter, Kerstin, Institut für Technikfolgen-Abschätzung (Hg.), Handbuch Strategische Umweltprüfung [online], Auflage 3.3, Wien, 2013, Verlag der Österreichischen Akademie der Wissenschaften, <http://hw.oeaw.ac.at/6631-3>

⁷⁵ <https://www.strategischeumweltpruefung.at/sup-infoaustausch> The main topics are new implementation rules of the SEA Directive, the status of SEA implementation and practical SEA experience in Austria, the SEA collection with practical examples, the presentation of SEA practice sheets and information on EU decisions. In addition, an SEA practice group was set up in 2013 to discuss practical issues. The experiences gathered are summarised in SEA practice sheets. The Climate Ministry collects SEA examples (https://www.bmk.gv.at/themen/klima_umwelt/betrieblich_umweltschutz/sup/oesterreich.html).

⁷⁶ E.g. Jiricka-Pürerer/Geißler (2021) Beitrag der Strategischen Umweltprüfung zu verstärktem Climate Proofing im Rahmen der Raumplanung: Herausforderungen und Chancen aus dem Blickwinkel nationaler und internationaler Planungspraxis, Der Öffentliche Sektor - The Public Sector Vol. 47/2 (2021), 65-76.

⁷⁷ While Romania has set out targets in its 2023 Long Term Strategy for the reduction of GHG emissions (78% by 2030 and 99% by 2050, compared to 1990), these targets do not seem to be based on any carbon budget analysis.

⁷⁸ While the International Institute for Law and the Environment (IIDMA) advocated to introduce a provision on carbon budgets in the Spanish Climate Change and Energy Transition Law, this was not accepted. The Constitutional Court ruled in 2019 regarding the 2017 Catalan Climate Change Law that national legislation did not allow any authority to adopt carbon budgets.

⁷⁹ Instead, they have estimated the emission reduction that can be achieved by using only existing technologies and excluding behavioral interventions and setting corresponding emission reduction targets.

not included; also the National Emissions Reduction Programme does not include any carbon budget.

While in 2023, the government of Estonia commissioned a study from the Tallinn University of Technology to estimate the remaining Estonian carbon budget, the preliminary draft of the Climate Act presented in May 2024 contained proposed emission reduction targets which were far off the results of the study.

In Croatia, by 2030, will strive for a more ambitious reduction of emissions, with a trajectory in the area between the low-carbon scenarios NU1 and NU2.⁸⁰ This strategy is mentioned in EIA and SEA studies meaning that targets, overall goals and measures are listed in EIA and SEA reports.

Other countries have carbon budgets, but they are not referred to in EIA or SEA procedures:

In Hungary, the Act on Climate Protection⁸¹ commits Hungary to reducing its emissions by 40% by 2030 (50% by 2030 according to the NECP) and to achieving climate neutrality by 2050. The country did not set an annual carbon budget per person. The activities set out in points I to XXI of Annex 1 to Act CCXVII of 2012, may only be carried out on the basis of a final GHG emissions permit issued by the authority responsible for climate protection. The quantity of allowances that can be allocated to installations each year is set out in the National Implementation Measure (NIM). The draft NIM is prepared by the Climate Protection Authority and submitted to the European Commission for approval. However, the national carbon budget and climate objectives are not considered in EIA and SEA procedures.

In Austria, the Climate Protection Act 2011,⁸² dealing with national emissions not subject to the European ETS, provides for procedures to set maximum quantities of GHG emissions for individual sectors.⁸³ These maximum quantities applicable to Austria in accordance with

⁸⁰ Low-carbon development strategy of the Republic of Croatia until 2030 with a view to 2050, O.G. 63/21. The basic target is to achieve a 7% reduction in emissions in non-ETS sectors, compared to 2005 emissions. The targets for renewable energy sources, energy efficiency and sectoral targets derive from the above targets. The implementation document for the period until 2030 is the NECP 2021-2030. The goal of reducing GHG emissions by 2050 is to reduce them with a trajectory between the low-carbon scenarios NU1 and NU2, with the aim of a more ambitious NU2 scenario. Croatia needs to redefine its low-carbon trajectory at the end of the next ten-year period. See in English: https://mingo.gov.hr/UserDocImages/klimatske_aktivnosti/odrzivi_razvoj/NUS/Its_nus_eng.pdf

⁸¹ Act XLIV of 2020.

⁸² Climate Protection Act, FLG I No. 106/2011, last amended by FLG I No. 58/2017.

⁸³ In an amendment in 2013, sectoral ceilings were set for 2013 to 2020, whereby the annual emission ceilings stipulated by EU law must be complied with in total (FLG I No. 94/2013). In 2015, emission ceilings of the Climate Protection Act were reallocated to the individual sectors (FLG I No. 128/2015).

obligations under international or EU law are set out in the Annexes,⁸⁴ but only until 2020.⁸⁵ For the period thereafter no maximum quantities were determined. So far, maximum quantities have been calculated according to the IPCC Guidelines for National Greenhouse Gas Inventories. According to the EU Effort Sharing Regulation (ESR), Austria's current reduction target by 2030 is in the non-ETS sector -48 % compared to 2005.⁸⁶ The Austrian government has also set the goal of achieving climate neutrality by 2040.⁸⁷ The Federal Environment Agency prepares national scenarios on the possible development of Austrian GHG emissions every two years on behalf of the Climate Protection Ministry, which are also used as a basis for fulfilling the EU reporting obligation as part of the National Energy and Climate Plan (NECP).⁸⁸ The Federal Environment Agency is currently working on updated scenarios required for the reporting obligation and the adaptation of the NECP 2023.⁸⁹ While the Austrian EIA Act refers to the reduction of GHG emissions as authorisation criterion (see above), in the legal bases on EIA and SEA no explicit reference is made to carbon budgets or the Austrian Climate Protection Act, which should set maximum quantities of emissions (see above). What is more, the above-mentioned Guideline on the climate and energy concept in the context of EIA procedures pre-date the Climate Protection Act, the Paris Agreement or ESR Regulation.

⁸⁴ Sec. 3(1) Climate Protection Act.

⁸⁵ Annex 2 contains maximum annual GHG emissions by sector for the commitment period 2013 to 2020 in million tons of carbon dioxide equivalent. An annual progress report on compliance with the maximum quantities, broken down by sector in accordance with the Annexes, must be submitted to the Parliament and the National Climate Protection Committee, which monitors the implementation of the Act. Secs. 3, 6 Climate Protection Act. Progress report 2023 available at: https://www.bmk.gv.at/dam/jcr:5d3e9e51-c10a-45df-8c03-61e8a69ec63b/KSG-Fortschrittsbericht_2023.pdf

⁸⁶ ESR; Regulation 2018/842, amended by Regulation 2023/857.

⁸⁷ In this context, a research project developed possible scenarios, see <https://iiasa.ac.at/projects/netzero2040>

⁸⁸ NECP 2019, available at https://energy.ec.europa.eu/system/files/2020-03/at_final_necp_main_en_0.pdf Draft updated in 2023. See https://commission.europa.eu/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-energy-and-climate-plans_en

⁸⁹ In addition to the scenarios "with existing measures" (WEM) and "with additional measures" (WAM), a "Transition" scenario is also being developed, which will present the possibilities and conditions for achieving climate neutrality ("net zero emissions") in Austria by 2040.

Case studies

CZECHIA: EIA

The project 'New source - fluidized bed boiler and gas boiler room in Mělník' entailed the installation of two new heat sources in an old power plant in Mělník, operated by the majority state-owned ČEZ energy company. The EIA procedure took place in 2017 and 2018.⁹⁰ One of the proposed sources - the fluidized bed boiler - was supposed to have the power of 307 MW_T and use lignite (brown coal) as fuel. Environmental associations criticised the introduction of a new fossil fuel source since this could be highly damaging for the climate, especially considering the planned time frame of their operation (25 to 30 years). In this timespan, based on data provided in the environmental report, the overall absolute emissions of CO₂ could amount to 15-18.6 million tonnes being equivalent to the production of approximately 620,000 tonnes of CO₂ per year, corresponding to the average emissions of around 300,000 passenger cars per year. The environmental report provided by the operator failed to assess the project in the light of EU climate goals and the Paris Agreement and failed to assess the impact of the project's CO₂ emissions (it did not take into account the proposed lifespan of the sources). It also failed to establish the share of the project's CO₂ emissions in total CO₂ emissions in the Czech Republic.

The expert report assessing the project's impact on climate change only stated that 'the installation of new technologies with significantly higher efficiency' would 'allow the use of less fuel' and therefore lower GHG production while maintaining power output. The report also pointed out that emissions would be reduced by 15-52 per cent compared to the status quo, with the exception of NH₃ and CO. Implementation of the project would have 'a significant and long-term positive impact on air quality and the climate system.'⁹¹ The authority issued a positive EIA statement and while it also set a number of conditions for the project, none of them aimed at reducing its impact on the climate. In its justification, the authority stated regarding the project's impact on climate change, partly repeating the expert opinion, that 'the installation of new technologies with significantly higher efficiency' would 'allow the use of less fuel and therefore lower GHG production while maintaining power output'. The consumption of lignite would be reduced by 56 % compared to the status quo. Emissions would be reduced compared to the status quo except for NH₃ and CO. Regarding GHG, the implementation of the project in 2022 would 'lead to a reduction of about 75% in water vapour and about 53% in CO₂ emissions

⁹⁰ For details with all documents available at: https://portal.cenia.cz/eiasea/detail/EIA_MZP475?lang=en

⁹¹ Expert report, page 32.

compared to the current situation'. The implementation of the project would have 'a significant and long-term positive impact on air quality and the climate system'. Regarding the vulnerability of the project to climate change, no additional measures beyond the status quo would be necessary to adapt the project to climate change.⁹²

ESTONIA: EIA

Enefit Power AS, a subsidiary of the state-owned energy company Eesti Energia is constructing a new shale oil plant in Estonia. The plant is expected to begin operation at the end of 2024 and thereby increase Estonia's GHG emissions by about six per cent or over 800,000 tonnes. The primary product of the plant, shale oil, is a polluting fossil fuel that is exported beyond the EU and mostly used as ship fuel on oceans.

Experts concluded in the EIA proceedings that the plant would generate over 800,000 tonnes of GHG emissions yearly. They excluded the exported emissions, i.e. the emissions of burning the oil, which are about equal to the emissions of the operation of the plant. They also factored in the company's future plans of transforming shale oil production into chemical production, despite there being no commercially viable technology yet available for that. When these plans were included, the emissions of the plant dropped to around 500,000 tonnes a year. The experts stated that although the emissions of the plant are large, operating the plant would not conflict with any legal norms, therefore it could go ahead.

The authority, the Environmental Board, agreed with the experts and based on the EIA report, issued an integrated permit for the plant in May 2024. The Board noted that national emission reduction targets do not set strict limits on individual installations and activities, so despite the plant causing significant GHG emissions, it could still go ahead. Based on the shortcomings of the EIA report as well as other arguments, MTÜ Loodusvõlu, an environmental NGO, and an individual plaintiff challenged the integrated permit issued to the plant. As of October 2024, the case is pending before the Tallinn Administrative Court.⁹³

⁹² EIA Statement, page 10.

⁹³ <https://climatecasechart.com/non-us-case/fridays-for-future-estonia-vs-environmental-board/>



Conclusions and Recommendations

While all nine countries have transposed the EIA and SEA Directive to the extent that they require the assessment of climatic factors explicitly in their legal bases, the latter could go beyond and provide more details in order to ensure consistent legal practice. For instance, national legal bases could require more details in relation to climate mitigation (e.g. alternatives to reduction of GHG emissions) or adaptation to climate change (e.g. consideration regarding project's adaptation to climate change and contribution to better adaptation of the wider area). They could demand e.g. the usage of multiple climate scenarios and assessment the project's impacts on this changing baseline; the identification of trends and key indicators over time; or the mentioning of the degree of probability with regard to expected impacts.

Even in countries which have carbon budgets, the latter hardly play a role in assessing climate-related impact of a project or programme. Countries without national carbon budget could at least refer in EIA and SEA to internationally determined carbon budgets and refer to their country's legal obligations in relation to climate mitigation and adaptation under international and EU law.

In none of the countries, there was a specific authority or body that provides an opinion in the EIA or SEA process specifically on the impact regarding climate (change). However, usually different bodies are authorised to provide an opinion on environmental impact which may include the impact on the climate. Such opinions are often non-binding, but sometimes authorities are explicitly required to take them into account. In none of the countries analysed legal provisions require authorities to obtain an expert opinion specifically on climate impacts in EIA and/or SEA procedures. Instead, the climate impact seems to be regarded as one of different environmental impacts.

Mandatory instructions or trainings on how to assess climatic impacts, which would also contribute to consistent legal practice in line with international and EU climate-related commitments, hardly exist in the analysed countries. Instead, in several countries voluntary guidelines originating from different sources exist. However, their legal value is not always clear. In a few cases, courts took such voluntary guidelines up vesting them indirectly with some legal weight. In general, trainings for authorities responsible for EIA and SEA procedures and relevant stakeholders could help in incorporating climate protection and adaptation to climate change more strongly into the awareness and mindset.

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