IEMA Transforming the world to sustainability

Impact Assessment Outlook Journal
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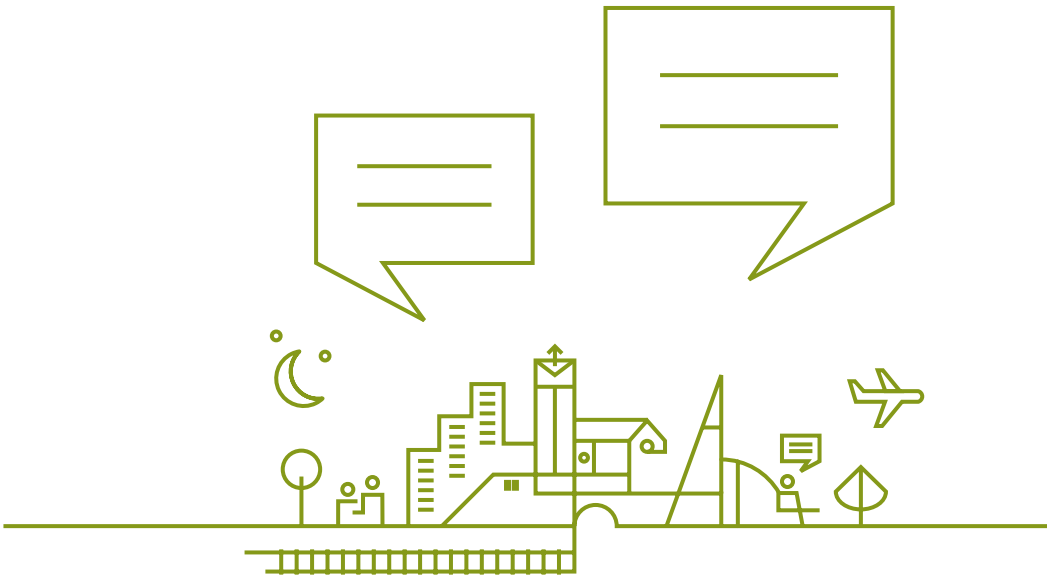
International Best Practice in Impact Assessment

Thought pieces from UK and International practice



Guest Editor
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GUEST EDITORIAL

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Welcome to Volume 23 of the Outlook Journal on international best practices of Impact Assessment (IA). In 10 exciting contributions, you will be able to read about case studies and examples from Australia, Thailand, Ireland, Denmark, China, Portugal, South Africa, Austria, Wales and others.

Whilst as an IA community, we are very good at reflecting on shortcomings, weaknesses and problems of IA, we are usually not so good at depicting the numerous positive impacts IA is having in practice. At a time when there is a lot of pressure on established IA tools such as Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA), and various ill-informed attempts at simplification or reform[1], it is important to clearly advocate for the benefits obtained from IA. In this context, we need to stop thinking and acting in silos and reach out as much as possible to others. I have seen numerous attempts by different disciplines to establish ingredients for the necessary transformation towards sustainable development. And I have usually been left struck by the associated suggestions made that tend to look very similar to a systems/framework approach[2] to Impact Assessment. However, IA is usually not mentioned, meaning that experiences from nearly 55 years of its application are ignored[3], resulting in unnecessary delays in the transformation required. It is in this context that Volume 23 of the Outlook Journal has been prepared.

In the first contribution, Tanya Burdett from Essential Planning Ltd looks at positive outcomes from a range of strategic assessments in Australia that are prepared according to the Environment Protection and Biodiversity Conservation Act (EPBC, 1999). She shows, for example, that cost savings, the creation of substantial conservation areas, certainty for future planning and increased wetland protection were all achieved based on the strategic assessments conducted.

Tanya goes on to explain how, through specific sets of guidance documents, clarity is achieved in how to organise EIA procedural stages in different Australian provinces and in different situations of application. She finally stresses the important role of strong professional associations for an effective implementation of IA.

1 Fischer, T.B. (2023). 'Simplification and potential replacement of EA in the UK – is it fit for purpose?' in *Impact Assessment and Project Appraisal 41*(3): 233-237. www.tandfonline.com/doi/full/10.1080/14615517.2023.2166257

2 Fischer, T. B. & González, A. (2021). Conclusions – Towards a Theory of Strategic Environmental Assessment? [Chapter 27] in: Fischer, T. B. and González, A. (Eds.) *Handbook on Strategic Environmental Assessment*, Edward Elgar, Cheltenham: 425-437. doi.org/10.4337/9781789909937.00042

3 Fischer, T.B. (2023). 'Transformation towards a sustainable world – the pivotal role of impact assessments' in *Impact Assessment and Project Appraisal 41*(2): 85-86. doi.org/10.1080/14615517.2023.2171829

Next, Chaunjit Chanchitpricha from Suranaree University of Technology and myself introduce Community-led Health Impact Assessments (CHIAs), which have been conducted in Thailand since 2008. CHIAs aim at protecting local communities from negative impacts of project developments, in particular, in the mining and energy sectors and to date they have been applied in over 17 locations throughout Thailand. The authors explain how their application has resulted in numerous benefits, not just to the local communities driving them, but also to government agencies.

In the third contribution, Ainhoa González, from University College Dublin, and Tadgh O'Mahoney, from the Irish Environmental Protection Agency, report on the numerous initiatives to support effective Strategic Environmental Assessment (SEA) in Ireland. They do so by introducing an array of guidance documents. These are associated with a national SEA Action Plan, which has been prepared and revised every four years since 2012.

Next, Emilia Ravn Boess from the Danish Centre for Environmental Assessment (DCEA) writes about Danish initiatives to connect Environmental Assessments (EAs, i.e., SEA and EIA) with the UN Sustainable Development Goals (SDGs). These goals play an important role internationally in the transformation towards sustainable development. She shows how SDGs can be integrated based on a range of practice examples. Emilia concludes by making suggestions on how SDG integration into policy, plan, programme and project-making can be improved through EA.

This is followed by a contribution by Haojia Wang from the University of Liverpool's Environmental Assessment and Management Research Centre on the benefits from SEA application to Nanjing's Urban Master Plan (China). Here, SEA is institutionalised as Plan EIA. In Nanjing it was used with the clear remit to address environmental impacts from urban expansion, in particular air, water and noise pollution, as well as inefficient land use. The SEA suggested that Nanjing should position itself as a 'Riverside Ecological Liveable City', which was taken onboard by the city authorities. He concludes that this example demonstrates how SEA can guide sustainable urban futures.

Subsequently, Maria Partidário, from the Técnico Lisboa, reflects on the important role SEA is playing in the development of mega-projects in Portugal. A key question SEA is asking in this context is 'Why this project?'. She reflects on two mega-projects: (a) the lithium survey and exploration (2021), and (b) the new Lisbon international airport (2008 and 2023–2024). Importantly, government decisions were taken in line with the recommendations of these SEAs.

At a time when there is a lot of pressure on established IA tools such as EIA and SEA, and various ill-informed attempts at simplification or reform, it is important to clearly advocate for the benefits obtained from IA.

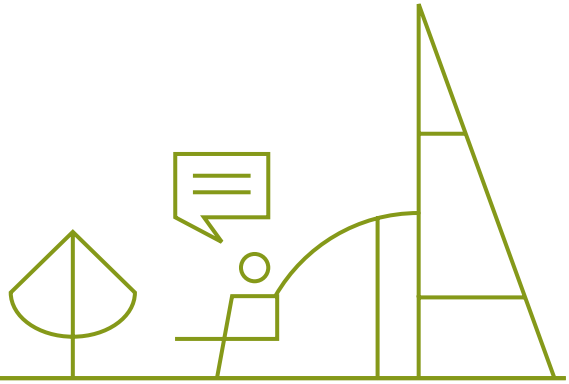
In the next paper, Francois Retief, Claudine Roos and Reece Alberts (all North-West University, Potchefstroom Campus, South Africa) reflect on principles of responsible waste management in South African protected areas and how these may be applied in best practice EIA. They outline six associated principles that cover ecosystems and biodiversity protection, pollution prevention and remediation, the waste management hierarchy, effective waste services and infrastructure, the promotion of participation and partnership building, and finally the possible contribution to wellbeing, livelihood and capacity.

In the eighth paper, Marielle Rowan and Hannah Mills (both Mott MacDonald, UK) discuss how to differentiate effectively among impacts, risks and human rights issues in a typical international ESIA, where very different principles and standards must be brought together. They explain the role of the ESIA practitioner and the need to focus on impacts first and only subsequently on risks. This is important as the latter are at the forefront of the considerations of financial institutions that usually support infrastructure projects, particularly in developing countries.

Next, Catrin Lyddon (Wales Health Impact Assessment Support Unit – WHIASU) reflects on the public health impact of public bodies focusing on waste reduction and reuse in Wales. This is based on a circular economy Health Impact Assessment (HIA) conducted by WHIASU. In this context, impacts from waste reduction and reuse approaches were assessed, including the impact on public bodies and their role of applying such approaches. Importantly, whilst the intentions underlying the action are inherently good, there are potentially challenges and friction that need to be carefully considered.

In the final contribution, Alexandra Jiricka-Pürrer and Astrid Gühnemann (BOKU University, Vienna, Austria) explain the approach towards SEA in transport infrastructure planning in Austria. Importantly, SEA is to be applied to the national transport/mobility plan. However, to date this is happening with a focus mainly on individual projects. There are attempts to change this and make the underlying approach more strategic, which means projects are derived from policy considerations that are (also) assessed based on climate change and environmental objectives. Possible alternatives for achieving those should be widened and the consideration of cumulative impacts should be strengthened. They introduce associated revised national guidelines.

Enjoy reading!



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Impact Assessment best practice in Australia

Overview

In reflecting on what makes for 'best practice' or at least 'good practice' in Australia we can look to professional associations concerned with Impact Assessment (IA) in Australia, particularly organisations like the Environment Institute of Australia and New Zealand (EIANZ)[4] and scholarly contributions including *EIA in Australia*[5]. Internationally, objectives of IA often reiterate five basic components: consideration of environmental (and e.g., social, cultural) factors in decision-making processes on policies; plans, programmes and projects, including alternatives, with a view to more sustainable decisions (normative); assessing, anticipating and avoiding, minimising or offsetting adverse impacts (procedural); engaging the public throughout the process (participatory/pluralist); contributing to sustainable development with a clear focus on outcomes (substantive); and undertaking IA in a way that is cost effective and efficient for all involved (transactive)[6]. By contrast, EIANZ guidelines for good practice IA suggest some additional measures and place emphasis on a lot of participatory, procedural and substantive aspects of practice, including certainty (of process) and precautionary principles[7].

IA outcomes

IA related to the *Environment Protection and Biodiversity Conservation Act* (EPBC, 1999) includes the wide-ranging objectives of the Act (covering Commonwealth activities and where Matters of National Environmental Significance [MNES][8] are concerned, draw in State and Territorial approaches), and the principle of subsidiary between strategic and project-level Impact Assessment. The specific references in the EPBC Act to principles such as Ecologically Sustainable Development (ESD) embed the principles of: considering temporal scale; precautionary approaches; assessment of economic, environmental, social and equity considerations; inter-generational equity; and conservation of biological diversity and ecological integrity into decision-making processes[9]. The ESD approach at the Commonwealth level also promotes improvements in valuation, pricing and incentive mechanisms.

The EPBC Act provides for both project-level EIA and strategic assessments, which focus on broader policies, plans, or programmes, particularly in areas such as urban development and spatial planning (which account for half of the about 30 strategic assessments undertaken since 2009), energy and resources, or other initiatives including environmental management[10]. A few of the ~30 strategic assessments undertaken have been cited by various commentators as providing examples of good outcomes, including:

- *Victoria:* Strategic Assessment of Melbourne's urban growth in 2009 led to the creation of substantive land conservation reserves (15,000 hectares grasslands,

4 Gronow, C. *et al.* (2013) *Environmental and Social Impact Assessment – Good Practice Statements*. Brisbane: EIANZ
5 Elliott, M. (2014) *Environmental Impact Assessment in Australia: theory and practice*. Annandale, NSW: Federation Press.
6 IAIA (2009) What is Impact Assessment? online: IAIA.
7 EIANZ (2014) Guidelines for Impact Assessment. Melbourne: EIANZ. www.eianz.org/about/good-practice-in-impact-assessment-resources/good-practice-in-impact-assessment-resources
8 See here for more: www.dcceew.gov.au/environment/epbc
9 EPBC Chapter 1, Part 1, section 3A.
10 Burdett, T., & Cameron, C. (2021). 'Strategic environmental assessment in Australia' in Fischer, T. & González, A. (Eds.). *Handbook on Strategic Environmental Assessment*. Cheltenham: Edward Elgar. www.elgaronline.com/edcollbook-oa/book/9781789909937/9781789909937.xml

1,200 hectares grassy eucalypt woodland reserve) as part of approval for up to 284,000 homes and related development. This removed the need for ~250 project-level appraisals, with a cost saving of ~$3.2 billion net present value for the private sector up to 2039[11, 12].

- *Western Australia*: Western Australia: SA of the Perth and Peel @3.5 million plan (2015) for urban growth in the region contributed to a significant reduction in clearing of remnant native vegetation, expanding the conservation reserve system and increased wetland protection[13].

- *Western Australia*: HP Billiton (Pilbara) noted benefits of the SA included a more holistic cumulative effect assessment, risk-based approach, front-loading engagement on values and natural assets, all enabling consistency in cross-site management at a regional scale[14]. Ultimately this has resulted in greater certainty for future planning, with 'actions' approved for 100 years, subject to five-yearly programme implementation reviews (see here for more).

IA process

A recent review of guidelines and, in particular, scoping aspects of EIA for the South Australian State Planning Commission[15], provides a publicly accessible and ready insight into all states' and territories' EIA regimes. Assessed against the EIANZ 'Good practice in Impact Assessment', the review notes 'leading practice' EIA in Australia (a mix of procedural, participatory and substantive matters), including

- *Scoping*: is both proponent and government led, noting the former can provide time-saving and efficiencies in consideration of embedded mitigation as proposals evolve.

- *Strategic context*: enhanced through templated approaches in some States (e.g., Queensland) directing EIA content, embedding requirements to discuss the strategic context for projects.

- *EIA focus and level of detail*: for example, New South Wales provides a good level of direction in EIA instructions for proponents.

- *Public participation*: various guidance documents assist proponents in their approach to engagement, and some (e.g., Victoria) require proponents to prepare a comprehensive EIA-specific consultation plan, tailored to potential impacts and interest of all stakeholders. The Northern Territory (NT) general duty for proponents to consult with communities includes a requirement to take account of public views, document knowledge and address Aboriginal values and rights[16].

- *Topic-specific guidance*: the NSW government has particularly useful guidelines including on Social Impact Assessment (SIA) and cumulative Impact Assessment, with the former including insightful templates and worksheets for consideration of various components of SIA[17].

11 Access Economics (2011). Cost Analysis of EPBC Strategic Assessments in Report for Department of Sustainability, Environment, Water, Population and Communities. Canberra, DSEWPAC.

12 Department of Sustainability, Environment, Water, Population and Communities (2013). *Strategic Assessment Prospectus*. Canberra: Commonwealth of Australia.

13 www.eianz.org/about/sea-community-of-practice/strategic-environmental-assessment-sea

14 Skarratt, B. (2016). 'Strategic Environmental Assessment BHP Billiton Iron Ore Environmental Approvals'. Paper presented at the EIANZ Webinar, Webinar online. www.eianz.org/resources/chapter-and-division-events
Skarratt, B. (2024). 'Using regional assessment to enable better decarbonisation transition'. Paper presented at the EIANZ 2024 Impact Assessment Symposium, Brisbane, Queensland, Australia.

15 JBS&G (2022) Model environmental impact statement guidelines: Comparative Review of EIS guidelines. www.saplanningcommission.sa.gov.au/__data/assets/pdf_file/0004/1174936/6.1-Impact-Assessed-Improvement-Project-Model-Guidelines-with-Appendices.pdf

16 Section 43, Environment Protection Act 2019.

17 Department of Planning and Environment (DPE) (2023a). Social Impact Assessment Guideline. Sydney, NSW Government; DPE (2023b). Technical Supplement – Social Impact Assessment Guideline for State Significant Projects. DPIE. Sydney, NSW Government. For worksheets, see: www.planning.nsw.gov.au/policy-and-legislation/under-review-and-new-policy-and-legislation/social-impact-assessment

- *Focus on post-approval environmental management frameworks and outcomes*: Queensland, Western Australia (WA) and the Northern Territory (NT) all include a requirement to show how a project can achieve relevant environmental objectives and performance measures. Notably, Victoria and WA approaches focus on environmental outcomes, with the WA government providing guidance and instructions on preparing environmental management plans.

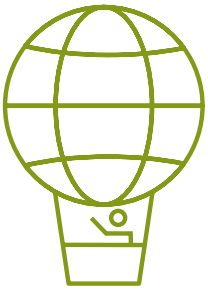
The IA community in Australia is rich and layered. With strong national professional associations and myriad State-based organisations, the industry is replete with sharing of practice and research.

- *Digital format EIA*: an emerging area of practice with only a few examples apparent over recent years. One such example is the Victoria Suburban Rail Loop Environment Effects Statement[18].

IA capacity

The IA 'community' or 'industry' in Australia is rich and layered. With strong national professional associations in the EIANZ, Planning Institute of Australia (PIA) and myriad State-based organisations, the industry is replete with sharing of practice and research. Professionalisation is increasing in the planning and IA community, and other discipline-specific sectors including public participation. For some IA processes there is recognition of leading practice across these institutions.

NSW stands out as somewhat of a leader with various notable initiatives. One is the Registered Environmental Assessment Practitioners (REAP) scheme, elaborated on in some detail in IEMA Outlook Journal Volume 22 (2024, pp. 27-28)[19]. With the introduction of REAP, both PIA and EIANZ offer an assessment and accreditation process, the former as part of the Registered Planner scheme (known as Registered Planner Plus (EIA) or RP+(EIA)). Noted benefits of the REAP scheme include improved reliability and accountability of decision-makers, and enhanced confidence for the community in the robustness and rigour of assessments[20].



18 bigbuild.vic.gov.au/projects/suburban-rail-loop/planning/ees
19 www.iema.net/resources/blogs/2024/09/ia-outlook-journal-volume-22
20 Planning Institute of Australia (2023). *2022-2023 PIA Annual Review*. www.planning.org.au

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Community-driven Health Impact Assessments in Thailand

Introduction

In Thailand, three main types of IA are practised[21]:

1. legislative EIA (since 1975)/Integrated Health in EIAs (EHIA) (since 2010);
2. voluntary IA to support local capacity building and public participation within EIA (i.e., Health Impact Assessment (HIA), Community-led Health Impact Assessment (CHIA)); and
3. SEA for policies, plans and programmes (discretionary).

In this article, we report on the latter: voluntary CHIAs.

HIA has evolved in Thailand over the past two decades. The National Health Act 2007 and the previous version of the Thai Constitution in 2007 were considered key drivers for HIA, highlighting 'the rights of people to live with good health, and a healthy environment'. In addition, the Ninth and Tenth National Economic and Social Development Plan (2002–2011) supported HIA implementation. HIA in Thailand is practised in different formats, as follows:

1. HIA in public policy, plan and programme-making (PPP) (guidance was updated in 2020, following amendments to the Thai Constitution in 201722).
2. Health in EIA for proposed projects (since 2010), operationalised by the Office of Natural and Environmental Resources Policy and Planning (ONEP).
3. HIA to support capacity building of people at the local (community) level; this takes either a CHIA approach (facilitated by e.g. researchers and Community-led HIA Platform teams) or an administrative approach (following Public Health Act B.E. 2535), where local authorities apply HIA.
4. Using HIA for generating key evidence for international policy agreements.

Currently, organisations involved in working on HIA and CHIA include the National Health Commission Office (NHCO), the Department of Health (DoH; under the Ministry of Public Health), the Health System Research Institute (HSRI), and the Community-led HIA Platform (a non-governmental organisation). These organisations fulfil different roles, for example, the NHCO for developing guidelines, the DoH (CHIA Platform) for providing support to local communities, and the HSRI for providing financial support.

21 Chanchitpricha C, Bond A. (2020). 'Evolution or revolution? Reflecting on IA effectiveness in Thailand' in *Impact Assessment and Project Appraisal 38*(2):156-166.

22 Notification of the National Health Commission Re: HIA Guideline for public policies B.E.2564.

Evolving practices of CHIA

Voluntary CHIAs have been conducted since 2008 and have been supported through funded research projects. CHIAs are conducted based on the perception that EIAs do not protect local communities from negative impacts of project developments. To date, funding has been provided to support CHIAs for mining and biomass (mainly coal) power plants in 17 locations across Thailand (2010–2012).

> *CHIAs are conducted based on the perception that EIAs do not protect local communities from negative impacts of project developments*

The CHIA Platform[23] is a key actor for delivering CHIAs. It supports mutual learning processes, the generation of evidence-based information and communication of risk perceptions in the development of PPPs that respect the health and wellbeing of communities. In this context, CHIA aims at the development of:

1. an improved understanding of health particularly regarding social determinants;
2. capacity building and learning in local communities; and
3. support for public policy-making, particularly regarding participatory processes.

Evidence for the CHIA cases and updates are provided on the CHIA Platform (chiaplatform.org).

CHIA is conducted as a process, consisting of six steps, as follows:

1. Exploration of community core values. In this context the so-called 'seven community tools'24 are used. These include: (a) the drawing of (geographical and social) community maps by locals to establish community value; (b) the preparation of genograms (family trees of at least three generations); (c) community organisation charts; (d) local health systems; (e) community calendars; (f) records of local history (timeline method); and (g) life stories.
2. Exploration of a proposed policy or project by the local community.
3. Identification of community rights and relevant laws.
4. Health impact appraisal and mapping of potential health risks.
5. Communication of findings to policy and project proponents.
6. Health impact monitoring of the proposed PPP or project.

This process reflects principles of co-production of lay and expert knowledge[25].

23 Founded in 2017 and led by Somporn Pengkam; Atlantic Fellow in Health Equity in Southeast Asia.

24 Chuengsatiensup K., Tengrung K., Pinkaew R., Pechkong W. (2002). *Community Life Approach: Learning Manual That Makes Community Work Easy, Effective, and Fun* (in Thai). Nonthaburi, Thailand: Health System Research Institute (HSRI).

25 Pengkam S., Theerasuwanajak K. (2019). 'Coping with Inequity thru Co-Production of Knowledge: Community Health Impact Assessment' (in Thai) in *Journal of Social Research*. 42(1): 53-80.

CHIA experiences and lessons learned

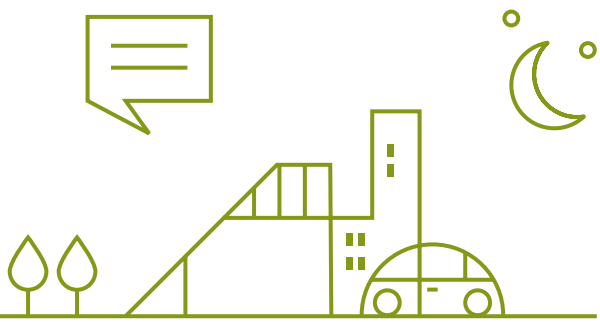
The following table provides a number of examples for CHIAs, showing year of preparation, name of case and lessons learned.

Source: chiaplatform.org/page/article_read/52

Year	Cases	Lessons learned
2010	Stone milling concession and factory in Ban Klang, Ao Luek district, Krabi	CHIA process allowed the community to exercise their legal rights against the approved EIA and gain evidential findings to support community positions and their core values in protecting local natural resources (limestone mountains).
2012	Illegal disposal of toxic industrial waste in Nong Nae, Phanom Sarakham District, Chachoengsao province	CHIA findings were used as evidence in applying for financial support for a toxic waste treatment system as an impact mitigation measure.
2012–2013	Deep-Sea port project in Ta Sa La district, Nakhon Sri Thammarat Province	CHIA was introduced and the process led to bringing community leaders together; collective community ownership was created through the process.
2013	Lead contamination recovery in Klity Lang village, Kanchaburi province (Pollution Control Department (PCD) was ordered by the Thai Supreme Administrative Court)	PCD took a CHIA approach as part of initiating the collaboration of the community and governmental authorities.
2018	Preparing a participatory CHIA project located in borderlands: a case study of Hongsa Coal project in Nan Province	Through the process, lay knowledge contributed to the drawing of community risks maps.

Final thoughts

CHIA developed due to public distrust towards the way decisions were reached on PPP and project developments. In this context, the promotion of economic values by proponents was critically questioned. In CHIA, what people will gain from development is assessed and discussed. Therefore, CHIA is an IA tool for local people.



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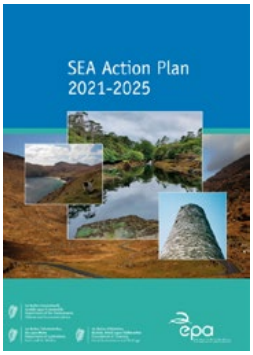
Championing effective SEA in Ireland



The Irish Environmental Protection Agency (EPA) launched the first Strategic Environmental Assessment (SEA) Action Plan in 2012[26]. There have been two follow-up SEA Action Plans since (one in 2018[27] and another in 2021[28]), all of which have championed improvements in national SEA effectiveness. These Action Plans have been informed by the SEA effectiveness reviews (EPA, 2012; 2019). The first Action Plan included an explicit commitment to establish a National SEA Environmental Authority Technical Forum, comprising members of each of the statutory environmental authorities. The Action Plans have also consistently agreed to deliver national good practice SEA guidance and training.

For the last decade, the EPA has dedicatedly worked in delivering these commitments. For example, the Forum has been meeting regularly for knowledge exchange and capacity building. From a practitioner's perspective, noteworthy is the range of SEA guidance published, which has enabled tackling some of the pressing challenges with regards to procedural stages and priority sectors. In this article, we briefly review these guidance documents, acknowledging that they all supplement and complement each other, and highlight their scope and contribution to advancing SEA practice.

Guidance on improving procedural stages and requirements include:

SEA screening good practice (2021)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/sea-screening-good-practice-2021.php

This guidance provides specific stand-alone advice on whether SEA is required. It includes an elaboration of the steps needed for screening, the legislative landscape underpinning SEA screening, and step-by-step processes and templates to assist in preparing the required documentation. The guidance also includes reference to case law which is shaping SEA screening processes, and case studies to illustrate good practice.

Realistic
Achieves the plan/ programme objectives

Reasonable
Based on socioeconomic and environmental evidence

Viable
Technically and institutionally feasible

Implementable
Realised within plan/ programme timeframe and resources

26 www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/SEAActionPlan2012-2016_ProgressUpdate.pdf
27 www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/EPA-Action-Plan-Progress-Report.pdf
28 www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/05565-EPA-Action-Plan-2021-2025.pdf

Developing and assessing alternatives in SEA (2015)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/developing-and-assessing-alternatives-in-strategic-environmental-assessment-sea.php

This guidance sets out good practice for practitioners on SEA alternatives. The recommendations and toolkit provided are based on approaches that have been found to be effective and useful in practice. It includes step-by-step recommendations on how to identify, assess and select alternatives, as well as good practice case studies.

Good practice guidance on cumulative effects assessment in SEA (2020)

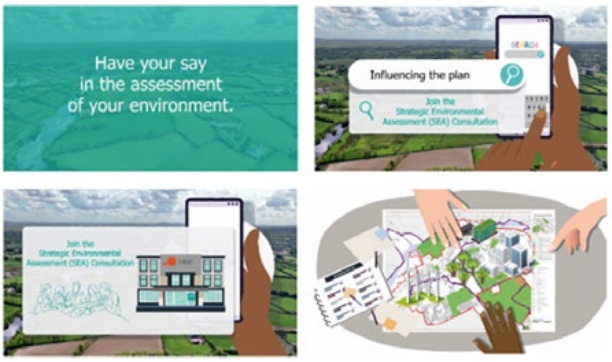
URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-on-cumulative-effects-assessment-in-sea.php

This guidance aims to improve current SEA cumulative effects assessment (CEA) practice by providing: pragmatic recommendations on the identification of environmental limits/targets/thresholds; description of past trends and likely future state of the environment; assessment of cumulative impacts compared to limits/thresholds; and mitigation aimed at avoiding or reducing cumulative impacts.

Good practice note on public participation in SEA (2024)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/guidance-note-on-public-participation-in-sea.php

This guidance outlines principles and makes recommendations to ensure that the public are meaningfully informed and consulted during SEA processes, and that any feedback is appropriately integrated into the SEA and the associated plan/programme. It includes lessons learned from a good practice case study piloting novel approaches to public engagement in SEA consultation.



A video for the public on how to engage in SEA is also available: www.youtube.com/watch?v=4unFmQVyzQk

Guidance on SEA statements and monitoring (2023)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/guidance-on-sea-statements-and-monitoring.php

This guidance includes step-by-step recommendations for practitioners to improve the preparation of SEA statements, as well as recommendations for both practitioners and plan-makers to facilitate a more consistent and coherent approach to monitoring, and presents a number of strategic indicators for national-level plans and programmes.

GISEA manual – improving the evidence base in SEA (2017)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/gisea-manual---improving-the-evidence-base-in-sea.php

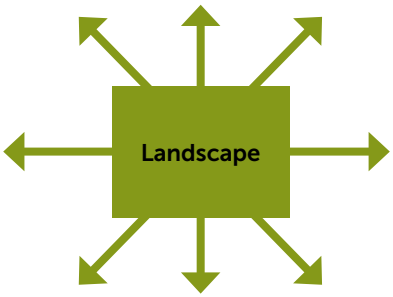
This manual is intended to guide the application of Geographic Information Systems (GIS) as a tool to enhance the evidence base in SEA. It covers the legislative framework, GIS techniques and their general applications, and spatial data management and limitations. It includes methodological step-by-step recommendations for applying GIS as a support tool for SEA in the context of Irish land use planning.

Material Assets
The landuse of an area can provide economic benefits. For example, agricultural land facilitates the farming industry. Landscape can also be central to promoting tourism in an area.

Cultural Heritage
Heritage assets are intrinsically linked to the landscape, presenting historical and cultural signs of civilisation and providing an understanding of the landscape in the past.

Biodiversity, Flora and Fauna
Different landscape features (e.g., cliffs, rivers, etc.) and vegetation (e.g., woodlands) provide different habitats for biodiversity.

Climatic Factors
The climate (temperature, precipitation, and wind etc.) influences the landscape in terms of the vegetation which grows. Vegetation can also help capture (sequester) carbon from the atmosphere.



Population and Human Health
Landscapes and outdoor space provide recreational opportunities for people. It can promote more active lifestyles having benefits for physical and mental health.

Soils/Geology
Soil type is influenced by the underlying geology and can influence the type of vegetation growing on land which contributes to the landscape.

Water
The hydrological system (rivers, streams etc.) helps shape the landscape. Vegetation in the landscape can also help filter pollutants before they reach watercourses.

Air
Vegetation (e.g., woodlands) help improve air quality by intercepting particulate matter and absorbing gaseous pollutants.

Guidance on Key Performance Indicators of Strategic Environmental Assessment Effectiveness (2024)

URL: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/guidance-on-how-key-performance-indicators-can-be-used-to-evaluate-effectiveness-of-strategic-environmental-assessment.php

This guidance explains how the 10 key performance indicators can be used to evaluate the SEA. It also presents the current status (i.e. baseline) of each KPI for Irish SEA practice, based on 20 case studies, and provides a good practice example.SEA topics have also been individually addressed in some instances:

Integrating climatic factors into Strategic Environmental assessment in Ireland: A guidance note (2019)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/integrating-climatic-factors-into-strategic-environmental-assessment-in-ireland---a-guidance-note.php

This guidance presents recommendations on how to practically incorporate climate change into plans/programmes that fall under the remit of the SEA Directive, considering how these may affect, or be affected by, climate change either directly or indirectly. It presents information on: the causes and consequences of climate change; how these causes and consequences can be described, evaluated and incorporated into the SEA; and where appropriate information can be found.

Good practice guidance on SEA and landscape (2023)

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-on-strategic-environmental-assessment-sea-and-landscape.php

This guidance seeks to support the way in which landscape is addressed in SEA, helping to ensure that landscape management, conservation and the outcomes of development are properly assessed. It provides an introduction to landscape analysis and an appreciation of the assessment process in order to evaluate landscape effects and impacts. It is also intended to introduce landscape professionals to the SEA process and how landscape can be considered within that process.

Guidance for priority sectors, aiming to provide good practice recommendations for each of the procedural SEA stages, have also been prepared including:

- **SEA of Local Authority Land Use Plans (2024)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/sea-of-local-authority-land-use-plans---epa-recommendations-and-resources.php

- **Good Practice Guidance on SEA for the Tourism Sector (2023)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-on-sea-for-the-tourism-sector.php

- **Good Practice Guidance Note on SEA in Water Sector (2022)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-note-on-sea-in-water-sector.php

- **Good Practice Note on SEA for the Energy Sector (2021)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-note-on-sea-for-the-energy-sector.php

- **Good Practice Note on SEA for the Waste Sector (2019)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-note-on-sea-for-the-waste-sector.php

- **Good Practice Note on SEA for the Forestry Sector (2019)**

URL: www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-note-on-sea-for-the-forestry-sector.php

The wide array of guidance documents published to date in Ireland have been developed for the Irish legislative and planning contexts, but given the fact that they comply with the procedural stages and requirements, as well as the sectoral applications established in the European SEA Directive 2001/42/EC, the recommendations compiled therein are transferable to other jurisdictions.

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Innovating in Environmental Assessment through the Sustainable Development Goals

Despite recognising that Environmental Assessment (EA) should embody a focus on promoting sustainable plan and project outcomes, current practice is driven by initiatives to minimise impacts. Strengthening adherence of EA to political sustainability objectives can ensure that societal goals are at the visionary forefront of EA.

Some EIAs and SEAs have turned to the Sustainable Development Goals (SDGs) to better address how plans and projects stand in terms of meeting the needs of the global community. Cases of SDG integration have appeared across the globe[29].

The primary questions plaguing practice today are, firstly, how many and which SDGs are relevant for the EA at hand; secondly, how prominent should they be, where are they best introduced, and what does this mean for reporting and communication with the public; and lastly, who is responsible for implementing such a new practice?

Localising SDGs

Determining which SDGs are relevant and how many to include depends on the context. However, recognising that SDGs are interrelated and are only successful in their collective fulfilment, the identification of relevant SDGs should not be exclusionary. They should not seek to only identify positive impacts, as practice tends towards today, but should cover all potential impacts, including those that negatively impact sustainability goals.

The SDGs are divided into goal, target and indicators levels. The target level lends itself well to EA, but not all 169 SDG targets are relevant (a Danish report[30] identified 57 potentially relevant targets). All environmental factors can be linked to corresponding targets, implying overlap between EA and SDG contents. Targets can also further develop understanding of what environmental factors entail. The alignment between SDG indicators and EA has not yet been thoroughly explored, but their pertinence to international and global levels may require further conversion to be applicable on local plan/project levels.

Integrating SDGs

The approach to SDG integration affects their leverage within EA. Mostly, SDGs are merely mentioned, typically as a general framework in the introduction of the EA, without coupling individual goals and targets to neither the contents of the plan or project nor the different phases of EA (such as scoping, assessment, mitigation). This contrasts with EA in which the SDGs are more integrated into the process (e.g., alternatives, assessments, mitigation, public involvement) and contribute to decision-making centred around whether the plan or project fulfils the SDGs.

Practitioners and researchers concede that the most meaningful integration occurs early in EA, but also requires their persistence throughout the process.

29 Ravn Boess, E., Lyhne, I. & Kørnøv, L. (2021) Sustainable Development Goals. State-of-the-art. The Danish Centre for Environmental Assessment, Aalborg University, Denmark.

30 Ravn Boess, E., Kørnøv, L., Coutant, A. E., Jensen, J. U., Jantzen, E., Kjellerup, U. & Partidário, M. R. (2023). *UN Sustainable Development Goals in Environmental Assessment practice – A Danish standard – Version 2*. Aalborg University: The Danish Centre for Environmental Assessment (DCEA).

Examples of integration based on current practice include:

- *Introduction and plan or project description*: using the SDGs to provide context and describe earlier work (e.g., SDGs addressed in a prior municipal plan)[31].
- *Sustainability workshop*: SDGs to engage practitioners in an early dialogue about potential sustainability initiatives[32].
- *Scoping*: linking SDGs to environmental factors, with the intention of revisiting them in assessments of impacts[33].
- *Relevant policies and objectives*: identifying and assessing SDGs alongside other relevant (inter)national policies and objectives[34, 35]. Some consultancies in Denmark have made this a standard practice for SEAs[36].
- *Assessment of impacts*: embedding SDGs alongside the assessment of impacts on environmental factors, at times using them in understanding the 'significance' of impacts[37] or embedding them as separate environmental factors[38].
- *Sustainability chapter*: assessing impacts according to the SDGs[39]. These can differ from conventional assessments[40].

When applying the SDGs, there is a distinction between whether they are an integrated part of EA, or whether they run parallel to EA and are dissociated from conventional practice. For instance, using SDGs to inform the significance of an impact is more integrated into the core of EA than conducting a voluntary SDG assessment in a sustainability chapter that could be overlooked in decision-making.

Practitioners' role in SDG integration

Perhaps the biggest challenge remaining is the differing opinions regarding where the responsibility for introducing SDG integration lies. Consultants feel they have the competencies to make SDG assessments and develop methods, but not necessarily the time nor developer support and have little discretion without developer approval. Developers are hesitant to experiment when outcomes of SDG integration are uncertain, and methods have neither been developed nor tested. Also, authorities are concerned with stepping beyond legislative requirements. These somewhat simplified perspectives complicate experimentation. An almost exclusive attention to legislative requirements compromises the attention to making SDGs a central part of how EA lives up to its fundamental purpose, namely challenging and changing practice to support the sustainable transformation of plans/projects.

Successful and meaningful SDG integration calls for practitioners to change their practice and support each other in new ways of thinking. It requires motivated practitioners in all roles and through all stages of EA. The purpose should neither be name-dropping of sustainability trends nor communicating solely the most prominent positive effects on the SDGs.

31 COWI A/S (2021). *Miljøvurdering af Forslag til Kommuneplan 2021-2033 for Trekantområdet*. p.13.
32 Odense Letbane (2021). Odense Letbane Etape 2. Miljøkonsekvensvurdering. p.60.
33 Government of Ireland (2019). *National Marine Planning Framework*. p. 99.
34 RPS (2021). *SEA Environmental Report. Policy Statement for Mineral Exploration and Mining*. p.xiv.
35 SWECO (2020). *Miljökonsekvensbeskrivning för ny energianläggning i lövsta*. p.173.
36 COWI (2023). *SEA of proposed amendments to the Danish Maritime Spatial Plan. Danish Maritime Authority*. p.50.
37 Energistyrelsen & Rambøll (2022). *Udarbejdelse af miljøvurdering (SMV) i forbindelse med udbud i Nordsøen med henblik på injektion og lagring af CO2 i undergrunden*. p.33.
38 Odsherred Kommune & COWI A/S (2021). *Miljøvurdering af forslag til Odsherred Kommuneplan 2021*. p.15.
39 Ekologigruppen AB (2021). *Miljökonsekvensbeskrivning av Sollentuna översiktsplan 2040*. p.57.
40 Aarhus Havn & COWI A/S (2021). *Udvidelse af Aarhus Havn – Yderhavnen*. p.583.

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Strategic Environmental Assessment of Nanjing's Urban Master Plan

Following China's economic reforms and rapid urbanisation, the country faced unprecedented environmental challenges, including deteriorating air quality, water scarcity, and resource exploitation. These issues were exacerbated by an urban planning system that had prioritised economic growth without adequate consideration of environmental sustainability. Recognising the need for sustainable urban planning that integrates environmental considerations from the outset, China institutionalised Planning Environmental Impact Assessment (PEIA), the predominant form of SEA in China, through the enactment of the Environmental Impact Assessment Law in 2003[41]. Since then, the primary role of PEIA has been to enhance the capability of urban planners to incorporate environmental considerations into the planning process, aiming to foster sustainable and environmentally friendly urban development[42]. This approach has notably influenced cities across China, with Nanjing presenting a compelling case of integrating these environmental strategies into its Urban Master Plan, setting a precedent for future sustainable urban initiatives.

Nanjing, the capital of Jiangsu Province, is one of the most economically developed and densely populated cities in China. Located in the Yangtze River Delta, it serves as a crucial cultural, economic, and political centre in eastern China. The year 2007, which marked the beginning of Nanjing's *Urban Master Plan* (2007–2020), coincided with a peak in the city's rapid urbanisation. From 2000 to 2007, Nanjing's GDP grew at an annual average rate of 18.4%[43], and its population expanded from 5.82 million to 7.41 million[44]. The urban construction land within the city area ballooned from 375 km^2 to 682 km^2, i.e., nearly doubling in size[45].

This urban expansion significantly heightened environmental pressures, in particular air and water pollution, severe noise pollution, and inefficient land use. Taking air pollution as an example, the city's reliance on high-energy-consuming industries such as petrochemicals and steel has perpetuated severe air quality issues, with increasing SO_2 emissions leading to frequent events of acid rain. In 2007, Nanjing experienced acid rain frequencies of 43.8%, with rates reaching up to 76.7% in certain areas[46]. Additionally, inhalable particulate matter remains the primary pollutant, leading to a consistent failure to meet air quality standards. Construction sites and road dust, in particular, exacerbate the situation.

PEIA was used to integrate environmental concerns into the strategic decision-making of Nanjing's Urban Master Plan, aiming to ameliorate these issues. In this

41 Li, T., Wang, H., Deng, B., Ren, W. & XU, H. (2016). 'Strategic Environmental Assessment performance factors and their interaction: An empirical study in China' in *Environmental Impact Assessment Review 59*: 55-60.
42 Che, X., English, A., Lu, J. & Chen, Y. D. (2011). 'Improving the effectiveness of planning EIA (PEIA) in China: Integrating planning and assessment during the preparation of Shenzhen's Master Urban Plan' in *Environmental Impact Assessment Review 31*: 561-571.
43 NJBS (2008). *Nanjing 2007 National Economic and Social Development Statistical Bulletin*. Nanjing Municipal Bureau of Statistics.
44 NJBS (2011). *Nanjing Sixth National Population Census Data Bulletin*. Nanjing Municipal Bureau of Statistics.
45 NJAEP (2009). *Nanjing Urban Master Plan (2007-2020) Environmental Impact Assessment Technical Report*. Nanjing Research Academy of Environmental Protection.
46 *Ibid.*

context, the most significant contribution of PEIA was its influence on the strategic positioning and foundational principles of the city's Master Plan. Although the original plan already stressed the advancement of a resource-conserving and environmentally friendly society, the PEIA recommendations prompted a pivotal supplement, elevating the 'priority on ecological and environmental protection' in plan principles.

This recalibration was a strategic enhancement in Nanjing's approach to urban planning, and led to ecological and environmental considerations not being secondary but central to development. This shift directly influenced policymaking and planning strategies, embedding environmental sustainability more deeply into the city's growth blueprint.

The commitment to ecological and environmental protection has not merely been rhetorical within the city's planning principles but permeates through various planning domains under PEIA's influence

PEIA advised that Nanjing's authorities, while maintaining focus on the city's historical, cultural, and economic significance, should position it as a 'Riverside Ecological Liveable City'. This recommendation not only enhances the city's aesthetic and functional appeal but also prioritises the wellbeing of its residents. By emphasising liveability, the plan now incorporates elements such as residential environment, human health, and community wellbeing into the broader urban development strategy. This approach leads to the city's growth, promoting a higher quality of life and sustainable living conditions for all residents.

The commitment to ecological and environmental protection has not merely been rhetorical within the city's planning principles but permeates through various planning domains under PEIA's influence. For instance, regarding the problem of air pollution, the PEIA conducted a comparison between a 'business as usual' scenario and a 'new strategy' scenario, focusing on clean production processes and the circular economy. It highlighted that, without intervention, emissions of SO_2 and NOx would exceed acceptable levels during the planning period under existing policies, with NOx poised to surpass SO_2 as the primary pollutant. Additionally, significant increases in SO_2, NO_2, and PM_{10} levels were projected, thus underscoring the importance for suggested comprehensive pollution control measures.

Overall, PEIA provided a suite of recommendations for the Master Plan, advocating for enhanced clean production standards in high-pollution industries such as petrochemicals, steel, and automotive. It also suggested spatial planning adjustments for industrial zones, recommending sufficient safety buffers and green belts around chemical industrial bases adjacent to environmentally sensitive areas. Proposals for the relocation of residential areas and upgrades to corporate pollution control measures were made. With the implementation of these measures, it is anticipated that air pollutants will be effectively controlled and maintained within acceptable limits.

In conclusion, Nanjing's integration of PEIA into its Urban Master Planning exemplifies a forward-thinking approach to urban development, meticulously influencing decisions, ranging from strategic principles to detailed planning aspects. This strategy not only supports environmental and ecological preservation but also enhances the liveability and sustainability of urban environments. By affecting both overarching planning goals and implementation, it serves as a vital framework for other cities to emulate, demonstrating how SEAs are crucial for guiding sustainable urban futures.

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Portuguese experience regarding the role of Strategic Environmental Assessment in mega-project development

Strategic Environmental Assessment (SEA) can play a key role in mega-projects' development. It provides an opportunity to ask: *why* this project? opening a strategic[47] debate on need, exploring a range of options, objectives and timeframes, in isolation or in conjunction with other developments, existing or in the future. However, practice shows that the *why* question is rarely formulated, and even less frequently answered.

The Portuguese experience with the SEA of the *Lithium survey and exploration (2021)*, and the *New Lisbon International Airport (2023–2024)* are among the most outstanding examples of national mega-projects which have been assessed with SEA. These will be briefly analysed.

SEA became legislated in Portugal in June 2007 and the same year a good practice methodological guidance for SEA was adopted by the Portuguese government, revised in 2012[48]. This guidance promotes a strategic thinking approach[49]. An associated national policy was also established. The essence of the guidance methodology is recognised on the national environmental agency (APA) website[50] as a process that: facilitates decision-making; and is applied at strategic decision-making levels to assess strategic options, focusing on a few relevant decision factors called Critical Decision Factors (CDF).

In practice, the guidance terminology is reasonably adopted but strategic thinking has been poor or absent. There is some effort involved in outlining how environmental outcomes can be strategically enhanced, which requires a search for indirect causes, including an analysis and understanding of governance and economic dimensions.

With regards to the *Lithium survey and exploration (2021)*, the purpose of the SEA, initiated and completed in 2021 (final report in 2022 after public consultation), was to assess eight areas with lithium potential for survey and exploration to grant associated rights. Areas are located in the north and centre of Portugal. SEA objectives, as established by DG Energy and Geology (DGEG), included safeguarding 'environment and sustainability' to promote public discussion and to identify pre-existing incompatibilities.

47 Strategic approaches in policy and planning, according to Mintzberg (1994, *The rise and fall of strategic planning*. Cornwall: Prentice Hall International), are not intended to find out what can happen in the future but aim to plan and steer actions that make up possible routes to a desirable future.

48 apambiente.pt/sites/default/files/_SNIAMB_Avaliacao_Gestao_Ambiental/AAE/SEA_Guidance_BetterPractices.pdf

49 Strategy is understood as an idea or action that seeks to achieve long-term objectives, led by a vision, but maintaining flexibility to adapt to changing circumstances, framed by the uncertainty that the future implies (...). Strategic thinking is the related way of thinking (...). (Partidário (2021). 'Strategic thinking for sustainability in SEA' [Chapter 4] in Fischer T. and Gonzalez, A. (Eds.). *Handbook on Strategic Environmental Assessment*. Cheltenham: Edward Elgar Research Handbooks of Impact Assessment Series: 41-57.)

50 apambiente.pt/avaliacao-e-gestao-ambiental/avaliacao-ambiental-estrategica

SEA granted the need for lithium exploration based on the Paris Agreement, climate change mitigation and carbon neutrality policies applied to the electrification of production processes and transports. Geological resources and geomorphology, water, biodiversity, population, heritage and governance were the CDFs assessed. The SEA investigated site-specific negative effects for all themes. Geological resources and governance were also assessed from a future needs perspective. Of eight potential sites, two were excluded because of biodiversity issues. Mitigation measures for six site locations were established. Public participation happened according to legal obligations.

The commitment to ecological and environmental protection has not merely been rhetorical within the city's planning principles but permeates through various planning domains under PEIA's influence

It is important to note that at the time of initiating the SEA two other mining projects (Barroso and Romana), located in the north of Portugal, had already initiated procedures for lithium exploration. Associated EIAs resulted in favourable decisions, issued by APA in 2023 and 2024, i.e., two and three years after the SEA was completed. Both were excluded from the SEA because the concession contracts had been signed in 2016 and 2019. There is still major public controversy with regards to both cases not being included in SEA.

The *New Lisbon International Airport* has been the subject of national debate for more than 50 years. A turbulent process interrupted by economic crises, financial difficulties and political inconsistencies led to a sequence of decisions and non-decisions. EIA has been on board since 1990. Before 1990 there were no environmental studies.

An initial SEA in 2008 did a comparative assessment of two possible locations, with a strategic perspective, but without public consultation. A decision was taken, the EIA followed on the selected location, but due to the economic crisis, and several political/governance issues, it was never implemented.

In 2023–24, a second SEA looked into the strategic options to increase airport capacity in Lisbon Region with a radically different approach in terms of governance, strategic approach and focus. Crucial in this approach was an agreement between the two main political parties in Portugal: one in government, the other in opposition. When a decision was taken at the end of the SEA, the government and opposition had changed, but they agreed on the final decision.

An Independent Technical Commission (CTI) was appointed, granting full independence to the assessment. The CTI included one overall coordinator and six thematic experts on air flights' demand, airport planning, accessibility, environment, economic and finances, and legal aspects. Expert studies were contracted for each theme. Public engagement was significant: an online platform engaged the community for over a year. The *why* question was raised and publicly debated. The SEA challenge was to explore strategic options to increase airport capacity in the Lisbon Region and establish the location/combination of locations, that could serve the strategic objective.

The SEA expanded on five strategic options, supported by extensive and multiple public consultation. A vision was adopted, a 50 years of operation horizon was considered, stakeholder meetings and expert thematic tables were conducted. Out of the integration of six experts' themes, five CDFs were identified to structure and conduct the assessment: aeronautic safety; accessibility and territory; human health and environmental viability; connectivity and economic development; and public investment and financial model. The process and outcome of SEA was publicly acknowledged. A government decision was taken according to the SEA recommendation. Implementation is in process, and the airport is expected to be built in 10 years.

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Incorporating responsible waste management principles: towards EIA best practice in South African protected areas

Despite a long history of EIA practice in South Africa, no context-specific best practice principles exist. However, with protected areas facing increased development pressures, there has been calls to produce EIA best practice principles. In this context, 'the need for specific Best Practice Guidelines for EIAs in protected areas to avoid merely ticking the box in terms of legal requirements' has been emphasised[51].

As a first step, principles towards responsible waste management in South African protected areas have been proposed for consideration and incorporation into EIA processes and decision-making[52]. These principles were formulated in response to research[53, 54, 55], which found waste management to be particularly poorly considered and incorporated into EIAs for developments in South African protected areas.

Subsequently, how these principles can be applied to EIA is explained.

How were these proposed principles developed?

The proposed principles were developed through a four-step process, adapted from best practice methodologies[56, 57, 58]), as follows:

51 Alberts, R.C., Retief, F.P., Cilliers, D.P., Roos, C. & Hauptfleisch, M. (2021). 'Environmental impact assessment (EIA) effectiveness in protected areas' in *Impact Assessment and Project Appraisal 39*(4): 290–303. doi.org/10.1080/14615517.2021.1904377

52 Roos, C., Alberts, R.C., Retief, F.P., Cilliers, D.P. & Bond, A.J. (2023). 'Proposing principles towards responsible waste management in South African protected areas', *Koedoe 65*(1): a1753. doi.org/10.4102/koedoe.v65i1.1753

53 Wylie, D.M., Bhattacharjee, S. & Rampedi, I.T. (2018). 'Evaluating the quality of environmental impact reporting for proposed tourism-related infrastructure in the protected areas of South Africa: A case study on selected EIA reports' in *African Journal of Hospitality, Tourism and Leisure 7*(3), 1–14.

54 Sandham, L.A., Huysamen, C., Retief, F.P., Morrison-Saunders, A., Bond, A.J., Pope, J. *et al.* (2020). 'Evaluating Environmental Impact Assessment report quality in South African national parks' in *Koedoe 62*(1): a1631. doi.org/10.4102/koedoe.v62i1.1631

55 Claassens, C.E., Cilliers, D.P., Retief, F.P., Roos, C. & Alberts, R.C. (2022). 'The consideration of waste management in environmental impact assessment (EIA) for developments in protected areas' in *Impact Assessment and Project Appraisal* 40(4), 320–330. doi.org/10.1080/14615517.2022.2080491

56 Brownlie, S. & Treweek, J. (2018). *Biodiversity and ecosystem services in impact assessment*, Special Publication Series No. 3, International Association for Impact Assessment, Fargo, ND.

57 Morrison-Saunders, A., Hughes, M., Pope, J., Douglas, A. & Wessels, J. (2019). 'Understanding visitor expectations for responsible tourism in an iconic national park: Differences between local and international visitors' in *Journal of Ecotourism 18*(3): 284–294. doi.org/10.1080/14724049.2019.1567740

58 Vanclay, F. (2003). 'International principles for Social Impact Assessment' in *Impact Assessment and Project Appraisal 21*(1): 5–11. doi.org/10.3152/147154603781766491

Step 1 framed the principles using South African environmental management laws and relevant legislation.

Step 2 involved a literature review and document analysis to contextualise the principles.

Step 3 included a specialist workshop with experts to review and refine the principles.

Step 4 assessed how well the principles meet the minimum requirements for responsible waste management, including accommodating protected area characteristics, aligning with objectives, addressing operational impacts, and providing social benefits.

Incorporating the proposed principles within EIAs

Principle 1. Protection of ecosystems and biodiversity

Protecting ecosystems and biodiversity is important when performing EIAs. This requires managing waste to avoid net loss to biodiversity. EIAs should provide for waste infrastructure to be sited away from sensitive areas to minimise harm to unique species and ecosystems that provide essential services. Placing waste facilities in accessible areas (e.g., entrances) helps prevent littering.

Principle 2. Prevention and remediation of pollution

It is necessary to anticipate and mitigate negative impacts of waste across the lifecycle. Effective measures should be provided in waste management plans, including robust infrastructures and clear communication to prevent littering/illegal dumping. A 'leave no trace' approach where tourists need to dispose of waste outside protected areas can lead to unintended consequences, such as increased illegal dumping outside protected areas. Where waste disposal is unavoidable, strict measures for responsible and lawful disposal must be enforced. EIAs should address contamination or degradation caused by waste through assessment and rehabilitation efforts.

Principle 3. Implementing the waste management hierarchy

The waste management hierarchy advocates avoidance, reduction, reuse, recycling, recovery, and treatment, with disposal as a last resort[59]. Implementing this principle when conducting EIAs requires provision for measures such as waste separation at source, use of recycled materials, composting of organic waste, and cooperation with local businesses and local communities. Challenges may arise due to the remote locations of many protected areas.

Principle 4. Provision of effective waste services and infrastructure

This poses unique challenges in remote and rural locations. EIA and related management plans may require providing waste management services independently or through partnerships. This may require dedicated budget allocation, staffing, and infrastructure like waste bins, separation facilities, and possibly composting or treatment plants. Ensuring compliance with legal requirements, and norms and standards for waste storage, collection, transportation, and disposal, while considering visitor behaviour and environmental impacts, are crucial in EIA.

Principle 5. Promotion of participation and building of partnerships

This is crucial to ensure that waste management considerations align with the needs and values of interested and affected parties. Through meaningful participation, stakeholder engagement and integration of traditional knowledge, the way in which waste management measures are addressed in EIAs can be improved, gaining community support and buy-in.

59 Department of Forestry, Fisheries and Environment (DEFF) (2020). 'National waste management strategy, GN 56' in *Government Gazette 44116* of 28 January 2021, Government Printer, Pretoria.

Principle 6. Contribution to wellbeing, livelihood and capacity

This emphasises mitigating negative impacts on community wellbeing from waste management and promoting community empowerment and livelihoods. Local communities should be involved, also the informal waste sector to enhance economic opportunities[60]. EIAs should provide for education and skills development, which are essential for improving waste management practices in protected areas, also addressing challenges such as inadequate waste management infrastructure and limited awareness.

Through meaningful participation, stakeholder engagement and integration of traditional knowledge, the way in which waste management measures are addressed in EIAs can be improved, gaining community support and buy-in

Conclusion

The proposed principles for waste management in protected areas aim to provide strategic direction and to coordinate and standardise waste management practices. We believe that these principles provide a useful framework for ultimately developing more detailed guidance for the management of waste in protected areas. Finally, we believe that these principles provide useful information for the consideration of waste management measures in EIA for developments in and around protected areas.

60 Department of Forestry, Fisheries and Environment and Department of Science and Innovation (DEFF & DSI) (2020). *Waste picker integration guideline for South Africa: Building the recycling economy and improving livelihoods through integration of the informal sector*. Pretoria: DEFF & DSI.

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Differentiating among impacts, risks and human rights issues in international ESIAs

Many infrastructure projects in low – and middle-income countries that require Environmental and Social Impact Assessments (ESIAs) are completed to meet the Equator Principles IV (EPIV)[61], the International Finance Corporation's Environmental and Social Performance Standards[62], or similar risk-oriented financial requirements. Hence, ESIA practitioners sometimes use the words 'impact' and 'risk' interchangeably, rather than as discreet concepts. As assessment of human rights is now required by EPIV and other international frameworks, this article identifies how impacts, risks, and human rights issues are assessed differently and can be presented in a typical international ESIA.

Environmental and social impacts are expected changes to the physical, natural or cultural environment, or effects on surrounding communities, workers or other individuals or groups. In international ESIAs, the main methodology is to assess impacts by attributing significance using a combination of impact magnitude and receptor sensitivity. Impacts can be adverse or beneficial. Magnitude criteria addresses size in various spheres, for instance, spatial, temporal, regularity, and more[63]. Common factors used for describing the magnitude of an impact are extent, scale, amount, reversibility, frequency, and adherence to standards. Receptor sensitivity looks at capacity to absorb change. ESIA identifies project-induced changes, which we know with some certainty are likely to occur.

In comparison, risks are much less certain negative events. They are assessed differently from impacts using a combination of levels of likelihood of occurrence and severity of the consequence. Risk assessment can include the identification of potential outcomes that may never occur.

Risk assessment looks at negative outcomes, whereas ESIA addresses positive impacts and benefits alongside negative impacts. The mitigation hierarchy focuses on negative impacts and risks, while good international industry practice ESIAs should identify both mitigation for adverse impacts and enhancement measures for beneficial impacts. ESIA practitioners need to look for how new developments can protect, conserve, contribute, and add value to scarce environmental resources and to make societies more equitable. Enhancement measures can create new benefits, expand the amount of positive impacts, or share them more fairly[64].

Practitioners often confuse impacts and risks by predicting risks as impacts. For instance, some ESIAs predict Health and Safety (H&S) accidents. Yet almost always H&S issues are risks that require managing. Certainly, construction sites can be managed such that the hazards do not materialise into accidents and injuries. An environmental example is the risk of a spill of a hazardous material. ESIAs do not predict that a spill will

61 Resources Archive – Equator Principles
62 Performance Standards on Environmental and Social Sustainability | International Finance Corporation (IFC)
63 Rowan, M. (2024). 'Attributing Significance to Social Impacts', [Chapter 36] in *Handbook of Social Impact Assessment and Management*, Vanclay, F. & Esteves A.N. (Eds.). Elgar Publishing. Open access at Chapter 36: Attributing significance to social impacts in: Handbook of Social Impact Assessment and Management (elgaronline.com)
64 Rowan, M. and Streather, T. (2011). 'Converting Project Risks to Development Opportunities through SIA Enhancement Measures: A Practitioner Perspective' in *Impact Assessment and Project Appraisal 29*(3). September 2011.

occur yet often a spills management plan or procedures are part of ESIA documentation.

For improved understanding of and differentiating between impacts and risks, we propose that accidents and incidents are not predicted as impacts in ESIAs. Instead, risks are identified without attribution of significance but with a focus on prevention, mitigation, management and control. Typical risks to cover in international ESIAs are:

- health risks (diseases, HIV/AIDS and STIs, non-communicable diseases such as malaria, emergencies such as snake bites and social health issues such as substance abuse), electromagnetic fields, access to health services with discussion on possible effects from the presence of a workforce

- community safety and security risks such as storing and using of explosives, harm from inadequately vetted and trained security staff, conflict, or gender-based violence.

Human Rights Impact Assessment (HRIA) is becoming standard practice due to changes in national and international laws, sustainability frameworks and lenders' standards[65]. Human rights are assessed differently from other social impacts risks. They are assessed according to their severity which is determined by considering scale, scope and irremediability of impacts. Both actual and potential human rights impacts should be considered; 'actual' encompassing harms which have already occurred, or are certain to occur, and 'potential' impacts being less certain and aligning more with the definition of risks than impacts. For human rights impacts, likelihood of occurrence is considered alongside severity to define priorities for action. Unlike in ESIA, however, where it is possible to mitigate only significant (major and moderate) impacts, for HRIA all identified actual and potential human rights impacts must be addressed, mitigated or where the harm has already occurred, remediated. Likelihood of human rights harms may be influenced by external factors such as challenging contexts where open dialogue with stakeholders is not within cultural norms or where certain groups are excluded from participation in employment opportunities through systemic discrimination.

For improved understanding of and differentiating between impacts and risks, we propose that accidents and incidents are not predicted as impacts in ESIAs. Instead, risks are identified without attribution of significance but with a focus on prevention, mitigation, management and control

Circling back to the beginning, lenders' frameworks have influenced the mingling of concepts. Being part of the financial sector, they take a risk-based approach and often require identification of risks and impacts, whereas an ESIA should focus on impacts as a priority, followed by risks. ESIA practice has evolved to consider this important financial sector perspective and new aspects such as a human rights lens. Our job as ESIA practitioners is to identify priority issues, which in most cases will be actual or near certain impacts and the resources needed to manage them, while suggesting mitigation to prevent risks and potential human rights impacts from materialising, especially where the consequences may be severe. Projects may have limitations in terms of human resources, capacity, time, and capital. The ESIA process, through attribution of significance and severity to impacts, helps to decide where to focus efforts to achieve the best possible outcomes for affected people and the environment.

65 Mills, H. (2024). 'Human Rights Impact Assessment in infrastructure development' in *Impact Assessment Outlook Journal 21*: July 2024 (j55928_iema_iaoj_vol_21_final.pdf)

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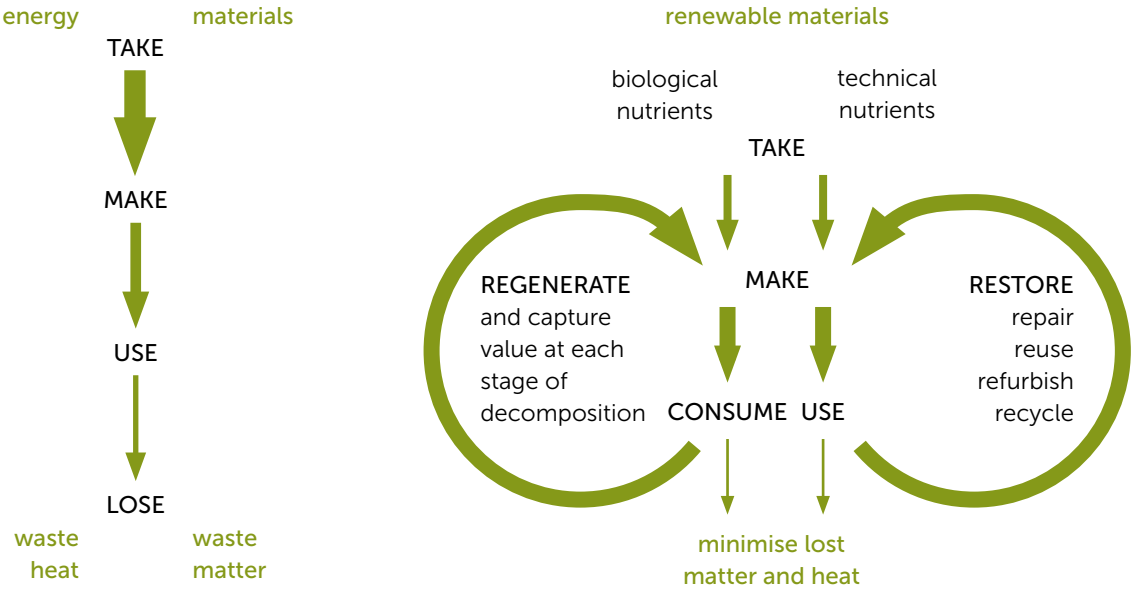
Circular economics and sustainable health and wellbeing:

the public health impact of public bodies refocusing on waste reduction and reuse in Wales

Introduction

The environmental, social and economic benefits of waste reduction as part of broader circular economy approaches are increasingly acknowledged and understood[66]. However, impacts on the wider determinants of health and wellbeing in Wales, including access to services, macro-economic factors, health behaviours, and mental health are less well established.

The circular economy is conceptualised as changing from a linear economy to a circular one, as shown below.



(Raworth, 2017)
"Create to regenerate: growth will clean it up again."

(Raworth, 2017)
"Regenerative by design."

Figure 1[66]: Conceptual figure of linear versus circular economy (redrawn from Raworth, 2018)

66 Welsh Government (2021a). *Beyond Recycling: a strategy to make the circular economy in Wales a reality* [online]. Cardiff, Welsh Government. www.gov.wales/sites/default/files/publications/2021-03/beyond-recycling-strategy-document.pdf

67 Raworth, K. (2018). *Doughnut economics: seven ways to think like a 21st-century economist*. London: Random House Business Books.

Circular economy approaches support the wellbeing goal of a globally responsible Wales by considering not just where resources are used in Wales, but the entire lifecycle and reducing waste to zero, effectively designing out waste.

Methods

The WHIASU team and colleagues conducted a Health Impact Assessment (HIA) which sought to partially address this gap in knowledge. HIA considers impacts on a population through the lens of the determinants of health and wellbeing, using WHIASU established HIA methodology[68].

HIAs can identify positive impacts or opportunities, and negative impacts or unintended consequences. They provide evidence-informed actions to identify opportunities to mitigate negative impacts and enhance positive impacts.

This Circular Economy HIA investigated impacts resulting from waste reduction and reuse approaches, including the impact on public bodies and their role of applying such approaches.

Evidence was gathered from a range of sources, including peer-reviewed journals, grey literature, websites of public bodies, workshops with stakeholders in which 15 public bodies in Wales were represented.

The health impacts (positive and negative) and unintended consequences were identified, along with the population groups with the greatest potential to be affected.

Findings

Initially, the HIA was scoped and carried out as a comprehensive and concurrent HIA of the impact of waste reduction, reuse and recycling on public bodies in Wales prior to the pandemic. Whilst keeping the central focus, the HIA considered the wider context of circular economy approaches.

Some key findings include:

- The **evidence identified focuses on positive impacts of reduce, reuse and recycle policies** as part of wider circular economy approaches. Evidence of impact pathways to health and wellbeing is absent in literature.
- Achieving zero waste **requires an evolution in thinking about how resources are used – from a linear to a circular approach**.
- A focus on **reduce, reuse and recycle policies would have major, probable, positive long-term health benefits at a whole population level**. Major probable impacts are identified for groups that have historically suffered health inequities.
- Reduce, reuse, recycle is the strapline for the waste hierarchy, yet **some evidence suggests policies for recycling can conflict with those intended to reduce waste**.
- A **complex systems approach can support evaluation of outcomes and greater understanding of necessary actions** to ensure policy is implemented in practice throughout all levels of decision-making and operational processes.
- A **key indirect positive impact is the indirect role circular economy approaches play in mitigating general population risks associated with climate change**.

Negative impacts will be felt in the short-term but with lower intensity, paving the way for more intense long-term positive impacts. So, there is an important period of transition where public bodies and wider organisations play an important role in establishing policies and modifying behaviours to mitigate medium-term negative health impacts.

68 Chadderton, C., *et al.* (2012). *Health Impact Assessment: A Practical Guide* [online]. Public Health Wales. phwwhocc.co.uk/whiasu/wp-content/uploads/sites/3/2021/05/HIA_Tool_Kit_V2_WEB-1.pdf

Conclusions

An approach to prioritise reduce and reuse policies has the potential for significant public health co-benefits in Wales. Some of these have the potential to help reduce long-standing health and other inequalities within Wales, such as creating skilled jobs and fair work.

Reduce and reuse policies are an essential ingredient and significant opportunity to deliver the goal of zero waste by 2050 and a circular economy in Wales. The HIA identified that the very concept of waste needs to be reshaped: Wales needs to collectively focus on the sustainable use of resources, keeping products and goods in use at their highest level of value for as long as possible. Wales is leading globally in recycling: the next step is for circular economy approaches to make recycling the 'loop of last resort'[69].

HIA has provided a greater understanding of the major impacts a circular economy can have. It can support public bodies, organisations, communities, and individual workers to foster an approach that promotes health, wellbeing, and equity to enable effective, productive, and positive delivery of policies and services related to reduce and reuse as well as the circular economy more broadly. The pathways to health impact requires further research and investigation.

There is an important period of transition where public bodies and wider organisations play an important role in establishing policies and modifying behaviours to mitigate medium-term negative health impacts

Future actions

Future actions that could potentially be implemented have been developed and include:

- use of HIA when developing circular economy policies and interventions
- prioritising waste reduction
- reducing all energy consumption
- increasing levels of reuse
- collaborative action across all sectors and public bodies to consider the health and wellbeing impacts any inequalities
- public bodies should lead by examples towards zero waste and a circular economy.

There are opportunities at different levels and times for public bodies to integrate findings from the HIA of circular economy approaches into policies and interventions. At all times there is a role for public bodies, communities, organisations and individuals in Wales in adopting circular economy approaches.

69 Ellen MacArthur Foundation (no date). 'What is the circular economy?' [online]. www.ellenmacarthurfoundation.org/podcasts/what-is-the-circular-economy

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Improving the consideration of climate change in transport planning SEA practice

The reduction of greenhouse gas emissions from transport is key for a transition to a carbon neutral future and to achieve climate change targets. This requires strategic and high-level planning to meet future needs. Alternatives need to be chosen in line with environmental targets. A wicked problem in this context is uncertainty about demand as well as technological innovation and how to integrate them appropriately.

From its origin, SEA intended to contribute to intrinsic learning and transformation towards sustainability[70, 71]. Studies and EU guidance highlight the importance of considering climate change mitigation and adaptation targets in SEA and a stronger integration into planning[72]. International authors point out the deficiencies with consideration of climate change mitigation and adaptation in Environmental Assessments still being limited in transport planning[73]. For Germany, it was reported that whilst SEA made national transport planning more transparent, it was not leading to sustainable transport planning[74].

In Austria, federal transport infrastructure projects must undergo a strategic assessment, incorporating SEA since 2001. Whilst there was an associated ministerial guideline on SEA in high-level transportation planning, the Austrian Court of Auditors repeatedly criticised existing SEA practice[75]. Following elections in 2020, a newly established ministry combines competencies for climate change, environment and transport, which should lead towards a better consideration of climate change. In order to improve strategic transport planning, the ministry initiated an amendment of the SEA guideline. BOKU University was commissioned to lead the revision[76]. Key stakeholders were involved, and two associated workshops were organised. Proposed changes were discussed with project developers in the field of rail infrastructure and operation as well as national highways and motorways. Also, actors from consultancies and national authorities participated.

A world café was held, in which the most urgent revision needs were established regarding the development of alternatives, impact measurement and value synthesis.

70 Faith-Ell, C. and Fischer, T.B. (2021). 'Strategic Environmental Assessment in transport planning' [Chapter 11]. In: Fischer, T.B. and Gonzales, A. (Hrsg.): *Handbook on Strategic Environmental Assessment*. Edward Elgar Cheltenham. www.e-elgar.com/shop/gbp/handbook-on-strategic-environmental-assessment-9781789909920.html

71 Carvalho, S., Partidario, M., Sheate, W. (2017). 'High speed rail comparative strategic assessments in EU member states' in *Environmental Impact Assessment Review 66*: 1–13.

72 European Commission (2019). The European Green Deal; COM(2019) 640 final. Brussels, 11.12.2019. commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

73 Hands, S. and Hudson, M.D. (2016). 'Incorporating climate change mitigation and adaptation into Environmental Impact Assessment: a review of current practice within transport projects in England', *Impact Assessment and Project Appraisal 34*(4): 330-345.

74 Balla, S. and Günnewig, D. (2017). Von der Projektbewertung zum Umweltbericht – Erfahrung zur Strategischen Umweltprüfung für den Bundesverkehrswegeplan 2030UVP-report 31 (4): 290-299.

75 Rechnungshof Österreich (2021). Verkehrsinfrastruktur des Bundes – Strategie, Planung, Finanzierung; Follow–up–Überprüfung und COVID–19–Auswirkungen. Bericht des Rechnungshofes, Reihe BUND 2017/33. www.rechnungshof.gv.at/rh/home/home/home_7/Verkehrsinfrastruktur.pdf

76 BMK (2023). Strategische Prüfung im Verkehrsbereich – Leitfaden Screening, Scoping und Umweltbericht. Vienna bmk.gv.at/themen/verkehrsplanung/strategische_pruefung/gesetz_leitfaden.html

Guiding questions	Procedural step(s)
Is there an existing criteria system and are environmental objectives and legal requirements included in the assessment, if available or relevant?	Assessment of env. impacts
On what basis was the assessment carried out in case no existing criteria system was available?	Assessment of env. impacts
Have all environmental issues been presented in the assessment in accordance with the SEA Directive and are the impacts on each environmental issue individually comprehensible?	Assessment of env. impacts
Are scaling and categorisation explained and therefore transparent?	Assessment of env. impacts
Does the choice of colour match the impacts in the context of the scaling (e.g., green is possible significant positive impacts)?	Assessment of env. impacts
Have uncertainties (e.g., due to a lack of data) been presented for each environmental issue?	Assessment of env. impacts

Table 1: Guiding questions (selection) for expert discussion

These were subsequently prioritised online on a whiteboard and summarised in a table, which then formed the basis for further steps. Table 1 shows a selection of the guiding questions.

Amendments made in the novel version of the SEA guideline focused on how to foster better integration of climate change concerns in transport SEAs and support the transparent discussion of decision trade-offs. Modifications in the revised SEA guideline focused mainly on:

- a stronger integration of climate change and environmental objectives in scoping
- an ameliorated development and assessment of alternatives
- methodological improvements in the assessment of environmental impacts
- stronger consideration of cumulative impacts.

As a consequence, a clear distinction between objectives, benefits and justifications of proposed projects is made in the revised guideline. With regards to alternatives, these are now supposed to be developed at an earlier stage, supported in a co-operative process between developers and national authorities (see Figure 2). For the Impact Assessment itself, the revised guidelines propose traceable documentation of transport models used as well as qualitative and quantitative assessments of, for example, CO_2 emissions.

While SEA should consider cumulative impacts starting during scoping and continuing during the assessment of alternatives, in reality this does not often happen[77]. The Austrian transport planning practitioners discussed the importance of an assessment of cumulative impacts as well as demand forecasts and systemic alternatives when SEA is applied. Both cumulative impacts and the assessment of alternatives is still limited in practice, however, as the overarching Transport Master Plan/ the Mobility Strategy[78] for Austria is not subject to SEA. However, a voluntary SEA is now being discussed and some key actors stress the advantages of considering climate change mitigation targets next to other environmental objectives at this planning level already. Whether this voluntary SEA will take place, though, is subject to future developments and political decisions.

77 Rehhausen, A., Günther, M., Odparlik, L., Geißler, G., Köppel, J. (2018). Internationale Trends der UVP – und SUP-Forschung und – Praxis. Umweltbundesamt, UBA-Texte 82/2018, Dessau-Roßlau, S. 247

78 BMK (2021) *Mobilitätsmasterplan 2030*. Wien www.bmk.gv.at/themen/mobilitaet/mobilitaetsmasterplan/mmp2030.html

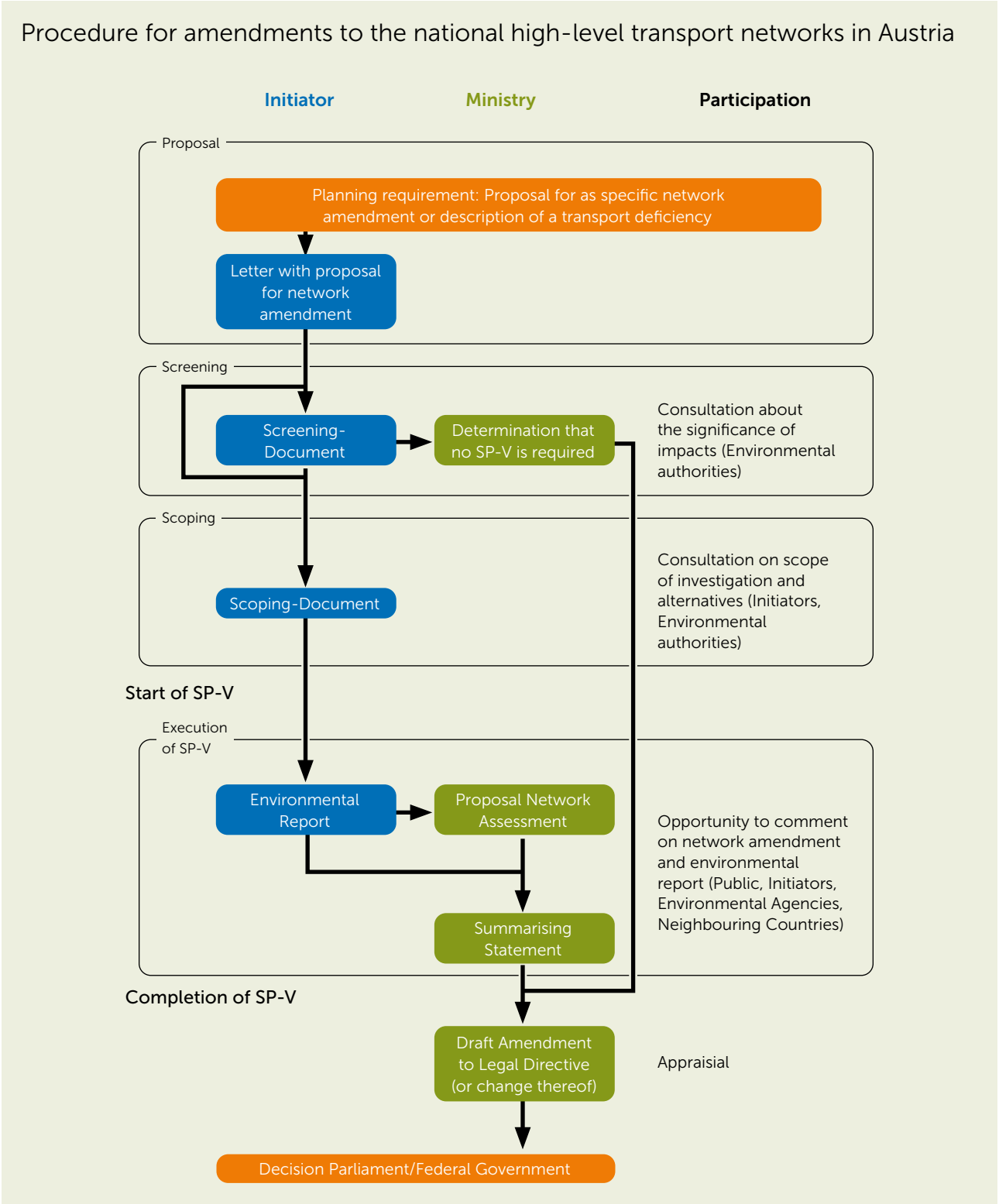

Figure 2. Procedure for strategic assessment of national transport infrastructure projects in Austria[79]

79 BMK (2023) *Ibid.* p. 14, own translation.

Make the Most of IEMA's Impact Assessment Resources

IEMA's website includes a host of content and tools designed to support IA professionals at every stage of their careers. From guidance and case studies to webinars and networking opportunities, the resources available are invaluable—but often underutilised. Here's a guide to what's on offer and how you can take full advantage:

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- **Future Events and Webinars:** Keep up with the latest in IA trends and practices by joining IEMA-hosted events and live webinars.
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- A Roadmap to Digital Environmental Assessment
- Implementing the Mitigation Hierarchy from Concept to Construction
- A New Perspective on Land and Soil in Environmental Impact Assessment
- Assessing Greenhouse Gas Emissions and Evaluating their Significance
- Determining Significance for Human Health in Environmental Impact Assessment
- Effective Scoping of Human Health in Environmental Impact Assessment
- Environmental Assessment of Traffic and Movement

Additionally, dive into the Delivering Proportionate EIA Strategy for a roadmap to efficient and effective assessments.

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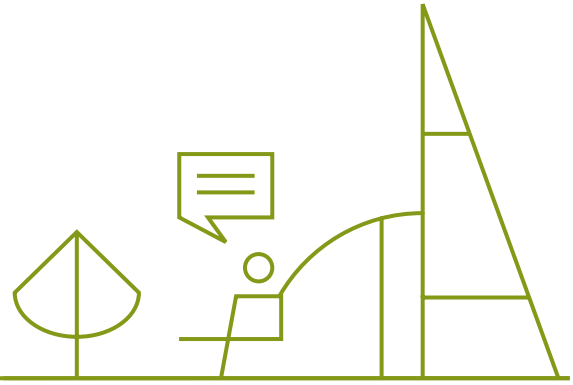

Summary

In this issue of the Outlook Journal, numerous examples of good Impact Assessment (IA) cases and practices are introduced in a total of 10 contributions. We hear about Strategic Environmental Assessment's (SEA) ability to create greater certainty in plan-making and about how SEA can be effective in reducing vegetation loss associated with development and in enhancing land conservation reserves (Burdett). We also learn about community-driven Health Impact Assessment's (HIA) ability to enhance the health and wellbeing of local communities (Chanchitpricha and Fischer). Furthermore, we are informed about the Irish EPA's SEA Action Plan and associated numerous good practice guidelines (González and O'Mahoney). We are informed about how Denmark is providing us with various examples for how Environmental Assessment can be innovated through integration with the Sustainable Development Goals (Ravn Boess). Furthermore, we hear about SEA's ability to develop options for sustainable urban futures in Chinese Master Planning (Wang). We also learn about the importance of Critical Decision Factors in SEA application in Portugal and about how agreements are made with the support of SEA that can survive changing governments (Partidário). We are shown how good EIA practice can be supported through integration with responsible waste management principles in South Africa (Retief, Roos and Alberts) and we learn about how to effectively differentiate among impacts, risks and human rights issues in international Environmental and Social Impact Assessments (ESIAs; Rowan and Mills). We are informed about HIA's ability to create transparency on the public health impacts of public bodies refocusing on waste reduction and reuse in Wales by outlining potential incompatibilities and associated trade-offs (Lyddon). Finally, we hear about some innovative work on SEA in national transport planning from Austria and associated guidance, which advocates a tiered approach to SEA (Jiricka-Pürrer and Gühnemann).

These are compelling lessons and forward-looking insights from diverse global contexts. As the IA field faces increasing scrutiny amid calls for reform and simplification, this collection affirms its enduring relevance and the vital role it plays in fostering sustainable development.

The articles highlight good applications of IA, revealing its tangible benefits. For instance, Australia's strategic assessments under the EPBC Act illustrate how clarity in guidance and robust professional networks lead to substantial cost savings, conservation outcomes, and streamlined planning processes. Similarly, Thailand's Community-led Health Impact Assessments (CHIAs) have empowered local populations to mitigate risks in sectors like mining and energy, delivering broad social and health benefits.

The collection also emphasises innovative adaptations of IA tools in various regions. In Europe, alignment with emerging EU directives showcases progressive practices, while in South Africa and China, tailored approaches address unique socio-environmental dynamics. From Wales to Portugal, these case studies underline the versatility and transformative potential of IA when effectively implemented.

Looking forward, the journal underscores the need for a shift toward integrated, cross-disciplinary approaches. IA's future depends on transcending silos to collaborate with sectors such as climate science, public health, and social equity. This will involve leveraging the wealth of knowledge generated through decades of IA practice while adapting to contemporary challenges like climate change, biodiversity loss, and rapid urbanisation.

The journal concludes with a call to action: to strengthen IA as a tool not just for regulation but for inspiration—building resilient, sustainable societies that prioritise both environmental stewardship and human well-being. By embracing these principles, IA practitioners and stakeholders can advance a robust, unified vision for the field's global evolution.

Thomas Fischer
December 2024

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University of Natural Resources and Applied Life Sciences, Vienna
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IEMA's EIA Quality Mark: A scheme operated by the Institute allowing organisations (both developers and consultancies) that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed. Founded in 2011, the EIA Quality Mark is a voluntary scheme, with organisations free to choose whether they are ready to operate to its seven EIA Commitments: EIA Management; EIA Team Capabilities; EIA Regulatory Compliance; EIA Context & Influence; EIA Content; EIA Presentation; and Improving EIA Practice.

International Best Practice in Impact Assessment

This 23rd edition of the Impact Assessment Outlook Journal provides a series of thought pieces on international best practice in Impact Assessment. In this edition, the Guest Editor, Thomas B. Fischer, has selected 10 articles produced by IEMA professionals and Impact Assessment experts. The result is a valuable yet quick read across some of the different aspects of international best practice in Impact Assessment from Denmark, Ireland, Australia, Portugal, Wales, South Africa, Thailand and Austria, as well as thought pieces on international practice in general.

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