Unlocking the Potential:

A study on the potential role of the Sustainable Development Goals in the Dutch Strategic Environmental Assessment

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Unlocking the Potential: A study on the potential role of the Sustainable Development Goals in the Dutch Strategic Environmental Assessment

On behalf of the Netherlands Commission for Environmental Assessment (NCEA),

By

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Abstract

The Sustainable Development Goals (SDGs) are increasingly being used by organizations as a benchmark for sustainable development. Additionally, the formal adoption of the SDGs is mandated by the Dutch government and more than a third of Dutch municipalities. This formalizes their use as a measuring tool.

The SDGs can play a role in Strategic Environmental Assessments (SEAs), which the Netherlands Commission for Environmental Assessment (NCEA) can subsequently assess. This presents a potential role for NCEA in this context. This approach aims to obtain a comprehensive view of nature and environmental protection. Currently, this practice is not yet implemented, and this research will take an initial step in exploring the possibilities.

This research aims to investigate the integration possibilities of the SDGs in Dutch SEA. The study will examine to what extent it is already being done, identify the challenges and opportunities associated with its use, explore ways to integrate the Sustainable Development Goals into Strategic Environmental Assessment and assess the contribution to sustainable development. For this purpose, the following research question has been formulated: To what extent can the Sustainable Development Goals be applied in Dutch Strategic Environmental Assessment, and what are the advantages and disadvantages of applying the Sustainable Development Goals in Strategic Environmental Assessment?

To address the research question, a combination of interviews and literature research was conducted. The research aimed to identify to what extent there were SEA reports that incorporated the SDGs, which were discussed with various experts. The research showed that currently, there are no SEA reports that include the SDGs. However, documents such as environmental visions that may serve as a basis for SEA reports do contain SDGs. Additionally, through interviews, an examination of the advantages and disadvantages was conducted. The primary advantage identified was the familiarity with SDGs, offering broad communication possibilities and the ability to comprehensively map activities related to sustainable development, highlighting areas of progress and gaps. The main disadvantage of integrating SDGs in SEA lies in the complexity of the SDGs, attributed to the numerous underlying sub-goals. While specific methods for applying SDGs in SEA are not yet established in the Netherlands, Danish research provides a framework for understanding how they can be implemented.

Based on this, it is recommended to the NCEA to adopt the Danish model. Starting with the variants of integration that align with the context of specific SEAs is suggested. These variants ensure that the impact is visible but do not immediately require a complete restructuring, making it possible with existing resources. However, in theory, the SDGs seamlessly align with SEA, and vice versa.

Acknowledgments

Dear reader,

Before you is the master's thesis: "Unlocking the Potential: A Study on the Potential Role of the Sustainable Development Goals in the Dutch Strategic Environmental Assessment." I have written this thesis for the Netherlands Committee of Environmental Assessment (NCEA), as part of the requirements for obtaining my Master's degree in Public Administration at the University of Twente.

This thesis provided me with the opportunity to delve deeper into topics I had already gained some experience and interest in, namely the Sustainable Development Goals during my Bachelor's studies, and Environmental Impact Assessment during my job at the Province of Overijssel throughout my studies. This job also facilitated the connections between the NCEA and me. The intrinsic motivation of the NCEA to conduct research on the SDGs, combined with my various experiences, led to the choice of this topic. Therefore, I would like to express my gratitude to my supervisors from the NCEA, Roel Sillevis Smitt and Geert Draaijers. Their keen insights and experience with Environmental Impact Assessment have been helpful.

Additionally, I want to thank my supervisor from the University of Twente, Dr. Frans Coenen. His expertise in environmental studies and his experience as a researcher have guided me in the right direction and made me able to do and finish this research. Furthermore, I would like to express my gratitude to the second reader of this thesis, Dr. Veronica Junjan, for her feedback.

Finally, I want to thank the individuals who participated in the interviews, everyone involved in reviewing my thesis, my classmates, my friends, my family, and, specifically, my fiancé Bente for all the cups of coffee she brewed during the writing of this thesis.

I wish you enjoyable reading!

Sincerely,

Thomas Kroon
University of Twente
Sneek, January 2024

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List of Abbreviations and Acronyms

EA	Environmental Assessment
EIA	Environmental Impact Assessment
EU	European Union
MDGs	Millennium Development Goals
NCEA	Netherlands Commission for Environmental Assessment
NPM	Nationaal Milieu Progamma - (National Environmental Programme)
PPP	People, Planet, Profit
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (National Institute for Health and Environment)
SDGs	Sustainable Development Goals
SEAs	Strategic Environmental Assessments
SIA	Sustainable Impact Assessment
UNECE	The United Nations Economic Commission For Europe
UNCSD	United Nations Commission of Sustainable Development
UN	United Nations
UNEP	United Nations Environment Programme
VNG	Vereniging van Nederlandse Gemeenten (Dutch Municipality Association)

1. Introduction

1.1. Background

Strategic Environmental Assessment (SEA) has been used in the Netherlands since 1987, making it a systematic and integrated approach to assess the environmental and potential environmental impacts of policies, plans, and programs. Since the introduction of the environmental impact assessment (EIA) law in 2005 and the subsequent enactment of the Spatial Development Act in 2008, there has been a notable surge in the number of SEAs (NCEA, 2010). These legislative developments have led to an increased recognition of the importance of considering environmental factors in decision-making processes related to spatial planning and development. Simultaneously, another development has taken place in the field of environmental impact, and the assessment or expression of sustainable development. The application of this development has been expressed since 2015 through the Sustainable Development Goals. These seventeen goals were adopted in 2015 by the United Nations and are also adopted and integrated by nations worldwide into the policy-making process (UN, 2023).

The Dutch government, municipalities, provinces, and Water Authorities have committed themselves to the SDGs. This means that these institutions monitor how well they are doing in participating towards the goals. Each year, a report is made on the progress the Netherlands is making towards achieving the goals. As of 2023, the Netherlands is ranked in the 20th place out of the 166 countries participating in the Sustainable Development Report. This ranking shows the progress towards achieving all seventeen SDGs. Out of the seventeen goals, only one goal has been achieved, which is the goal of no poverty. All other sixteen goals have not been achieved yet.

An institution that monitors and assesses the environmental impacts of plans, programmes, policies, and projects is the NCEA. The NCEA advises, as an independent organisation, on the content of made environmental impact reports and whether it complies with the legal requirements. Occasionally they are asked to advise what should be included in a report. A possible way of measuring effects or what occurs within the environment in a strategic plan or project is by using the SDGs. The Dutch Municipality Association (Vereniging van Nederlandse Gemeenten, VNG), has written a vision document in which they want the SDGs to be applied in government, especially in municipal strategic environmental visions[1] (VNG International, 2020). Additionally, it is important to state that governments must conduct an SEA with certain plans and programmes if they meet the threshold. Simultaneously, governments must make sustainable decisions, starting in 2024, which can

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[1] *There is no direct one-to-one translation for "omgevingsvisie," but the Dutch government uses the term "Strategy on Spatial Planning and the Environment." Therefore, the "Strategy on Spatial Planning and the Environment" includes more than the environment. In this thesis, the term "Strategy on Spatial Planning and the Environment" is used.*

be found in Article 1.3 [2]of the Environmental and Planning Act (Ministry of Infrastructure and the Environment, 2016).

Ultimately, this has led to the question by the NCEA of applying the SDGs within SEA could imply for the SEA-reports, and what the possible advantages and disadvantages are for applying the SDGs in SEA. The developments from the VNG, the commitment to the SDGs by governments, and the introduction of the Environmental and Planning Act, which mandates sustainability in policies, make the question of whether there is a connection between SEA and the SDGs highly relevant. Furthermore, there is an increase in government layers that want SDGs as a benchmark for policy development and decision making. By applying the SDGs in policies, it is expected that the SDGs will contribute to the National Environmental Programme (Nationaal Milieuprogramma, NMP). The NMP is a national programme, initiated by the Dutch National Government in order to describe how the Cabinet wants to work on a healthy, clean, and safe living environment (Ministry of Infrastructure and Water Management, n.d.). To assess if the SDGs could contribute to SEA, this thesis has been written.

This study is relevant from a public administration perspective because it could improve the way that governance is done within the context of strategic environmental assessment, environmental assessment, and sustainable development. Improvement in this context implies that a broader scope of the environment can be assessed, or that the understanding of the assessment increases due to the use of the SDGs. According to De Vries (2016), public administration has different interpretations, such as understanding problems in the public sector, it being a distinction between political science, economics, law, and sociology, and finally, the knowledge to improve public administration as an applied discipline. This thesis will contribute to these public administration characteristics, because firstly, it contributes to the issues or problems surrounding sustainable development. Ultimately, this thesis assesses if the SDGs, being sustainable indicators, could contribute to environmental and sustainable development as takes place in SEA. Secondly, it contributes to political science in the field of the environment and government because this research assesses how a semi-government institution (closely related to the national government), can use, and apply the theoretical knowledge in their field of work. Thirdly, a contribution is made to the sociological issue by analysing different interpretations of SDGs at SEA, because SDGs are constructs made to conceptualize sustainable development, making it a social matter. Finally, it contributes to the application of public

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[2] *The law is stated as:*
This law is aimed at sustainable development, habitability of the country, and protection and improvement of the living environment, by:
a. Achieving and maintaining a safe and healthy physical living environment and a good environmental quality, and
b. Efficiently managing, using, and developing the physical living environment to fulfill societal needs. (Ministry of Infrastructure and the Environment, 2016)

administration because it becomes advice on how and why a legitimate institution can or cannot apply SDGs in SEA. Therefore, making it an applicable product towards environmental policy.

1.2. Research problem

The research problem addressed in this study is the potential application of the SDGs in SEA within the context of the Netherlands. The aim of this thesis is to explore the advantages and disadvantages of integrating or adding the SDGs into SEA reports and to assess the feasibility and potential impact of such integration. Ultimately, the research problem is that the NCEA is aware that SDGs are widely used by governments and other stakeholders but is uncertain about how this applies to the organization itself. The NCEA desires to incorporate SDGs but lacks clarity on the specifics. This study aims to provide insight into what SDGs can offer to the NCEA, particularly in the context of SEA.

1.3. Research objective

This research has two main objectives. The first objective is to analyse to what extent the SDGs can be applied to Dutch SEA practice. The second objective is to explore the potential benefits and drawbacks of incorporating the SDGs in Dutch SEA. By conducting this research, and focus on these two research objectives, this study will provide valuable insights for policymakers, researchers, and practitioners to get a better of understanding of the SDGs within the field of environmental assessment. The findings of this study will contribute to a deeper understanding of the role of SDGs in SEA, and possible within the general field of EIA, and will offer recommendations for maximizing their impact on sustainable development outcomes.

1.4. Research question

The main research question of this thesis is based on the question posed by the NCEA. The NCEA wants to investigate to what extent the SDGs are applicable to SEA, and to assess what the advantages and disadvantages are of applying SDGs into SEA. Ultimately, in order to achieve this objective, the following main research question is formulated:

- *To what extent can the Sustainable Development Goals be applied in Dutch Strategic Environmental Assessment, and what are the advantages and disadvantages of applying the Sustainable Development Goals in Strategic Environmental Assessment?*

To answer the main question, the question is divided into three sub-questions, each contributing in its own way to addressing the main question. This study employs a theoretical framework that encompasses three key areas: SEA, Sustainable Development, and the SDGs. These interconnected concepts provide a comprehensive lens for examining the subject matter, facilitating an understanding of the environmental, social, and economic dimensions involved. By integrating these theoretical

perspectives, this research aims to uncover meaningful insights and contribute to the broader discourse on sustainable development and its implementation through SEA in alignment with the SDGs. The first sub-question will examine the current integration of the SDGs within the existing SEA framework, assessing their implementation and impact.

1. *How are the Sustainable Development Goals currently addressed in Strategic Environmental Assessment and in Dutch Strategic Environmental Assessment?*

The second sub-question examines the significant challenges and opportunities pertaining to the integration of the SDGs within SEA, encompassing an assessment of both potential obstacles and possibilities that may arise during this integration process.

2. What are key challenges and opportunities in integrating the Sustainable Development Goals into Strategic Environmental Assessment?

The final sub-question addresses ways in which the Sustainable Development Goals can be effectively integrated into the practice of Strategic Environmental Assessment. It seeks to explore the strategies, approaches, and methods that can be employed to successfully incorporate the SDGs into the SEA, while emphasizing the practical implementation and assessing the added value that this integration brings to the overall effectiveness of SEA.

3. In what ways can the Sustainable Development Goals be implemented in the practice of SEA and what will it contribute within the field of sustainable development?

1.5. Societal relevance

This study has a significant societal relevance as it addresses key challenges related to strategic environmental assessment, environmental decision-making, and sustainable development. Understanding the potential integration of SDGs in SEA, valuable insights can be gained conserving the assessment of plans, policies, and programs in relation to sustainable development, which holds significant societal relevance. Secondly, SEA is a crucial tool for evaluating and making plans on the potential impacts of plans, policies, and programs on the environment (built environment, nature, residents, etc.). Examining the application of the SDGs within this process can provide insights into how social-related issues can and are being addressed. Thirdly, studying the application and integration of the SDGs into the Dutch SEA framework can serve as a benchmark for other countries, contributing to the improvement of their own SEA process and promoting sustainable development. Additionally, this study carries political significance. Given the commitment of the Dutch government, and Dutch local governments to the SDGs and their role in SEA, this research can influence the political decision-making process. It can provide new insights into how the government addresses the SDGs, identify opportunities and challenges, and propose ways to enhance the integration of the SDGs within SEA. Additionally, this research can contribute to raising public awareness and political awareness about the importance of the SDGs and about their importance in relation to SEA. Additionally, this research is relevant because it reveals that the Netherlands has not

yet reached the level necessary to achieve the SDGs as it should (HvA, 2023). The potential value of SDGs in SEA may offer a contribution to addressing this gap.

1.6. Scientific relevance

The scientific relevance of this study also has various aspects. Firstly, the SDGs serve as a widely used and accepted framework for sustainable development. Understanding theory on how others integrate SDGs in SEA, will contribute to the scientific importance, because it has not been assessed in a Dutch context. By examining the integration of the SDGs within the Dutch SEA system, this study can provide insights for researchers and practitioners interested in understanding how the SDGs are implemented in practice, and specifically in the Netherlands. Secondly, investigating how the SDGs can be integrated in SEA offers valuable insights into how countries address environmental policy related to the SDGs. SEA serves as a valuable tool for identifying and mitigating potential negative impacts on the environment in plans or projects. Analysing the incorporation of the SDGs within SEA can contribute to the scientific understanding of how environmental sustainability is pursued through policy implementation. Thirdly, this study will connect two scientific concepts, being the SDGs and SEA. As a result, the study becomes relevant in various research endeavours that have been conducted and are being conducted regarding the role of SDGs in SEA and the environment in general. Lastly, the incorporation of the SDGs within SEA can provide a framework for measuring and evaluating progress towards sustainable development. Researching the effectiveness of this integration can shed light on the possibilities and challenges associated with achieving the goals. This scientific exploration can contribute to the existing body of knowledge on the practical application of the SDGs in the context of SEA and Dutch SEA.

1.7. Thesis outline

The second chapter will consist of the theoretical framework, in which various relevant concepts within the field of SEA will be analysed. It will delve into existing literature to identify how SEA works, how SDGs work and what is meant by sustainable development. Furthermore, it is supplemented with knowledge from experts in the various mentioned fields. The third chapter will describe what methods were used for this thesis and how findings came to the way they were presented. It will consist of the methodology on this thesis. The fourth chapter will give the findings of this research, consisting of two sections. The fifth section will give the discussion part, in which shortcomings of this study will be discussed. The sixth section highlights the conclusions that were found in this thesis. Finally, a chapter will be dedicated to the limitations of this research and recommendations for future research.

2. Theoretical framework

This chapter describes the theoretical framework and concepts of this research. This will be done by assessing literature and by conducting explorative interviews with experts in different fields that relate to the sub-questions. The first concept that will be analysed is the concept of Strategic Environmental Assessment. By assessing the concept of SEA, the theoretical and practical perspectives on this matter can be understood. The second concept that will be analysed is the concept of Sustainable Development. Different pillars of sustainable development will be assessed and described. Then, within this analysis, a deeper understanding of the relationship between SEA and sustainable development will be analysed. The third and final concept that is relevant within this thesis is the concept of the Sustainable Development Goals. Within this framework, the formulation of the goals and their intended purposes will be studied, and their relationship with sustainable development. Additionally, the concepts related to the integration of SDGs within the field of policymaking in general will be examined. This analysis will provide current views on SDG integration into SEA, and what their potentials and limitations are. Finally, a conclusion will be drawn by combining these concepts into a comprehensive framework, and by making four expectations based on the theories and concepts in this chapter.

The concepts used in this theoretical framework serve as the guiding principles for this research. To explore why SDGs may or may not align with SEA, it is relevant to examine the historical context of SEA. Beyond, understanding the significance of the SDGs and how they can be linked to these concepts is crucial. To assess coherence and understand the meaning of sustainable development, this concept also plays a significant role in the theoretical framework. Then, a brief discussion on the topic of decision-making is included, as it pertains to the choice of whether to incorporate SDGs, making it relevant to the decision-making process itself. However, this is not a key concept. Additionally, an examination of the interplay between the concepts is conducted, primarily to investigate the advantages and disadvantages of using SDGs in SEA. Finally, considering the potential interactions between the explained concepts, four expectations will be formulated to assess in the analysis whether these expectations hold true in reality.

2.1. Strategic Environmental Assessment

SEA plays a vital role in safeguarding the environment and promoting sustainable outcomes. SEA is an integrated approach by formalized institutions that consider environmental issues in the decision-making process. With the use of SEA, different perspectives by various stakeholders and different objectives and constraints towards a proposed plan or program are included in the decision-making process (Brown & Therivel, 2000). According to Therivel (2004), SEA goes beyond the traditional scope of Environmental Impact Assessment (EIA). EIA traditionally focusses on projects, rather than plans and programs that occur in SEA. Bina (2013) suggests that SEA represents an evolved form of EIA, with an emphasis on rationalist environmental traits. Moreover, Bina (2013)

highlights that SEA strives to achieve sustainable outcomes rather than solely assessing the impacts of a plan or program. However, this is a controversial point of view because traditionally, SEA primarily focuses on the effects and alternatives, and the perspective mentioned by Bina (2013) goes beyond that by emphasizing a sustainable outcome instead of presenting alternatives.

To effectively fulfil its purpose of safeguarding the environment and promoting sustainability, SEA follows a structured framework compromising six stages, as outlined by Therevil (2004). These stages are designed to guide the assessment process and ensure comprehensive coverage of all relevant aspects of the assessment process. The first stage is to use SEA as a tool for improving the strategic action (Therevil, 2004). This means that the decision is not fixed, but has different outcomes based on the SEA process including the alternatives SEA provides. The second stage is about the promotion of participation among stakeholders. SEA aims to include different stakeholders in the process, to include different issues. The third stage consists of the focus on environmental and sustainable constrains. SEA should therefore focus on sustainable outcomes. The fourth stage has SEA as a tool that identifies the best option for different strategic outcomes. The first and the fourth stage are similar. However, the main difference between these stages is that the first stage focusses on the SEA process and to enhance it, while the fourth stage focusses on SEA as a strategic outcome, thus, to maximize positive outcomes by the SEA. The fifth stage consists of SEA to minimize negative impacts and optimize positive impacts. Any loss of valuable features or benefits due to the decision should be compensated. The sixth stage is about the fact that SEA should ensure the prevention of damage in a way that is irreversible (Therevil, 2004).

Continuing to understand what Strategic Environmental Assessment is about, it is important to understand its brief history, and its interpretations. Table 1 gives an overview of different interpretations of SEA. SEA finds it history in the shortcomings of EIA. The momentum of SEA was found between the 1980s and 1995, when the Brundtland Report called for a separate sphere of the environment within policies. Later, in Europe, in 1992, The United Nations' Economic Commission For Europe (UNECE) called for the environmental assessment of People, Planet Profit (PPP)[3] as means of addressing sustainable issues to EA. Another difference is the stage SEA is being used in. SEA is being implemented at an earlier stage compared to EIA, which is typically applied later in the planning process (Lee & Walsh, 1992). Ultimately, this resulted into an assessment tool that intended to measure more than traditional environmental assessment methods do (Bina, 2013).

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[3] *People, Planet, Profit. The meaning of that will be explained in chapter 2.2.*

Table 1: Interpretations of SEA (Own work, 2023)

Interpretation	Year[4]	Source
A formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or program and its alternatives, including the preparation of a written report of the findings of that evaluation, and using the findings in publicly accountable decision-making.	1990	(Jordan, 1993)[5]
It is essential that proper procedures are devises to ensure that environmental implications of major policy areas are fully discussed prior to the preliminary decision to advance any particular proposal [6].	1987	(Bina, 2013)
A participatory approach for upstreaming environmental and social issues to influence development planning, decision-making and implementation processes at the strategic level	2005	(Verheem et al., 2005)
a systematic process for evaluating the environmental implications of a proposed policy, plan or programme and provides means for looking at cumulative effects and appropriately address them at the earliest stage of decision making alongside economic and social considerations.[7]	2010	(Capacity4dev, 2010)

To complete the literature review on SEA, it is necessary to gain an understanding of SEA's position within the field of EA. First, understanding the difference between EIA and SEA is essential. As briefly mentioned before in this paragraph, EIA focusses solely on assessing environmental effects of individual projects, such as the construction of a highway or a turbine park (Glasson & Therivel, 2013). SEA is a broader concept, which assesses what occurs when a plan or program is implemented and focusses on aspects of why it is done and where it is done. Whereas EIA focusses on how a project is done. (Morrison-Saunders & Arts, 2006). SEA is within the scope of plans, and programs rather than single projects. However, various scholars such as Bridgewater (1998) and Fischer (1999) state that SEA needs to change its framework in order to adequately add a framework for sustainable development. Fischer (2010) for example, finds that the People, Planet, Profit point of view should be integrated in the framework to make it truly sustainable.

2.1.2. SEA in the Netherlands

To ascertain the relationship between the use of SDGs and Dutch SEA, one must delve into the essence of Dutch SEA. This section will give an empirical description of Dutch SEA. Dutch SEA primarily encompasses plans or programs, with the process itself representing an SEA. The determination of whether a particular plan or program necessitates an environmental impact assessment is contingent on two specific criteria. The Environmental and Planning Act defines those

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[4] *The reason that year is included in table 1, is because of the fact that interpretations can change over the years due to new developments. Therefore, it is significant to see the change of it, as the urge and awareness to become more sustainable also changes (ADB, 2012).*

[5] *This definition comes from a literature review written by Jordan, but its definition is by Thérivel et al. (1992).*

[6] *Original definition is by O'Riordian (1976:208), but it was found in an article by Bina (2013).*

[7] *Interpretation of the EU*

subjects to impact as being plans and programs. The second requirement is that the plan or program serves as a framework for decisions regarding EIA mandatory projects (also see Environmental and Planning Act Article 16.36). Alternatively, a suitable assessment may be required for the plan or programme (IPLO, n.d.). Once it has been assessed whether an SEA is required, the document must include the following items (IPLO, n.d.-a):

- Description of content and reasonable alternatives.
- Key objectives of the plan, program, or policy.
- Description of the existing stage or quality of the environment and the expected changes if the plan, program, or policy is not implemented.
- Existing environmental issues relevant to the plan, program, or policy, and in specific in areas where the environment plays a significant role.
- Integration of international, European, or national environmental goals.
- Description of potential significant environmental effects.
- Proposed measures to prevent, limit, or compensate for adverse environmental effects.
- Justification for the selection of alternatives and the assessment of environmental effects.
- Planned monitoring measures.
- A non-technical summary providing the public with sufficient information to evaluate the impact report.

Once an SEA-report is made, environmental issues are being addressed. According to EU- guidelines, the following environmental effects must be assessed in the SEA-report (InfoMil, n.d.):

- Biodiversity
- Population
- Human health
- Fauna
- Flora
- Soil
- Water
- Air
- Climate factors
- Material goods
- Cultural heritage
    - architectural and archaeological heritage, landscape
- The interaction between the aforementioned elements

2.2. Sustainable Development

Sustainable Development is a widely used concept in academia, business and beyond, but what does it mean and how does it fit within the context of SEA? The concept of sustainable development finds its origin in the 1972 Conference on the Human Environment in Stockholm, Sweden. At that conference, a group consisting of twenty-seven experts connected the environment with development. After this conference, the United Nations Environment Programme (UNEP) was found which had as mission *"to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and people to improve their quality of life without compromising that of future generations"* (Paul, 2008). In 1987, the Brundtland Commission published the report *Our Common Future* to highlight the link between issues in economic and environmental development. The Brundtland Commission report defined sustainable development as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (United Nations General Assembly, 1897). After this development, scholars argued that sustainable development is not only economic or environmental development, but that it should be a trade-off or an overlap between environmental and economic development (Emas, 2015).

While the Brundtland Commission Report played an important role in the recognition of the need for sustainable development, it still had to be operationalized. According to Ness et al., (2007) the U.S. National Research Council argued in 1999 that there were three important components of sustainable development, therefore what needs to be sustained, thus what needs to be maintained and/or improved (for future generations). These components are nature, life-support systems, and community. The Council argued that this could be allowed by developing three other components, which are people, society, and economy. In order to operationalise sustainability, it also had to be assessed. The main question that was relevant was: "*Are the goals that we want to achieve in line with what we are doing?*". One of the tools within the assessment family is the tool of SEA (Ness et al., 2007). According to Devuyst et al. (2001), sustainability assessment (which SEA belongs to) is a tool that "*can help decision-makers and policymakers decide which actions they should or should not take in an attempt to make society more sustainable*".

There are different indicators in measuring sustainable development. In 1992, 58 national indicators were set out and used by the United Nations Commission of Sustainable Development (UNCSD). This occurred, because the UN was striving to arrive at a broader and more complete picture of societal development, rather than only economic or environmental development (Ness et al., 2007). Ultimately, this resulted into economic, social, environmental, and institutional monitoring mechanisms (Eurostat, 2008). A remark made by Hanley et al. (1999) about the interpretation of sustainability refers to the political context in which it could occur. In order to make the interpretation of sustainability objective, Hanley et al. (1999) used three types of measurement levels for sustainable

development. They classified these measurements as ecological/environmental, economic, and socio-political.

The operationalization of sustainable development could be put in a figure, which in this case is figure 1, which is called the "Common three-ring sector view of sustainable development". Often, sustainable development is considered to be in the centre of the three rings. According to Giddings et al. (2002), if the rings are seen separately, different perspectives can give a greater priority to one or the other. The major limitation of this model is that it assumes there is a separation of rings, which implies a certain autonomy per ring (Giddings et al., 2002). This, even though even if the rings are separate, they could be interconnected, meaning that the true centre of sustainable development theoretically lies in the centre of the three rings, but could be in other places either.

Figure 1: Common three-ring sector view of sustainable development (Giddings et al., 2002)
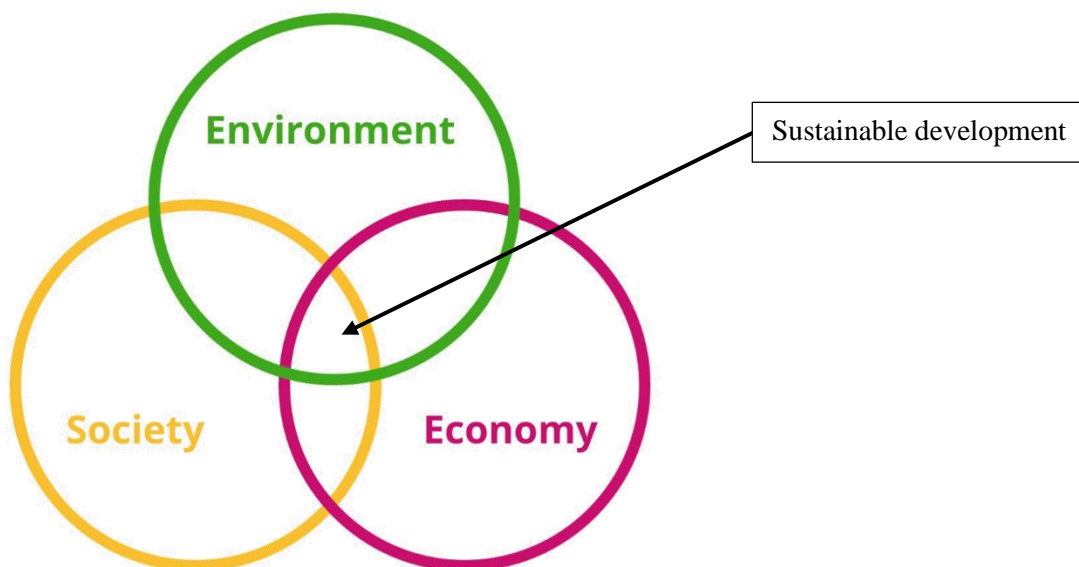
2.2.1. Strategic Environmental Assessment and Sustainable Development

Theoretically, SEA contributes to sustainable development in several ways. According to Marsden and De Mulder (2005), SEA has several benefits that are related to the three-ring sector view of sustainable development. These benefits are that SEA strengthens the plan, and programme-making process, since by using SEA time and money are being saved by avoiding costly mistakes. Furthermore, it could improve good governance and public trust, since multiple considerations are made in the SEA report, and interests are weighed alongside each other (Marsden & De Mulder, 2005). Another important aspect of SEA and sustainable development is the condition for good communication. If this occurs, then one of the conditions to promote sustainability within SEA is met (Marsden & De Mulder, 2005). Effective communication mechanisms, if in place, could ensure comprehensive involvement of all partners in the SEA process, taking into account their perspectives.

A vital aspect of sustainability with SEA is the legislative aspect from the European Union

(EU). The EU has in its Treaty of Maastricht from 1992, that "*community policy on the environment is to contribute to the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational unitization of natural resources*" (European Union, 1992). In relation to SEA, this would mean that the European legislation provides a framework in which policy makers should work with. Furthermore, it states that SEA should work in a way to promote sustainable development (Marsden & De Mulder, 2005). Hence, not only does SEA protect, it also must promote the environment and sustainability to a certain extent from a formal perspective.

According to Dalal-Clayton and Bass (2012) sustainability within SEA should change to be a Sustainable Impact Assessment (SIA), in which different methodologies apply. One of the approaches that apply here is the explicit focus on the trade-offs between the environment, the social aspects, and the economic aspects of plans and programmes. It must be kept in mind that these trade-offs take place in a political decision-making environment. Then, SEA would also fulfil the two other pillars of sustainable development, not only being the environmental perspective, but also the economic and social perspective.

2.3. Sustainable Development Goals

The SDGs are a well-known concept to those who work in government, environmental policy, or sustainability. This section will provide a theoretical understanding of how the SDGs evolved to their current state and offer an empirical description of the goals. The SDGs are a shared sustainability concept amongst 193 UN members, that adopted the goals in 2015 (United Nations, n.d.). After the Earth Summit in 1992, 179 countries adopted Agenda 21, which was a global plan for partnership in order to improve sustainable development. In 2000, the UN-member states adopted the Millenium Declaration, which led to the Millennium Development Goals (MDGs), to reduce extreme poverty by 2015. In June 2021, UN-member states adopted the document of "The Future We Want" which built further upon the MDGs and had a higher focus on sustainable development rather than only the focus on poverty. This led into the adoption of the 2030 Agenda for Sustainable Development, which focusses on planet, prosperity, peace, people, and partnership. The operationalization of the Agenda of Sustainable Development consists of the 17 SDGs and the 169 sub-SDGs (Dalal-Clayton & Bass, 2012). Not only the Dutch National government has committed itself to the SDGs, but other government layers have also done so too. 122 Dutch municipalities have committed themselves to the SDGs, making 35,67% of all Dutch municipalities so called "SDG-municipalities" (VNG, n.d.). The dimensions of the goals try to find its balance between social, economic, and environmental development.

According to González et al. (2020), scholars have found that SEA could play an important role in the anticipation towards the SDGs, by for example, empowering stakeholders, increasing transparency, democracy, and accountability, and promoting intergenerational equity. SEA could fulfil a vital role in integrating environmental considerations into policy, plan and programme making,

aiming towards sustainable development. These three roles are integrating the SDGs into decision-making, providing a link between SEA and the SDGs, and offering an implementation framework for monitoring and auditing (Nilsson & Persson, 2017). There are three main reasons why the SDGs and SEA relate to each other. The first reason is that the SDGs include direct SEA-relevant considerations in terms of environmental protection. The second reason is that SEA can help tackle issues identifies in the MDGs. The third reason is that SEA provides a legal framework for monitoring and auditing (González et al., 2020). Ultimately, making SEA a usable tool to aim for the work towards the goals of the SDGs.

2.3.1. The seventeen goals

The Sustainable Development Goals consist of seventeen goals, and 169 subgoals that operationalize the seventeen goals. Table 2. shows the seventeen goals and what they aim for[8]. Within the seventeen goals, there are three scopes. Within these scopes, a so-called wedding cake can be made, hence the SDG-Wedding cake. This framework suggests that there is an interaction between all the SDGs, even though they are in a different layer. According to the Stockholm Resilience Centre (2016), food is the main character of the SDG-framework, in which all goals are directly and indirectly related to food. However, the explanation of this models focusses on food. On the other hand, the model does show a relationship between People, Planet, and Profit.

Figure 2: The SDG-wedding cake (Stockholm Resilience Centre, 2016)

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[8] *The SDG-wedding cake, that uses the three scopes, uses the term biosphere instead of environment. The meanings are the same, but because the authors of this theory used biosphere instead of environment, the term biosphere is now used.*

Table 2: The SDGs and their sustainability scope (Stockholm Resilience Centre, 2016) and (United Nations, n.d.-b)

Goal	Aim according to UN	Sustainability Scope
1. No poverty	End poverty in all its forms everywhere.	Society
2. Zero hunger	End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	Society
3. Good health and well-being	Ensure healthy lives and promote well-being for all at all ages.	Society
4. Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	Society
5. Gender equality	Achieving gender equality and empower all women and girls.	Society
6. Clean water and sanitation	Ensure availability and sustainable management of water and sanitation for all.	Biosphere
7. Affordable and clean energy	Ensure access to affordable, reliable, sustainable, and modern energy for all.	Society
8. Decent work and economic growth	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.	Economy
9. Industry, innovation, and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Economy
10. Reduced inequalities	Reduce inequality within and among countries.	Economy
11. Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient, and sustainable.	Society
12. Responsible consumption and production	Ensure sustainable consumption and production patterns.	Economy
13. Climate action	Take urgent action to combat climate change and its impacts.	Biosphere
14. Life below water	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.	Biosphere
15. Life on land	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	Biosphere
16. Peace, justice, and strong institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build	Society

	effective, accountable, and inclusive institutions at all levels.	
17. Partnership for the goals	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	All of the above

(The SDG wedding cake uses biosphere instead of environment, but the meaning is the same)

2.3.2. Integration of the SDGs in policy and in SEA

In section 2.3. it becomes visible that there is a relationship between the use of SEA and the monitoring of the SDGs and vice versa. With the integration of the SDGs in SEA, integration here implies "an action or process of combining two or more things in an effective way" (Kørnøv et al., 2020). According to Eggenberger and Partidário (2000), integration means that *"a new entity is created where new relationships are established, bearing on individual entities that have specific characteristics and specific dynamics but in a combination act in a different way.".* Eggenberger and Partidário (2000) also describe integration as a substantive form of integration, which, according to Kørnøv et al. (2020) is relevant within his research on SEA and SDGs. Substantive integration means that there is a form of incorporation environmental, social, and economic aspects in decision-making for sustainable development within this context. Thus, various elements or principles are aligned within a certain context or system (Kørnøv et al., 2020)

Within this field of integration, different levels of integration occur. According to a study by Kørnøv et al. (2020) the linking of SDGs to Environmental Assessment (EA) and SEA, non-integration, partial integration, and radical integration could take place. The conceptual framework they describe can be seen in table 3.

Table 3: Table 3: Scopes of SDG integration in EIA (Kørnøv et al., 2020)

Type of integration	Integration definition	Levels of integration
Radical integration	SDGs and EA are linked in a manner that goes beyond existing EA frameworks. This provides a new approach of decision-making.	1. SDG **led**: Scope of EA and SEA broadened to cover all SDGs and SDG targets to guide the entire assessment.
		2. SDG **based:** Scope of EA and SEA is broadened to cover all SDGs, and the assessment of impacts are compared to SDG target.
Partial integration	SDGs are used actively in EA as part of the EA process; however, it is used within the existing framework and practice of EA.	3. SDG **testing:** SDGs are used for scoping as well as for testing the impacts' contribution to the goals
		4. SDG **scoping**: SDGs are used actively to scope the assessment

Non-integration	Efforts of linking SDGs and EA that are passive, and do not use them. They are only being mentioned. Passive efforts are not adhered to the definition of integration in this research.	5. SDG **dropping**: SDGs are mentioned in the reporting but without explicit evidence that SDGs are used for any purpose in the assessment.
		6. SDG **washing**: Purposefully manipulating SDG contributions (e.g. by boosting positive and/or downplaying the negative contributions)

According to Kørnøv et al. (2020), EA and SEA are relevant governance mechanisms for embedding the SDGs in the decision-making process, and simultaneously the strengthening of EA and SEA by the SDGs. In order to conceptualize it, the framework given in table 3 is provided. The conclusion of this research is that the full integration is a non-tradition approach, which could ultimately work towards sustainable development rather than checking sustainable and environmental development (Kørnøv et al., 2020).

Then there is the question of why integrating. Research by Boess and González (2023) about the integration of SDGs in EA and SEA in Denmark and Ireland, integrated by consultants, shows that their motivation (both internal and external motivation) for integrating SDGs in the assessment is strong, and that it grows as the discussion on the urgency of the sustainable transition rises (Boess & González, 2023). However, this research also shows that despite the SDGs can and are used in Danish and Irish EA and SEA, it still calls for a dialogue between different actors on how to use the SDGs (Boess & González, 2023).

2.4. Decision-making within the field of SEA

An integral aspect within the field of public administration is decision-making. According to Sheate et al. (2003), SEA is seen as an important tool for integrating the environment into decision-making. This, because SEA informs the decision-maker on the degree of uncertainty over impacts a plan or program can have, the alternatives that are given, and the possible options that are available. Sheate et al. (2003) also suggest that SEA is more than a report, by also involving more stakeholders into the decision-making process. With the development of more requirements of participation in policy processes that lead to a decision-making process, SEA could offer insight of stakeholders' view. On the other hand, their research concludes that despite SEA provides information from different angles, improvement is needed. For example, quality must be improved on how to assess policy options. A conclusion in their research on this is that this can be done by aligning indicators (Sheate et al., 2003).

Another research, by Runhaar (2009) shows that SEA contributes to decision-making in general, rather than only the environment – which was said in the previous paragraph. A case study done by Runhaar on the Wadden Sea case[9], also showed that SEA practitioners can enhance their

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[9] *The Wadden Sea case is a case about the development of this area and the environmental challenges that were related to it (Runhaar, 2009).*

contribution to decision-making by promoting discourse reflection by stakeholders involved. Ultimately, translating this to SDGs and SEA, it implies that when stakeholders are using the same communication techniques and concepts, decision-making can be improved. However, research is needed to apply this to different context, and to different conditions. A second conclusion in this research, is that the extent to which SEA contributes to decision-making, is depending on the characteristics of stakeholders (and other elements of the context) in which SEAs are conducted. Therefore, alignment could be significant.

Not only in the realm of SEA is decision-making taking place. The role of SDGs is also significant in decision-making concerning sustainability. Research by Meuleman (2021) demonstrates the challenge for governments and decision-makers to navigate between change and stability, particularly in a time when the SDGs' agenda extends until 2030, urging governments to expedite goal attainment within the set timeframe. Meuleman (2021) emphasizes that the quality of public administration is crucial to encourage the utilization of SDGs. However, the research also indicates that public officials often do not feel connected to the 2030 Agenda for goal achievement. To address this, Meuleman (2021) underscores the importance of prioritizing goals, a decision falling within public administration, clearly showcasing the relationship between public administration and the achievement of SDGs.

2.4.1 Environmental monitoring in the public sector

In addition to the added value of SEA in decision-making and public administration, monitoring also plays a significant role in the field of public administration. Environmental monitoring ensures the protection of resources and provides insights into poorly planned plans and programs, which may incur more costs than benefits (Lovett et al., 2007). The SDGs serve as indicators or monitoring mechanisms to assess a country, or in a local context, a municipality or province's progress in sustainable development. Simultaneously, monitoring can reveal areas where shortcomings exist, potentially resulting in long-term costs, including environmental costs.

Furthermore, SEA itself serves as a method for monitoring environmental impacts, with its implications reflected in the decision-maker's choice to pursue alternatives based on the SEA report. According to Conrad and Daost (2008), addressing environmental issues is most effective when all concerned parties are involved. This aligns with the current trend of governments incorporating participation in decision-making processes. Monitoring can also take place from society, through additional monitoring by residents in policies and programs where SEAs are involved.

2.5. Conclusion on theoretical framework

In conclusion, the theoretical framework consists of three main concepts that are relevant for this research: SEA, Sustainable Development, and the SDGs Additionally, it has delved into the relationship between decision-making in public administration and SEA, highlighting the role of SEA

in shaping policies and plans that prioritize sustainability and environmental responsibility. SEA emerged as a crucial tool for safeguarding and promoting sustainability and the environment. However, it is more than a tool for evaluation the environment. As uncovered, SEA is an integrated approach that considers a wide range of stakeholders, objectives, and constraints in decision-making processes related to plans and programs. Unlike traditional EIA, SEA focuses on plans and programs, incorporating various stakeholder perspectives, rather than a single project. SEA extends its scope to encompass broader plans and programs, bringing together diverse stakeholder perspectives to foster collaborative decision-making that aims for sustainability.

Furthermore, the historical developments of SEA highlight its evolution, emphasizing its role in addressing sustainable and environmental issues, leading to an assessment tool measuring more than environmental aspects. Sustainable Development, originating from the 1972 Stockholm Conference, is a central concept in contemporary discourse. The Brundtland Commission report of 1987 defined sustainable development as achieving development that meets current needs without compromising the ability of future generations to meet their own needs. This definition emphasizes the need to strike a balance among economic, environmental, and social development, promoting an integrated approach where these aspects interconnect to achieve sustainable outcomes.

The SDGs, introduced in 2015 and embraced by 193 UN member states, provide a comprehensive framework for advancing sustainable development. Comprising seventeen overarching goals and 169 sub-goals, the SDGs aim to synthesize social, economic, and environmental development into a harmonious agenda. Within this framework, SEA emerges as a crucial tool for incorporating environmental considerations into decision-making. This alignment is essential for addressing complex global challenges such as poverty alleviation, climate change mitigation, and biodiversity conservation.

In essence, the theoretical framework offers insights into the interplay between SEA, Sustainable Development, and the SDGs. SEA transcends its role as a conventional assessment tool, becoming a strategic approach that empowers the inclusion of diverse stakeholder perspectives and the nuanced navigation of multiple objectives within decision-making processes. This synergy holds the key to guiding policies and plans toward sustainability and aligning them with the ambitious global agenda of the SDGs.

2.5.1. Expectations on theoretical framework

Based on the literature reviews focusing on SEA, sustainable development, and the SDGs, four expectations will be formulated. These expectations address expectations that derived from the literature. This will contribute to the exploration of whether the interconnected theoretical topics align with the analysis. Because there is not yet much literature available on the interconnection between SDGs, SEA, and sustainable development, expectations can serve as a means to assess whether those expectations align with reality. It is important to note that these expectations are not of a testing nature, as they do not propose new theories. Instead, these expectations serve an explanatory purpose.

The aim is to examine the coherence of the theoretical constructs in a real-world analysed context through this research. The assumptions have been qualitatively tested.

2.5.1.1. First expectation

The first expectation is that integrating SDGs within SEA can enhance the achievement of sustainable development objectives. The comprehensive and participatory nature of SEA, along with its focus on promoting sustainable outcomes within the process and after the process, provides a framework for aligning and applying the SDGs in plans and programmes. This integration leads to better decision-making, increased transparency, improved stakeholder engagement, and improved sustainable outcomes. If the SDGs are not utilized in SEA, it will also result in the failure to achieve sustainability goals and a lack of transparency regarding the efforts being made. This expectation relates to sub-question 1.

2.5.1.2. Second expectation

The second expectation that can be formulated is that SDG integration leads to a more understandable point of view of sustainable elements within SEA reports. Given the growing adoption of SDGs by governments, it is reasonable to anticipate that when integrating SDGs into SEA, stakeholders gain a more comprehensive understanding of SEA itself. Moreover, the reverse is also true: the integration of SDGs in SEA helps to enhance understanding of the SDGs and complements each other in the process. This heightened comprehension has the potential to improve the overall understanding of SEA reports and the operationalization of SDGs, ultimately enhancing decision-making processes as a result of improved report and SDG comprehension. This expectation relates to sub-question 2.

2.5.1.3. Third expectation

The third expectation proposes that integrating SDGs into SEA broadens the spectrum of sustainable elements underscored during the decision-making process. This expansion is underpinned by the SDGs' international acceptance as a benchmark for sustainability, enabling the incorporation of a diverse range of sustainable and environmental factors into the decision-making framework. Consequently, this integration offers an extended perspective on sustainability, potentially influencing the decision-making landscape by emphasizing a wider range of sustainability-related considerations. This expectation relates to sub-question 2.

2.5.1.4. Fourth expectation

The fourth expectation posits that the integration of SDGs can enhance the understanding of SEA at the local level, aligning with local objectives in municipalities and provinces. By involving individuals and organizations in the process and using the SDGs as a benchmark, SEAs can better cater to the needs of diverse governmental entities. This way, SEA can bridge the gap between global sustainability goals, local requirements, and their reciprocal influence.

3. Methodology

This chapter describes the procedure and methods used to conduct the data analysis. The chapter is divided into four parts. The first section will describe how all sub-questions were analysed and which data methods were used for this purpose. Additionally, an overview of the case selection for interviews and case studies will be provided. The second section will address the reliability and validity of the research. The third section will address the used approach for the analysis. The fourth section will describe the ethical considerations made during the research.

3.1. Data collection

To address the first sub-question, a combination of literature research and empirical research was conducted. Interviews with various experts were conducted to understand the current approach to SDG integration in SEAs. Subsequently, an examination of two SEAs was conducted, which were based on documents containing SDGs. For this study, the decision was made to focus on the environmental visions of Zeeland and Súdwest-Fryslân. This choice was based on recommendations from the interviews, employing a selection-by-convenience approach. Additionally, these case studies pertain to a province and a municipality. The choice was made to focus on a province and a municipality because SEAs frequently occur at these governmental levels. Moreover, these cases were familiar to the respondents. The literature review revealed that there are no cases in which SDGs are included in an SEA. Furthermore, these two cases are essentially outliers, as they are among the few documents where SDGs are present and can be related to SEAs. These two cases closely align with what is sought in the research. Other existing cases where SDGs were used in an SEA or similar were not found during the literature review, and not found during the interviews. The analysis took place between May 2023 and December 2023.

This selection method was chosen due to the novelty of the topic and the limited available information on the integration of SDGs in SEAs. The interview schedule, along with an explanation of how the questions were formulated and their relevance to the research and sub-questions, can be found in Appendix I.

Table 4 provides an overview of the sub-questions and the types of data used to answer the sub-questions.

Table 4: Data collection method (Own work, 2023)

Sub-question	Method	Type of data	Instrument	Resource
How are the Sustainable Development Goals currently addressed in Strategic Environmental Assessment and in Dutch Strategic Environmental Assessment?	- Literature research - Empirical research	Qualitative	- Data analysis - Interviews (appendix I and II) - Case studies	- Environmental Visions and SEA of Súdwest-Fryslân and Zeeland - Experts (table 5) - Theoretical framework

What are key challenges and opportunities in integrating the Sustainable Development Goals into Strategic Environmental Assessment?	- Empirical research	Qualitative	- Interviews (appendix I and II)	- Experts (table 5) - Theoretical framework
In what ways can the Sustainable Development Goals be implemented in the practice of SEA and what will it contribute within the field of sustainable development?	- Literature research - Empirical research	Qualitative	- Data analysis - Interviews (appendix I and II) - Case studies	- Environmental Visions and SEA of Súdwest-Fryslân and Zeeland - Experts (table 5) - Theoretical framework

3.1.1. Respondent and case selection

During the research, profiles of individuals were sought for interviewing. The focus was on identifying individuals with an affinity in their work and expertise related to SDGs or SEA to explore potential areas of cross play. Based on this, a selection of individuals was made who matched these profiles and were available at the time of research. It happened that those individuals were already within reach, therefore they were not difficult to get access to. Hence the decision to interview these individuals. This information is documented in Table 5. To structure the interviews and gather accurate information, an interview schedule was created, which can be found in Appendix I. The formal interviewing method was not employed due to the exploratory nature of the research. Ultimately, this led to eleven semi-structured interviews, occasionally deviating from the main topic, thus making them semi-structured. To provide support for the interview questions, an explanation for each question, its relevance, and its connection to specific sub-questions of the thesis are detailed in Appendix I. Subsequently, the interview was transcribed into a report, included in Appendix II. This qualitative sampling approach aligns with the exploratory phase of the study and recognizes the limited empirical evidence currently available.

Table 5: Experts for the interviews, their role and their organization (Own work, 2023)

Respondent	Role	Organization
1	Advisor, coach, facilitator, scientist	NCEA / independent consultant
2	Senior consultant	Stantec / NCEA
3	Postdoctoral, researcher	University of Utrecht (Copernicus Institute of Sustainable Development) / The Netherlands Environmental Assessment Agency (PBL)
4	Scientific policy researcher	The Netherlands Environmental Assessment Agency (PBL)
5	Policymaker / project leader	Municipality of Súdwest-Fryslân
6	PhD candidate / research assistant in: Department of Sustainability and Planning, The Technical Faculty of IT and Design, and The Danish Centre for Environmental Assessment	Aalborg University
7	Consultant and policy advisor	Independent consultant, who has done many assignments for The Association of Dutch Municipalities (VNG) related to the VNG's 'Municipalities for Global Goals' campaign

8	Policymaker	Province of Overijssel
9	Policymaker National Environmental Programme (NMP)	Ministry of Infrastructure and Water Management
10	Chair member	NCEA
11	Member International Department	NCEA

Two case studies were used for this study, which were analysed while addressing the sub-questions. Firstly, the focus was on the Strategy on Spatial Planning and the Environment of the municipality Súdwest-Fryslân. Subsequently, attention was directed to another document from this municipality, namely a zoning plan amendment. Although a zoning plan is different from a spatial vision, both cases concern the physical living environment. The spatial vision guides how the municipality organizes its space, while the zoning plan establishes how the environment in a specific area will be developed. The spatial vision of Súdwest-Fryslân has not been subjected to an SEA, whereas the zoning plan has undergone an SEA,

The second case analysed is the spatial vision of Zeeland and the corresponding SEA. Both cases share the commonality of being selected based on familiarity among respondents. Additionally, both cases were chosen based on recommendations from respondents, considering not only their relevance to answering the main question but also their feasibility for analysis within the available time and resources.

3.2 Reliability and Validity

To ensure reliability within the research, the following steps have been taken:

1. Interviewing individuals from various organizations with different various expertise.

2. Utilizing two recent case studies and their associated diverse sources to ensure a comprehensive perspective within the set parameters.

To ensure validity within the research, the following three-step approach has been taken:

1. Literature reviews: This will be an extensive review of the existing literature that was conducted to gather and gain insight into the current state of knowledge on the relationship between the use of SDGs in SEA and the disadvantages and advantages of using them.

2. Expert interviews: Key experts in EIA and the field of sustainable development (also including social development) will be interviewed to gather additional insights and perspectives on the relationship between the use of SDGs in EIA and the quality of EIA after using SDGs.

3. Case study of two SEAs and two related documents: A case study will be performed on a sample of two SEAs and the documents the SEAs are based on, to see if and how the SDGs were used in it, and what their purpose in the documents was.

Additionally, following the interviews, email correspondence with the respondents was conducted to verify whether the written records accurately reflected what was communicated during the interviews. When doing this, different steps have been taken to ensure validity.

3.3. Data analysis

To analyse the data, the focus was on examining the interviews and case studies. The interviews served as a starting point for drawing conclusions on questions because there is still limited quantitative and qualitative data on the correlation between the SDGs and SEA, and vice versa. Various tables were created to elaborate on the analysis and identify patterns in what was said. Additionally, the levels of SDG integration in SEA and the associated document were assessed based on the model proposed by Kørnov et al. (2020). In addition, to assess the extent to which the SDGs are applicable in SEA, a SWOT analysis has been conducted in the conclusion. This aims to identify the major disadvantages and advantages of employing SDGs in SEA.

3.4. Ethical considerations

Since interviews have been conducted, approval by the BMS ethics committee was required and approved[10]. Measurements that have been taken to follow UT-guidelines include discreet and anonymous interviews, informed consent, being allowed to quit the interview if necessary, and by storing the data in a safe and BMS-approved place. As mentioned, the names of the interviewees will remain anonymous, but their organization and role will be displayed. Several respondents have such clear roles in the organization where they work that it has been chosen to describe their positions more generally, considering privacy. All respondents have given their approval for this matter and have seen the interviews by the time they have been used for the purpose of this research.

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[10] *Request number 230920 for the Ethical Committee*

4. The current approach to addressing the Sustainable Development Goals in Strategic Environmental Assessment

The first sub-question focusses on if and how SDGs are currently addressed in SEA and in Dutch existing SEA. Therefore, the sub-question is: *How are the Sustainable Development Goals currently addressed in Strategical Environmental Assessment and in Dutch Strategical Environmental Assessment?* This will be assessed in two ways. First, an analysis will be made of the first two interview questions that relate to this question. Second, an analysis will be made of Dutch SEA by analysing existing SEA and the documents that were assessed, in order to conclude if and how SDGs are addressed.

4.1. Familiarity and applicability of the SDGs

The first two interview questions related to the extent to which the respondent was familiar with the SDGs and, if applicable, familiar with SDGs within SEA.

4.1.1. Familiarity with the Goals

The first question was: "To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?". All eleven respondents said that they were familiar with the SDGs. One respondent points out that she is not familiar with all seventeen individual goals, but she knows what it is meant for. Another respondent points out that she is aware of SDGs, and especially in relationship to spatial processes. However, nine out of the eleven respondents were aware of a context in which an SEA-report consisted of SDGs. One responded pointed out that he or she was aware of SDGs within SEA. Respondent 6 was familiar with SDGs in SEA and EIA, but only in a Danish context, thus not directly applicable to the Dutch context. Respondent 1 expressed awareness and recommended incorporating SDGs in SEA, particularly within the context of development in African countries. Respondent 3 said that he is very familiar with the SDGs, and that he is aware of organizations, such as the Municipality of Utrecht, actively use the SDGs as a guiding framework for initiatives they are taking.

Two things become clear in the analysis of the first interview question, and that is that all respondents are aware and familiar with the SDGs. The depth of familiarity with the individual seventeen goals varies, but everyone is familiar with them. The relevance of SDGs in SEA is not so clear. Nine out of the eleven respondents are not familiar with SDGs within SEA. However, no respondent gave an example in which SDGs were used in Dutch SEA. They only were aware of the use of SDGs in environmental visions and in policy programs, that would get assessed, but in which the SEA report did not consist of SDGs.

4.1.2. Methods and approaches to addressing the SDGs in SEA

The second question was: "Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment

framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?". From a Dutch perspective, no respondents gave answers on the specific part in which SDGs are used within SEA. A possible cause of this could be that the use of SDGs is not explicit or happening at all in Dutch SEAs, according to the experts and based on the literature reviewed in the theoretical framework. However, that what an SEA assessed, such as a program or environmental vision, was relatable to SDGs, thus useable in this question. Furthermore, respondent 6 gave a specific answer to this question, but this is answer only reflects to the Danish context. The answer is as follows: *"SDGs appear in different places in the SEA report. At times, SDGs appear in the introduction to an SEA, typically as a part of the plan description or as context for the plan development. They also in the section of the SEA about policies and objectives that are relevant for the assessments. Other times, relevant SDGs are linked to EA topics, but this does not always lead to actively using them in the process (merely recognizing the interlinkages). Other times, they appear alongside impact assessment of the different EA topics. And lastly, they also appear in separate sustainability chapters where their impact is typically assessed. The methods are typically, as far as I have been able to tell, very ad hoc and unsystematic, meaning there is not one way to do it. It depends on the consultant or developer doing the work. When impact is measured, it is typically qualitative, determining whether the relevant SDGs are positively, neutrally, or negatively impacted. Sometimes the SDGs are discussed".* Ultimately, this suggests that there is no standardization for using SDGs in SEA and EA, and the way they are addressed differs. Nevertheless, the answer by the respondent does indicate that SDGs appear in SEA. Respondent 4, said that he does not know a specific method between SDGs and SEA, but more about SDGs in general. He suggested that SDGs are formulated very abstractly, while some are clear. Environmental goals remain vague, therefore there are no specific methods in addressing SDGs in SEA yet. This is in line with the first answer by respondent 6, who stated that there is no standardization or clear method in addressing it. In none of the cases, there are criteria during the assessment process. Respondent 10 said that SEA already works towards the SDGs, but only implicitly: *"In SEA, so far, mostly, we implicitly consider the SDGs. We do measure policies and projects' impact on issues such as air quality, water management, energy, health issues, and infrastructure development, but an explicit reference to SDGs lacks, let alone that we measure the potential impact of policies in a consistent and well-defined manner."*

After analysing the answers from the second question it becomes clear that there are no specific methods or approaches to address the SDGs within SEA given by the respondents. Also, there are no measurable indicators in the assessment process regarding the SDGs. Then if it is used, in the case of Danish SEA, there is no vast method, but it just appears as it comes. And if it is used, it often is qualitative, measuring if an SDGs is positively, neutrally, or negatively impacted in the SEA.

4.2. Case study SDGs in SEA

This section will describe two environmental visions and one zoning plan-SEA (which are plans and therefore would require an SEA), and how SDGs are used in those environmental visions, and in the SEA that assessed the environmental visions or the document that indirectly related to an environmental vision. After the analysis, table 6 and 7 will discuss the level of integration, which is based on table 3, by Kørnøv et al., 2020.

4.2.1. Súdwest-Fryslân

The municipality of Súdwest-Fryslân has committed itself to the SDGs and is thereby a so called "SDG-municipality". An SDG-municipality is a municipality that use the SDGs within their framework regarding sustainable, economic, and social components, and try to operationalise it on a local government-level basis (VNG, n.d.-a). Within this environmental vision, the SDGs play a central role in addressing various societal issues. It is important to note that an environmental vision guides the long-term structural development that a municipality aims to pursue. The themes covered in an environmental vision are not solely spatial but also encompass aspects like the economy, mobility, and the local business environment (Ministry of Education, Culture and Science, 2022). One of the initiatives undertaken by the municipality of Súdwest-Fryslân is the modification of the rural area's zoning plan. In the SEA- report, among other factors, consideration is given to Súdwest-Fryslân's Environmental Vision 1.0, which includes SDGs. Nevertheless, the presence of SDGs in this context is not considered determinative.

The SEA report states that the Environmental Vision Súdwest-Fryslân 1.0 assists in making choices regarding developments affecting the physical living environment, with clarity being a primary objective. The Environmental Vision is approached from the standpoint of ambitions and possibilities, with legal frameworks being relevant but not the sole guiding factor.

However, it is worth noting that the SEA report does contain goals the municipality wishes to adhere to, such as pursuing circular practices, achieving energy neutrality, and promoting societal acceptance and support. Notably, the SEA report does not explicitly mention any of the SDGs throughout its entirety, despite Súdwest-Fryslân's commitment to them and the fact that the municipality's guiding principles can be traced back to the SDGs (Bekker & Van Gils, 2023).

In table 6, this looks as follows:

Table 6: Level of integration of SDGs in SEA and environmental vision in Súdwest-Fryslân (Own work, 2023)

Document type	Document description	Type of integration	Level of integration
Environmental Vision	Social challenge and the core qualities to be preserved in a municipality	**Partial integration**	**SDG testing:** The SDGs are guiding in the overarching principles, but they are not integrated to the level of detailed elaboration.

| SEA | SEA of the rural area's zoning plan in Súdwest-Fryslân | **No integration** | **No integration**: Even less than non-integration because the SDGs are not mentioned. |

4.2.2. Zeeland

The province of Zeeland has committed to the SDGs in its environmental vision. The province uses the SDGs as a framework to reason from global objectives to regional and local targets. They say that by using the SDGs, they improve the living environment in Zeeland. Furthermore, the province mentions in their environmental vision that by working with the SDGs, they also contribute to broad prosperity. The environmental vision consists of twenty-two themes, ranging from culture, to mobility, to water management and tourism. At the end of each theme, there is a selection of SDGs to which the theme in the environmental vision contributes.

The SEA that assessed the environmental vision does not contain SDGs. The SEA explicitly mentions that the report has a broader perspective than merely measuring the built environment but goes beyond that by assessing health, sustainability, and climate. The environmental vision of Zeeland also consists of themes as economics and the social domain. The SEA-report states that a broad evaluation framework has been used to assess this environmental vision. Within the environment vision, the province describes "building blocks" for relevant policy themes. All building blocks, or themes, are analysed in the SEA. In the environmental vision, each theme ends by a modest overview to which SDGs it contributes. However, an assessment towards their use of SDGs in Zeeland's environmental vision is not made. Table 7 shows the type and level of SDG integration within the SEA and the environmental vision.

Table 7: Level of integration of SDGs in SEA and environmental vision in Zeeland

Document type	Document description	Type of integration	Level of integration
Environmental Vision	In the environmental vision, the province sets out its ambitions and policy goals for the long-term physical living environment	**Partial integration**	**SDG scoping:** The SDGs are guiding in the environmental vision, but not detailed, and there are also no details in the document on how they work to the goals explicitly.
SEA	SEA of the environmental vision of Zeeland	**No integration**	**No integration**: Even less than non-integration because the SDGs are not mentioned in the SEA.

4.3. Existing SEA and the role of SDGs in SEA

Dutch Strategic Environmental Assessment framework emphasizes the importance of the content and the process of the assessment. Regarding the content, its focus lays on providing decision-makers with information about the environmental effects that are or are not caused by a plan, or program. Regarding the process, Dutch SEA aims to involve stakeholders and focusses on participation throughout the process, seeking for a collaborative dialogue (Van Buuren & Nooteboom,

2009). Dutch SEA seeks for consensus in its decision-making process and seeks for an environmental input within the outcome of that process.

Research by Van Buuren and Nooteboom (2009) suggests that SEAs were initiated to achieve more sustainable policies, and further contributing to sustainable and environmental development. Therefore, it is important to assess what is meant by sustainable development, because it could relate to the SDGs. Furthermore, an important part within the Dutch SEA process, as mentioned before, is the procedure. If the collaborate process is well put down, it could contribute to better decision-making. Within the dialogue, interaction between different government layers, and other relevant stakeholders, could take place. Therefore, if effective communication and alignment are in place, the likelihood of a successful outcome increases.

Table 8 shows the components of SEA, and how they relate to the individual goals. What becomes clear, is that all SEA components are directly translatable to the goals itself. Direct goals, and indirect goals. SEAs contribute to SDGs, and SDGs contribute to SEAs. Beyond, it shows how the SEA components could be translated into an explanation that perhaps makes it more understandable for the public, because it refers to the SDGs. Furthermore, this is in line with the results from interview 10, in which the respondent said that SDGs already relate to SEA components.

Table 8: The SEA components, and their relevance to the individual Sustainable Development Goals.

SEA environmental component	Relates to SDG	Explanation
Biodiversity	SDG 15 – Life on land SDG 14 – Life below water	Protecting and conserving ecosystems and biodiversity.
Population	SDG 3 – Good health and well-being SDG 5 – Gender equality	Could impact health, well-being, and rights of people.
Human health	SDG 3 – Good Health and Well-being	Focus on improving or maintaining human health.
Fauna	SDG 14 – Life below water SDG 15 – Life on Land	Relates to the protection of animals in ecosystems.
Flora	SDG 15 – Life on Land	Relates to the protection and conservation of plants and biodiversity
Soil	SDG 15 – Life on land SDG 2 – Zero Hunger	Soil quality relates to a sustainable (natural) ecosystem and to provide land use for food production.
Water	SDG 6- Clean Water and Sanitation SDG 14 – Life below water	Relates to ensuring safe and clean (drinking) water, and to maintaining the ecosystem below water

Air	SDG 11 – Sustainable Cities and Communities SDG 3 – Good Health and Well-being	Addressing air quality and air pollution in (urban) areas and their impact on (human) health.
Climate factors	SDG 13 – Climate cation	Focusing on actions to adapt and mitigate to climate change and its effects.
Material goods	SDG 12 – Responsible Consumption and production	Relates to promoting sustainable use of resources and responsible consumption.
Cultural heritage (including architectural and archaeological heritage, landscape, and interaction between the above elements)	SDG 11 – Sustainable Cities and Communities	Involves preserving heritage, cultural heritage, including architectural and archaeological heritage.

Additionally, all aspects of Table 2 are also reflected in Table 8. SEA thus encompasses aspects of society, biosphere, and economy. The interaction between SEA and the SDGs, and vice versa, appears to be significant. There are also indirect goals to consider. Table 8 is taken quite literally. For instance, SDG 1 (No Poverty) could potentially be facilitated by SDG 11 (Sustainable Cities and Communities). A sustainable city where people can live and thrive may lead to a reduction in poverty. Similarly, SDG 4 (Quality Education) could be enabled by individuals feeling well, which in turn allows for optimal development in educational institutions. All components of SEA indirectly touch upon all SDGs, and vice versa. There is a mutual influence between global sustainability goals and an instrument designed to identify and assess alternatives that are environmentally friendly impacting the surroundings.

4.4. Conclusion sub-question one

In this sub-question, the question was: "How are the Sustainable Development Goals currently addressed in Strategical Environmental Assessment and in Dutch Strategical Environmental Assessment?"

Interviews showed that all eleven respondents were familiar with the SDGs. The depth in which the respondents were familiar with the SDGs varied, but all were known with the goals. Examples regarding the integration of SDGs in SEA were only given by three respondents. However, the common thread was that there was no uniformity, and that one of the examples was only from a consultant's perspective in Denmark, which means that there is no known Dutch example. A case study of two SEAs that related to a municipal zoning plan that was partly based on an environmental vision, and an SEA that related to the environmental vision of a municipality showed that the environmental visions contained SDGs, but SEAs related to it did not. Literature research showed that

alignment and clear communication are important within the decision-making process. Furthermore, table 8 showed the relationship between SEA components and the SDGs. Therefore, the assumption could be made that SEA components are relatable to the SDGs. However, the analysed SEA reports did not show SDGs. Moreover, the interviews did not give examples of Dutch SEAs that consisted of SDGs.

5. The challenges and opportunities in integrating the Sustainable Development Goals in Strategic Environmental Assessment

The second sub-question focusses on the key challenges and opportunities in integrating the SDGs in SEA. Therefore, the sub-question is: *What are key challenges and opportunities in integrating the Sustainable Development Goals into Strategic Environmental Assessment?* This will be done by analysing the interviews, and then by analysing the by them mentioned challenges and opportunities.

5.1. Challenges and opportunities

Interview questions three, four and five related to the challenges, opportunities, and stakeholder engagement concerning SDGs in SEA.

5.1.1. Challenges in integrating the SDGs in SEA

The third question was: "What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?". Various responses emerged when posing this question, yet a common theme prevailed. A respondent who has given advise to the NCEA, says that applying the SDGs could make the SEA-process too complex, with a side note that it still could be manageable. Another respondent who works at an engineering firm, says that the use of SDGs could make the assessment too broad. And while he thinks that the SDGs could be beneficial and look at essential elements that are in the traditional usage overlooked, they should not replace something that is already working. Another respondent, who is an expert in the field of Integrated Assessment Models says that the seventeen SDGs sound straightforward, but have a lot of sub-targets, which could make it complex. Especially, because the question is if the current structure is designed in a way to work with SDGs. One could say that is already is, because through interview question 2, it became clear that an SEA implicitly already relates to SDGs. Respondent 4 says that the implementation of the SDGs itself is too abstract because the responsibility to do so lays at the Ministry of Foreign Affairs, making it difficult to reach local levels. Respondent 5 says that it could be a challenge, because there could be a lack of awareness among stakeholders when it comes to SDG understanding. Respondent 6, who is doing research in the field of SDG integration in EIA says that *"The main challenge is knowing how to operationalize them, meaning, how do we make the internationally developed goals relevant in an SEA context? How can we 'scale' impacts so that they make sense and can be measured on a plan level. It is also finding the capacity to be able to develop the necessary methods for integration, while knowing what the added value will be, to minimize wasting time in a process already restricted by a tight time schedule.".* Two other answers were in the same line with the broad scope of the SDGs. According to respondent 9, one challenge is the fact that one has to want it, because it is extra work in an SEA. A respondent who is a chair member at the NCEA, says that the fact that all stakeholders understand the SDGs and their relevance

could be a challenge. Additionally, the actual context in which you use SDGs in an SEA is a challenge because it is not known what contexts they are. "*There is no one size fits it all*", she says. Respondent 11 also says that the complexity is a challenge. The SDGs are broad but interconnected. The second challenge, according to him, is the depth of information: "*A traditional challenge in EIA and SEA is striking the right balance between providing sufficient information and avoiding overly detailed, time-consuming reports. Integrating SDGs has the potential to make reports more complex, which may be contrary to the NCEA's goals.*".

After analysing the question of what challenges arise when one wants to implement SDGs in SEA, it becomes clear that the conceptual framework of the SDGs might seem straightforward, but bring a certain level of complexity, due to their sub-goals, level of abstractness, and understanding. Therefore, the assumption could be made that implementing SDGs in SEA could be contractionary to what SEA is meant for. Ultimately, all respondents that shared their view on the challenges SDG integration brings in SEA, relate to the complexity of the SDGs and their sub-goals. Hence the conclusion that the challenge for integrating SDGs in SEA is the complexity of the SDGs and the components that come with it.

5.1.2. Barriers and limitations in integrating the SDGs in SEA

The fourth question was: "What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?". The first barrier that could occur, according to respondent 1, was possible misconception that applying the SDGs in SEA would complicate the process excessively. That barrier could lead to organizations not willing to adapt SDGs in SEAs, because of the thought that it could make it more complex alone. Another barrier, according to respondent 2 is related to those who assess SEAs. Assessment is done by experts in different type of fields that relate to what is supposed to be assessed in an SEA. It cannot be expected that the experts are also known to SDGs, which could make it more difficult for them. Additionally, there is a concern that making the SDGs the central focus of SEA could lead to complexity and impracticality, emphasizing the need to strike a balance between comprehensiveness and feasibility in the assessment process. According to respondent 4, the SDGs could be seen as a static agenda compared to the broader concept of well-being. However, he says that this is more about the SDGs than about SDGs in SEA. According to respondent 5, practical barriers could occur such as the need for capacity building in organizations to effectively integrate SDGs into SEA, and thus budget constraints. Respondent 6 says that one of the main barriers for consultants making SEAs in the Danish and Irish context, is the lacking demand from developers and authorities. According to respondent 6, this is so because developers are often concerned about the extra work and thus about the budget. In line with what respondent 5 said. Developers and authorities need to see the added value first. Respondent 7 states that it seems like there is no willingness to implement it, otherwise it would have already happened. Another potential barrier is the use of other methods instead of the SDGs, such as the Wheel of the Living Environment and the Monitor of Broad Well-being (which already incorporates the SDGs).

Respondent 9 says that it could lead to extra work and that you have to find someone that is actually willing to do this. According to respondent 10, barriers might include resistance to change, but also a lack of awareness about the SDGs. On top of that, measuring impact within the framework of the SDGs can be complex and requires quite some knowledge, capacities, and training. Respondent 11 says that a barrier could be the transition to work from impact orientation to goal orientation. SEAs traditionally focus on assessing a project's environmental impacts, while the SDGs are goal oriented. It requires a shift in thinking to integrate a more goal-oriented approach into impact-focused EIA processes.

After analysing the fourth question of what barriers arise in integrating SDGs in SEA, a few things become clear. Some respondents expressed concerns that applying the SDGs could overly complicate the SEA process, deterring organizations from its adoption. Experts assessing SEAs might lack familiarity with SDGs, potentially impeding their effective integration. Practical obstacles, including the need for capacity building and budget constraints, were also highlighted. Resistance to change and a general lack of awareness about the SDGs further compound these challenges. Shifting from an impact-oriented approach to a goal-oriented one, and demonstrating the added value of SDGs in SEA, will be essential for addressing these barriers and ensuring successful integration.

5.1.3. Role of stakeholders in the application of the SDGs in SEA

The fifth question was: "How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?" The first response was by respondent 2, who suggested that everyone involved in the process, whether you are a participant, initiator, or someone reviewing a proposal should look if all facets of the sustainable development are included, and that you can use the SDGs to do so. Respondent 3 says that true change comes from the grassroots level, driven by demand, therefore that local stakeholders have an important role here. The reason for the municipality of Súdwest-Fryslân to use SDGs in their environmental vision, was because a local resident suggested working with the SDGs. Then, it was followed up by an alderman, and a civil servant implementing it. This is in line with the response of respondent 4, who says the role of stakeholders and local communities in using SDGs varies, and that their engagement depends on existing ambitions and policies within. Respondent 5, who was highly involved in the making of the environmental vision of Súdwest-Fryslân, says that participation is essential in order to have engagement among different government levels. According to respondent 6, who says that the public also have a role in holding authorities accountable for plan development that meets political ambitions and goals, through for example public hearings. Respondent 7, who was also involved in the environmental vision of Súdwest-Fryslân, confirms the bottom-up approach that this municipality used, contributed to the use of SDGs as their framework. Another possible method in involving stakeholders is by having the right organizations related to certain SDGs. Respondent 8 says that this could happen by for example involving the National Institute for Health and Environment (RIVM) at

Goals that refer to health. According to respondent 9, it also comes down to local authorities that try to pioneer with using SDGs. Respondent 10 says the following about stakeholder involvement: *"Stakeholders and local communities play a vital role in achieving the SDGs. Their engagement can be enhanced through participatory approaches and meaningful interaction, such as public consultations and collaborative decision-making, considering the views and interests of different stakeholders. It should be ensured that their perspectives are fully and effectively considered in the assessment process".* Respondent 11 says that stakeholders should look further into the future than what they are doing now in terms of decision-making. He says that the SDGs could assist in this because they focus on long-term perspectives.

Ultimately, the interviews emphasized the importance of local governments, the use of bottom-up approaches, and public engagement. They highlighted that involving stakeholders is essential for effective implementation, and their engagement can be enhanced through participatory methods, considering local demands in using SDGs and long-term perspectives. The case of Súdwest-Fryslân's environmental vision, driven by a local resident's suggestion, exemplified how grassroots involvement can drive change. Additionally, collaborating with organizations related to specific SDGs and pioneering by local authorities were seen as ways to ensure the SDGs are integrated into environmental assessments effectively.

5.1.3. Benefits of SDG integration in SEA

The seventh question was: "What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?". Respondent 1 said that there are two potential benefits, with the first benefit being that using the SDGs allows for better international collaboration and communication with other countries conducting similar assessments. The second benefit respondent 1 describes is that by using the SDGs, aspects of Broad Prosperity (Brede Welvaart) can be brought to attention that otherwise would be overlooked in an SEA. Respondent 2 elaborates on this by saying that the SDGs could be a valuable tool in considering a broad spectrum in the SEA that focusses on the right aspects. To relate to the answer of respondent 1 on collaboration and communication, respondent 3 says that SDGs employ a shared sustainable language, making them a valuable asset in SEA due to their ability to facilitate communication and understanding. Respondent 3 also says that because there are seventeen goals, the public could understand it more. Respondent 4 also claims that incorporating the SDGs in SEA includes providing a common language and a set of indicators for measuring progress. Respondent 5 says that by including the SDGs in SEA, more aspects of sustainable development, such as social, environmental, and economical dimensions are becoming more visible. Respondent 6, who is doing extensive research into SDGs in SEA, says that one of the biggest benefits of using SDGs in SEA is being able to communicate impacts with the public in a different way than a very technical report. Additionally, the SDGs can also help to clarify the scope of an SEA in terms of making sure environmental factors are included well enough. Furthermore, she

says that the SDGs then can help to create a common language among stakeholders. Finally, she says that, when using SDGs in an SEA – which often focusses on negative impacts – the tendency of SDG-washing can go away and only associate SDGs with areas where positive contributions are being made, creating better transparency of SDG impacts overall. This is also in line with the paper by Boess and González (2023) in which respondent 6 contributed actively to. According to respondent 7, by implementing the SDGs in SEA, the NCEA could show that they take the goals seriously, especially since it is an internationally recognized framework. Compared to other assessment tools already used for spatial plans/projects, the SDGs are likely to add more emphasis on various social dimensions. But the most significant potential value of SDGs is that they provide a value framework and the fundamental principle/attitude that we should strive for a proper balance between economic activity, social welfare, and healthy ecosystems. It should be mentioned that respondent 7 also emphasizes that because of this reason it can become too complex, as mentioned in question four. Respondent 8 says that the use of SDGs can bring uniformity and clarity to the assessment process if multiple governments adopt them. This could enhance the consistency of methods and explanations. This trend is already visible with the "Wheel of the Living Environment" being adopted by many authorities. Respondent 9 names two benefits, with the first benefit being the accessibility of the SDGs, because it is an international instrument and has international backing. The second benefit that is pointed out by respondent 9 is that the SDGs have a wider acceptance, meaning that they also look at aspects such as health and liveability. Incorporating SDGs can potentially lead to wider acceptance of various initiatives. According to respondent 10, the clarification the SDGs have are valuable, especially since all countries have committed themselves to the SDGs and must report on progress. Another benefit that is mentioned is about the explicit incorporation of SDGs in SEA. Explicitly incorporating the SDGs into SEA assessment processes could also enhance the assessment's sustainability focus, fostering better, more aligned, and integrated decision-making. In the follow-up phase, it helps align projects with national policies, plans, and programmes, based on global sustainability objectives. This would ideally lead to positive environmental, social, and economic outcomes. Respondent 11 says that there are various benefits, with the first one being the holistic assessment the SDGs offer of a project's impact. As said by other respondents, respondent 11 also agrees on the common language the SDGs offer. This is also useful for stakeholders that are currently using SDGs, because they are engaged to the subject. Furthermore, he says that the SDGs explicitly emphasize sustainable development. By integrating SDGs in SEA, the importance of sustainable development is automatically being made in plans and programs that are being assessed by SEAs. Respondent 11 also emphasizes the long-term benefits on sustainable the SDGs offer. The use of SDGs encourages looking beyond the short term and considering the interests of future generations, contributing to sustainability. Moreover, it looks beyond what happens within local boundaries.

Ultimately, the incorporation of the SDGs into the SEA process yields a host of valuable advantages. As per the discussion, these benefits include enhancing international collaboration and

communication, shedding light on critical facets of sustainability, and facilitating a shared language among stakeholders. Moreover, SDGs prompt a comprehensive evaluation of project impacts, underscore the significance of sustainable development, and encourage a forward-looking, global perspective. By integrating SDGs into SEA, decision-makers can align their projects with worldwide sustainability objectives, ultimately resulting in more transparent, cohesive, and sustainable decision-making processes. In essence, the integration of SDGs into SEA promises to advance the cause of sustainable development on a global scale.

5.2. Analysis of the challenges and opportunities

This section will describe the challenges and opportunities that were given in the interviews, and analyses what is said. Based on the interviews, the integration of SDGs in SEA presents a landscape filled with challenges and opportunities. The challenges include the complexity of the SDGs themselves, stakeholder unfamiliarity, a potential lack of demand from developers and authorities, and resistance to change in the assessment approach. On the other hand, the opportunities, and facilitators for incorporating SDGs in SEA are substantial. Common language among stakeholders plays a pivotal role in SDG integration, as it aligns different sustainable development interpretations, and SEA-component interpretations to one common language. Beyond, the SDGs align with national and international development programs.

Ultimately, according to the interviewees, the key takeaway is that while challenges exist, the benefits of integrating SDGs into SEA are substantial. This integration can lead to more holistic, goal-oriented assessments that consider social, environmental, and economic dimensions, in line with SDGs' emphasis on various dimensions of sustainability. Moreover, it fosters a shared language among stakeholders and encourages plans and programs to think beyond short-term impacts and consider long-term perspectives that are not, for example, municipal limited. Ultimately, successful integration of SDGs into SEA holds the potential to advance the cause of sustainable development, both locally and globally, by aligning assessments with international sustainability objectives.

Table 9 gives an overview of the aspects related to the challenges and opportunities, including the role of stakeholders in it.

Table 9: Challenges and opportunities for SDGs in SEA

Component	Aspect	Explanation
Challenge	Complexity	SDGs and their sub-goals can be perceived as complex
	Abstract implementation	The responsibility of national implementation lies within the Ministry of Foreign Affairs, posing a challenge in reaching local levels
	Lack of awareness	Stakeholders may lack awareness about SDGs, hindering their understanding and integration into SEA
	Broad scope	The broad scope of SDGs may make the SEA process and report too complex and time-consuming
	Interconnectedness	The interconnected nature of SDGs adds complexity to reports, potentially conflicting with the goals of SEA

Barriers	Misconception	There is a potential misconception that integrating SDGs in SEA could overly complicate the process
	Expert familiarity	Experts assessing SEAs may not be familiar with SDGs, potentially impeding their effective integration
	Practicality	The need for capacity building, budget constraints, and a lack of demand from developers and authorities
	Alternative methods	The use of alternative methods, such as the Wheel of the Living Environment, may compete with SDGs
	Resistance to Change	Resistance to change and a lack of awareness about SDGs can impede integration
Stakeholders	Context	The challenge lies in applying SDGs in various, undefined contexts, as there is no one-size-fits-all approach
	Bottom-up	Involving local communities through a bottom-up approach is essential but can be challenging
	Public accountability	Public engagement is crucial for accountability, achieved through methods like public hearings
	Regional governments	Local authorities could pioneer the use of SDGs in SEA to encourage wider adoption
Opportunities	International collaboration	SDGs facilitate better international collaboration and communication in SEA
	Broad Well-being	SDGs bring attention to aspects of Broad Well-being that may be overlooked in traditional SEAs
	Common language	SDGs provide a common language for stakeholders, fostering understanding and collaboration
	Comprehensive evaluation	SDGs enable a holistic assessment of project impacts, considering social, environmental, and economic dimensions
	Long-term perspectives	SDGs encourage a long-term perspective, emphasizing sustainable development and consideration for future generations

while challenges exist, the potential benefits and opportunities of integrating SDGs into SEA are substantial. The integration can lead to more holistic, goal-oriented assessments aligned with international sustainability objectives, fostering transparent, cohesive, and sustainable decision-making processes. Additionally, the challenges and barriers are not necessarily decisive and may be removed based on experimenting with a practical application.

5.3. Conclusion sub-question two

In this sub-question, the question was: "What are the key challenges and opportunities in integrating the Sustainable Development Goals into Strategic Environmental Assessment?".

Interviews showed that there are clear challenges and clear opportunities in integrating the SDGs in SEA. The integration of the SDGs into SEA faces challenges such as complexity, resistance to change, and lack of awareness among stakeholders. Nevertheless, it presents significant opportunities. The SDGs serve as a common language, fostering international, national, and local collaboration and encouraging a global long-term vision. Despite concerns about complexity, the interviews emphasize that SDG integration leads to holistic, goal-oriented assessments, encompassing social, environmental, and economic dimensions, aligning with the SDGs' emphasis on sustainability. The role of stakeholders is crucial, according to the respondents, with local engagement, bottom-up approaches, and participatory methods deemed useful. In essence, despite existing challenges, successful SDG integration in SEA promises to advance sustainable development, both locally, and globally, aligning the assessments with international sustainability goals.

6. Implementation of the Goals and contribution to sustainable development

The third sub-question focusses on the different ways in which the SDGs can be implemented and what their contribution could be within the field of sustainable development. Therefore, the sub-question is: *In what ways can the Sustainable Development Goals be implemented in the practice of SEA and what will it contribute within the field of sustainable development?* The first part of this chapter consists of a qualitative analysis, conducted by analysing interviews. The second part will be an analysis in how SDGs could contribute to sustainable development seen from two case studies in the municipality of Súdwest-Fryslân and in the province of Zeeland.

6.1. Implementation practices

Questions six, eight, nine, and ten in the interview pertain to the analysis and explore potential methods for determining whether and to what extent the implementation of the SDGs in SEA is feasible.

6.1.1. Successful SDG integration cases in SEA

The sixth question was: "Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?". Not all respondents could provide examples of successful cases in which the SDGs have been effectively applied in SEA. One of the reasons for this, is because it has not happened in the Netherlands before. According to respondent 2, there is one example in which SDGs could occur in an SEA, but that is still in development: *"There is one example, and that is the Environmental Impact Assessment currently being developed by the Ministry of Infrastructure and Water Management as part of the NPM. They have created a scoping report, and the EIA is not yet complete. In this case, they have indeed used the SDGs to create an assessment framework. They considered how to evaluate the program and what criteria to use.".* According to respondent 6, who was involved with the making of an environmental vision in which the SDGs were used, a key factor of success was having a programme manager who saw benefits in using the Goals. However, the SDGs were not used in the SEA. Respondent 8 was familiar with the environmental vision of Zeeland but said that SDGs were not used in the SEA that assessed the environmental vision. Respondent 8 is not aware of specific factors contributing to it. Respondent 10 says that she has not seen explicit applications of SDGs in SEAs yet. However, a nuance is made by respondent 10: *"Implicitly, one could state that SEAs that are being undertaken in an optimal fashion and link the findings to policies, plans and programmes, and implementation thereof, do contribute to SDGs achievement as a matter of fact. Whether mentioned or not, if SEAs are well done and follow up secured, they can positively influence the achieve of SDGs.".* According to respondent 11, there are no specific SEAs in the Netherlands that have incorporated SDGs. In Denmark, within the DREAMS

project, significant research is being conducted in this regard. Beyond, respondent 11 says that in theory integration is feasible, but in practice, it has not been the case so far.

The lack of specific cases in the Netherlands when it comes to examining the integration of SDGs with SEA highlights how new this practice is. Even though they were unable to provide particular examples, the respondents provided insight into possible uses in ongoing initiatives like the National Environmental Program's SEA. A recurring theme shows that important advocates are needed for SDG engagement, as demonstrated by respondent 6's accomplishment, which she credits to a helpful manager who saw the potential of the Goals. According to respondent 10's nuanced viewpoint, well-executed SEAs naturally support SDGs even when they are not expressed directly. Respondent 11 brought up the Danish DREAMS project, which shows impressive research but has yet to find practical application in the Netherlands.

6.1.2. Relevant Goals for SEA

The eighth question was: "Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?". Not all respondents gave specific SDGs that have a significant impact, but mentioned more general goals, or more SDGs. Respondent 1 did not mention any specific goal, but instead mentioned that SDGs in the Netherlands are used as a reference framework and are integrated in national policies. Respondent 2 says that everything related to the physical living environment can be related to individual SDGs. The goal of education is a bit more distant, but poverty alleviation could be more relevant. Water management and climate-related matters are always relevant. Respondent 5 emphasized the context-dependent relevance of specific SDGs but stressed the importance of those related to environmental conservation, public health, and social equity in SEA due to their direct impact on project outcomes. According to respondent 6, it differs, since some goals and targets align better with SEA than others. In contrast, respondent 7 says that all goals are relevant: *"When taking all dimensions into account from the start, including social dimensions, municipalities are likely to opt for different, more integrated approaches and solutions.".* In addition, she says that from an ecological perspective, SDGs 6, 12, and 15 are of huge relevance in the Netherlands, as (chemical) pollution and biodiversity loss are issues which get, according to respondent 7, way too little attention and priority in municipal development plans. Respondent 8 says that while the SDGs cover a broad range of topics, some are more applicable to SEA than others, such as health, soil, and water-related goals. These align well with environmental assessment, although not all SDGs are equally suitable for this context. Respondent 9 says mentions goals as Life on land, life below water, public health, climate, clean water, sustainable cities, sustainable consumption and production. But the concept of health appeals to everyone, whether you are rich or poor, wherever you live. Health as a focal point for EIA. According to respondent 10, SEAs have to consider the broader context in which the assessment takes place. This implies that most of the time multiple SDGs are relevant and must be considered. Certain SDGs, related to clean water, energy, climate, health,

infrastructure, inequalities, and responsible consumption and production are particularly relevant in SEA. This also goes for SDG 16, which is closely related to good governance.

The responses reveal diverse perspectives on the relevance of SDGs in the context of SEA. While some respondents emphasize the overarching integration of SDGs in national policies, others highlight the specificity of goals tied to environmental conservation, public health, and social equity. There is consensus on the importance of water management, climate-related concerns, and ecological considerations, with varying opinions on the applicability of different SDGs to SEA. Respondent 7 underscores the inadequate attention to pollution and biodiversity loss in municipal development plans. Overall, the consensus suggests a nuanced approach, considering the context-dependent nature of SDGs in SEA, aligning them with specific environmental dimensions. Based on the outcomes of the interviews, the following SDGs are relevant:

- SDG 6: Clean Water and Sanitation
- SDG 12: Responsible Consumption and Production
- SDG 15: Life on Land
- SDG 16: Peace, Justice, And Strong Institutions

Additionally, there are references to broader themes or categories without specifying the exact SDG numbers but can be related to specific SDGs. Table 8 (chapter 4.3.) provides an overview of the SEA topics that relate to specific SDGs. Ultimately, the broader themes mentioned in the interview then relate to individual Goals:

- Environmental conservation   - SDG 15: Life on Land, SDG 14: Life Below Water
- Public health   - SDG 3: Good Health and Well-being
- Social equity   - SDG 10: Reduced Inequality
- Poverty alleviation   - SDG 1: No Poverty
- Education   - SDG 4: Quality Education
- Physical living environment   - This is a broader term and can be related to multiple SDGs, including SDG 11: Sustainable Cities and Communities.
- Water management   - SDG 6: Clean Water and Sanitation
- Climate-related matters   - SDG 13: Climate Action
- Health   - SDG 3: Good Health and Well-being
- Soil-related goals   - SDG 15: Life on Land, SDG 2: Zero Hunger
- Infrastructure including   - Infrastructure can be linked to several SDGs,

    SDG 9: Industry, Innovation, and Infrastructure.
- Inequalities   - SDG 10: Reduced Inequality

6.1.3. Specific tools, methodologies, and frameworks

The ninth question was: "Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?". Due to the fact that SDG integration in SEAs has not taken explicit place yet, this question was difficult to gain answers from. Respondent 1 said that the use of SDGs as a reference framework in the Netherlands occurs but has no specific recommendation on methodologies or tools how this can be done to SEA. Respondent 5 said that in order to make the decision to integrate SDGs in an SEA, a Multi-Criteria Analysis could be made to choose whether or not to integrate the goals. Respondent 6 refers to the framework by Kørnøv et al. (2020), that uses different levels of SDG integration. Respondent 6 also refers to a paper written by Ravn Boess and Kørnøv (2023) about approaches to localize SDGs in EA, and also in SEA. There are four methodological approaches. Table 10 shows the different approaches, and how EA correspondents to the SDGs.

Table 10: Methodological approaches to localize SDGs in EA (Ravn Boess & Kørnøv, 2023)

Methodological approach	*Description*	*Corresponding examples*
Refining SDG targets and indicators to an EA context	The SDGs are localized by reviewing the existing SDG framework (as developed by UN member states) and determining which SDG targets or indicators are relevant to consider in an EA context, thereby removing focus from less relevant SDGs	*UN SDGs in EA practice: A Danish Standard* *Environmental Impact Assessment, Health Impacts, and the SDGs*
Inventing new context-specific SDG indicators	The SDGs are localized into a context (i.e. geographic) through the development of context-specific indicators, such that measuring impact on the SDGs pertains to data relevant within that context.	*Denmark's "Our Global Goals" (Vores Mål) The Baseline for Global Goals in Denmark*
Transforming EA practice with new SDG-inspired topics	The SDGs are localized in EA practice by transforming – to varying degrees - the way that EA practice is understood (i.e. expanding the scope of EA topics considered, adding new objectives to EA, bringing new criteria into the assessment of impacts).	*Using SDGs to develop EIA scoping practices: A case of Denmark*
Linking SDGs to different aspects of the EA phases	The SDGs are localized by recognizing their relevance to certain phases of the EA process (i.e. objectives, impacts from activities, or proposed mitigation measures). This emerges from a localization to a specific EA case.	*Individual EA cases: Linking to objectives, plan/project impacts, and mitigation measures*

Respondent 8 says that she has no specific recommendations for SDG integration tools in SEA. However, she emphasizes that practical guidance on how to make SDGs more applicable and measurable within the context of regional planning and SEA could be useful. According to respondent 10, there is no one-size-fits-all approach to this. However, tools like sustainability checklists and impact assessment guidelines can help integrate the SDGs into SEA. Since the 2015 adoption of Agenda 2030 and the SDGs, different dashboards and tools have been developed that can be helpful. Additionally, training programs, capacity building and full understanding of national, regional, and local contexts are essential to effectively utilize these tools. Respondent 10 emphasizes the importance of the SDGs not being a "tick the boxes" system, whereby tools, methodologies or frameworks become leading instead of the objective to really contribute to positive impact. Respondent 11 says that there are no specific methods in use in the Netherlands that incorporate SDGs into SEA to his knowledge. However, the themes addressed in an SEA report are closely related to various SDGs. An example is the SDG-Wedding Cake, which illustrates the interconnectedness of various sustainability aspects, including those within an SEA. Another method that was discussed with one of the respondents working at the NCEA is the use of icons in an SEA. For example, when addressing a water-related theme in an SEA, using an SDG icon can indicate a contribution to clean drinking water. This is also known as SDG dropping.

What becomes clear in this question is that there currently is only one specific method for integrating or seeing the level of integration of SDGs in SEA. The framework, that was also used in the theoretical framework of this thesis, and respondent 6 referred to, aligns with SDG integration into SEA. However, the question on how to utilize this tool effectively cannot be answered. A plausible reason for this, and also for the lack of answers on this question, is because it has not been tried before in the Netherlands. Therefore, it is difficult to see how well it can or has been utilized.

6.1.4. General recommendations

The tenth question was: "Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?". Respondent 2 says that it is important that you approach the assessment comprehensively, and do not cling to the SDGs obsessively, hence, keep it simple. Respondent 3 says that the first step should be raising awareness. Once individuals become aware, the next natural progression is to engage in discussions about commitment and action regarding SDG integration into SEAs. Respondent 4 says that one needs to be specific about why and how SDGs are being used, considering the broad scope SDGs have. Therefore, it is important to carefully think about their relevance in specific plans and programs. Respondent 5 elaborates on what respondent 3 said, by emphasizing on the awareness policymakers should have on the SDGs. Another thing respondent 5 ads, is that it is important to monitor and evaluate, to ensure effective implementation. Respondent 6 says that the ambitions about SDGs in SEA should be coordinated early in the process and use resources that are available. Beyond, she says

that policymakers should dare to challenge traditional methods and approach to EA and try new things. Respondent 8 says that it is important to concretely tailor the SDGs to specific focus of the plan or assessment. By creating practical tools for making SDGs more actionable and understandable within SEA, more authorities could be encouraged to adopt and use them. Respondent 10 says that by using SDGs, EIA and SEA could become more exciting, whereas traditional EIA is not. SDGs are good branding, respondent 10 describes. Furthermore, he says that one should look at what inhabitants want: *"In the EIA, you have serious people with serious glasses, and with the SDGs, you have younger people with a bit more flair. The SDGs have good branding. I think with the planning EIA, it is the older environmental folks. Branding is very important. If people in society say, 'I live in a place with a lot of pollution, why has not there been an SEA?' You are doing it for society, but they also need to know that it exists and that it is important."*. Therefore, the SDGs could help. Respondent 10 recommends raising awareness about the relevance of well-considered SEAs for the SDGs achievement. She says that high quality SEAs can really contribute. The influence of SEAs on sustainable development and the subsequent planning and programming decisions depends on country ownership. That should be secured, respondent 10 says. Beyond, providing training and fostering collaboration among stakeholders is a prerequisite for success. In the context of weak governance 'coaching' on the integrated planning and SEA-process can be effective to enable governments to make effective use of the SEA. Additionally, respondent 10 says that policymakers should consider aligning legislation, regulations, and policies with the SDGs, and promote collaboration and coordination at all government levels both within and between different departments. Respondent 11 says that if SDGs are being used in SEAs, they should not be overly complicated. Furthermore, he adds that clear communication about SDGs among stakeholders is important. Additionally, he emphasized that achieving SDGs should be the goal and that the public should find them relevant and understandable.

Based on the answers of the respondents, a list of recommendations about SDGs in the field of SEA can be made, which can be seen in table 11.

Table 11: Recommendations on using SDGs in SEA (Own work, 2023)

Category	Recommendation
Communication	Raise awareness
	Clear communication among stakeholders
	Make SDGs relevant and understandable to the public
	Promote collaboration and coordination
	Align legislation, regulations, and policies with SDGs
Assessment / report	Avoid complexity in SDG use
	Tailor SDGs to the plan's focus
	Approach the assessment comprehensively
Process	Monitor and evaluate

	Specify the use of SDGs
	Provide training and foster collaboration

6.2. Contribution to Sustainable Development in case study

This section will analyse the contribution that the SDGs make to the field of sustainable development. It will analyse the environmental vision of the municipality of Súdwest-Fryslân and the environmental vision of the province of Zeeland.

The reason for Súdwest-Fryslân to choose for the SDGs, is because the municipality assumes that the strength of the SDGs lies in the comprehensive approach it takes. This approach encompasses physical, social, and economic aspects. The coherence provided by the SDGs in this regard is, according to the municipality, the reason to adopt the SDGs as a starting point. Additionally, the coherence between the physical, social, and economic aspects is central in the Environmental and Planning Act that will come into effect in early 2024. By contributing to the SDGs, it can be assumed that the municipality contributes to the three layers of sustainable development, being economic, social, and ecological development. To practically implement the SDGs, the municipality has aligned the 17 SDGs with challenges outlined in the National Environmental Vision. Consequently, twelve specific topics and five overarching main themes have been identified. This framework is intended to serve as the foundation for measuring the sustainable development that Súdwest-Fryslân contributes to through the execution of its environmental vision.

The motivation for Zeeland to utilize the SDGs is rooted in the province's belief in the comprehensive approach that the SDGs offer. According to them, the strength of the SDGs lies in their broad perspective, taking into account global considerations. This might refer to a long-term vision extending beyond the boundaries of Zeeland. Additionally, the province notes that many of the goals set by the UN in the SDGs have not been achieved. As the SDGs are endorsed by countries, including the Netherlands, Zeeland aims to make a "modest contribution" to the goals through the Zeeland Environmental Vision. However, there is a lack of a concrete application similar to what exists in Súdwest-Fryslân. The environmental vision mentions a few keywords and how they intend to achieve them, but the connection to the physical, social, and ecological domains is not explicitly made. What is stated is that the goals contribute to "broad prosperity" and as indicated in the environmental vision, aid progress in social, economic, and ecological aspects. In summary, a connection is made to the three themes of sustainable development and what Zeeland aims to contribute to through the SDGs.

Ultimately, Súdwest-Fryslân emphasizes the SDGs' comprehensive approach, aligning them with challenges in the National Environmental Vision, and the Environmental and Planning Act. In contrast, Zeeland's motivation is rooted in a global perspective, intending a "modest contribution" without a detailed application, raising questions about the clarity of its approach.

6.3. Conclusion sub-question three

In this sub-question, the question was "*In what ways can the Sustainable Development Goals be implemented in the practice of SEA and what will it contribute within the field of sustainable development?*".

Interviews showed that, since SDGs in SEA is a new practice, having supporters and policymakers that are willing to integrate and test is, is important to make it work regarding the integration. Beyond, the absence of established cases in the Netherlands emphasizes the need for further experimentation and exploration to develop effective methodologies for SDG incorporation. Regarding the contribution of sustainable development, the SDGs

In the context of sustainable development, as evident from the case studies in Súdwest-Fryslân and Zeeland, the SDGs can contribute to the three components of sustainable development, encompassing economic, social, and ecological dimensions. Utilizing the SDGs as a framework provides clarity on the areas to which the contribution is made. This aligns with the previously mentioned SDG cake.

The lack of specific tools and methodologies for SDG integration in SEA reflects the early stage of this practice. Recommendations from respondents emphasize the importance of tailored approaches, practical tools, and continuous monitoring and evaluation for meaningful integration. The case studies of Súdwest-Fryslân and Zeeland reveal different motivations and approaches to incorporating SDGs into environmental visions. Súdwest-Fryslân aligns SDGs with specific challenges in its National Environmental Vision and forthcoming Environmental and Planning Act, emphasizing a comprehensive approach. In contrast, Zeeland expresses a global perspective, aiming for a "modest contribution" to the SDGs without a detailed application. However, due to the absence of SEAs incorporating the SDGs, there are no examples of this for the analysis.

7. Conclusion

In this research, the investigation aimed to address the question: "*To what extent can the Sustainable Development Goals be applied in Dutch Strategic Environmental Assessment, and what are the advantages and disadvantages of applying the Sustainable Development Goals in Strategic Environmental Assessment?*". To answer the main question, three sub-questions were formulated.

The first sub-question focused on the current approach to addressing the SDGs in SEA. Interviews with various experts revealed that the SDGs do not explicitly appear in Dutch SEA. However, all experts were familiar with the SDGs, and literature research and interviews indicated that SDGs are used in environmental visions. Nevertheless, it was found that the SEAs of one of these environmental visions, and the SEA of a plan based on one of the visions, did not include SDGs, either explicitly or implicitly. The interviews also highlighted the absence of current examples of an SEA incorporating SDGs. On the other hand, the components of an SEA can be linked to SDG components. The conclusion of the first sub-question, "*How are the Sustainable Development Goals currently addressed in Strategic Environmental Assessment and in Dutch Strategic Environmental Assessment?*," is therefore that the SDGs are currently not explicitly applied in Dutch SEA.

The second sub-question addressed the challenges and opportunities associated with integrating SDGs into SEA, along with potential obstacles and possibilities relevant to this process. The interview results revealed that the number of advantages outweigh the disadvantages. However, it is important to note the nuance that this is only possible with partial integration. If full SDG integration were to occur within the report itself, it could result in an even more complex document than it already is. Additionally, there is a question of whether the NCEA has the personnel in-house to thoroughly assess all details related to SDGs when reviewing a report. However, this is a potential practical barrier and does not speak to the theoretical applicability of SDGs in SEA. An opportunity arising from partial integration, as suggested by the interviews, would likely result in a report outlining the contributions to specific SDGs without the need to retrain NCEA experts as SDG specialists. The conclusion of the second sub-question, "*What are the key challenges and opportunities in integrating the Sustainable Development Goals into Strategic Environmental Assessment?*", is therefore that the primary opportunity lies in making SEA more accessible through the use of SDGs. This is because the SDGs are generally understandable to a broad audience, whereas SEA is often perceived as complex due to the nature of the subject. The main drawback of integrating SDGs into SEA is that it could make SEA overly complex due to the breadth of the goals and their underlying sub-goals. This complexity could divert from the original purpose of SEA, which is to easily map environmental effects.

The third sub-question pertained to possible ways of applying SDGs in SEA. Because SDGs have not been applied in SEAs in the Netherlands, ten out of the eleven respondents were unable to provide a concrete answer to this question. The one respondent who did answer had conducted research on SDGs in SEA, EA, and EIA and referred to the framework of Kørnøv et al. (2020), which

delineates three levels of integration, further subdivided into a total of six possible variants of integration. Although specific application methods did not emerge from the interviews, it became apparent that integration is contingent on having individuals in the organization who are willing to adopt it. This marks the initial step towards experimentation. Furthermore, the reasons for a municipality and a province to use SDGs in their environmental vision were explored. It was revealed that SDGs can contribute to sustainable development and tangibly demonstrate this by addressing the three components of sustainable development. The use of SDGs can showcase the contribution to sustainable development in the environmental vision, potentially extending to SEA. The absence of specific tools and methods for SDG integration in SEA, coupled with the awareness of experts, indicates that SDG integration in SEA is still in its infancy. The conclusion of the third sub-question, "*In what ways can the Sustainable Development Goals be implemented in the practice of SEA, and what will it contribute within the field of sustainable development?*", is that, at present, the existing integration model of Kørnøv et al. (2020) appears to be the most relevant and most applicable model to look at SDG in SEA integration. The contribution of SDG integration to sustainable development lies in the explicit alignment of SDGs with the three components of sustainable development, enabling a more comprehensive understanding of what is developing in the realm of sustainable development and what is not.

Based on the sub-questions, an answer can be provided to the main question: "*To what extent can the Sustainable Development Goals be applied in Dutch Strategic Environmental Assessment, and what are the advantages and disadvantages of applying the Sustainable Development Goals in Strategic Environmental Assessment?*" Based on the model of Kørnøv et al. (2020) and the current phase of SDGs within SEAs, namely that they are not being used, it is advisable to start at the bottom of the model. As awareness of the use of SDGs in SEAs increases, one can then progress towards further integration. Therefore, it is recommended to start with non-integration and partial integration, depending on the context of an SEA. Non-integration can take place through SDG dropping, where the SDGs are mentioned in a report but there is no concrete evidence that the SDGs are used for the assessment. Although this is a passive contribution, it aligns with the current stage of Dutch SEA. Partial integration can occur through SDG scoping, where SDGs are actively used to scope the assessment. Because there are governments and organizations with active SDG policies, this could be used in an SEA that assesses them. This way, SDGs are actively used in a currently feasible manner. Radical integration is not advisable at this moment, as consensus is needed to eventually achieve it. Radical integration requires effort from both the internal organization and the stakeholders. Additionally, there are still visible challenges that should be taken away in order to go to radical integration. However, when it comes to the theoretical foundation for integrating SDGs into SEA, which suggests that it is actually one-to-one possible, radical integration could be feasible. SDGs align with SEA, and vice versa. Regarding the pros and cons of SDG integration in SEA, there are various aspects on both sides. The main disadvantage of SDG integration is that it makes SEA even

more complex, particularly in terms of implementation and assessment. On the other hand, the biggest advantage is that SDGs are a widely used framework in the context of sustainable development. It is a recognized framework, endorsed by formal institutions such as Dutch governments, lending sustainability a more legitimate stamp on an SEA report. Additionally, due to the familiarity of the SDGs, it is easy to communicate SEA components to various stakeholders by incorporating SDGs. The recommendation, therefore, is to start with SDG dropping and then transition to SDG scoping. This aligns with the ambition of the NCEA to explore the application of SDGs, implementing it directly. Simultaneously, this step ensures that the process does not immediately become overly complex. The extent to which the SDGs can the SDGs be applicable in SEA is one to one. All SEA components are directly translatable to the goals itself. Direct goals, and indirect goals. SEAs contribute to SDGs, and SDGs contribute to SEAs. Finally, the SWOT-analyses provides an overview of the main disadvantages and advantages.

Internal factors

Strengths	Weaknesses
Comprehensive framework	Complexity
International alignment	Lack of familiarity
Shared language	Potential overemphasizing
Long-term focus	Resource intensive

External factors

Opportunities	Threats
Enhanced collaboration	Resistance to change
Public engagement	Misinterpretation
Aligning with national and international policy	Resource constraints
Transparency and accountability	Potential greenwashing

7.1. Exploring the expectations

Based on the literature, four expectations have been formulated regarding the integration of SDGs in SEA. This section addresses the expectations, which have been answered through two case studies and various interviews with eleven experts. Hence, this section seeks to answer the expectations.

The first expectation is that integrating SDGs within SEA can enhance the achievement of sustainable development objectives. The comprehensive and participatory nature of SEA, along with its *focus on promoting sustainable outcomes within the process and after the process, provides a framework for aligning and applying the SDGs in plans and program. This integration leads to better decision-making, increased transparency, improved stakeholder engagement, and improved sustainable outcomes. If the SDGs are not utilized in SEA, it will also result in the failure to achieve*

sustainability goals and a lack of transparency regarding the efforts being made. Based on the research, it can be concluded that SDG integration in SEA primarily results in raising awareness of the goals that are being met and those that are not. Whether it leads to improved decision-making cannot be determined, as a separate study would be required for that purpose.

The second expectation that can be formulated is that SDG integration leads to a more understandable point of view of sustainable elements within SEA reports. Given the growing adoption of SDGs by governments, it is reasonable to anticipate that when integrating SDGs into SEA, stakeholders gain a more comprehensive understanding of SEA itself. Moreover, the reverse is also true: the integration of SDGs in SEA helps to enhance understanding of the SDGs and complements each other in the process. This heightened comprehension has the potential to improve the overall understanding of SEA reports and the operationalization of SDGs, ultimately enhancing decision-making processes as a result of improved report and SDG comprehension. This expectation relates to sub-question 2. Based on the research, it can be concluded that the integration of SDGs provides a better understanding of sustainable elements within SEA. All elements of an SEA can be linked to a sustainable aspect. These sustainable elements can, in turn, be connected to individual SDGs, ultimately making it clearer for stakeholders to discern what is happening or not happening in the realm of sustainable development.

The third expectation proposes that integrating SDGs into SEA broadens the spectrum of sustainable elements underscored during the decision-making process. This expansion is underpinned by the SDGs' international acceptance as a benchmark for sustainability, enabling the incorporation of a diverse range of sustainable and environmental factors into the decision-making framework. Consequently, this integration offers an extended perspective on sustainability, potentially influencing the decision-making landscape by emphasizing a wider range of sustainability-related considerations. Based on the research, it can be concluded that SDG integration in SEA does contribute to a broader spectrum of highlighting sustainable elements. However, it does not necessarily demonstrate whether it emphasizes these elements during the decision-making process. For this, a separate study would be required to examine the impact of SDGs on decision-making in SEA.

The fourth expectation posits that the integration of SDGs can enhance the understanding of SEA at the local level, aligning with local objectives in municipalities and provinces. By involving individuals and organizations in the process and using the SDGs as a benchmark, SEAs can better cater to the needs of diverse governmental entities. This way, SEA can bridge the gap between global sustainability goals, local requirements, and their reciprocal influence. Based on the research, it can be concluded that the use of SDGs in SEAs is feasible at the national, regional, and local levels, especially if governments at those levels are already incorporating SDGs into their practices. It remains a customized approach initially but given that over a third of Dutch municipalities have

endorsed the SDGs, and provinces are also doing so, utilizing SDGs in SEA can aid in providing a more comprehensive understanding of sustainability for these authorities.

7.2. Limitations

While this research has been conducted with the utmost care, some limitations have been identified that may impact the interpretation and generalization of the results.

The first limitation pertains to the available literature. Despite substantial information on sustainable development, the SDGs, and SEA, there was a noticeable lack of literature specifically exploring the interplay between these topics, as well as literature on SDG integration within SEA itself. This limited the ability to explore various models and approaches, leading the research to primarily rely on a single concrete model for the integration of SDGs within SEA.

A second limitation concerns the limited number of interviews conducted, resulting in a restricted sample size. Moreover, it was also a group that generally held a positive view towards the use of the SDGs, making it challenging to achieve complete nuance. There may be a slight bias as a result. While there is a broad group of experts available in the fields of SEA, EIA, EA, sustainability, and SDGs, constraints in project scope and available time determined the number of interviewees. Additionally, the absence of transcriptions introduced the risk of interpretation of respondents' answers by the researcher. Although there was follow-up communication with respondents to verify accuracy, this occurred post-interviews, casting doubt on the complete accuracy of the representation of respondents. Respondents that have been mailed, but were not available to answer, and thus could not be included in the interview, could be contacted in another research.

A third limitation relates to the scarcity of available SEA cases incorporating SDGs, limiting the diversity of cases. This number was limited to zero, making it challenging to make concrete statements about the current integration of SDGs within SEA. To mitigate this limitation, attempts were made to utilize potential environmental visions and SEA reports based on them. To somewhat alleviate this limitation, efforts were made to use potential environmental visions and subsequently examine SEAs that were based, either wholly or partially, on those environmental visions or associated plan documents to conduct as comprehensive an analysis as possible.

7.3. Future research

Based on the findings of the conducted research, several recommendations for future studies within this domain can be articulated.

The first recommendation suggests a more inclusive approach by involving a broader spectrum of experts in the integration of SDGs within SEA. This could lead to a comprehensive exploration of stakeholder approaches to SDGs in SEA, with a specific focus on the consultant sector. As these consultants are the primary authors of SEA reports, understanding their perspectives and

practices in integrating SDGs could significantly contribute to the enhancement of sustainable development considerations in these reports.

The second recommendation proposes the exploration of alternative sustainability models, such as the Broad Well-Being model. While the current study assessed the suitability of the SDGs as a framework, other forms of sustainability metrics were not thoroughly examined. Investigating the applicability and effectiveness of different sustainability models would provide a more comprehensive understanding of their potential contributions to SEA.

The third recommendation emphasizes the need to investigate the downstream effects of SDGs on SEA reports and their influence on decision-making processes. This entails examining not only the political ramifications but also the broader impact on policy formulation. Understanding how the integration of SDGs translates into tangible changes in decision-making and policy development can shed light on the effectiveness of this integration.

The fourth recommendation suggests conducting a longitudinal case study where SDGs might be integrated in the future. This approach would allow researchers to observe and assess the evolving dynamics over an extended period. By comparing the outcomes of such a study with the current state of SEA reports, researchers can determine whether the integration of SDGs leads to more comprehensive coverage of sustainable aspects.

The fifth recommendation is to conduct further research in the field of awareness of SEA or EIA in general. In this study, we have focused on the role of SDGs in SEA, specifically examining the awareness of SDGs. However, when it comes to understanding the purpose of SEA, which is to provide information for making informed choices among different alternatives, it is also interesting to assess the awareness of SEA itself. This would enable an exploration of whether SEA could contribute to the SDGs, and such a conclusion cannot be drawn at this point.

A sixth recommendation would be to do a specific SWOT-research on the use of SDGs in SEA. While this should not necessarily be an extensive research project, the impact could be significant, as it could bring insights into the practical application of SDGs in SEA in a practical analysis method.

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Appendix I: Interview matrix

Interview matrix

Sub-questions	Interview questions	Explanation and relevance
Sub-question 1: How are the SDGs addressed in SEA and Dutch SEA?	Q1. To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	This question is linked to sub-question 1 as it seeks to gather information about the current understanding and awareness of the interviewees regarding the SDGs and their relevance in SEA
	Q2. Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	This question delves deeper into sub-question 1 by seeking information on the methods and approaches employed to address the SDGs within the SEA framework. It aims to understand how the SDGs are operationalized and translated into practical measures during the assessment process.
Sub-question 2: Challenges and opportunities in integrating the SDGs in SEA	Q3. What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	This question is linked to sub-question 2 as it aims to explore the main challenges that arise when incorporating the SDGs into the practice of SEA, providing insights into the potential difficulties faced in implementing the SDGs in SEA
	Q4. What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA? If applicable: how can these challenges be overcome?	This question is linked to sub-question 2 as it focuses on identifying the barriers and limitations that may hinder the integration of the SDGs into SEA, providing insights into the potential challenges to be addressed for successful implementation.
	Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation? Sub-question 3: Implementation of the SDGs in SEA and their contribution to sustainable development?	This question is linked to sub-question 2 as it explores the role of stakeholders and local communities in the application of the SDGs in SEA, shedding light on their involvement and the ways to enhance their engagement for achieving effective implementation.
	Q7. What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	This question is linked to sub-question 2 as it explores the potential benefits of incorporating the SDGs in the assessment process of SEA, highlighting their role in promoting sustainable decision-making and the overall contribution to sustainable development.
Sub-question 3: Implementation of the SDGs in SEA and their contribution to sustainable development	Q6. Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	This question is linked to sub-question 3 as it seeks to gather examples of successful cases where the SDGs have been applied in SEA, providing insights into the practical implementation and the key factors that led to their success.
	Q8. Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	This question is linked to sub-question 3 as it focuses on identifying specific SDGs that are deemed relevant or impactful when applied within the framework of SEA, providing insights into the prioritization and rationale behind their selection.
	Q9. Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	This question is linked to sub-question 3 as it explores the recommended tools, methodologies, or frameworks for integrating the SDGs in the practice of SEA, shedding light on the practical approaches and their effective utilization in achieving the intended outcomes.
	Q10. Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	This question is linked to sub-question 3 as it seeks expert recommendations and considerations for policymakers, professionals, or researchers interested in applying the SDGs in the field of SEA, providing valuable insights for future practices and research in this area.

Appendix II: Interview responses

Interview 1
Name:	███████████
Organization:	NCEA / independent consultant
Role:	Advisor, coach, facilitator, scientist
Date of interview:	31-08-2023
Informed consent:	Yes
Field of expertise:	Sustainable Development, public administration

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	████ is familiar with SDGs and notes their importance in SEA. He has provided advice on using SDGs in SEA, especially in the context of development in African countries. He points out that sustainability interests of developing countries are sometimes not well represented within the Netherlands.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	████ explains that SDGs are applied as a kind of framework within SEA, using "Brede Welvaart" (Broad Well-being) as a reference point in the Netherlands. This helps identify which aspects of Broad Well-being are missing in the assessment process and can be added. He emphasizes that SDGs are used as a way to assess the contribution of decisions to broader well-being.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	████ mentioned that one challenge is the perception that applying the SDGs can make the process too complex. However, he believes it's manageable. Additionally, integrating SDGs into SEA may require creating an integrated environmental effects report that considers various aspects beyond traditional environmental factors.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	████ suggested that a barrier could be the misconception that applying the SDGs would complicate the process excessively. However, he believes this is not the case. He also discussed the challenge of fitting SDGs into the existing SEA process and ensuring they are considered adequately.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	████ did not specifically address this question in his responses.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	████ did not provide specific examples of successful cases but discussed the use of SDGs as a reference framework in the Netherlands' SEA process.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	████ mentioned two potential benefits. First, using SDGs allows for better international collaboration and communication with other countries conducting similar assessments. Second, it helps bring attention to aspects of "Broad Prosperity" (Brede Welvaart) that might otherwise be overlooked in environmental impact assessments.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or	████ did not specify particular SDGs as more relevant but emphasized that in the Netherlands, SDGs are used as a reference

have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	framework, and the focus is on ensuring that they are integrated into national policies.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	█████ mentioned that in the Netherlands, the use of SDGs as a reference framework is considered an effective tool for integrating them into the SEA process. He also emphasized the importance of allowing flexibility for interpretation at a national level.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	█████ did not directly provide recommendations but highlighted the significance of using SDGs as a reference framework and the need for flexibility in interpretation at the national level. He also discussed the idea of "Broad Prosperity" (Brede Welvaart) as a way of integrating SDGs effectively.

Interview 2
Name: ████████████
Organization: Stantec / NCEA
Role: Senior consultant
Date of interview: 29-08-2023
Informed consent: Yes
Field of expertise: Spatial planning, environmental studies and economics

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	█████ mentioned that he is reasonably familiar with the SDGs, understanding their importance as a unifying tool between policy areas and countries. However, he is not specifically acquainted with the precise SDGs. He recognizes the overarching concept of the SDGs and acknowledges their potential to clarify the framework for environmental impact assessment. He emphasizes the importance of considering a broad range of factors, shifting from traditional concerns like noise, soil, and water to encompass aspects of the living environment and sustainability, including health. The SDGs, in this context, are seen as a useful reference point to ensure a comprehensive assessment framework. █████ has not yet encountered the direct application of SDGs in environmental assessments.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	Not a direct elaboration towards approaches were made. Instead, █████ focused on the broader use of SDGs as a background reference and a tool to ensure a comprehensive assessment, rather than providing specific methods or techniques for their integration into SEA.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	The biggest obstacles, as mentioned by █████, are that the Sustainable Development Goals (SDGs) often seem distant from the people involved in planning and strategic assessments, who are typically part of specific policy areas such as housing, climate, or nature. These individuals require a practical framework to create a good assessment criteria. SDGs can be used as a tool, but they are not the primary guiding force. The underlying principle is the need for a well-informed decision framework. The SDGs can be employed to ensure that all

	relevant aspects are considered when conducting, for instance, an environmental impact assessment (EIA) for energy projects. ██████ perspective is that SDGs are broad and should not be the leading force in assessments. They can be beneficial in helping to ensure that an assessment framework is comprehensive and inclusive of all relevant factors. When used appropriately, they can prevent important elements from being overlooked. However, they may not align perfectly with the existing systems in which policy development and strategic assessments take place. These systems often have specific focuses and objectives, and the challenge lies in integrating the broader scope of the SDGs effectively.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	One notable barrier to integrating the Sustainable Development Goals (SDGs) into Strategic Environmental Assessment (SEA) is the perception that the SDGs may appear distant from the professionals engaged in SEA, who often specialize in specific policy areas. Adapting the broad scope of the SDGs to these specific domains can be challenging, necessitating guidance to create a suitable assessment framework. Additionally, there is a concern that making the SDGs the central focus of SEA could lead to complexity and impracticality, emphasizing the need to strike a balance between comprehensiveness and feasibility in the assessment process.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	Everyone, whether they are a participant, an initiator, or simply someone reviewing a proposal, is looking to see if what is currently on the table provides me with sufficient insight. Am I not missing anything? In that case, you can use the SDGs. The question sometimes is, what exactly constitutes sustainable development, but the facets of sustainable development are included.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	There is one example, and that is the Environmental Impact Assessment currently being developed by the Ministry of Infrastructure and Water Management as part of the National Environmental Program (NMP). They have created a Preliminary Environmental Impact Assessment (NRD) and the EIA is not yet complete. In this case, they have indeed used the SDGs to create an assessment framework. They considered how to evaluate the program and what criteria to use.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	Everything as a background check. That's the significant added value. If you make it the leading factor, it becomes overly extensive and unmanageable. I see the SDGs as a valuable tool within Environmental Impact Assessment to ensure that I am considering a broad spectrum, focusing on the right aspects, and not missing anything. It also helps me to look beyond my own perspective and consider the issue comprehensively. It prompts me to raise questions and inquire whether we are looking broadly enough at a topic. For example, is poverty alleviation relevant in this project or not? For instance, in an environmental vision. It's essential as a background check. You can also use it as: 'Why hasn't attention been paid to that issue? We addressed it there and there.' You can expand or limit your criteria in two directions. You can refer back to the SDGs. The SDGs encompass the entire spectrum of sustainable development, assuming you all agree on that. Then, a selection is made within the project. On the other hand, when you present a project, certain aspects are sought. Sometimes, you might have a nagging feeling, 'Are they not forgetting things?' In that case, you can also use the SDGs as a reference. Does it provide me with insights or inspiration to add things?

Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	Actually, everything related to the physical living environment. Education is a bit more distant. But, for example, poverty alleviation can be relevant. Water management and climate-related matters are always relevant.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	▮▮▮ did not mention specific tools, methodologies or frameworks to recommend of integrating SDGs in SEA.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	The most important thing is what I just mentioned: demonstrate that you use it as inspiration and as a check to ensure that you are approaching the assessment comprehensively. However, don't cling to it obsessively. Don't create an assessment framework where you can still see the SDGs. Keep it simple. The most interesting aspect is whether they are meaningful criteria, which can then be used to gauge if your approach is comprehensive and provides a broad perspective. Use them in the background. Utilize them to check for the right breadth and depth.

Interview 3

Name: ▮▮▮▮▮▮▮▮▮▮
Organization: University of Utrecht (Copernicus Institute of Sustainable Development) / The Netherlands Environmental Assessment Agency (PBL)
Role: Postdoctoral, researcher
Date of interview: 29-08-2023
Informed consent: Yes
Field of expertise: Integrated Assessment Models - IMAGE

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	Yes, I am familiar with the Sustainable Development Goals (SDGs), and in Utrecht, where I work, the municipality and the Utrecht University have actively integrated them into the planning for governmental actions. The municipality of Utrecht has been using the SDGs as a guiding framework for their initiatives. They have been transparent about the actions they are taking in alignment with the SDGs. In terms of urban development and transportation, the municipality has made notable progress and is quite satisfied with the outcomes. However, they recognize that there is room for improvement, particularly in the area of housing, where they aim to enhance their efforts.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	N.A.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of	Well, integrating the Sustainable Development Goals (SDGs) into Strategic Environmental Assessment (SEA) does present some challenges. The SDG concept, on the surface, appears straightforward with its seventeen easily understandable goals, akin to a traffic light system where

Strategic Environmental Assessment?	green signifies good progress and red denotes areas requiring improvement. This simplicity is beneficial for general public awareness. However, when you delve deeper into each SDG, you encounter targets and a multitude of indicators. These indicators often necessitate extensive research and assessment by various groups to determine their relevance and impact on specific goals. There are more than 200 indicators for all the SDGs, making the integration into SEA reports potentially intricate. The overarching purpose of the SDGs is to provide a broad and comprehensive framework, not limited to environmental aspects but also encompassing cultural and societal dimensions. This comprehensive scope was intended from the beginning to foster communication and engagement with the public. It's designed to convey the message that this is a global effort worth fighting for. Integrating SDGs into SEA reports offers the advantage of adopting a broader sustainability agenda. It connects people from various areas and allows aspects of the SDGs to be embedded in different contexts. The shared sustainable language of the SDGs can facilitate this integration, promoting a common understanding. However, when we consider the practical design of SEA reports, challenges emerge. Bringing SDGs into the process may not be straightforward if the SEA report has not been designed this way. Pros and cons related to SDGs might surface at different stages, requiring careful navigation.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	The Sustainable Development Goals (SDGs) are indeed comprehensive and ambitious. They aim for the best possible outcomes, like eradicating poverty worldwide, not just reducing it. They focus on recovery, not just limiting declines. These goals were established with a vision of what we could achieve by 2030. However, since their inception in 2015, many unforeseen events, such as the COVID-19 pandemic and conflicts, have occurred. Unfortunately, these unforeseen factors tend to hinder progress towards the SDGs, with the exception of greenhouse gas emissions, which have decreased in 2020 but are already at record-breaking levels again. We are now at a critical juncture where achieving the SDGs by 2030 seems unlikely, and even by 2050, it remains challenging. The question arises: should we acknowledge our inability to meet them, or should we interpret this as an awareness of the difficulty of the task? This presents a messaging dilemma for the United Nations and the scientific community. Additionally, organizations like the Integrated Assessment Modelling Consortium (IAMC) play a crucial role in providing data to entities like the Intergovernmental Panel on Climate Change (IPCC). A similar framework might be necessary for the SDGs. IAMC's data contributes to IPCC reports, and envisioning a comparable system for the SDGs could enhance their assessment and reporting mechanisms.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	One of the most fundamental aspects to consider, and I believe it is of utmost importance, is the role of local communities and stakeholders. True change often originates from the grassroots level, driven by demand. When there's a demand for something, someone will step up to fulfill it. This approach is often referred to as a 'bottom-up' approach. In my prior experience, I worked on a project in Brazil before joining this organization. We were researching ecosystem services provided by tropical forests that go beyond carbon-related aspects. These services encompassed a wide range of factors, such as water recycling and addressing issues like waterfall pollution. Our team included diverse members, including researchers who closely collaborated with indigenous communities. Collaborating with indigenous communities offers a unique perspective, as they possess knowledge that extends beyond what traditional science knows. While they might not always be able to explain it in scientific terms, they have an innate understanding of their

	environment, including their deep knowledge of plants and their properties."
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	No examples were given.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	The strength of the SDG concept lies in its comprehensiveness. At a glance, one can easily grasp the essence of the SDGs through their seventeen primary goals. Even with the numerous targets, the intention was to maintain a broad perspective. This inclusivity allows for the active involvement of the general public in the discourse.

Integrating the SDGs into SEA reports offers the advantage of aligning with a more extensive sustainability agenda, one that transcends specific domains. This integration brings together individuals from diverse backgrounds. Additionally, the SDGs employ a shared sustainable language, making them a valuable asset in SEA due to their ability to facilitate communication and understanding |
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	No specific SDGs were given.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	No specific tools, methodologies or frameworks were mentioned.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	Raising awareness about the possibilities is the initial step. Once individuals become aware, the next natural progression is to engage in discussions about commitment and action.

Interview 4

Name:
Organization: The Netherlands Environmental Assessment Agency (PBL)
Role: Scientific policy researcher
Date of interview: 30-08-2023
Informed consent: Yes
Field of expertise: International climate policy and sustainable development

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the	Not very familiar with it in terms of the relationship between SDGs and SEA. Familiar with SDGs.

framework of Strategic Environmental Assessment?	
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	Not specifically between SDGs and SEA, but about the SDGs in general. Some SDGs are formulated abstractly, while some are very clear (such as poverty reduction). Environmental goals remain vague, therefore there are no specific methods yet in addressing SDGs in SEA yet. The Netherlands has not clearly articulated its ambitions regarding the SDGs. Standardization and a common language are seen as advantages of using SDGs. However, using SDGs as a checklist is cautioned against. Standardization is both a benefit and a challenge. I'm unsure if there are specific methods. The major challenge is that the SDGs require a translation into the national context. This is a matter for policy and politics. If they don't undertake this, it becomes difficult to assess.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	Challenges in integrating SDGs in SEA include the abstract nature of the SDGs, the lack of clear national ambition, and the coordination of SDGs within the Ministry of Foreign Affairs. Because it is within the Ministry of Foreign Affairs, it also doesn't easily reach local governments or other national agencies.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	The fact that the SDGs could be seen as a static agenda compared to the broader concept of well-being. But this is more about the SDGs than about SDGs in SEA.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	The role of stakeholders and local communities in using SDGs varies, and their engagement depends on existing ambitions and policies within municipalities. Some municipalities are looking at both SDGs and well-being, which have different histories. Standardization is emphasized, but it also has limitations.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	The interviewee does not provide specific examples of successful SDG application in SEA but suggests looking at relevant reports and studies.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	Benefits of incorporating SDGs in SEA include providing a common language and a set of indicators for measuring progress. However, challenges in translating SDGs into concrete actions and policies are acknowledged. Especially for SEA and EIA, because of the nature of SDGs. Because SDGs are not clearly defined, it can be challenging to fully standardize this within the branding process.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	Specific SDGs' relevance in SEA is not discussed in the interview.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental	The interviewee does not recommend specific tools or methodologies for integrating SDGs into SEA but suggests referring to relevant reports and studies.

Assessment? How can these tools be effectively utilized?	
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	Be specific about why and how SDGs are being used, considering the global nature of SDGs in national or sub-national contexts, and careful thought about their relevance in specific projects or programs.

Interview 5

Name:	████████████████
Organization:	Gemeente Súdwest-Fryslân
Role:	Policymaker / project leader
Date of interview:	30-08-2023
Informed consent:	Yes
Field of expertise:	Environmental Vision (at the time of working with the SDGs)

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	████████ expressed a strong familiarity with the Sustainable Development Goals (SDGs) and stressed their relevance within the framework of Strategic Environmental Assessment (SEA). She has actively integrated SDGs into the municipal environmental vision.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	████████ explained that she employs a variety of methods and approaches to address SDGs within SEA. She translates SDGs into measurable indicators and criteria by aligning them with existing environmental and social assessment parameters.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	According to ████████, the main challenges in integrating SDGs into SEA include a lack of awareness among stakeholders, coordination difficulties, and prioritizing relevant SDGs for each specific project.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	████████ identified potential barriers such as institutional resistance, budget constraints, and the need for capacity building to effectively integrate SDGs into SEA.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	████████ emphasized the importance of stakeholder and local community engagement in applying SDGs in SEA. She recommended improving participation through early consultation, public meetings, and transparent communication to ensure effective implementation.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	████████ cited specific successful cases where SDGs were effectively applied in environmental visions, but not specifically in SEAs. She highlighted factors such as strong political support, interdisciplinary collaboration, robust data utilization, and clear communication as key contributors to success.

Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	██████ discussed potential benefits, including enhanced sustainability assessments and informed decision-making through the incorporation of SDGs in SEA. By addressing social, environmental, and economic dimensions, SDGs contribute to more holistic and sustainable decision-making.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	██████ emphasized the context-dependent relevance of specific SDGs but stressed the importance of those related to environmental conservation, public health, and social equity in SEA due to their direct impact on project outcomes.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	██████ recommended tools and frameworks such as Life Cycle Assessment and Multi-Criteria Analysis for integrating SDGs into SEA. She emphasized the need for training and capacity building to effectively utilize these tools.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	Drawing from her expertise, ██████ recommended increasing awareness of SDGs among stakeholders, fostering collaboration between government, industry, and civil society, and developing guidelines and best practices for integrating SDGs into SEA. She also stressed the importance of monitoring and evaluation to ensure effective implementation.

Interview 6

Name: ██████████████

Organization: Aalborg University of Utrecht (Copernicus Institute of Sustainable Development) / The Netherlands Environmental Assessment Agency (PBL)

Role: PhD candidate / research assistant in: Department of Sustainability and Planning, The Technical Faculty of IT and Design, and The Danish Centre for Environmental Assessment

Date of interview: 01-09-2023

Informed consent: Yes

Field of expertise: SDG integration in Environmental Assessment

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	I am quite familiar – it is the topic of my PhD study. I am most familiar with the Danish context for using SDGs, with some insight into Irish practice. My answers will reflect this geographic boundary.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	SDGs appear in different places in the SEA report. At times, SDGs appear in the introduction to an SEA, typically as a part of the plan description or as context for the plan development. They also in the section of the SEA about policies and objectives that are relevant for the assessments. Other times, relevant SDGs are linked to EA topics, but this does not always lead to actively using them in the process (merely recognizing the interlinkages). Other times, they appear alongside impact assessment of the different EA topics. And lastly, they also appear in separate sustainability chapters where their impact is typically assessed. The methods are typically, as far as I have been able to tell, very ad hoc and unsystematic, meaning there is not one way to do it. It depends on the consultant or developer doing the work. When impact is

	measured, it is typically qualitative, determining whether the relevant SDGs are positively, neutrally, or negatively impacted. Sometimes the SDGs are discussed
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	The main challenge is knowing how to operationalize them, meaning, how do we make the internationally developed goals relevant in an SEA context? How can we 'scale' impacts so that they make sense and can be measured on a plan level. It is also finding the capacity to be able to develop the necessary methods for integration, while knowing what the added-value will be, to minimize wasting time in a process already restricted by a tight time schedule.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	It depends on the practitioner group (consultants, developer, authority). Here I would like to refer to my paper, https://www.sciencedirect.com/science/article/pii/S0195925523000719, where I identify several 'capacities' in both Danish and Irish contexts – see Table 2. One of the main barriers (for consultants) is the lacking demand from developers/authorities. Developers are often concerned about the extra 'work' and costs without knowledge of the added-value (most applicable for project level EIA). And authorities are most tied to their role of needing to ensure legislative compliance – they are often wary of adopting new things in the EA because they do not know whether it will compromise legislative compliance.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	I do not have very much to say about local communities, but as far as stakeholders go, everyone has a role in being curious for how to improve the EA process and to be willing to try new approaches and use new methodologies. The public have a role in holding authorities accountable for plan development that meets political ambitions and goals – i.e. through public hearings.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	I can provide several cases of integration, but whether they have been 'successful', I am not certain. It depends on what you mean by 'successful'. I do not have knowledge of SDG integration that really has changed the outcome of an SEA. I can refer you to this report that talks of different ways of working with SDGs, and has a long reference list of reports (albeit both EIA and SEA) with SDGs. But I am not entirely sure I would call it successful. https://dreamsproject.dk/download/2888/
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	I think one of the biggest benefits is being able to communicate impacts with the public in a different way than a very technical report. If this improved communication allows for better participation at public hearings, it could lead to more transparent and influential SEA processes. The SDGs can also help us to clarify the scope of an SEA – is there content from the SDGs that are relevant when assessing impacts on environmental factors. And if integrated early enough, they can also help create a common language for stakeholders involved, and help coordinate visions for plan development. And lastly, using them in EA, which is a process that typically identifies negative impacts, we can do away with tendencies of SDG-washing and only associating SDGs with areas where we positively contribute – thereby creating better transparency of SDG impacts overall. This is just to name a few. You can also refer to the same Irish/Danish article I linked above.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	Not really, but there are perhaps goals and targets that align better with SEA than others. Here I can refer you to a report where a taskforce (myself included) reviewed the 169 targets to find those that are most relevant for EA (both EIA and SEA) practice in Denmark. https://dreamsproject.dk/wp-content/uploads/2023/09/reduceret-V2-DK-online-FNs-verdensmal-i-miljovurderingspraksis.-En-dansk-Standard_2023-kopi.pdf.
Q9: Are there specific tools, methodologies, or frameworks	I would recommend the framework by Kørnøv et al. (2020) on different levels of SDG integration:

that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	https://www.sciencedirect.com/science/article/pii/S019592552030055X. As far as methodologies go, I can refer you to this report on different approaches to localizing SDGs in EA: https://dreamsproject.dk/wp-content/uploads/2023/08/Localizing-the-SDGs-in-Environmental-Assessment-2.pdf.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	This is quite idealistic in nature, but I would say, coordinate ambitions early on in the SEA process and use the resources that are available. Dare to challenge traditional methods and approaches to EA and try new things.

Interview 7

Name:	▮▮▮▮▮▮▮▮▮▮
Organization:	Independent consultant, who has done many assignments for The Association of Dutch Municipalities (VNG) related to the VNG's 'Municipalities for Global Goals' campaign
Role:	Consultant and policy advisor
Date of interview:	17-08-2023
Informed consent:	Yes
Field of expertise:	SDGs, sustainable development and local governance/public administration, nature-agriculture, international development

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	Very familiar with SDGs, also in relation to spatial processes, and co-author of a piece on the use of SDG's as a 'compass' in municipal spatial plans (Praktijkproef VNG). Not involved with SDG's in a one-to-one relationship with Environmental Impact Assessment (EIA). The SDGs are not yet widely used in spatial processes.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	If you want to balance different interests and goals, there are various methods for doing so. I believe the Environmental Impact Assessment Commission (NCEA) works with the Wheel of the Physical Environment (Rad van de Leefomgeving). Some components of this are very similar to those of the SDGs. So, you don't necessarily need the SDGs for substantive [assessment]. In de Praktijkproef VNG, we have done some initial work in detailing indicators for specific (sub)goals. Municipalities expressed a preference for using (their own) existing indicators, but were also interested in introducing new ones for areas which are now poorly covered.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	The actual integration because SDGs are rarely used within spatial processes. The willingness to integrate them can be a challenge.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	That there is no willingness to implement it, causing it to ultimately not take off. Additionally, a potential barrier is that other methods are already being used, such as the Wheel of the Living Environment and the Monitor of Broad Prosperity, which already incorporate aspects of the SDGs. This can lead to an overload of similar frameworks.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their	This is not my main expertise but clearly, working with the SDGs requires involvement and interaction of stakeholders/experts from multiple disciplines. The municipality of Súdwest-Fryslân is the only municipality which I know personally where the SDG's have been at the heart of the municipal vision for the physical environment (omgevingsvisie).

engagement be enhanced to ensure effective implementation?	When preparing for this vision, consultations and meetings took place across the municipality. Interestingly, it was an individual resident who strongly suggested to use the SDGs as reference framework, which that municipality decide to do. A great example of bottom-up participation.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	Not an example where SDGs were applied in SEA, but in an environmental vision (omgevingsvisie): Súdwest-Fryslân municipality. A key factor for success in this case was having a programme manager who saw benefits in it.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	The SDGs (UN Agenda 2030) have been endorsed by the Netherlands. The physical environment is a key area to apply them, as many SDG goals and targets meet here. Incorporating the SDGs into SEA is an important demonstration that we take the goals seriously. The SDGs as an internationally agreed framework also create legitimacy and robustness. Compared to other assessment tools already used for spatial plans/projects, the SDGs are likely to add more emphasis on various social dimensions. But the most significant potential value of SDGs is that they provide a value framework and the fundamental principle/attitude that we should strive for a proper balance between economic activity, social welfare, and healthy ecosystems. However, precisely for this reason, it might not happen, because the focus on economic goals is still so strong in the Netherlands, at all levels. It requires (political) willingness to fundamentally change the nature of the decision-making process. The Brundtland definition of sustainability is essential! The Netherlands is still performing poorly in this regard. If you start from the basic principle that there should be a balance between the three P's (People, Planet, Prosperity), then you need to begin by restoring that balance, and we have a very long way to go there.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	They are all relevant. In the 'praktijkproef VNG' with an SDG-based assessment tool for municipal spatial plans (Omgevingsvisie), we have listed all relevant subgoals (targets) and clustered them around 12 themes. When taking all these dimensions into account from the start, including social dimensions, municipalities are likely to opt for different, more integrated approaches and solutions.

From an ecological perspective, SDGs 6, 12 and 15 are of huge relevance in the Netherlands, as (chemical) pollution and biodiversity loss are huge issues which get way too little attention/priority in municipal development plans. |
| Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized? | Not discussed. |
| Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in | Not discussed. |

the field of Strategic Environmental Assessment?	

Interview 8

Name:	▮▮▮▮▮▮▮▮
Organization:	Provincie Overijssel
Role:	Policymaker
Date of interview:	15-08-2023
Informed consent:	Yes
Field of expertise:	Environmental Impact Assessment

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	I am familiar with the Sustainable Development Goals (SDGs), although I may not be able to name them all. At our provincial office, we explored which methodology to use for the environmental impact assessment (EIA) in the context of our regional vision. We considered the example of Zeeland, which had used the SDGs for their regional vision and EIA.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	Ultimately, we did not use the SDGs for our SEA. We opted for a different methodology. One reason was the broad scope of the SDGs, which included objectives less relevant to our provincial policies. We chose a method called the "Wheel of the Living Environment" used in the National Environmental Vision (NOVI), as its indicators were more aligned with our goals.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	One challenge was the extensive nature of the SDGs, including some goals more suitable for international development rather than provincial policies.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	The broadness of the SDGs could make them less applicable to specific regional plans.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	Stakeholder engagement is essential. For example, in the context of health-related SDGs, organizations like the Public Health Service (GGD) and the National Institute for Public Health and the Environment (RIVM) possess valuable data and expertise. Their involvement can be crucial in using the SDGs effectively in SEA.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	I don't have direct experience with cases where the SDGs were applied in SEA. However, I found Zeeland's approach to using the SDGs in their regional vision and EIA interesting, although I can't speak to its success or specific factors contributing to it.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	The use of SDGs can bring uniformity and clarity to the assessment process if multiple governments adopt them. This could enhance the consistency of methods and explanations. This trend is already visible with the "Wheel of the Living Environment" being adopted by many authorities.

Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	While the SDGs cover a broad range of topics, some are more applicable to SEA, such as health, soil, and water-related goals. These align well with environmental assessments, although not all SDGs are equally suitable for this context.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	I don't have specific recommendations for SDG integration tools in SEA. However, having practical guidance on how to make SDGs more applicable and measurable within the context of regional planning and SEA could be beneficial.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	As mentioned earlier, it's important to concretely tailor the SDGs to the specific focus of the plan or assessment. Creating practical tools for making SDGs more actionable and understandable within SEA could encourage their adoption by more authorities.

Interview 9
Name: ▮▮▮▮▮▮▮▮
Organization: Ministry of Infrastructure and Water Management
Role: Policymaker National Environmental Programme (NMP)
Date of interview: 13-09-2023
Informed consent: Yes
Field of expertise: Sustainable Development, SDGs, Environmental studies

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	Well, as far as I know, not with us, but when we started the EIA procedure, I also said I wanted to include broad prosperity aspects. They have a lot of overlap. I&W has created a framework for broad prosperity, which has been a guide to start the EIA. In this way, we gained some experience. We are writing the NPM (Nationaal MilieuProgramma), halfway, to do an EIA now is a different kind of process for the construction of a road or building.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	▮▮▮ discussed the importance and relevance of SDGs within SEA, but specific methodologies and indicators were not detailed.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	The first one is quite practical – one has to want it because it's all extra work. People say SDGs are nice, but what do I do with them in my regional project? They often see it as more of a threshold. It's nicely designed, but in the government, they still struggle with how to apply the SGs in policies. It needs to be more than just monitoring. There is a need for some kind of workshop/information package to come from the SDGs, explaining how we can better apply SDGs to policies in general. In the EIA, it's the next step, but because you're looking at various aspects (like with broad prosperity), it's a great way to connect. It's much more engaging. SDGs can replace the 'nice' aspect and make it more accessible. Plus making the benefits of using the

	SDG clearer so they justify the extra work hours. Make using them part of the work culture (more easily said than done!)
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	Extra work... And you have to find someone who is enthusiastic about doing this. And the EIA, it's not that it's used more, it's being used less, and then it will require more energy and time due to the SDGs. This is a real obstacle. With NMP, how can we promote the EIA even more? But then, what are we going to do with the results? The results of the EIA are not necessarily leading to drastic changes in plans, often its more minor adjustments. Working with SDG at the core should be seen as a one of the core functions of work, now that is not yet the case and even when it is, people find it hard to know there to start. How to move from idea, to action, to impact.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	It's important that we start pioneering this. Local authorities need to say, 'We're going to sit down with the SDG house and document our experiences, what works well.' But it's logical because the Netherlands has also committed itself. It makes an EIA much stronger when approached in this way.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	No, not familiar.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	I think firstly, it's about accessibility. Residents understand it, businesses understand it, it's an international instrument, and therefore, it has international backing. Suppose we are building and causing damage to aspects that are important for the SDGs, it legitimizes it. It legitimizes your story, makes it more accessible and understandable. You connect things that are related. Legitimacy is very important, and maybe the EIA will even improve because of it. They can also be updated. There may be current aspects of an EIA that can now be expanded upon by the SDGs. It can also be more widely accepted because you would be looking at more than just the environment. We're looking at health, liveability. It's just important across the board.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	Life on land, life below water, public health, climate, clean water, sustainable cities, sustainable consumption and production. But the concept of health appeals to everyone, whether you are rich or poor, wherever you live. Health as a focal point for EIA.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	███ primarily discussed the importance of SDGs, their alignment with SEA, and the need for effective communication or branding. There are no specific tools or methodologies.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in	I would do it / use it; I consider it important. Look, the EIA isn't that exciting, and that needs to change. The SDGs resonate with people. It's appealing, good branding, so I think they can learn a lot from each other in that aspect. What I also think is important is that it's something you want, what the residents want. In the EIA, you have serious people with serious glasses, and with the SDGs, you have

the field of Strategic Environmental Assessment?	younger people with a bit more flair. The SDGs have good branding. I think with the planning EIA, it's the older environmental folks. Branding is very important. If people in society say, 'I live in a place with a lot of pollution, why hasn't there been a planning EIA?' You're doing it for society, but they also need to know that it exists and that it's important.

Interview 10

Name:	████████████
Organization:	NCEA
Role:	Chair member
Date of interview:	10-08-2023
Informed consent:	Yes
Field of expertise:	Sustainable Development, SDGs, international affairs, governance

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	████: I have broad experience working with Agenda2030 and the Sustainable Development Goals (SDGs) in different capacities, as a strategy-guiding agenda in both international and national contexts. The SDGs are certainly relevant to Strategic Environmental (and Social) Assessment (SEA). They are human rights driven and aimed at an ecologically & socioeconomically sustainable, and future-proof policies driven agenda. The SDGs provide one of thé, if not thé leading frameworks for addressing sustainability and developmental challenges in an integrated manner.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	████: In SEA, so far, mostly, we implicitly consider the SDGs. We do measure policies and projects' impact on issues such as air quality, water management, energy, health issues, and infrastructure development, but an explicit reference to SDGs lacks, let alone that we measure the potential impact of policies in a consistent and well-defined manner. We could win by explicitly identifying how our projects align with specific goals and indicators
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	████: One challenge is ensuring that all stakeholders understand the SDGs and their relevance. That includes experts on Environmental and Social Impact of policies and projects. Another is developing practical methods to measure progress and impact. Additionally, the applicability of certain SDGs may vary depending on the context. That context might also define the way SDGs are taken into consideration. There is no one size fits all.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	████: The SDGs represent an integrated agenda, that touches upon many areas, relevant in any socioeconomic and ecological context. Barriers might include resistance to change, but also a lack of awareness about the SDGs. On top of that, measuring impact within the framework of the SDGs can be complex and requires quite some knowledge, capacities, and training. Aligning existing regulations and policies to the goals and vice versa to adequately localize SDGs-driven policies can be challenging and time consuming. Cooperation within and between different government agencies, as well as meaningful interaction with societal stakeholders is essential for success.

	Overcoming these barriers requires strong and positive leadership, strategic thinking, capacity building, practical tooling, a phased approach, and a sharp eye for the context.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	████: Stakeholders and local communities play a vital role in achieving the SDGs. Their engagement can be enhanced through participatory approaches and meaningful interaction, such as public consultations and collaborative decision-making, taking into account the views and interests of different stakeholders. It should be ensured that their perspectives are fully and effectively considered in the assessment process
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key factors contributing to their success?	████: As underlined, thus far, I haven't seen explicit application of the SDGs as part of a SEA. Implicitly, one could state that SEAs that are being undertaken in an optimal fashion and link the findings to policies, plans and programmes, and implementation thereof, do contribute to SDGs achievement as a matter of fact. Whether mentioned or not, if SEAs are well done and follow up secured, they can positively influence the achieve of SDGs.
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	████: All countries have committed themselves to SDGs achievement and must report on progress, so clarifying in what manner any approach contributes to that objective is in the interest of governments, one would hope. Explicitly incorporating the SDGs into SEA assessment processes could also enhance the assessment's sustainability focus, fostering better, more aligned, and integrated decision-making. In the follow-up phase, it helps align projects with national policies, plans, and programmes, based on global sustainability objectives. This would ideally lead to positive environmental, social, and economic outcomes.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	████: SEAs have to consider the broader context in which the assessment takes place. This implies that most of the time multiple SDGs are relevant and must be considered. Certain SDGs, like those related to clean water, energy, climate, health, infrastructure, inequalities, and responsible consumption and production, are particularly relevant in SEA. This also goes for SDG16, which is closely related to good governance. The integrated character of SEAs makes them potentially highly impactful. We shouldn't forget though, that the SDGs represent a comprehensive agenda, the integration of which requires high levels of strategic thinking, knowledge, experience and organizational & collaboration capacities.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	████: While no one-size-fits-all approach exists, tools like sustainability checklists and impact assessment guidelines can help integrate the SDGs into SEA. Since the 2015 adoption of Agenda 2030 and the SDGs, many dashboards and tools have been developed that can be helpful. Training programs, capacity building and full understanding of national, regional and local contexts are essential to effectively utilize these tools. It is important not to create a 'tick the boxes' reality whereby tools, methodologies or frameworks become leading instead of the objective to really contribute to positive impact.

| Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment? | ███████: I recommend raising awareness about the relevance of well-considered SEAs for the SDGs achievement. High quality SEAs can really contribute. The influence of SEAs on sustainable development and the subsequent planning and programming decisions depends on country ownership. That should be secured.

Providing training and fostering collaboration among stakeholders is a prerequisite for success. In the context of weak governance 'coaching' on the integrated planning and SEA-process can be effective to enable governments to make effective use of the SEA.

Policymakers should consider aligning legislation, regulations and policies with the SDGs, and promote collaboration and coordination at all government levels both within and between different departments.

Professionals should start measuring and reporting on SDG related impacts in their assessments.

Researchers can contribute by developing robust and at the same time practical methodologies for SDG integration in SEA, building on the work that has already been done. |

Interview 11

Name: ███████████

Organization: NCEA

Role: Member International Department

Date of interview: 17-08-2023

Informed consent: Yes

Field of expertise: Environmental Assessment, International Affairs

Q1: To what extent are you familiar with the Sustainable Development Goals and their relevance within the framework of Strategic Environmental Assessment?	████ is familiar with the SDGs, and has some understanding of what EIA and SEA means for the SDGs or vice versa, but he is not an expert.
Q2: Can you elaborate on the specific methods or approaches used to address the Sustainable Development Goals within the Strategic Environmental Assessment framework? How are the Sustainable Development Goals translated into measurable indicators or criteria during the assessment process?	████ is on the board of the DREAMS project, which is a project that primarily focuses on the integration SDGs into SEA and EIA.
Q3: What do you consider the main challenges in integrating the Sustainable Development Goals into the practice of Strategic Environmental Assessment?	The first challenge is undoubtedly the complexity. SDGs encompass a wide range of sustainability issues, and they are interconnected. This can make the integration of SDGs into SEAs complex because it requires consideration of all the interrelationships and potential impacts. The second challenge is the balance between concise reporting and depth of information. A traditional challenge in EIA and SEA is striking the right balance between providing sufficient information and avoiding overly detailed, time-consuming reports. Integrating SDGs has the potential to make reports more complex, which may be contrary to the Commission's goals.

	Another challenge, which also acts as a barrier, is that the use of SDGs in SEA is context-dependent. It can vary based on the sector, location, available resources, and timeframe. This makes it challenging to establish uniform guidelines for all situations. The fourth challenge is that money and available resources play a role in integrating SDGs into SEAs. In some cases, there may not be enough time or resources available to conduct comprehensive SDG analyses because it also requires the involvement of personnel. The fifth challenge is finding a balance between the utility of using SDGs in SEA and the complexity. It is essential to strike a balance between enhancing the relevance of SEAs by integrating SDGs and avoiding unnecessary complexity.
Q4: What possible barriers or limitations do you see in integrating the Sustainable Development Goals into SEA?	While there are many benefits, there are also numerous barriers corresponding to the challenges. The first is the complexity, as mentioned earlier. The SDGs encompass a wide range of sustainability issues and interconnections. This can make SEAs complex and overwhelming because it can be challenging to address all relevant SDGs and their relationships in a single report, while aiming to keep an SEA straightforward. Another barrier is context dependence. The use of SDGs in SEAs heavily relies on the specific context, such as the sector, location, and available resources. There is no one-size-fits-all approach to integrating SDGs in SEAs, making it challenging to adapt to the unique circumstances of each project. A third barrier relates to practical limitations, which are tied to the context. SEAs often face constraints like time, budget, and available human resources. It can be difficult to conduct comprehensive SDG analyses within these practical constraints. A fourth barrier concerns goal orientation versus impact orientation. SEAs traditionally focus on assessing a project's environmental impacts, while the SDGs are goal-oriented. It requires a shift in thinking to integrate a more goal-oriented approach into impact-focused EIA processes. A more implicit barrier is the cultural change required for the use of SDGs and truly embracing them. Cultural change is necessary to be open to alternative outcomes that align with the SDGs, even if they conflict with the original project proposal. For example, there was a municipality that strongly desired a sustainable industrial park, whereas, for true sustainability, an industrial park should not be built.
Q5: How do you perceive the role of stakeholders and local communities in the application of the Sustainable Development Goals in Strategic Environmental Assessment? How can their engagement be enhanced to ensure effective implementation?	The role of local stakeholders is primarily to look at the long term and how they can make sustainable choices, and the SDGs can assist in this regard because they focus on long-term perspectives. For example, a municipality may make a choice that appears sustainable now but may not be so in a few years. Alternatively, the same municipality may make a decision that is sustainable for its own community but has effects visible beyond the borders of the Netherlands, making the so-called sustainable decision no longer sustainable.
Q6: Can you provide examples of successful cases where the Sustainable Development Goals have been effectively applied in Strategic Environmental Assessment? What were the key	As far as is known, there are no specific SEAs in the Netherlands that have incorporated SDGs. In Denmark, within the DREAMS project, significant research is being conducted in this regard, and theoretically, it should be feasible, but in practice, it has not been the case so far

factors contributing to their success?	
Q7: What are the potential benefits of incorporating the Sustainable Development Goals in the assessment process of Strategic Environmental Assessment? How can this contribute to sustainable decision-making?	Fortunately, there are also numerous potential benefits associated with the application of SDGs in SEA. The first advantage is a broader approach to sustainability. Using SDGs can lead to a more holistic assessment of a project's impact, considering not only environmental effects but also social and economic impacts, thereby promoting a more comprehensive view of sustainability. A second benefit is the common language. SDGs serve as a shared language and conceptual framework for sustainability. This can facilitate communication and understanding among various stakeholders. While SEA also aims to be sustainable, the SDGs explicitly emphasize sustainable development. Integrating SDGs underscores the importance of sustainable development in plan and program assessment. It encourages developers and decision-makers to prioritize sustainability. Another advantage is that it can enhance stakeholder engagement because many stakeholders, such as municipalities, are already using the SDGs and are becoming aware of the broad sustainability issues that affect them. The application of SDGs can also make negative effects more visible on a global and national scale since it becomes clear which SDGs are being addressed and which are not. One of the most significant long-term benefits is the emphasis on a long-term vision of sustainability. The use of SDGs encourages looking beyond the short term and considering the interests of future generations, contributing to sustainability. Moreover, it looks beyond what happens within local boundaries.
Q8: Are there specific Sustainable Development Goals that you consider particularly relevant or have a significant impact when applied within the framework of Strategic Environmental Assessment? Why?	███ did not mention specific SDGs but emphasized that relevance depends on the context.
Q9: Are there specific tools, methodologies, or frameworks that you would recommend for integrating the Sustainable Development Goals in the practice of Strategic Environmental Assessment? How can these tools be effectively utilized?	Currently, there are no specific methods in use in the Netherlands that incorporate SDGs into SEA. However, the themes addressed in an SEA report are closely related to various SDGs. An example is the SDG-Wedding Cake, which illustrates the interconnectedness of various sustainability aspects, including those within an SEA. Another approach we discuss within the NCEA is to initially apply it on a smaller scale, for instance, by using an icon representing an SDG related to water when the topic in the SEA is water-related.
Q10: Based on your expertise, what recommendations or considerations would you offer to policymakers, professionals, or researchers interested in applying the Sustainable Development Goals in the field of Strategic Environmental Assessment?	███ did not provide specific recommendations but highlighted the need to avoid making SDGs overly complicated and to ensure clear communication to stakeholders. He emphasized that achieving SDGs should be the goal and that the public should find them relevant and understandable.