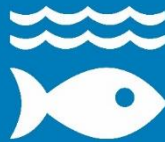


‘Conserve and sustainably use the oceans, seas and marine resources’

SUSTAINABLE
DEVELOPMENT
GOALS

14 LIFE
BELOW WATER



HAS THE UN SDG14 ‘LIFE BELOW WATER’ BEEN IMPLEMENTED IN THE NETHERLANDS?

AN ANALYSIS ON THE STATUS OF IMPLEMENTATION OF GOAL 14
‘LIFE BELOW WATER’ IN THE NETHERLANDS

Joren Room

Bachelor thesis report



**van hall
larenstein**
university of applied sciences



Ministry of Agriculture, Nature and
Food Quality of the Netherlands

Has the UN SDG14 ‘Life Below Water’ been implemented in the Netherlands?

An analysis on the status of implementation of Goal 14 ‘Life Below Water’ in the Netherlands

Bachelor thesis report

Coastal and Marine Management

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Soest, December, 15th 2020

Front cover: The Netherlands from space, made by ESA astronaut Andre Kuipers, on board of the ISS (ESA, n.d.).

Abstract

While the status of UN SDG14 *Life Below Water* lags behind in the Netherlands, target horizons for certain targets have been either reached or are fast approaching (2020, 2025 2030). In 2016, recommendations have been formulated by the PBL Netherlands Environmental Assessment Agency, for adjustments in the implementation of the environmental-related SDGs in the Netherlands. The research question of this thesis concerns: **To what extent has the UN Sustainable Development Goal 14 'Life Below Water' been implemented in the Netherlands, in regards to the recommended adjustments on SDG implementation, proposed by the 2016 PBL Netherlands Environmental Assessment Agency?** The aim of the research of this report was to provide advice to Dutch policy makers at the ministry of Agriculture, Nature and Food Quality and other interested stakeholders on areas that need further implementation. Analysis was conducted through desk and literature analysis (*Part A*) and interview analysis with a semi-structured approach (*Part B*). Results showed that the SDG 14 ambition level was not translated into the national context. The horizons (end-year) of national policy targets that cover themes of SDG 14 were not found to align with the concerned SDG 14 target horizons. Also, a national long-term vision was lacking. As coordinated efforts on this Goal were found, ministries responsible for SDG 14 and targets were not found determined but are assumed where it links with policy areas, which is not clear in all cases. The Council of Ministers is the assigned authority on policy coherence on paper, interview results showed this to be the joint responsibility of ministries, held accountable by Foreign Affairs. As the long-term vision was lacking, active participation in defining and implementing this vision was not carried out. However, societal parties were found to contribute to achieve SDG 14, although efforts were in several cases, not made specific. The extent of active participation in defining policy targets was found concerning consultation and in cases, through stakeholder participation. Participation concerning the implementation of policy targets could not be analyzed within the time-budget of this research. The periodic national monitoring in the Monitor of Well-Being & SDGs, reported on just four indicators and lacks indicators concerning the Wadden Sea. Although this report was published with a national appreciation on the status of the SDGs in the Netherlands, no reporting on accountability on underlying developments and policy performance evaluation was found. Few interview respondents were able to confirm or debunk findings from desk and literature analysis. This was due to the limited number of experts that could actively provide information about SDG 14 and its implementation in the national context. Also, SDG Focal Points at the ministries were found oriented on the international situation. Most adjustments, proposed by the PBL policy study have not been found implemented. Exceptions were found concerning the coordination of policy efforts on SDG 14 and cases of societal participation to improve ocean sustainability. Recommendations were formulated that largely refer to the recommended adjustments that were proposed by the PBL policy study in 2016.

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1. Introduction and problem description

According *Our Common Future*, also known as the Brundtland Report, "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (International Institute for Sustainable Development [IISD], n.d.). The United Nations Sustainable Development Goals (SDGs) (Figure 1) is a framework that is established on the 25th of September 2015 by the United Nations General Assembly and is the heart of the 2030 Agenda for Sustainable Development. All UN Member States adopted the 17 Goals for Sustainable Development which set up a 15-year plan to achieve the Goals (United Nations, n.d.). The SDGs sets challenges for all countries concerning environmental (*planet*) as well as social (*People*) and the economic (*prosperity*) dimensions. Conditions in order to achieve the 2030 Agenda are *Peace* and cooperation (*partnerships*) (Kenniscentrum Wetgeving en Juridische zaken, 2019). The SDGs consists of 17 goals (Figure 1) that encompasses a total of 169 targets and 230 indicators. Governments and their countries are primarily responsible for implementing the 2030 Agenda (OECD, 2016).



Figure 1. The Sustainable Development Goals (SDGs) that replaced the Millennium Development Goals in 2015 (United Nations, 2015).

Individual countries are called upon to translate the global goals into long-term visions with clear targets and integrated policy agendas based on the national context. Not only governments but also businesses and other parties work on the 2030 Agenda (Ruijs, Van der Heide, & Van den Berg, 2018). This research focuses on SDG14 *Life Below Water* with the aim to 'Conserve and sustainably use the oceans, seas and marine resources'. In the following, the different targets and indicators of SDG14 have been described as well as the importance to achievement.

SDG14 encompasses 10 targets with an indicator for each target. The targets can be classified in *near-term* (0-5 years), *mid-term* (5-10 years) and *long-term* (beyond 10 years) timeframes. The SDG tracker presents all targets and indicators and tracks global progress using the 'Our World in Data' database with official statistics from the UN and other organizations (SDG Tracker, n.d.). Urgency to achieve *Life Below Water* is evident as the strategies and contributing activities necessary to achieve

the strategic objectives (presented in Figure 5) are set for 2020 (14.2, 14.4, 14.5, 14.6), one Target is set for 2025 (14.1.1) and others for 2030 (14.3, 14.7, 14.A, 14.B, 14.C) (Our World In Data, n.d.). The target years for the indicators have either already been reached (2020) or are fast approaching (2025, 2030) and international concerns regarding ocean sustainability are rising.

Peter Thomson, the UN Secretary-General's Special Envoy for the Ocean, spoke on the importance of the ocean to the future of the planet, during the reception at the Ocean Conference in 2017. The oceans cover 70 per cent of the earth's surface and absorb 25 percent of all carbon dioxide CO₂ emissions and 90 per cent of the heat from greenhouse gas emissions. It has been described as the lungs of the planet, as it generates 50 per cent of the oxygen we breathe. About 60 per cent of the world's major marine ecosystems have been degraded or used unsustainably. The oceans are the largest biosphere and climate regulator. As we cannot have a healthy planet without having a healthy ocean, it is said that trouble for the oceans means trouble for the people (United Nations, 2017). Europe, surrounded by seas and oceans, have been shaped by its climate, economies and societies over centuries. According to the European Commission, the 'blue' economy account for 5.4 million jobs (Bruyninckx, 2018). In general, the Kingdom of the Netherlands has great interest in the oceans' health and sustainable use of it (Government of the Netherlands, 2017). Responsible ocean management requires continual effort from the government in cooperation with other countries as well as national and international organizations, the private sector and civil society (Koenders, 2017).

In 2016, a plan of action was presented on the implementation of the SDGs by the former ministries of Economic Affairs, Infrastructure and Environment, Social Affairs and Employment as well as the ministry of Education, Culture and Science. The plan states that only small provisions are taken, counting on already existing institutions, work distributions and policy initiatives instead of a particular SDG implementation program (Ploumen, 2016). In the same year, eight ministries conducted an inventory of the central policy regarding the SDGs in the Dutch context, whereby established and announced policy has been described for all the targets (Government of the Netherlands, 2016). The plan of action refers to a 2016 policy study by the PBL Netherlands Environmental Assessment Agency on the *'Sustainable Development Goals in the Netherlands. Building Blocks For Environmental Policy For 2030'*. The policy study addressed policy challenges in the Netherlands in regards to environment-related SDG targets and concluded that the implementation could build on already existing goals, policy programs and monitoring reports, but that adjustments were needed in order to successfully implement the SDGs in the Netherlands, which are formulated in four types of recommendations:

1. First of all, the global SDGs have to be translated into a national ambition level, consisting of a clear, long-term vision supported by new and updated national policy targets for 2030.
2. Secondly, successful SDG implementation requires close coordination of policy efforts and responsibilities between various ministries and provincial and local authorities, thereby ensuring policy coherence.
3. Furthermore, active participation of various groups within society (e.g. citizens, businesses, NGOs) is required in defining and implementing the national vision and policy targets.
4. Finally, a periodic national monitoring report is needed to track progress and – depending on the political ambition – to promote accountability by explaining underlying developments or even to evaluate policy performance.

(Lucas, Ludwig, Kok & Kruitwagen, 2016, p. 8)

Today, four years later, all the SDG14 targets set for 2020 (14.2.1, 14.4.1, 14.5.1, 14.6.1) had to be achieved. The status of *Life Below Water* in the Netherlands is alarming. Several international reports publicize on the status of the SDGs. The latest publication of the Bertelsmann Stiftung and the

Sustainable Development Solutions Network (SDSN) shows the rankings in dashboards where the performance of the Netherlands on SDG14 has been labeled as a ‘major challenge’ and the trend in achieving the goal was labeled, ‘moderately increasing’ (Figure 2) the ‘average performance by SDG’ (Figure 3) indicates that SDG14 is behind most other goals (Sachs, et al., 2020).

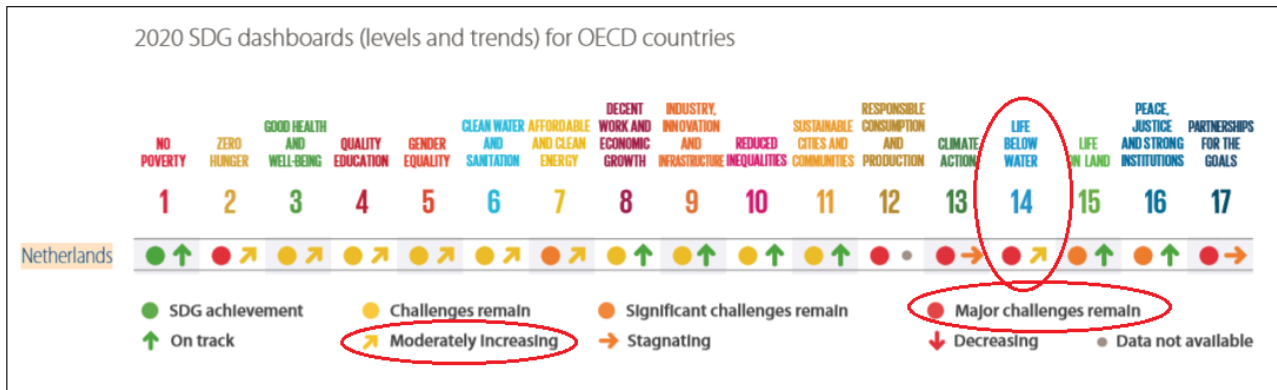


Figure 2. A fragment of the international dashboard on the status of the Netherlands in achieving the SDGs (Sachs et al., 2020).

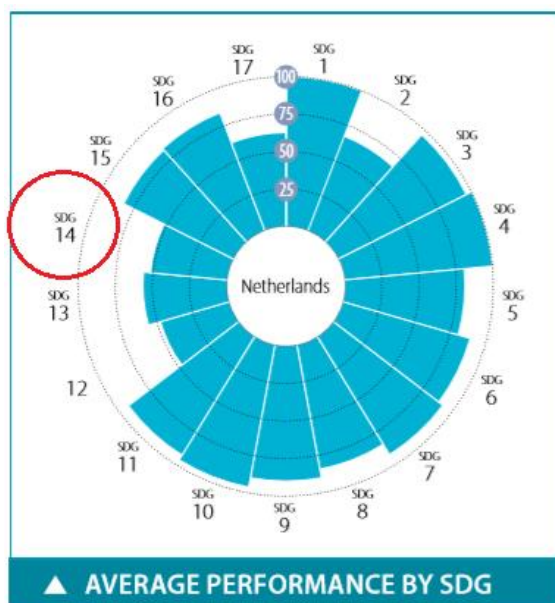


Figure 3. The performance of the Netherlands in 2020, shown by the Bertelsmann Stiftung and SDSN (Sachs et al., 2020).

In May 2020, the status of this goal was confirmed on a national level in two annual reports that were published by Statistics Netherlands and the central government that indicated, that the Netherlands has a poor position in regards to SDG14 (Government of the Netherlands, 2020). Reporting of national efforts to achieve the SDGs is annually presented by the central government together with a broad spectrum of organizations. The latest publication (*‘Vierde Nederlandse SDG Reportage- Nederland Ontwikkelt Duurzaam’*). The national publications are brief concerning SDG14, however, it is listed as a goal whereof achievement is a challenge in the Netherlands. The poor status and limited information regarding *Life Below Water* in the Netherlands causes uncertainty concerning the current efforts by responsible authorities and raises concerns on whether the four

recommendations for adjustments made by the 2016 PBL Netherlands Environmental Assessment Agency, have been implemented in order to achieve the SDGs and specifically SDG14 *Life Below Water*. The four recommendations have been laid out in the four different *sub-questions* of this research. The problem-owner of this thesis is Mr. Dr. Ing. P. van Velzen from the ministry of Agriculture, Nature and Food Quality who showed interest for an investigation concerning missing elements in the implementation of SDG14.

1.1. Problem statement

It is unclear to what extent the recommendations for adjustments, made by the 2016 PBL Netherlands Environmental Assessment Agency concerning the implementation of the UN SDGs, have been implemented in regards to SDG14 *Life Below Water*.

1.2. Goal

This research project aims to provide advice to the Dutch policy makers at the ministry of Agriculture, Nature and Food Quality and other interested stakeholders concerning areas that need further implementation of the UN Sustainable Development Goal 14 *Life Below Water* in the Netherlands.

1.3. Research question and sub-questions

To what extent has the UN Sustainable Development Goal 14 'Life Below Water' been implemented in the Netherlands, in regards to the recommended adjustments on SDG implementation, proposed by the 2016 PBL Netherlands Environmental Assessment Agency?

Sub-question 1

Which SDG14 targets have been translated into a national ambition level, consisting of a clear, long-term vision supported by new and updated national policy targets for 2020, 2025 or 2030?

Sub-question 2

What coordination of policy efforts and responsibilities exists between various ministries and provincial and local authorities, ensuring policy coherence in regards to SDG14?

Sub-question 3

What active participation of various groups within society exists in defining and implementing the national vision and policy targets, in regards to SDG14?

Sub-question 4

Which periodic national monitoring exists that serves to track progress and- depending on the political ambition- account on the underlying developments or even to evaluate policy performance, in regards to SDG14?

1.4. Reading instruction

The second chapter covers the methods which have been described in two parts. In research, a desk and literature analysis (*Part A*) has been carried out, followed by interview analysis (*Part B*). This research is structured according to the two parts that both address the four sub-questions in order to answer the research question. The results from desk and literature research has been described in chapter three, followed by results from the interview analysis (chapter 4). Chapter 3 addresses results from desk and literature analysis as well as interview analysis concerning the four sub-questions, under the headings: ‘Translation of the SDG14 ambition level’ (sub-question 1); ‘Coordination of responsibilities and policy efforts’ (sub-question 2); ‘Participation of various groups within society (sub-question 3)’ & ‘National monitoring and accountability’ (sub-question 4). Each paragraph is introduced by a matrix to show the summary of findings which are further elaborated. A discussion has been presented in chapter 5, followed by the conclusion (chapter 6) and recommendations (chapter 7).

Different abbreviations were applied in this report which are presented and defined in Table 1. The PBL Netherlands Environmental Assessment Agency, 2016, *Sustainable Development Goals in the Netherlands -Building blocks for Environmental policy for 2030*. Is referred to as ‘PBL policy study’ in this report. Original document names were described in *italic*.

Table 1. *Abbreviations applied in this report.*

Abbreviations	Name
T14.1	Target 14.1
AN&FQ	Dutch ministry of Agriculture, Nature and Food Quality
I&WM	Dutch ministry of Infrastructure and Water Management
<i>NWP</i>	National Water Plan
<i>Marine Strategy</i>	Marine Strategy (part 1) Update of current environmental status, good environmental status, environmental targets and Indicators 2018-2024
WFD	Water Framework Directive
CFP	Common Fisheries Policy
EEZ	Exclusive Economic Zone

2. Methods

The research process, including detailed steps, have been described in this chapter (see Figure 4). This research was divided in two stages. *Part A* focuses on desk study and literature analysis. *Part B* focusses on interview analysis. Steps 1-4 represent sub-questions 1-4. With step 5, preliminary conclusions were drawn and interview questions were prepared for interview analysis in *part B*. In step 6 (interview analysis) data collection and analysis was not necessarily divided per sub-question. During the pre-study it was expected that desk research needed follow-up by interviews on missing data in desk and literature research or to clarify data as well as to understand situations in daily practice. In addition, the outcome of the interviews might show differences on available knowledge to the public as well as whether respondents have knowledge on SDG14 in Netherlands. In the last step (step 7) emphasis was placed on writing the discussion, conclusions and formulating the recommendations.

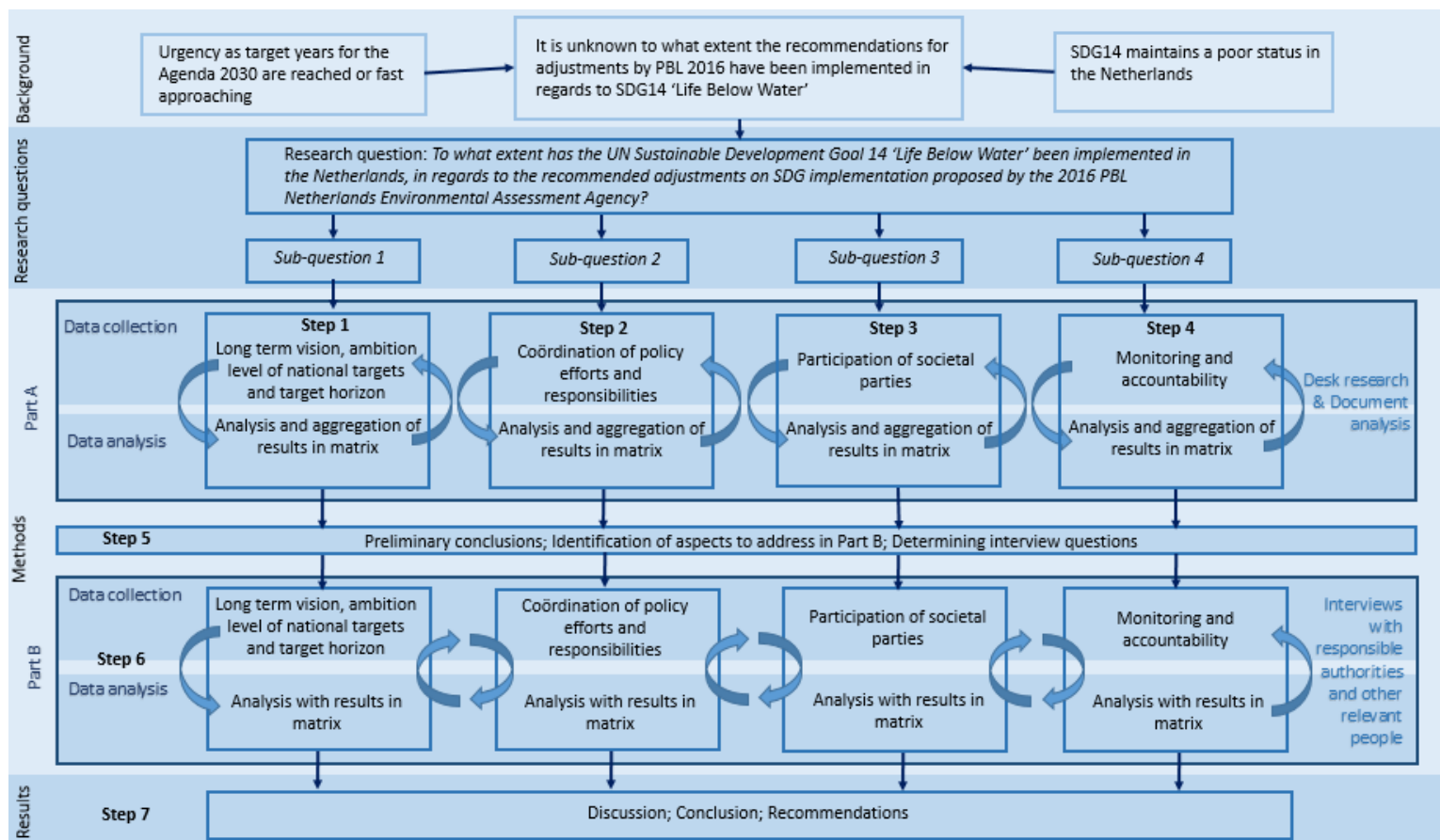


Figure 4. The process of research is presented.

2.4. Study scope

According to the scope of the 2016 PBL Netherlands Environmental Assessment Agency policy study, this research focusses on the national situation. It takes into account the Dutch territory and Exclusive Economic Zone. Following the SDG14 targets that are addressed in the PBL policy study, SDG target 14.7 as well as 14.A, 14.B and 14.C were excluded from this project, as these targets focus on the international realm instead of the national situation. Therefore these targets are beyond

the scope of this research. The set of SDG14 targets and indicators involved in this research are presented in Figure 5.

<i>Conserve and sustainably use the oceans, seas and marine resources</i>	
SDG14 Targets and Indicators 14.1-14.6	
	<p>Target 14.1 By 2025, prevent and significantly reduce <u>marine pollution</u> of all kinds, in particular from land-based activities, including marine debris and nutrient pollution</p> <p>Indicator 14.1.1 (a) Index of coastal eutrophication and; (b) plastic debris density</p>
	<p>Target 14.2 By 2020, sustainably manage and protect marine and coastal <u>ecosystems</u> to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans</p> <p>Indicator 14.2.1 Number of countries using ecosystem-based approaches to managing marine areas</p>
	<p>Target 14.3 Minimize and address the impacts of <u>ocean acidification</u>, including through enhanced scientific cooperation at all levels</p> <p>Indicator 14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations</p>
	<p>Target 14.4 By 2020, effectively regulate harvesting and <u>end overfishing</u>, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics</p> <p>Indicator 14.4.1 Proportion of fish stocks within biologically sustainable levels</p>
	<p>Target 14.5 By 2020, <u>conserve at least 10 per cent</u> of coastal and marine areas, consistent with national and international law and based on the best available scientific information</p> <p>Indicator 14.5.1 Coverage of protected areas in relation to marine areas</p>
	<p>Target 14.6 By 2020, prohibit certain forms of <u>fisheries subsidies</u> which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation</p> <p>Indicator 14.6.1 Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing</p>

Figure 5. SDG14 targets and indicators 14.1-14.6 with the core of each target underlined (Our World In Data, n.d.).

2.5. Research units

The operationalization and formulation of the sub-questions have been carried out in accordance with the 2016 PLB Netherlands Environmental Assessment Agency, following the Dutch version of the report, '*Sustainable Development Goals in Nederland. Bouwstenen voor leefomgevingsbeleid voor 2030*', as differences were found in the translated English version. The original version in Dutch was leading in case of any differences.

2.5.1. Sub-question 1

Sq

Which SDG14 targets have been translated into a national ambition level, consisting of a clear, long-term vision supported by new and updated national policy targets for 2020, 2025 or 2030?

The translation of SDG14 targets into a national ambition level has been analyzed by four units.

'New and updated national policy targets for 2020, 2025 or 2030' concern both the link with Dutch policy targets with the level of ambition of the problem/ theme of the SDG14 targets and its target horizons to the horizons of SDG14 targets. Therefore it was separately addressed. As the targets of SDG14 concerns objectives which are not clearly defined, the PBL Netherlands Environmental Assessment Agency addresses the need for an assessment framework with criteria and was addressed in this research. Terms in the sub-question has been further operationalized in Table 2.

Table 2. Operationalization sub-question 1.

Units operationalized	
Clear long-term vision	Refers to a national long-term vision which addresses the national ambition to achieve SDG14, in order for societal parties to attune its efforts and investments as well as to inspire society to actively contribute to the implementation.
Ambition level of problem/ theme covered in national policy targets	Refers to the ambition level of the problem/ theme of SDG14, covered in national policy targets. Whereby the most important elements of the SDG14 target is covered.
Corresponding target horizons with policy targets	Refers to the target horizon (end-year) of national policy targets corresponding with the horizons of the global SDG14 targets (2020, 2025, 2030).
Assessment framework with criteria on SDG14 achievement	Refers to an assessment framework with criteria, which needs to be defined according to the PBL policy study, as SDG14 targets was set without a clearly defined end-goal and targets do not provide much guidance. It was added due to the importance and relevance of this project.

2.5.2. Sub-question 2

Sq

What coordination of policy efforts and responsibilities exists between various ministries and provincial and local authorities, ensuring policy coherence in regards to SDG14?

The sub-question was analyzed according to the units operationalized in Table 3.

Table 3. Operationalization sub-question 2.

Units operationalized	
Coordination of responsibilities between authorities (ministries, provincial, local)	Refers to the determined responsible authorities between ministries as well as with provincial and local authorities, concerning SDG14 and targets.
Coordination of policy efforts between authorities (ministries, provincial, local)	Refers to the extent to which efforts by responsible authorities are attuned and working together with efforts of other governmental levels. Policy efforts concern efforts by responsible authorities to contribute to achieve SDG14.
Responsibility of policy coherence	-

2.5.3. Sub-question 3

Sq

What active participation of various groups within society exists in defining and implementing the national vision and policy targets, in regards to SDG14?

Terms in the sub-question has been further operationalized in Table 4.

Table 4. Operationalization sub-question 3.

Units operationalized	
The term 'active' refers to the initiative of societal groups to participate which has different applications concerning the different units operationalized.	
Active participation in defining national vision	Involvement of groups within society in defining the national vision to achieve SDG14.
Active participation in defining policy targets	Involvement of groups within society in defining policy targets contributing to achieve SDG14.
Active participation in implementing the national vision	Refers to the involvement of societal groups, by initiatives and contributions concerning the implementation on the national vision to achieve SDG14.
Active participation in implementing policy targets	Refers to the involvement of societal groups in the implementation of policy targets to achieve SDG14.

2.5.4. Sub-question 4

Sq

Which periodic national monitoring exists that serves to track progress and- depending on the political ambition- account on the underlying developments or even to evaluate policy performance, in regards to SDG14?

Terms in the sub-question has been further operationalized in Table 5.

Table 5. Operationalization sub-question 4.

Units operationalized	
Periodic national monitoring	Refers to the existence of a periodic national monitoring on SDG14 to track progress.
Most recent reporting year	-
Reported accountability on underlying developments	Refers to accountability by responsible ministries on the underlying developments to achieve SDG14 in the Netherlands, depending on the political ambition.
Reported policy performance evaluation	-

2.6. Matrix

The research units from the sub-questions have been analyzed, using matrixes that were developed for this research. The matrixes for *Part A* and *B* presents results in brief, whether units were found described per SDG14 target and Goal (*Part A*) and to show results from the interview analysis per respondent (*Part B*). Each unit can be identified by a code (such as '1a') for the purpose of reference and was marked with red in case the concerned unit was not found present. In the following, methods of data collection and analysis have been described concerning desk and literature analysis (*Part A*) and interview analysis (*Part B*).

2.7. Part A Desk research and literature analysis

In desk and literature analysis, different types of (public) literature were collected such as governmental documents such as letters to parliament, and policy documents, reports, and web-pages.

2.7.1. Data collection

Data collection was carried out in chronological order from sub-question 1-4. In this research, sources often applied to more than the concerned sub-question. Therefore, document titles and links were collected in a separate Word document to retrieve data when applicable.

Documents were retrieved in English in case it was available. Data collection was finished when no additional documents/ information were found within a timespan of two weeks (sub-question 1),

one week (sub-questions 2 and 3) and half a week (sub-question 4). During research, data collection and analysis were alternated.

Two types of documents were used as main documents for further data collection. On the organization and current development of the SDG in the Netherlands, it concerns the Plan of action on SDG implementation in a letter to parliament as well as the *Fourth Dutch national SDG report*. In regards to policy, the *NWP & Policy Document on the North Sea* were used.

The policy documents were used to retrieve relevant references in the policy documents concerning governmental/ policy documents on the marine environment (North Sea and Wadden Sea), using Google Search, and presented descriptors of the *Marine Strategy* that guided in the selection of relevant environmental targets for analysis. The *Marine Strategy* environmental targets are presented in Appendix II. The plan of action on SDG implementation referred to the Dutch inventory on the Implementation of the Sustainable Development Goals (*Duurzame Ontwikkelingsdoelen Inventarisatie Nederlandse Implementatie Per 31-12-2016*) which presents policy for each SDG target and was used in the acquisition of Dutch policy targets. The collection of Dutch policy targets focused on more recent (policy) documents, beyond the listed policy in the 2016 inventory. Policy documents retrieved, concerned the policy cycle of 2016-2021. The most recent version of documents was retrieved. The updated version of the *Marine Strategy* part 1, (2018) was collected. In the pre-study, a document on national visions was collected in consultation with the ministry of AN&FQ, through the problem-owner. Retrieved reports on the SDGs in the Netherlands were used to find references to (other) reports that covered subjects linked with the sub-questions.

The main websites used, concerned the *Noordzeeloket*, *Rijksoverheid* (Government of the Netherlands) and *Helpdesk Water*. By consulting the web-pages, governmental documents and management plans were consulted and retrieved, in case it was relevant. The *Fourth Dutch national SDG report* provided a link on 'program strengthening biodiversity' associated with SDG14, leading to web-pages on Natura 2000 and biodiversity management. Google Search was used to retrieve documents referred to in web-pages.

Google Search was used to retrieve documents addressed in web-pages and documents as well as in letters to the house of representatives. In addition, the governmental page on letters to parliament were searched on 'SDG 14'. Additional data was collected, using Google Search, to retrieve references in documents or websites. Searches focused on SDG14. In case limited findings occurred, the searches focused on the SDGs in general. Data collection through Google Search was primarily applied for sub-questions 1 and 3 to retrieve more data on long-term visions, and a framework with criteria on SDG14 implementation. Concerning societal participation, searches were carried out on contributions to SDG14. Google Search was less extensive applied concerning sub-questions 2 and 4 as the collected documents and web-pages covered the themes of the research units. Applied search terms used were derived from the sub-questions, applied to SDG14 using variations. The following presents used variations in Google Searches. 'Long-term vision' & 'assessment framework with criteria on SDG achievement', with search terms: 'langetermijnvisie SDG14', 'langetermijnvisie zee beleid', 'nationale visie zee', 'langetermijnvisie duurzame groei', 'criteria achieving SDG14', 'framework of criteria SDG14' (sub-question 1); 'wettelijk verplicht zienswijze beleid', 'consultatie beleid zee', 'participatie beleid zee' (sub-question 3); 'Reported accountability on underlying developments' & 'reported policy performance evaluation', 'beleidsevaluatie sdg' (sub-question 4).

2.7.2. Data analysis

Data analysis was carried out, using the a matrix of which a sample is presented in Figure 6 (A, B, C), which is further explained in the below.

Sub-question concerned	Goal/Target	14.1	14.2	14.3	14.4	14.5	14.6	SDG14
Translation of the SDG14 ambition level	Label							
1a	Unit	Present/ Lacking	Lacking					N/A
1b	Unit	Completely/ Limited/ Lacking		Completely			Completely	
1c	Unit	Yes/ Not linked		Not linked		Not linked		
1d	Unit	Present/ Lacking			Lacking			

Figure 6. Sample explaining matrixes, used in analysis Part A.

The color red (A) was applied in case the unit was not found with a certain SDG14 target, which was therefore selected for followed-up in interview analysis. Units (B) were derived from the sub-questions addressed under paragraph 2.5. Unit were given a code (A) for references made in the results section. Labels (C) have been developed in order to present the result in brief, which have been further defined in Table 6.

Table 6. Explanation of labels used in the matrix in Part A.

Labels applied	Meaning
Yes/ Not linked	Refers to whether target horizons correspond (yes) or whether horizons do not correspond and therefore do not link (Not linked).
Completely/ Limited/ Lacking	Refers to the extent the national targets cover the problem/ theme of the SDG14 target (Completely/ Lacking), taking into account the possibility of a partly covered problem/theme (Limited)
Present/ Lacking	Refers to whether units were found described and therefore 'present'.
N/A	Refers to cases where <ul style="list-style-type: none"> 1) The answer was provided through another unit in the matrix. 2) In case a target was achieved or 3) The Netherlands aims to contribute to a target, primarily on the European level which causes units lacking on a national level.
?	Refers to unit that were unclear, in desk and literature analysis

Documents were analyzed by first, reviewing the table of contents. In case of large documents (± 20 pages), the PDF function would be commonly used for the selection of relevant sections, depended on the analyzed sub-question. Smaller documents were manually scanned for relevant headings.

The analysis focused on Dutch policy targets to cover the problem/ theme of SDG14 targets. Analysis started with documents, referred to in the 2016 inventory of policy on the SDGs by ministries as well as the *NWP & Policy Document on the North Sea* and web-pages retrieved in data collection. Despite an extensive inventory of policy and management documents, no additional targets were found which existed on a comparable level with the policy targets, covered in the ministerial inventory. Both the policy document on the Wadden Sea and its reference to targets on fisheries methods were excluded as it did not exist on a comparable level with policy documents in the ministerial inventory. The 2016 ministerial inventory became the scope of the analysis on Dutch policy targets. All targets were analyzed on whether the level of the problem/ theme of the SDG14 targets were found covered by Dutch policy targets. Analysis on long-term visions focused specifically on SDG14 and was carried out on both descriptions on SDG14 themes in governmental/ policy documents as well as using the PDF search tool with search-terms: 'SDG14', 'SDG 14' and *Life Below Water*, a Dutch document would be analyzed for the Dutch translation of *Life Below Water* (*Leven in het water*).

In order to identify the ministries responsible for achieving SDG14, web-pages and documents were analyzed for descriptions on ministries and their policy areas and coordinated efforts on SDG14. Policy documents were analyzed, using the PDF search function. Search terms used were: 'coordination', 'responsibilities'; 'responsibility'; 'responsible authority'; 'ministries'; 'provinces'. Management plans and governmental documents and reports have been analyzed for coordination of responsibilities and efforts with other governmental levels. Documents covering the organization and implementation of the SDGs in the Netherlands were analyzed for relevant sections on the organization on the SDGs, through findings of headings that linked with the themes of the sub-questions and reading the document for sections linked to the sub-questions.

Governmental web-pages and policy documents were analyzed on consultation processes and involvement by societal parties. The PDF search tool was used for analysis in policy documents. Concerning the *Marine Strategy* and the *Policy Document on the North Sea*, the used search terms were 'participation' and 'consultation'. Concerning the *Natura 2000 objectives document* (Natura 2000 doelendocument) and *Summary of River basin management plans* (Samenvatting stroomgebiedbeheerplannen), search terms: 'Opstellen'; 'consultatie'; 'belanghebbenden'; 'participatie', were used. The plan of action on SDG implementation as well as the *Fourth Dutch national SDG report* provided an overview of societal groups/ organizations contributing to the SDGs, linking to websites which were analyzed by using the search-functions at the websites on search terms: 'sustainable development goals'; 'SDG14' 'SDG 14' and *Life Below Water* in the language of the concerned website. Findings linking with SDG14 were further analyzed for contributions on the national level. Through the search function on the website of 'SDG Nederland', societal organizations and initiatives to contribute to SDG14 were analyzed.

Analysis of sub-question 4, was carried out on the *Fourth Dutch national SDG report*. Texts were analyzed, using the PDF search tool on the terms of the sub-question as well as: '14', 'Leven in het water', *Life Below Water*. Furthermore, *The Monitor of Well-Being & SDGs* was analyzed on explanatory factors concerning monitoring on the SDGs and the SDG14 dashboard.

2.8. Part B Interview analysis

The objective of interview analysis was to understand whether elements addressed in the sub-questions were existing, or adjusted in the Netherlands and whether experts could confirm or debunk findings in *Part A*. Units labeled as 'lacking' or 'not linked' in desk and literature analysis were followed-up in *Part B*. First the selection of respondents have been described.

2.8.1. Selection of respondents

In the analysis of *Part A*, respondents were inventoried and contacted directly by email. Experts were selected for their expertise on SDG14. Experts were contacted as proposed by other contact persons in the pre-study of which certain respondents were selected. The selected respondents concern officials from different ministries, persons from, or associated with SDG Nederland and an expert from Statistics Netherlands. At the ministry of I&WM, three officials were contacted, including the SDG Focal Point as well as an officials of which one was working in the interdepartmental working group on SDG14 ('Living Oceans'). Contact was made with three officials from the ministry of AN&FQ, through the problem-owner. A policy officer on the SDGs from Foreign Affairs was contacted through email conversation with SDG Nederland which was selected for its expertise on the SDG implementation in the Netherlands, and was considered an important respondent. From Statistics Netherlands, an expert working on the monitor dashboard of SDG14 was contacted. From SDG Nederland the SDG14 alliance coordinator was selected as well as a project manager of this platform. The SDG14 alliance coordinator was positioned for a short time. Therefore least two respondents were selected to represent the societal viewpoint. The respondents interviewed are listed in Table 7.

Table 7. *Interviewed respondents and role.*

Respondent	Ministry/ organization	Role, SDG related
Alting, A.	Ministry of Foreign Affairs	Policy Officer SDGs
Tavenier, J.	Ministry of I&WM	SDG coordinator/ Focal point
Vis, J.	AN&FQ	Coordinating policy officer Nature and North Sea
van Soest, T.	SDG Nederland	Senior Project Manager
Coolen, E.	Programma Rijke Noordzee (Program rich North Sea)	Coördinator SDG14 Alliance, program director Programma Rijke Noordzee
De Jong, R.	Statistics Netherlands	Leader cluster Sustainability- Monitor of Well-Being and SDGs

2.8.2. Data collection

The semi-structured approach was selected as the preferred method of data collection for interviews outside ministries. Concerning the interviews with ministerial officials, the preferred method was a group session, however, due to Covid-19, the researcher was limited to one-on-one interviews. Questions that were addressed, largely corresponded among interviews with officials in order to discover differences in perception. Any difference in questions between such interviews were due to follow-up questions or elements not addressed in case the respondent clarified a certain theme was unknown. The matrixes from *Part A* (A1-A4) were sent to officials in advance, to present an overview of topics that needed clarification. It served as a guidance during the interview, and to communicate the scope of this research. It was expected that officials could provide relative abundant information on the implementation of units from the four sub-questions, compared to respondents outside ministries. Therefore it was sent to only the ministerial officials.

The time budget the interviews concerned one hour, taking into account five minutes of introduction, ten minutes for additional questions that could arise during the interview and five minutes to wrap up the interview. Within the scope of time for this research, five interviews were held, with a sixth relevant respondent contacted through email correspondence, due to delayed response. Interview respondents were considered for their different backgrounds and their expertise/ knowledge on the subject. Respondents concern the following: Van Soest, T., SDG

Nederland (October, 6th); Tavenier, J., I&WM (October 8th); Coolen, E., Programma Rijke Noordzee/SDG14 alliance coördinator (October 14th); De Jong, R., Statistics Netherlands (October 14th); Vis, J., AN&FQ (October 15th); Alting, A., Foreign Affairs (Email November 9th 2020). The units addressed in the different interviews are presented in Table 8.

Table 8. *Units addressed in interviews.*

	Aspect addressed in interview	Respondents
Translation of the SDG14 ambition level (sub-question 1)		
1a	Described clear long-term vision	I&WM; AN&FQ; Foreign Affairs; SDG Nederland; SDG14 alliance coordinator
1b	Ambition level of problem/ theme covered in national policy targets	I&WM; AN&FQ; Foreign Affairs
1c	Corresponding target horizon with policy targets	AN&FQ, I&WM; Foreign Affairs
1d	Assessment framework with criteria on SDG14 achievement	I&WM; AN&FQ; Foreign Affairs; SDN Nederland
Coordination of responsibilities and policy efforts (sub-question 2)		
2a	Described (coordination of) responsibilities between authorities (ministries, provincial, local)	I&WM; AN&FQ; Foreign Affairs; SDG Nederland; SDG14 alliance coordinator
2b	Described (coordination of) policy efforts between authorities (ministries, provincial, local)	I&WM; AN&FQ,
2c	Described responsibility of policy coherence	I&WM; AN&FQ; Foreign Affairs
Participation of societal groups (sub-question 3)		
3a	Not addressed: Described active participation in defining national vision	None
3b	Described active participation in defining policy targets	I&WM; AN&FQ; Foreign Affairs; SDG Nederland
3c	Described active participation in implementing the national	SDG Nederland & SDG14 alliance coordinator
3d	Not addressed: Described active participation in implementing policy targets	None
National monitoring and accountability (sub-question 4)		
4a	Periodic national monitoring	Statistics Netherlands
4b	Most recent reporting year	Statistics Netherlands
4c	Reported accountability on underlying developments	I&WM; AN&FQ; Foreign Affairs; SDG Nederland; SDG14 alliance coordinator; Statistics Netherlands
4d	Reported policy performance evaluation	AN&FQ & Foreign Affairs

Questions were added in interviews, in case clarification was necessary, or in case it was relevant to understand the viewpoint of the respondent related to the concerned matter. In case it became evident that knowledge lacked on a certain topic, additional questions linked with this topic would not be addressed. Based on reflections during analysis of *Part A* and the PBL policy study, few additional questions were addressed concerning themes linked with the sub-question to understand and support answering the sub-questions.

Processing of data

Interviews were carried out by online video-calling or by phone. In the introduction, the respondent was asked for permission to record the interview. Recording took place with an iPhone and were completely transcribed into Word documents, that were used in analysis. The recordings were

converted to a word document. The full sentences were reproduced, except for sentences which were interrupted mid-sentence by the respondent.

2.8.3. Analysis of data

The transcripts from the ministerial officials were analyzed first, as it contained the richest information. Transcripts from AN&FQ and I&WM were compared for the provided answers. The interview with Foreign Affairs was not included in the comparison as the interview took place through email correspondence, in a later stage of the analysis. All transcripts were analyzed for its messages related to the sub-questions, which were marked with yellow. Key sentences were underlined. The analyzed sections answering the sub-question were translated to English and described in the report. After each analyzed transcript, reflection on findings was carried out. After this analysis, the process was reviewed again, taking all transcripts for a second review. Hereby the analysis was checked on whether the context was rightly represented in the analysis. With all interviews transcribed, all answers were questions corresponded, were compared to analyze the content once more. As most themes were policy-related, answers from the ministries on these topics were regarded more authoritative, than those of respondents outside ministries. Therefore, the respondent from AN&FQ was considered most authoritative concerning policy on SDG14, and Foreign Affairs concerning units on the translation of the SDG14 ambition level. The interview questions addressed were translated to English and included in Appendix VI.

Matrix

The matrix, used in *Part A*, was further developed to indicate answers provided by respondents. The results of analysis was shown per respondent, rather than for each SDG14 target, as it became clear that certain SDG targets were not developed on the national level and results on targets, developed on the national level, applied to the entire SDG14. The answers were presented in several categories. A color code was developed, representing the colors red, orange, yellow and grey, linked to the answer of respondents (Figure 7). Colors are explained as follows (see legend in Figure 7): Units were marked with red in case the respondent explained it as not existing or adjusted, based on the PBL policy study recommendations and therefore regarded as not implemented which is then further described. Unknown units were marked with orange. The answer was further described in the results section. In case of questions not answered, the color yellow was applied. Units not addressed with a respondent, were marked with grey. A field left in blanc, indicates that the answer was provided, without indication of a clear answer, whether it was unknown or not adjusted/implemented. In case of the respondent at Foreign Affairs (Alting, A.) email correspondence took place, due to the last-minute reply.

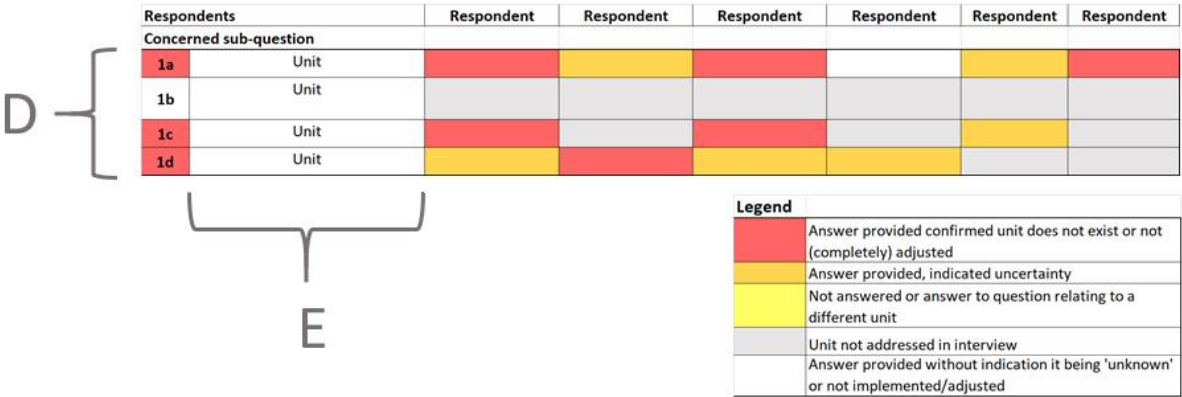


Figure 7. Sample of a matrix used in analysis Part B.

3. Results

Results have been described concerning desk and literature analysis (*Part A*) as well as interview analysis (*Part B*). Both sections in this chapter address the four sub-questions. Sections addressed in both parts are ‘translation of the SDG14 ambition level’(sub-question 1), ‘coordination of responsibilities and policy efforts’(sub-question 2), ‘participation of various groups within society’(sub-question 3) and ‘national monitoring and accountability’(sub-question 4).

3.1. Part A: Desk and literature analysis

This first part (*Part A*) of this results section presents results from desk and literature analysis. Each sub-question is prefaced with a summary, showing the results in the matrixes A1-A4.

3.1.1. Translation of the SDG14 ambition level

First, results on the long-term vision have been described, followed by results concerning the translation of the SDG14 ambition level, described according to the SDG14 targets. This is followed by results on policy target horizons.

Summary of results

Table 9 presents units 1a- 1d. All units have been marked with red, indicating that units have not been found in desk and literature analysis. Unit 1d has been additionally addressed.

Table 9. *Matrix A1, summary of results (Part A).*

Sub-question concerned	Goal/Target	14.1	14.2	14.3	14.4	14.5	14.6	SDG14
Translation of the SDG14 ambition level	Label							
1a	Described clear long-term vision	Present/ Lacking	Lacking	Lacking	Lacking	Lacking	N/A	Lacking
1b	Ambition level of problem/ theme covered in national policy targets	Completely/ Limited/ Lacking	Completely	Completely	Lacking	Completely	N/A	Lacking
1c	Corresponding target horizon with policy targets	Yes/ Not linked	Not linked	Not linked	N/A	Not linked	N/A	N/A
1d	Assessment framework with criteria on SDG14 achievement	Present/ Lacking	Lacking	Lacking	Lacking	Lacking	N/A	Lacking

Long-term vision regarding SDG14 targets

No (clear) long-term vision regarding achieving SDG14 was found. In 2017, an ocean note (*Toekomstbestendige oceanen*) was offered to parliament to provide insight in policy, in regards to protecting and sustainable use of international areas and waters, as well as how the Kingdom of the Netherlands is implementing SDG14. The note elaborates on policy principles, actions and ambitions of the Kingdom (Koenders, 2017). However, it primarily focusses on the international level (Government of the Netherlands, 2017). Policy/ governmental documents describe visions linked with themes of SDG14, which are the *Nature ambition great waters*, *North Sea Spatial Agenda/Policy Document on the North Sea*, *Draft National Strategy on Spatial Planning and the Environment* and vision descriptions from the letter to the House of Representatives on the IPBES report and from the management of the Natura 2000 Delta waters. Elaborations can be found under Appendix III.

Inventory of national implementation

An inventory of national implementation of the SDGs in existing and announced governmental policy was drawn up in 2016. Per SDG target, the national policy was listed. A summary of national policy was listed in Table 10.

Table 10. *Inventory of policy on SDG14 targets* (Government of the Netherlands, 2016).

SDG target	National policy to contribute to SDG target on a national level
14.1	<i>Marine Strategy</i>
14.2	Contribution in OSPAR; <i>Marine Strategy</i> : Good Environmental Status; Assigning marine Natura 2000 areas within the national EEZ
14.3	Contribution in OSPAR; National Water and Climate Knowledge and Innovation Programme.
14.4	Through CFP; <i>Marine Strategy</i> : Good Environmental Status (2020); Restrictions on fisheries methods in the management plans for marine Natura 2000
14.5	Natura 2000 areas, 14% of the Dutch part of the North Sea (North Sea Coastal Zone, Voordelta, Raan Flats, Dogger Bank, Cleaver Bank
14.6	The Netherlands does not know subsidies to support overcapacity of fisheries

The following addresses the translation of ambition level of SDG14 targets- problem/ theme, into national policy targets as well as whether target horizons correspond.

Target 14.1



Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

The environmental targets were derived from the *Marine Strategy* descriptors 5, 8, 9, 10, 11. (Appendix II). The themes of T14.1 were found covered by the targets.

Target horizon analysis

The target horizons of policy targets do not link with the SDG target horizon. No adjustments or links were found regarding this SDG target. No particular references were found whether targets/ objectives have been added or adjusted to achieve T14.1. Target horizons have been compared in Table 11. Dutch policy target do not have a corresponding target horizon as the target horizons are uncertain.

Table 11. *Target horizon analysis*.

Policy Documents regarding SDG target 14.1, Horizon: 2025		
Policy document	Target horizon	Corresponding target horizon?
WFD objectives (<i>NWP</i>)	2027/2023?	Not corresponding, the determined target horizon is unclear.
<i>Marine Strategy for the Dutch part of the North Sea</i>	Good Environmental Status (2020)? /	Uncertain

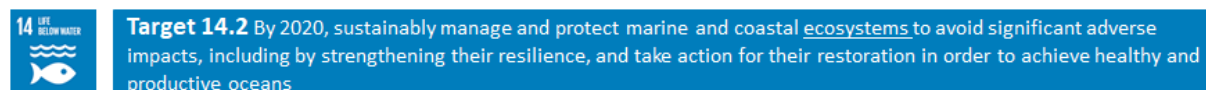
2018-2024	End of policy cycle (2021)?	
<i>River basin management plans</i>	End of policy cycle (2021)?	Not corresponding.

The horizon of the *River basin management plans* was included in the target horizon analysis as the environmental targets of the *Marine Strategy* refers to the timeline of the management plans.

Different target years are mentioned regarding achievement of the WFD. According to a policy document on sustainable crop protection, the government aims for a good water quality at the latest in 2023 (Government of the Netherlands, 2013). According to the *NWP*, the government expects to be on track to achieve the WFD objectives by the end of 2021. In the timeframe of 2016-2018 the government planned to explore whether the Netherlands is still on track to achieve the objectives in 2027 as well as whether additional measures are needed and possible. (Government of the Netherlands, 2015). However, website *Helpdesk Water* stated concerning Natura 2000 areas that the WFD assumes achievement in 2015 which could be extended until 2021 or 2027 (Government of the Netherlands, n.d.). As *Helpdesk Water* might not have been updated in recent years, the flexible end-years, compared with different sources to achieve the WFD, is notable. In 2019, the Environmental Data Compendium indicated that the ecological water quality in the Netherlands is nearly everywhere, moderate to bad. At three quarter of the water bodies, the chemical water quality is insufficient (Government of the Netherlands, 2020).

The horizons concerning achieving the WFD were found to differ between sources as extensions of the target year are presented. Therefore, questions arose on whether the Netherlands has appropriate targets set regarding this issue.

Target 14.2



Environmental targets Marine Strategy on ecosystems

The environmental targets were derived from the *marine strategy* descriptors 1, 3, 4 and 6 (Appendix II). The themes of T14.2 were found covered by the targets. Indicator 14.2.1 was found to specify this unit as 'countries that use the Ecosystem Based Management approach to manage marine areas'. This approach was found adapted in the *Marine Strategy* (Government of the Netherlands, n.d.).

Natura 2000 objectives

The Natura 2000 areas are designated to protect specific habitats or (bird) species under the BHD (Ministry of Agriculture, Nature and Food Quality, n.d.). It regards marine Natura 2000 areas within the Dutch EEZ (Figure, 8B) as well as 'coastal' Natura 2000 within the territorial sea concern the following areas (Figure, 8A) (Ministry of Economic Affairs, 2016; Europe Environment Agency, n.d.). See Table 12.

Table 12. *Marine and 'coastal' Natura 2000 areas* (Ministry of Agriculture, Nature and Food Quality, n.d.).

Marine Natura 2000 areas	'Coastal' Natura 2000 areas
Raan Flats (Habitat Directive area) Dogger Bank (Habitat Directive area) Cleaver Bank (Habitat Directive area) Frisian Front (Bird Directive area)	Wadden Sea (HBD area) North Sea Coastal Zone (HBD area) Voordelta (HBD area) Delta waters: <ul style="list-style-type: none"> - Western Scheldt; Saeftinghe; Eastern Scheldt; Grevelingen; Haringvliet (HBD area) - Oude Maas (Habitat Directive area) - Lake Veerse (Bird Directive area) - Hollands Diep (largely Bird Directive area, concerning north bank area: Habitat Directive)

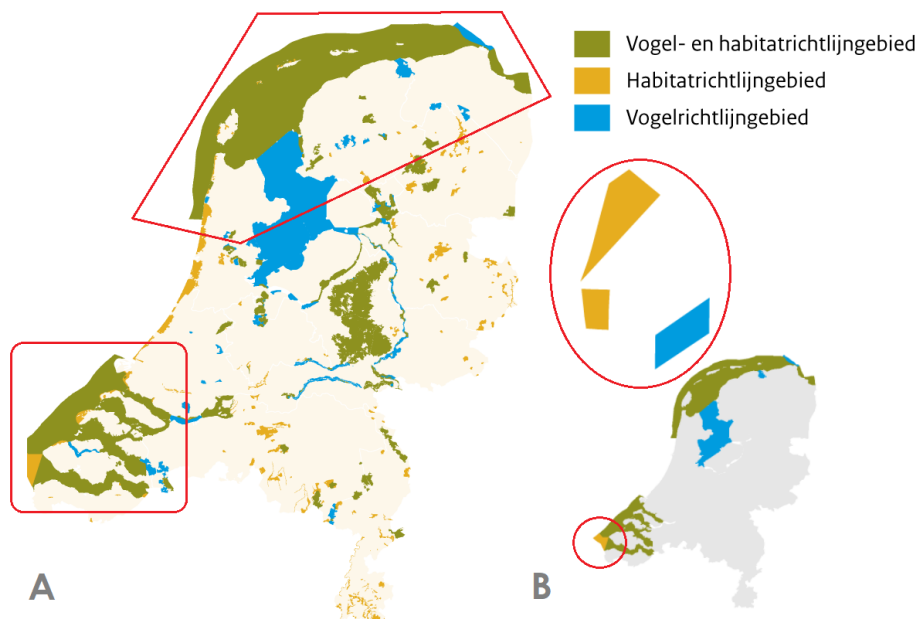


Figure 8. Natura 2000 areas in the Netherlands regarding coast and sea (Government of the Netherlands, 2020).

The *Marine Strategy* addressed the conservation objectives, which are the following:

- Preservation of the contribution of the Natura 2000 to the biological diversity and favorable condition of conservation of natural habitats and species within the European Union
- Preservation of the contribution of the Natura 2000 area to the ecological coherency of the Natura 2000 network both within the Netherlands as well as within the European Union

- Preservation and recovery where necessary of the spatial coherency with the environment contributing to the sustainable conservation of the natural habitats and species that exist in the Netherlands
 - Preservation and recovery where necessary, of the natural features and coherency of the ecological structure and functions of the entire area, for all habitat types and species for which conservation objectives have been formulated.
 - Preservation and recovery of spatial specific ecological requirements for the sustainable conservation of the habitat types and species for which conservation objectives have been formulated.
- (Ministry of Agriculture, Nature and Food Quality, 2006)

Target horizon analysis

The target horizons of policy targets do not link with the SDG target horizon. No adjustments or links were found regarding this SDG target. No particular references were found whether targets/objectives have been added or adjusted to achieve T14.2. Target horizons have been compared in Table 13. Policy target do not have a corresponding target horizon or target horizon is uncertain.

Table 13. *Target horizon analysis.*

Policy Documents regarding SDG target 14.2, Horizon: 2020		
Policy document	Target horizon	Corresponding target horizon?
<i>Marine Strategy for the Dutch part of the North Sea 2018-2024</i>	Good Environmental Status (2020)? / End of policy cycle (2021)?	Uncertain
<i>Objectives document Natura 2000</i>	<i>Marine Strategy/ 2050</i>	End-year communicated by Schouten was recognized as horizon, and does not correspond (20 years).

Some of the policy targets do not correspond, others are unknown or uncertain

No horizon has been determined concerning the Natura 2000 and the BHD (Government of the Netherlands, n.d.). The Minister of AN&FQ stated in a letter to the House of Representatives on the appreciation of the IPBES report that 65% of the objectives for the BHD will be achieved in 2027 with current policy agreements such as a completing of the 'nature network Netherlands' (Natuurnetwerk Nederland). The objective of the program is both to achieve the BHD for 100% in 2050 as well as halving the ecological footprint in 2050 (Schouten, 2019).

Target 14.3



Target 14.3 Minimize and address the impacts of [ocean acidification](#), including through enhanced scientific cooperation at all levels

The *Marine Strategy* addresses ocean acidification by the participation of the Netherlands in a program of OSPAR to monitor this phenomenon. It has not been part of the environmental targets (Government of the Netherlands, 2018).

Target 14.4



Target 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

The EU is the only authority to implement fishing measures. The European Commission has the right of initiative (Government of the Netherlands, 2015). National policy target in the *Marine Strategy* has been described concerning descriptor 3 (Appendix II).

Target 14.5



Target 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

With the Natura 2000 areas in the Netherlands, at least 10% of coastal and marine areas are protected concerning the conservation objectives (Government of the Netherlands, 2016).

Target 14.6



Target 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

The 2016 inventory for the implementation of the SDGs by Dutch ministries in the Netherlands does not indicate policy targets. Fisheries subsidies was described to be only supporting the innovative activities that exclude IUU-fisheries and/or overcapacity (Government of the Netherlands, 2016).

Assessment framework adjusted to the SDGs

In response to the letter of the Minister for Foreign Trade and Development Cooperation on May 18th 2018, officials were urged to provide insight into the effects of new policy, laws and regulations on achieving the SDGs (Kenniscentrum Wetgeving en Juridische zaken, 2019). In 2019, the assessment framework for policy and regulations was adjusted to the SDGs (SDG Nederland, 2019). The PBL policy study states that an assessment framework with criteria needs to be defined for targets that are not quantitative or absolute formulated (reduce, increase, minimize, etc.) (Lucas et al., 2016). Such assessment framework with criteria have not been found concerning SDG14 targets.

3.1.2. Remarks on results and additional analysis in *Part B*

The unit 'ambition level of problem/ theme covered in national targets' (1b) was found covering the problem/ theme. However, target horizons do not correspond and a long-term vision on a national level was found missing. Therefore, results indicate that sub-question 1 has not been executed and adjusted. All units have been addressed in the interview analysis (*Part B*) in paragraph 3.2.

3.1.2. Coordination of responsibilities and policy efforts

First, results on coordination of responsibilities have been described, followed by coordination on policy efforts and the responsible authority concerning policy coherence. Where possible, results have been described according to the separate SDG14 targets.

Summary of results

Table 14 presents units 2a-2c. One unit (2a), was not found described in desk and literature analysis and therefore marked red. 'Coordination of policy efforts between authorities' was found 'present'. As results concerning policy coherence apply to the entire Goal14, instead of specific targets, 'N/A' has been presented.

Table 14. *Matrix A2, summary of results (Part A).*

Sub-question concerned		Goal/Target	14.1	14.2	14.3	14.4	14.5	14.6	SDG14
Coordination of policy efforts and responsibilities		Label							
2a	Described (coordination of) responsibilities between authorities (ministries, provincial, local)	Present/ Lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking
2b	Described (coordination of) policy efforts between authorities (ministries, provincial, local)	Present/ Lacking	Present	Present	Present	Present	Present	Present	Present
2c	Described responsibility of policy coherence	Present/ Lacking	N/A	N/A	N/A	N/A	N/A	N/A	Present

Described coordination of responsibilities between authorities

No specific responsible authorities have been found on SDG14 and/ or its specific targets. Minister Kaag is responsible for the Sustainable Development Goals (Government of the Netherlands, n.d.). The responsibilities, described in the report on the implementation of the SDGs in the Kingdom of the Netherlands states that responsibilities are assigned to all concerned ministries (Kingdom of the Netherlands, 2017). The ministry of Foreign Trade and Development Cooperation has the light coordination on the SDGs (Ploumen, 2016). The term 'light' coordination was not further specified. This ministry is also described as in charge of the overall coordination. The organizational structure of the implementation constitutes of a network between ministries by SDG Focal Points which is represented by each ministry and the Association of Netherlands Municipalities which meet regularly. Also a small secretariat has been installed that assist a high level coordinator for SDG implementation nationally (Kingdom of the Netherlands, 2017).

The responsible authorities concerning policy for the North Sea falls under various ministries. According to the *Policy Document on the North Sea* the former Minister of Infrastructure and Environment is responsible for coordinating the integrated North Sea policy and management (Government of the Netherlands, 2015). The Minister of I&WM is the responsible authority in the preparation of the *Marine Strategy* and the implementation. In accordance with the Water Law, this ministry shares its responsibility with the Minister of AN&FQ due to its policy responsibilities on the areas of biodiversity, nature and fisheries (Government of the Netherlands, n.d.). Coordination between ministries is organized in the Interdepartmental Directors' Consultation Body North Sea (IDON). An IDON newsletter on the recent start of interdepartmental working group 'Living Oceans' described a list of ministries (up-to-date ministries) that contribute to *Life Below Water*, which are the following:

- Foreign Affairs
- Economic Affairs and Climate Policy

- I&WM
- AN&FQ (The ministry of AN&FQ fell previously under Economic Affairs)
- Ministry of Education, Culture and Science (IDON, 2019)

In the Netherlands, governmental and administrative decentralization took place, with significantly increased responsibilities and competences for provinces and municipalities. Therefore, the implementation of the Agenda 2030 would primarily be laid on the shoulders of decentral governments. The VNG (umbrella of Dutch municipalities) was to support the Dutch municipalities in campaigning, facilitating and implementing the Goals at a local level. The VNG therefore, produced a guide which was updated in 2020 (*De Global Goals in het gemeentelijk beleid*), to be followed by actors and populations of a municipality (Bachus, Pollet, Steenberghen, & Huyse, 2018). Actions on SDG14, to be executed by municipalities are further described below.

Coordination of policy efforts between authorities

All ministries with tasks and responsibilities on the North Sea work together in the IDON, which coordinates policy development and prepares decisions on North Sea management. Represented are directors from the former ministries of Infrastructure and Environment and its executive authority, the National Water Authority and the Coastguard. Furthermore, the ministries of Defense, Economic Affairs, Education, Culture and Science as well as the ministry of Finances are represented (Government of the Netherlands, n.d.). The 'Living Oceans' interdepartmental working group, serves as a consultancy platform between involved ministries, described in the above as well as societal parties which meet frequently. Meetings address the question how the impact of ocean policy could be increased as well as where societal parties can strengthen each other (IDON, 2019).

The webpage of *Helpdesk water* concerning the *Marine Strategy*, describes the convergence of different subjects and policy areas in the *Marine Strategy* which requires close collaboration with a number of other ministries and subjects. It concerns the following ministries and its themes:

- *Agriculture, Nature and Food Quality*: implementation of Natura 2000 on sea, biodiversity and sustainable fisheries
- *Economic Affairs and Climate Policy*: sustainable energy production and efficient use of natural gas and oil resources.
- *Ministry of Defense*: defense areas and activities on sea
- *Infrastructure and Water Management*: pollution from land, shipping, sand extraction and replenishment for coastal protection as well as prevention of flood risks.
 - o National Water Authority: functional management concerning sea (North Sea) and Delta (Government of the Netherlands, n.d.)

The *Fourth Dutch national SDG report* addresses how the government works together on a multitude of subjects. This national report is brief on SDG14. The Goal was linked with the '*program strengthening biodiversity*', together with other SDGs (Government of the Netherlands, 2020). This program has been described as an interdepartmental collaboration that identifies and implements follow-up steps in bringing about a societal and economic transformation for the recovery of biodiversity (Schouten, 2019). The Minister prioritizes extending and strengthening the Dutch nature network (Natuurnetwerk Nederland) through provinces which are responsible for this network (Schouten, 2019). However, part of the nature network are the great waters such as rivers, Delta waters, Lake IJssel and the Wadden Sea lies under the responsibility of the state (Government of the Netherlands, n.d.). Since 2014, the implementation of nature policy is also formally a task of

provinces as realizations demands an area-specific approach (Kompas2020, n.d.). An analysis on responsibilities and policy efforts between authorities on the ministerial level and provincial and local authorities on themes linking with SDG14, is presented in Appendix III.

A Guide from the Association of Dutch Municipalities (VNG) on the Global Goals in municipal policy, presents the most relevant targets for local governments, which concerned T14.1, T14.2, and T14.4 and described how municipalities can contribute through their tasks, roles and operations. It addresses sustainable sewer and waste management, water pollution through awareness and source measures, environmental regulations and collection facilities for sea and river ports as well as coastline protection through building regulations and keeping river deltas, beaches and coastal areas clean with involvement of students and companies. The guide also addresses additional efforts such as a municipal plan and public actions to tackle litter and microplastics, in particular in municipalities along the coast and rivers, cooperation with other municipalities and Green Deals on 'litter', 'clean beaches', 'fisheries and a clean sea' and to promote the labels of MSC/ASC (VNG, 2020).

Analysis on coordination of national efforts addressing ocean acidification has been described in the *Ocean Acidification Action Plan of the Netherlands* which has explicit links made with T14.3. It concerns the Netherlands partaking in the International Alliance to Combat Ocean Acidification, at the Global Action Summit in San Francisco in September 2018. Ministries are cooperating to contribute to SDG14 in the international context to participate in national half-yearly meetings, called 'Living Oceans' (Government of the Netherlands, 2019).

Described responsibility of policy coherence

The Council of Ministers ensures policy coherence. All relevant ministers are responsible for SDG implementation in accordance with their respective policy areas (OECD, 2018).

Remarks on results and additional analysis in Part B

The 'coordination of responsibilities between authorities' was not found described, concerning SDG14 and targets and was therefore addressed in *Part B*, to analyze whether the responsible authorities have been determined. Coordination of policy efforts were found and therefore not selected for analysis in *Part B*. The 'responsibility of policy coherence' (2c) was addressed in *Part B* as results were initially not found. However, literature was found to cover this subject in a later stage of research. Therefore, results are presented in both parts. Results indicate that the ministries with policy areas linking with the SDG14 themes concern the ministry of AN&FQ and I&WM which were therefore contacted for interviews.

3.1.3. Participation of various groups within society

First, results on participation concerning defining and implementing the national vision is addressed, followed by results on participation concerning defining policy targets and implementing the national vision.

Summary of results

Table 15 presents units 3a-3d. Unit 3a was marked with red, as a long-term vision on the national level was lacking concerning results, described in paragraph 3.1.1. Participation in defining policy targets have been found. Societal parties contribute to SDG14, although links with SDG14 (targets) was not specified or weak in several cases. Unit 3d was limited analyzed and not made complete. 'N/A' was applied concerning targets that were not approached on the national level (T14.3, T14.6) or considered achieved in literature (T14.5). No results were formulated concerned the entire Goal.

Table 15. *Matrix A3, summary of results (Part A).*

Sub-question concerned	Goal/Target	14.1	14.2	14.3	14.4	14.5	14.6	SDG14
Participation of societal groups	Label							
3a	Described active participation in defining national vision	Present/ Lacking	Lacking (see 1a)	Lacking (see 1a)	Lacking (see 1a)	Lacking (see 1a)	Lacking (see 1a)	Lacking (see 1a)
3b	Described active participation in defining policy targets	Present/ Lacking	Present	Present	N/A	Present	N/A	N/A
3c	Described active participation in implementing the national vision	Present/ Lacking	Present	Present	Present	N/A	N/A	N/A
3d	Described active participation in implementing policy targets	Present/ Lacking	?	?	N/A	?	?	N/A

Active participation in defining the national vision

No participation in defining the national vision on SDG14 (targets) have been found as a long-term vision was not found determined on the national level (see paragraph 3.1.1.). Vision documents that address themes of SDG14 concern the *Nature Ambition Great Waters*, the *Draft National Strategy on Spatial Planning and the Environment*, and the *North Sea 2050 Spatial Agenda*. Here, societal organizations have been involved such as knowledge institutions, businesses, societal organizations and citizens (Government of the Netherlands, 2019; Government of the Netherlands, n.d.; Schultz van Haegen, 2014).

Active participation (in implementing the national vision)

As a national long-term vision on SDG14 was not found, analysis on active participation in implementing the national vision focused on initiatives and contributions by societal parties on SDG14. Initiatives were found concerning the Plan of action on SDG implementation as well as from the *Fourth Dutch national SDG report* and concerning SDG Nederland.

Websites are presented in the plan of action of SDG implementation that cover actions on SDG14 in Table 16. The website, 'duurzaamheid.nl' links a company on saline agriculture to SDG14. However links do not exist with SDG14 themes. The company Straw by Straw was found to link in an indirect way with T14.1. through reducing plastic waste in general.

Table 16. *Parties to contribute to SDG14 listed in the national plan of action of the SDGs* (Ploumen, 2016).

Websites/organizations	Action on SDG14
Duurzaamheid.nl	Articles are presented with initiatives from entrepreneurs on SDG14: <ul style="list-style-type: none"> - Company Marc van Rijsselberghe Natural Foods on 'saline agriculture as an opportunity and solution' - Plastic Soup Foundation - Straw by Straw, on straws to solve the plastic problem
Ocean Cleanup	Contributes to 'reduce marine litter'
Green Deals	See Table 19
MVO Nederland	See Table 17
1% Club	Crowdfunding on projects linking with SDG14 concern the international realm

The national SDG report is annually presented to parliament and drawn up by the government as well as multiple sectors such as with business and financial institutions, civil society, knowledge institutions and youth. It presents activities on the SDGs in the Netherlands. The *Fourth Dutch national SDG report* (2020) lists organizations contributing to SDGs which have been analyzed. It concerns organizations: Green Deals; SDG Nederland; MVO Nederland (further referred to as, CSR the Netherlands) where examples were found on contributing to SDG14. No links to contributions on SDG14 were found concerning the Global Compact Netwerk Nederland; Groene Groeiers Netwerk; Dutch Sustainable Growth Coalition (DSGC) which were also are listed in the report. The websites present articles and information on the SDGs.

The efforts concerning CSR the Netherlands contributing to SDG14 were found in 'The New Business agenda 2019' (*De Nieuwe Businessagenda 2019*) and an initiative linked with CSR the Netherlands concerning marine litter (Table 17). In the first case, SDG14 was explicitly linked.

Table 17. *Links with SDG14 by CSR.*

Report and article	Description in brief
The new business agenda 2019	With certain activities/programs with which companies could contribute to an SDG, a set of suggestions are made that contributes to SDG14, SDG11 and 15.
Signing petition on plastic litter	On September 27 th 2019, the international Tourism Plastic Pledge was signed by hundred tourism companies. The initiative originates from CSR the Netherlands and guides participants in taking the next steps (Damiaans, 2019).

The business agenda presents six suggestions for companies on how to contribute to the SDGs and provides several links to a website on sustainable entrepreneurship, website on sustainable rooftops, as well as links for tips to get involved and a link to calculate biodiversity footprint (Reinhoudt & Teuns, 2019). Direct links with SDG14 were not found. Furthermore, the Business Agenda 2019

describes the cooperation between the ministry of AN&FQ, together with VNO-NCW, IUCN, NBA, as well as CSR the Netherlands concerning the implementation of methods and tools to take into account the natural capital (Reinhoudt & Teuns, 2019).

SDG Nederland is a platform for societal organizations to contribute to the SDGs that presents profiles of Dutch companies from different sectors that intent to contribute to all or selected SDGs. A total of 84 organizations have been found listed (fall 2020) that intent to contribute to SDG14. However, not all efforts are clear on its contributions. Therefore, three categories were identified which are the following:

- Organizations that communicate to contribute to all 17 SDGs, where no clear contribution to SDG14 is mentioned, concerned 27 organizations (see Appendix IV).
- Organizations that have selected certain SDGs they contribute to, without indicating a clear contribution to SDG14, concerned 39 organizations (see Appendix IV).
- Organizations that have selected SDGs they contribute to, and indicate which contribution is made to SDG14 (see Table 18). It concerned 19 organizations.

Green Peace was regarded as exception at its efforts also focus on SDG14.

Organizations that indicated its contribution, are listed in Table 18. Cases where it concerns a semi-public organizations, a star(*) was added as 'governmental' does not apply 'active' participation of societal parties within the scope of this research. Organizations have been listed in Dutch with the type of organization in English.

Table 18. *Organizations listed at SDG Nederland for contributing to SDG14* (SDG Nederland, n.d.).

Organizations selected SDGs with SDG14	Indication of contribution on SDG14
Bepakt (non-Profit)	Waste (T14.1)
D-Bottle D-TAP Water Refill Programs (Bedrijf SME)	Waste (T14.1)
Seaweed Yarn& Dye (Social Enterprise)	Waste (T14.1)
Charlutions (Company)	Waste (T14.1)
Common Fund for Commodities (CFC) (multilateral)	Financed commodity sector development projects-also fisheries (T14.6)
Ozarka B.V. (company)	Waste (T14.1)
Our Mapp (company)	Waste (T14.1)
CoCasa (others)	Waste (T14.1)
Future of Food Institute (company/ SME)	Sustainable food systems (T14.2/ T14.4)
Apenheul (non-Profit)	Waste (T14.1)
Unrobe (company/ SME)	Waste (T14.1)
VVM, network van milieu professionals (non-profit/ association/ cooperation)	Biodiversity (T14.2)
Searious Business (company)	Waste (T14.1)
D3 Aak boten (social enterprise)	Pollution (T14.1)
Straw by Straw (others)	Waste (T14.1)
Aruba Centre of Excellence for Sustainable Development- UNDP (multilateral)	Small Island Developing States (T14.7)
*COE- The Centre of Excellence for SIDS on Aruba (government, politics and (semi) public)	Small Island Developing States (T14.7)
*Waterschap Zuiderzeeland (government, politics and (semi) public)	Waste (T14.1)
*Netherlands Water Partnership (Overheid, Politiek en (semi) Publiek/ (semi) public- others)	Pollution (T14.1)

The SDG Nederland website presents pages of SDG alliances presenting elaborations on ‘where are we’; ‘where do we stand’; ‘where do we want to go’; ‘how do we get there’ and ‘how is the progress’. Elaborations have not been found concerning SDG14.

In the following, sections address public and private partnerships. Green Deals are voluntary agreements between the government and other parties which have been found linked to themes of marine biodiversity and water concerning themes of T14.1 and T14.2 (Table 19). The “finished” Green Deals have not been included.

Table 19. *Green Deals related to SDG target 14.1* (Green Deal, n.d.).

SDG theme	Green Deal	Clarification in brief
14.1	GD222- Sport fishing Lead free	-
	GD172- Clean Beaches	-

	GD171- Fishery for a clean sea	Reducing the amount of litter at sea by fishery ships.
	GD188- Recreation	Reducing the use of crop protection products
	GD166- Shipping litter chain (Scheepsafvalketen)	Prevention, separation and recycling of plastic, improving supervision and harmonization of waste delivery in harbors.
14.2	GD227 Sea Ranger Service	Collaborate on sustainable management of the sea.

Participation by NGOs, knowledge institutes as well as private sector parties, exists within the ministerial 'Living Oceans' working group to contribute to development of *Life Below Water*. Issues discussed, concern common interest as well as improving knowledge of ocean acidification (Government of the Netherlands, 2019).

On April 26th 2019, the central government send a letter to parliament concerning the mission-driven top sectors and innovation policy, with four societal themes with missions. Concerning the North Sea, oceans and inland waters, the mission was described as follows: 'for marine waters in 2030 and for inland waters (rivers, lakes, and intertidal areas) by 2050, a balance exists between ecological carrying capacity and water management (water safety, fresh water and water quality), and tasks for renewable energy, food, fisheries and other economic activities' (Government of the Netherlands, n.d.). The description regarding this mission linked its contributions to SDG14.

The account concerning the missions described in the document, were carried out under the leadership of a Steering group from the ministries of AN&FQ, I&WM, Health, Welfare and Sport, together with top sectors, 'Agri & Food; 'Tuinbouw & Uitgangsmaterialen' and 'Water & Maritiem'. Elaborations were carried out with the help of a project group of departmental representatives as well as from the most involved top consortia for knowledge and innovation, knowledge institutions and representatives from the interprovincial consultation. In addition, input was obtained from the policy directorates from involved departments and during workshops with a wide circle of stakeholders (Government of the Netherlands, n.d.).

Active participation in defining the policy targets

It is unknown to what extent participation by societal groups in defining policy targets contributes to achieve SDG14 as the unit of sub-question 1 (1b) has not been found executed (paragraph 3.1.1.). However, themes of SDG14 targets have been found covered by national policy targets. The analysis covers the involvement of societal parties in policy documents of which targets have been analyzed in paragraph 3.1.1.

Public consultation with relevant societal organizations and companies takes place in the I&WM Consultative Platform (Overleg Infrastructuur en Milieu, OIM) This consultative platform is a nation-wide consultative body of stakeholders which exists for issues related to water and the North Sea. Here, advice is given by those involved, concerning policy plans on policy concerning the *Marine Strategy* (Government of the Netherlands, n.d.). The consultative platform for the physical environment (Overlegorgaan Fysieke Leefomgeving OFL) as stated on the website, serves to advice the government and to cooperate with the government and other parties. It is involved in the North Sea consultation, *Marine Strategy*, *NWP*, and the *Delta program* (Overlegorgaan Fysieke Leefomgeving, n.d.).

Furthermore, public consultation was found described concerning the formation/ preparation of the *NWP*, the *Draft Policy Document on the North Sea* as well as concerning the (marine) Natura 2000

objective document. The collective letter on the Wadden area to the House of Representatives informs on governance, that environmental consultation is set for the initiation of discussions as well as sharing information. This is further designed together with stakeholders. Participants invited are societal organizations, users as well as the Wadden-academy (Schouten & Van Nieuwenhuizen Wijbenga, 2019). The *Marine Strategy* states that a broad consultation with scientific institutes and stakeholders was consulted in the establishment of the *Marine Strategy* part 1 and 3. The Strategy states that once a year advice is given on MSFD products in the regular meetings (Government of the Netherlands, 2012). Also mentioned is a collaboration in the Kust Zee association, where Dutch and Belgian members and member organizations of the European Coastal Marine Union (EUCC) are organized (Government of the Netherlands, 2012). This Union is a stakeholder and network association with expert and NGO organizations as members (Coastal Marine Union, n.d.).

Recently a participation plan was made for new plans on national water policy and management of state waters of the years 2022-2027, concerning the *NWP* and the *Management and Development Plan for National Waters*. The web-page addresses attunement with societal organizations that are involved in water policy and management (Government of the Netherlands, n.d.). It concerns procedures for draft review.

Active participation in implementing policy targets

Analysis on active participation in implementation of policy targets was limited, as participation, linked with policy targets remained largely unclear within the time-budget of this research. Different examples of participation have been found concerning water quality, linking to T14.1. and T14.3. Participation takes place through the Statement of Amersfoort (*Verklaring van Amersfoort*) as well as in the Clean Water Work Program in addition to the *River basin management plans*. Other examples concern participation in the governance of the Wadden Sea, the Deltaplan Agricultural water management (an initiative of entrepreneurial organization) and LTO Nederland (Dutch farmers and horticulturalists). The Delta approach on Water Quality (Delta-aanpak Waterkwaliteit) (Government of the Netherlands, 2015; Ministry of Infrastructure and Environment, 2015).

Remarks on results and additional analysis in Part B

Participation in defining policy targets were addressed in interview analysis to find other means of involvement of societal parties. Concerning ‘participation in implementing the national vision’ (3c), relatively few cases were found concerning contributions to SDG14, relative to other SDGs and in a number of cases, contributions were not found specific. Therefore, this unit was followed-up in *Part B* as well. Participation in implementing policy targets has not been addressed as it was expected to be unknown to respondents. Results have been described in paragraph 3.2.3.

3.1.4. National monitoring and accountability

First, results on the periodic national monitoring have been described, followed by results on reporting on underlying developments and policy performance evaluation.

Summary of results

Table 20 presents units 4a-4d. All units were marked with red, as a periodic national monitoring was found to report on just four indicators, not addressing the Wadden Sea. No reported accountability on underlying developments or policy performance evaluation was found.

Table 20. *Matrix A4, summary of results (Part A).*

Sub-question concerned		Goal/Target	14.1	14.2	14.3	14.4	14.5	14.6	SDG14
National monitoring and accountability		Label							
4a	Periodic national monitoring	Global indicator/ Alternative indicator/ Not reported	Alternative indicator (Monitor of Well-Being & SDGs)	Not reported	Not reported	Global indicator (Monitor of Well-Being & SDGs)	Not reported	Not reported	Status: Major challenges remain, Trend: Moderately increasing
	Most recent reporting year	Year	2019	N/A	N/A	2018	N/A	N/A	2020
	Reported accountability on underlying developments	Present/ lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking
	Reported policy performance evaluation	Present/ lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking	Lacking

Annually (in May), two reports on the SDGs in the Netherlands are published and presented to the Dutch parliament. The *Monitor of Well-being & the SDGs* by Statistics Netherlands as well as the national SDG reporting by the government, and conducted together with societal parties (in 2020 the *Fourth Dutch national SDG report*).

Periodic national monitoring to track progress

Monitoring on SDGs have been reported since 2016 by Statistics Netherlands. Since 2019, the status of the SDGs were reported with the Monitor of Well-Being. In 2019, Statistics Netherlands stated regarding several indicators under goals 7, 13, 14, 15, that the Netherlands is positioned in the lower region in the European list (Statistics Netherlands, 2019). The report shows the status/ trends for a limited number of indicators (4) compared with other SDG dashboards. Official indicators, 14.1.1 and 14.4.1 were presented. Alternative indicators presented concerned SDG 14.1, 'Clean Water Index' (part of Ocean Health Index, linking with indicator 14.1.1.) as well as 'Quality of coastal swimming waters' and 'Trend Fauna North Sea' (regarding the offshore part of the North Sea), see Figures 9 & 10 (Statistics Netherlands, 2020). The application of additional indicators have been applied in case certain indicators are either relevant for the policy theme or provide information that could be used in political or societal debates as well as in policy making and decision making (Statistics Netherlands, 2019). The publication from 2020 describes challenges in the making of the SDG14 dashboard, stating that improvements of the dashboard will be carried out (Statistics Netherlands, 2020).

Outcomes

45.4 score on a scale of 0-100 (100 = completely clean) in 2019

[SDG14.1.1] Clean water index



5 out of 6 fish species for consumption are above sustainability level in 2018

[SDG14.4.1] Stocks of fish

75.6% qualified as 'excellent' in 2019

Quality of coastal bathing waters



65.7 index (trend 1990=100) in 2015

Trend North Sea fauna



Figure 9. represents the dashboard on SDG14 for the situation of the Netherlands in 2020 for which data with good quality exists (Statistics Netherlands, 2020).

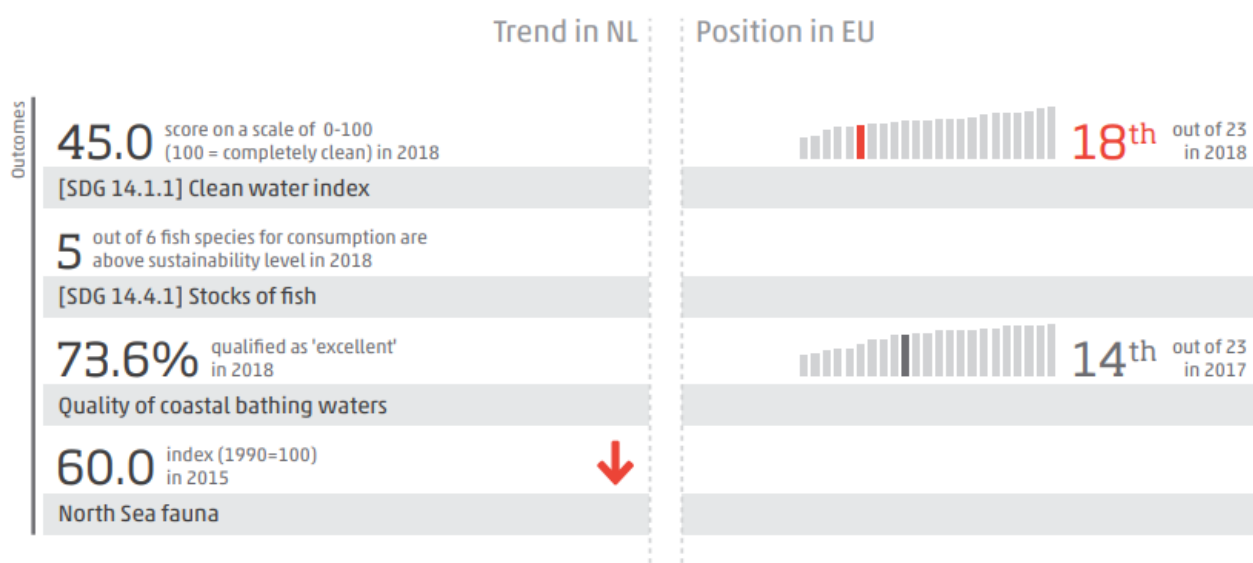


Figure 10. represents the dashboard on SDG14 for the situation of the Netherlands in 2019 for which data with good quality exists (Statistics Netherlands, 2019).

The most recent picture, presenting values/ status concerning all SDG14 (alternative) indicators was published in 'The Sustainable Development Goals: the situation in the Netherlands' (2018) by Statistics Netherlands and was therefore included in Appendix V.

Accountability on underlying developments

No elaborations on accountability concerning the underlying developments have been found. The national SDG report is annually published in May, and presented to parliament at accountability day. In 2020 the *Fourth Dutch national SDG report* was published. The SDG report mentions SDG14 seven times, regarding its status. The report describes that the Netherlands continues to lag behind concerning selected SDG, including SDG14. It states that (1) it is one of the SDGs that are one of the greatest challenges in the Netherlands; (2) it is among the SDGs of which the poor position is confirmed in comparison to other EU member states and (3) mentioned in a list among climate and environmental SDGs of which the youth is worried about.

Reported policy performance evaluation

No reporting has been found on policy performance evaluation concerning SDG14.

Remarks on results and additional analysis in Part B

As the *Monitor of Well-Being & SDGs* presented a limited amount of indicators, not covering the Wadden Sea, more information was acquired in *Part B* concerning this SDG dashboard. No reporting on an account on underlying developments or policy performance evaluation was found. Therefore all units of the sub-question have been addressed in interview analysis (*Part B*), paragraph 3.2.4.

3.2. Part B: Interview analysis

The second part (*Part B*) of this results section presents results from interview analysis,. Each sub-question is prefaced with a summary, showing the results in the matrixes B1-B4.

3.2.1. Translation of the SDG14 ambition level

First, results on the long-term vision have been described, followed by results concerning the translation of the SDG14 ambition level, corresponding target horizons and the assessment framework.

Summary of results

All units (1a-1d) remained marked with red, as units were found unknown (1a) or not adjusted in implementation (1b-1c) (Table 21). A long term vision was unknown to respondents. The translation of the SDG14 ambition level was not executed which links with results on target horizons, that did not correspond with SDG14. An assessment framework with criteria and a national implementation strategy does not exists, and unknown to other respondents.

Table 21. *Matrix B1, summary of results (Part B).*

Respondents		Foreign Affairs	I&WM	AN&FQ	SDG Nederland	SDG14-alliance coordinator	Statistics Netherlands
Translation of the SDG14 ambition level							
1a	Clear long-term vision						
1b	Ambition level of problem/ theme covered in national policy targets						
1c	Corresponding target horizon with policy targets						
1d	Assessment framework with criteria on SDG14 achievement						

Clear long-term vision

The ministry of AN&FQ stated that instead of a vision on SDG14 in the Netherlands, the connection with SDG14 is sought in vision descriptions and ambitions on the North Sea. The vision on SDG14 was not determined, however, the Netherlands contributes to this Goal through the *Marine Strategy* and OSPAR [ref: AN&FQ, personal communication, October 15th 2020]. A long-term vision was unknown to respondents of SDG Nederland and the SDG14 alliance coordinator [ref: SDG Nederland, personal communication, October 6th 2020; ref: SDG14 alliance coordinator, personal communication, October 14th 2020].

The respondent of Foreign Affairs did not answer this question in the email correspondence. I&WM answered concerning missing links between policy documents and SDG14 and did not provide an answer.

Translated ambition level of the SDG14 target into national policy targets

The respondent from I&WM did not know whether the ambition level of the SDG14 target was translated into national targets although policy efforts have been executed [ref: I&WM, personal communication, October 8th 2020]. The respondent from AN&FQ acknowledged that such a translation has not been carried out [ref: AN&FQ, personal communication, October 15th 2020].

The respondent of Foreign Affairs stated that the SDGs have not been translated into national policy objectives, because no national SDG- strategy exists as it is not mentioned in the coalition agreement. A statement concerned the fact that the Netherlands currently aims to implement the

SDGs through existing structures and agreements, as well as the fact that a growing call exists for an implementation strategy, which exists in other countries [ref: Foreign Affairs, personal communication, November 6th 2020].

According to the knowledge of the respondent of SDG Nederland, no national implementation strategy exists [ref: SDG Nederland, personal communication, October 6th 2020].

Corresponding target horizon (2020, 2025, 2030) with policy targets

The SDG14 objectives have not been worked out, to link with national targets (horizons). The *Marine Strategy* and OSPAR are more determining concerning national policy and is synchronized to these frameworks, instead of the SDGs [ref: AN&FQ, personal communication, October 15th 2020].

Assessment framework with criteria on SDG14 achievement

No assessment framework has been determined, according to respondents from I&WM, SDG Nederland, Statistics Netherlands and the SDG14 alliance coordinator [ref: I&WM, personal communication, October 8th 2020; SDG Nederland, personal communication, October 6th 2020; Statistics Netherlands, personal communication, October 14th 2020; SDG14 alliance coordinator, personal communication, October 14th 2020].

The annual reporting of the current situation and monitoring by Statistics Netherlands (*Monitor of Well-Being & SDGs*) serves as a mirror to update parliament with a picture regarding the current situation [ref: I&WM, personal communication, October 8th 2020]. The existence of an assessment framework is unknown to the respondent from AN&FQ. The SDGs are not leading in the Dutch policy formulations and reporting, but are applied where it suits. Instead the European agreements, objectives and directives have the main lead which are imposed on the Netherlands. Coordinated efforts on the SDGs are attempted on the European level. However, no 'roadmap SDG' exists [ref: AN&FQ, personal communication, October 15th 2020]. This problem is linked with a missing responsible authority regarding this Goal, as no ownership exists regarding this issue. Also, a department to create such a framework is preferred [ref: Statistics Netherlands, personal communication, October 14th 2020].

Remarks on results

As it was confirmed that the 'ambition level of problem/ theme covered in national policy targets' (1b) has not been executed and a long-term vision lacks, it shows that units have not been adjusted, as proposed by the PBL policy study.

3.2.2. Coordination of responsibilities and policy efforts

First, results on coordination of responsibilities have been described followed by the coordination on policy efforts and the responsible authority concerning policy coherence.

Summary of results

Units 2a and 2c (Table 22) remain marked with red. No responsible authorities on SDG14 and targets have been determined. The responsible authorities on policy coherence did not correspond with desk and literature analysis.

Table 22. *Matrix B2, summary of results sub-question 2.*

Respondents	Foreign Affairs	I&WM	AN&FQ	SDG Nederland	SDG14-alliance coordinator	Statistics Netherlands
Coordination of policy efforts and						
2a (Coordination of) responsibilities between authorities (ministries, provincial, local)						
2b (Coordination of) policy efforts between authorities (ministries, provincial, local)						
2c Responsibility of policy coherence						

Coordination of responsibilities between authorities

According to Foreign Affairs, the responsibility of implementing SDG14 lies primarily at both the ministries of AN&FQ and I&WM [ref: Foreign Affairs, personal communication, November 6th 2020]. Responsibilities concerning SDG14 targets have not been laid down in a certain document but is the joint responsibility of ministries. The SDGs are broad to an extent that for every SDG, more than one department could be designated. Often, one department carries more themes of a certain SDGs. This is the case with the ministry of I&WM, as the majority of SDG14 targets lies under the responsibility of this ministry [ref: I&WM, personal communication, October 8th 2020].

According to other respondents, this is unknown. the respondent from AN&FQ stated that it is unknown whether the responsibilities have been determined, as instructions of the distribution of targets lack. It is not determined which ministry has the main responsibility for *Life Below Water* [ref: AN&FQ, personal communication, October 15th 2020]. According to a respondent of Statistics Netherlands, the responsible authority on SDG14 hangs between I&WM and AN&FQ but the responsible authority is unknown [ref: Statistics Netherlands, personal communication, October 14th 2020].

Foreign Affairs elaborated on SDG coordination. The Minister of Foreign Trade and Development Cooperation has a light coordinating role concerning executing the SDGs in domestic policy. The position of the National Coordinator SDGs is assigned to the ministry of Foreign Affairs and is supported by a small team of officials of the same ministry. The focus of the National Coordinator SDGs primarily concerns the national situation, while the team focusses on both the national and international effort of the Netherlands on the SDGs [ref: Foreign Affairs, personal communication, November 6th 2020]. The term 'light' coordination was explained by I&WM and refers to the fact that Foreign Affairs cannot demand efforts on the SDGs, apart from keeping ministries accountable [ref: I&WM, personal communication, October 8th 2020].

Furthermore, the respondent from Foreign Affairs elaborated on the fact that it is unlogic to have the SDGs assigned at Foreign Affairs. A more logic assignment of the SDGs would concern a ministry with a national focused mandate, such as the ministry of the Interior and Kingdom Relations, General Affairs, or Economic Affairs and Climate which would prosper the national implementation of the Goals [ref: Foreign Affairs, personal communication, November 6th 2020]. The respondent from I&WM stated that the responsibility of the MDGs was assigned to Foreign Affairs. With the SDGs, no adjustments have been made concerning the assigned ministry [ref: I&WM, personal communication, October 8th 2020]. This was confirmed by the respondent from SDG Nederland that elaborated on the fact that the SDGs, other than the MDGs, lay emphasis on the national policy, instead of developmental cooperation [ref: SDG Nederland, personal communication, October 6th 2020].

Email correspondence on coordination of responsible ministries

Through email contact with two officials, in preparation for interviews within the ministry of AN&FQ, two different options were communicated on linkages between departments and SDG targets. An internal document of the ministry (option 1), differed with information provided by email from the SDG Focal Point of the same ministry (option 2) represented in Table 23. Differences concerned T14.2 and T14.5 (indicated with*).

Table 23. *SDG14 targets linked to ministries according to AN&FQ [ref: AN&FQ, August, 6th 2020] (Ministry of Agriculture, Nature and Food Quality, 2020).*

Option 1		Option 2
Goal	Concerned ministries	
SDG14	I&WM, AN&FQ, Economic Affairs and Climate, Foreign Affairs, IGG (Inclusive Green Growth)	
Target	Ministry	Ministry
14.1	I&WM	I&WM
14.2*	I&WM	AN&FQ
14.3	I&WM	I&WM
14.4	AN&FQ	AN&FQ
14.5*	I&WM	AN&FQ
14.6	AN&FQ	AN&FQ

Described responsibility of policy coherence

No particular department was assigned to be responsible for policy coherence as it concerns the joint responsibility of departments, held accountable by the Foreign Affairs [ref: I&WM, personal communication, October 8th 2020]. The respondent from Foreign Affairs did not provide an answer on the responsible authority of policy coherence.

Remarks on results

Results confirm the fact that SDG14 and its targets have not been found officially assigned to ministries in *Part A*. Although ministries are responsible for targets, linked with their policy areas, the links made between ministries and SDG14 targets, do not correspond in communications from officials. The responsible authority was unknown to four respondents. Therefore, this unit was found not adjusted, as proposed by the PBL policy study.

The responsible authority for policy coherence slightly differed between *Part A* (Council of Ministers) and *Part B* (Joint responsibility of ministries, held accountable by Foreign Affairs). It is unknown whether policy coherence is organized on different ministerial levels or whether different nuances in these results exists.

3.2.3. Participation of various groups within society

First, results on participation in defining policy targets are addressed, followed by results on active participation in implementing the national vision.

Summary of results

Unit 3a links with findings from paragraph 3.2.1. and was marked with red (Table 24). Units 3b and 3c have been further explored but were largely unknown to respondents.

Table 24. *Matrix B3, summary of results sub-question 3.*

Respondents		Foreign Affairs	I&WM	AN&FQ	SDG Nederland	SDG14-alliance coordinator	Statistics Netherlands
Participation of societal groups							
3a	Active participation in defining national vision						
3b	Active participation in defining policy targets						
3c	Active participation in implementing the national vision						
3d	Active participation in implementing policy targets						

Active participation in defining policy targets

According to AN&FQ, societal participation exists by means of the availability of policy documents for inspection by societal parties. The North Sea Agreement is approached in a different way, where stakeholder participation exists for a longer period of time, with beforehand document formation and operational elaborations that are available for inspection. The suggestions/ reactions on texts are brought in and considered based on what (politically) suits [ref: AN&FQ, personal communication, October 15th 2020]. This subject was largely unknown to the respondent of I&WM [ref: I&WM, personal communication, October 8th 2020]. The respondent of SDG Nederland referred to the North Sea Agreement and the Green Deals regarding the participation of society, as the North Sea Agreement is a multi-sectoral agreement [ref: SDG Nederland, personal communication, October 6th 2020]. The respondent from Foreign Affairs did not provide an answer on active participation in defining policy targets.

Active participation in implementing the national vision

Respondents from SDG Nederland and the SDG14 alliance coordinator elaborated on active participation concerning the formation of the SDG14 alliance as this subject was largely unknown to the respondents of SDG Nederland and the SDG14 alliance coordinator concerning *Life Below Water*.

The government orders the assessment agencies and Statistics Netherlands to report on the SDGs. However, what happens beyond reporting concerning the 'plan-do-check-act (PDCA) is unknown. Although certain efforts are undertaken, no plan exists. Whether other units of the PDCA are realized is unknown to the respondent. When less than all four factors are carried out, it is hard to make adjustments. Does everyone knows where we are working towards in the Netherlands [ref: SDG Nederland, personal communication, October 6th 2020]?

SDG alliances started in 2017/2018 out of progressive development on what is needed in the Netherlands. The objective is to create synergies between initiatives and to strengthen the impact to optimally contribute to achieving the SDGs. It is the point of contact for everything and everyone concerning a certain SDG. Questions on this specific SDG will be passed on to the coordinator on this SDG [ref: SDG Nederland, personal communication, October 6th 2020]. As the alliance on SDG14 is yet to be formed, determining the direction of the alliance has the first priority. This role does not link with the SDG Focal Points at the ministry departments [ref: SDG14 alliance coordinator, personal communication, October 14th 2020].

Other than the well-known nature organizations or those focused on the sea, organizations contributing to SDG14 are relatively unknown [ref: SDG14 alliance coordinator, personal communication, October 14th 2020].

Remarks on results

Active participation in defining policy targets takes place through consultation and in some cases, through stakeholder processes. Concerning other units, examples have been found of existing active participation. However, as actions are undertaken to contribute to SDG14, a plan is missing. The SDG14 alliance is in its start-up phase in 2020.

3.2.4. National monitoring and accountability

First, results on the periodic national monitoring have been described, followed by results on reporting concerning underlying developments and policy performance evaluation.

Summary of results

Insight in the limited monitoring on SDG14 was provided in an interview with Statistics Netherlands. Reports on accountability on underlying developments or on policy performance evaluation do not exist. Policy performance evaluation was not addressed in the interview with I&WM and other respondents as a lack of knowledge was expressed concerning this topic (Table 25).

Table 25. Matrix B4, summary of results sub-question 4.

Respondents		Foreign Affairs	I&WM	AN&FQ	SDG Nederland	SDG14-alliance coordinator	Statistics Netherlands
National monitoring and accountability							
4a	Periodic national monitoring						
4b	Most recent reporting year						
4c	Reported accountability on underlying developments						
4d	Reported policy performance evaluation						

Periodic national monitoring

Four indicators were found presented in the *Monitor of Well-Being & SDGs*, other than the report from 2018 which is of a different type. The indicators need to comply to additional data quality standards and interpretation requirements in order to integrate data in the monitor. It also needs to be simply presented by way of “more is better” or “less is better” as well as to visualize trends. Explanatory factors have been described in case this was clear. Concerning indicator ‘Trend North Sea fauna’, a decreasing trend is shown without an indication of the cause [ref: Statistics Netherlands, personal communication, October 14th 2020].

Statistics Netherlands depends on other organizations to monitoring on SDG14. Creating indicators from existing data has been explained as a challenge and a time consuming process. Although an abundant amount of data exists, it is a challenge to find consensus on data interpretation by external experts. Another issue regarding the measurement of indicators, is the fact that no authority with a clear mandate exists that determines, what is going to be measured in order to provide a picture on the status of the North Sea and the Wadden Sea as well as to draw experts together. A lot of research have been carried out without being it well coordinated. The objective of the monitoring by politics is unclear, as the responsibilities are unclear and ownership of SDG14 lacks [ref: Statistics Netherlands, personal communication, October 14th 2020].

As the the Wadden Sea and the North Sea have different ecological functions, it was planned to create a separate dashboard on the Wadden Sea in consultation with the NIOZ, the National Water Authority, as well as the ministries of AN&FQ and Economic Affairs and Climate. Challenges exists to use data that meets the quality requirements. Difficulties arose concerning the different policy frameworks and datasets which is not well coordinated (Wadden Sea falls under the WFD, and the North Sea under the *Marine Strategy*). The WFD and the *Marine Strategy* have an update frequency of six years, which is less frequent for the desired application by Statistics Netherlands.

It is uncertain which indicators will be measured in the coming years, as for certain indicators, measurements will end. Also data from some species will be unusable as numbers decline [ref: Statistics Netherlands, personal communication, October 14th 2020].

Reported accountability on underlying developments and policy performance evaluation

Apart from the *Monitor of Well-Being & SDGs* and the *Fourth Dutch national SDG report*, no other reportages are made to the knowledge of respondent of I&WM and AN&FQ [ref: I&WM, personal communication, October 8th 2020; AN&FQ, personal communication, October 15th 2020]. Other than the reports in the above, and the *Voluntary National Review* from 2017, no other reports have been indicated by Foreign Affairs [ref: Foreign Affairs, personal communication, November 6th 2020].

Accountability is given on themes, but the link is often not laid with SDG14. No accountability mechanism exists concerning reporting on Goals and targets, other than the annual reports on its progress [ref: I&WM, personal communication, October 8th 2020].

Reporting concerning accountability on underlying developments are unknown to the SDG14 alliance coordinator and the respondent of Statistics Netherlands [ref: SDG14 alliance coordinator, personal communication, October 14th 2020; Statistics Netherlands, personal communication, October 14th 2020]. SDG Nederland refers to the monitoring of Statistics Netherlands and the PBL Netherlands Environmental Assessment Agency, concerning reporting on SDGs [ref: SDG Nederland, personal communication, October 6th 2020].

Regarding reporting on the evaluation of policy, no evaluation based on SDG14 has been carried out [ref: AN&FQ, personal communication, October 15th 2020]. The respondent from Foreign Affairs did not provide an answer on the reporting policy performance evaluation.

Remarks on results

Although a periodic national monitoring was found, the brief dashboard on SDG14 shows that it is only implemented to a certain extent. The Wadden Sea was not addressed. The recommendations concerning the reporting of accountability on underlying developments and policy performance evaluation have not been found adjusted.

4. Discussion

The discussion focusses first on the methods used per sub-question, followed by discussions on limitations. Also the context of the findings in the Netherlands is discussed.

4.1. Methods

As this research represents two types of data collection and analyses most research units were also addressed in interview analysis. The methods proved well suited to this research, as a better understanding was gained on the implementation of the research units due to follow-up in interview analysis. Also, desk and literature analysis became valuable to ask the right questions in interviews as well as asking follow-up questions, based on knowledge from earlier analysis. Hereby the researcher is confident with the results to reflect the situation in the Netherlands. In the below, results that were weaker are discussed. The interviews supported understanding on whether research units were implemented. However, it was challenging to have comparable questions as respondents were largely from different background and different areas of expertise. Where it was possible, interviews were compared, as is the case of interviews with AN&FQ and I&WM. Limitations concerning interviews are further discussed in the below.

The methods were designed to investigate the recommended adjustments of the PBL policy study in a broad manner, collecting and analyzing data in two parts. However, few cases were not analyzed to an extent whereby clear results could be presented. One case concerns, 'active participation in implementing policy targets' (3d), of which no clear results could be presented. This was due to the fact that in desk and literature, within the time-budget, no linkages were discovered between policy targets and societal participation in its implementation. This theme would need further research in order to reach a result. Another case concerns the responsible authority of policy coherence (2c) which needs further research in order to reach a result, as this research lead to different results regarding responsibilities on different levels of consultations within ministries. Results could indicate that this responsibility exists at different levels within ministries. As an alternative result was found in the last stage of the analysis, this unit remains largely unknown. In case of sub-question 3, interview analysis did not add particular value to the research, due to the different dimension of this theme compared to other sub-questions. In addition, it was also due to the fact that respondents were relatively unknown concerning active participation on SDG14.

Important limitations in this research concerned the limited population. A limited amount of persons were found to have knowledge on SDG14 and were competent to confirm, debunk or elaborate on findings from desk and literature analysis. Although most requests for interviews were accepted, two important persons selected, were not able to participate. It concerns an official from I&WM, selected for its leading role in the interdepartmental consultation, 'Living Oceans' focused on *Life Below Water* as well as his colleague that was not able to participate as well. Both respondents could also have provided more information concerning societal participation. In addition, it became evident that the SDG Focal Point from the ministry of I&WM was not able to answer certain questions concerning the national situation. As this situation occurred with the SDG Focal Point from AN&FQ, this official was not included in interview analysis. Due to these circumstances, the importance to interview the policy officer on the SDGs from Foreign Affairs became increasingly important. Unfortunately, due to a belated response, it became necessary to interview this respondent through email correspondence. This resulted in a written statement from Foreign Affairs on the SDGs in the Netherlands instead of direct answers to questions. Also unfortunate, was the limited knowledge on SDG14 with the respondent from SDG Nederland as well as the SDG14 alliance coordinator, which was also due to the fact that the SDG14 alliance existed in the start-up phase, at the time of the interview.

The lack of knowledge on SDG14, found within ministries was notable. This was unexpected at the start of the research. It might indicate that achieving this Goal is of less priority.

4.2. Literature on SDG14 implementation in the Netherlands

Other than the PBL policy study, of which recommended adjustments have been investigated, a report on the SDGs from 2018, presented case studies of policy practices from different countries, including the Netherlands. It states that a number of SDGs have not yet been translated into national ambitions, implying that the national indicators and a corresponding monitoring strategy are still to be developed (Bachus et al., 2018). This is in line with this research, concerning the fact that sub-question 1 was not found executed and adjusted. This was originally analyzed by the PBL policy study on 'linking SDG targets to current Dutch policy targets' in 2016, from which the recommendation for adjustments concerning the translation of the ambition level was proposed. In the PBL policy study, policy was analyzed that was agreed at the national, European and international level. It shows different results with this research, as T14.2 and T14.3, were labeled as 'partly covered by national policy targets'. Concerning all targets in the analysis (T14.1-T14.6), the ambition level as well as target horizon needed reconsideration (Lucas et al., 2016). This research focused on the national level and was carried out less extensive than in case of the analysis conducted by the PBL Netherlands Environmental Assessment Agency. This could indicate why differences were found.

4.3. Discussion on important findings

An important result concerns the fact that SDG14 has not been translated into a national ambition level, and that a long term vision concerning SDG14 in the Netherlands is lacking. The PBL policy study states that a clear and recognizable long-term vision can serve as a form of direction whereby societal organizations could tailor their own efforts and investment decisions. Furthermore, the PBL policy study states that the national implementation of the SDGs requires broad participation of all parties in society, both concerning the determination of the ambition level as well as in its implementation. Therefore the government needs to make the SDGs widely known and has to take a leading role in the determination of the national ambition level; ensuring policy coherence; stimulating initiatives and to make renewal possible in the context of the SDGs (Lucas et al., 2016). In the national SDG report from 2020, civil society elaborated in light of all SDGs concerning insufficient efforts from the government and the fact that the SDGs are not well known in the Netherlands. It states that it expects a clear vision with vigor to achieve the SDGs and that politics as well as societal parties and civilians, need to critically assess their actions on the Goals (Government of the Netherlands, 2020).

In regards to these elaborations, from 2016 and 2020, the results from this research are relevant and indicate the connectiveness between the themes of the different sub-questions. It indicates the importance to translate the SDGs into a national level with a clear long-term vision, which influences societal active participation concerning this Goal as was pointed out in interview analysis. SDG Nederland strives to organize national efforts as progress is insufficient on SDGs (including SDG14). However, as efforts are made, a plan is lacking and therefore, direction is missing concerning questions such as, 'are we doing the right thing', 'are we doing it fast enough' [ref: SDG Nederland, personal communication, October 6th 2020]. Notable is the statement of the Dutch prime Minister Mark Rutte who affirmed that it is the Netherlands' intention to make the SDGs its leading policy framework for the next 15 years, during the UN Sustainable Development Summit in September 2015 (United Nations, 2017). This statement was not recognized with the results from this research. The adjusted assessment framework for policy and regulations to the SDG in 2019 shows recent developments whereby insight into the effects of new policy, laws and regulations on achieving the SDGs are provided (Kenniscentrum Wetgeving en Juridische zaken, 2019).

Another notable finding concerns elaborations by respondents on the assignment of the SDGs at Foreign Affairs, which was due to the fact that the assigned ministry was not adjusted when the MDGs (Millennium Development Goals) were succeeded by the SDGs. The respondent of Foreign Affairs, elaborated on the fact that this is not preferred in regards to the national implementation of the SDGs [ref: Foreign Affairs, personal communication, November 6th 2020]. As results indicated, SDG14 and its targets have not been assigned to ministries. The respondent from Statistics Netherlands linked a lack of ownership on SDG14 and targets with its challenges with the monitoring reporting on SDG14 [ref: Statistics Netherlands, personal communication, October 14th 2020].

Concerning the national monitoring, the limited amount of indicators presented in the dashboard is notable, compared to dashboards presented of other SDGs. Also notable is the decreasing trend of the alternative indicator on biodiversity, 'Trend North Sea fauna' on water and bottom life including sea birds, applied to the offshore part of the North Sea. Statistics Netherlands (2020) state that biodiversity in the Netherlands is under pressure and makes a notable remark concerning protected areas. A significant part of the Dutch marine waters are protected, but because different forms of protection and use are overlapping, protection is not completely implemented everywhere. Therefore, an unambiguous picture is missing concerning development (Statistics Netherlands, 2020). The ministerial inventory of policy on SDG14 targets, regarded T14.5 as achieved due to the fact that Natura 2000 areas cover more than 10% of coastal and marine areas (Government of the Netherlands, 2016). Statistics Netherlands reported in 2018 on indicator 14.2.1 as entirely or almost entirely satisfied (Statistics Netherlands, 2018) (Appendix V). As the status of the 'Trend North Sea fauna is decreasing, and protection was not completely implemented everywhere, T14.5 ('By 2020, conserve at least 10 per cent of coastal and marine areas') and Indicator 14.2.1., ('part of the EEZ must be managed according to an Ecosystem Based Management approach') (Figure 5) should be critically approached in regards to achievement concerning "protection" and should also be assessed against the analysis of the PBL policy study on 'linking SDG targets to current Dutch policy targets'. On SDG14, the analysis shows concerning T14.2 that the SDG target is only partly covered by existing Dutch policy targets (Lucas et al., 2016).

In light of the decreasing 'Trend North Sea fauna', Targets concerning biodiversity loss' (SDG14 & SDG15) concern aspirational objectives. The SDG Focal Point of I&WM elaborated on the fact that in the negotiations in determining the SDGs, Goals were not specifically defined due to resistance of countries as targets indicate 'reducing substantial/ significantly' [ref: I&WM, personal communication, October 8th 2020]. In an interview with a respondent from Statistics Netherlands, this subject was regarded as a politically charged subject. As it is not defined in the national context, it is challenging to indicate whether we move in the direction of the Goal [ref: Statistics Netherlands, personal communication, October 14th 2020]. The PBL policy study states that an assessment framework with criteria needs to be defined where a specific end-goal was not defined (Lucas et al., 2016). Therefore the missing assessment framework with criteria on SDG14 achievement, is also an relevant finding.

5. Conclusion

In this conclusion, answers are formulated on the four sub-questions, followed by an answer on the main research question.

Which SDG14 targets have been translated into a national ambition level, consisting of a clear, long-term vision supported by new and updated national policy targets for 2020, 2025 or 2030?

The SDG14 targets have not been translated into a national ambition level. A clear long-term vision on the national level was lacking, although visions descriptions in governmental and policy documents cover themes. Ambitions on this Goal focused on the international level. Interview analysis confirmed that the SDGs have not been translated into national policy objectives, although the themes of SDG14 were found covered in Dutch policy targets, but without alignment of target horizons with SDG14. The targets 14.3 and 14.6 have not been found developed on the national level. The missing assessment framework with criteria on achievement have not been found determined. The intention expressed by Dutch prime Minister Mark Rutte in 2015, to make the SDGs its leading framework was not confirmed based on this research.

What coordination of policy efforts and responsibilities exists between various ministries and provincial and local authorities, ensuring policy coherence in regards to SDG14?

Although ministries are responsible for SDG targets linked to their policy areas, SDG14 and the specific targets have not been officially assigned to ministries. Therefore, specific competent authorities on SDG14 and its targets remain unclear. The Minister of Foreign Affairs is politically responsible for the success of the SDG agenda. However, interview analysis indicated that it is not assigned at the preferred ministry in regards to the national implementation of the SDGs. Coordination of policy efforts were found with policy areas (explicitly) linked with SDG14. An example is the interdepartmental working group 'Living Oceans' contributing to *Life Below Water*, represented by ministries and societal parties. Consultation exists with the national SDG coordinator, SDG Focal Points from each ministry as well as the Association of Netherlands Municipalities. As governmental and administrative decentralization took place, provinces and municipalities received increased responsibilities and competences. On paper, the responsibility of policy coherence is assigned to the Council of Ministries. Interview analysis indicated that it is the joint responsibility of ministries and the SDG Focal Points, held accountable by Foreign Affairs.

What active participation of various groups within society exists in defining and implementing the national vision and policy targets, in regards to SDG14?

Active participation in defining and implementing the national vision was not possible to analyze, as a national long-term vision on SDG14 lacks. Societal parties were found contributing to SDG14, but no plan exists and therefore clear direction is missing. As expressed by civil society in the *Fourth Dutch National SDG report*, a vision and strategy is needed, with a greater commitment as current efforts are insufficient as well as the extent to which the SDGs are known in the Netherlands. At the time of analysis, the SDG14 alliance to involve societal parties in achieving SDG14 was yet to be started. Active participation in defining policy targets was found in regards to consultation of policy documents and in some cases such as the North Sea Agreement, through stakeholder participation. No results were made concerning active participation in implementing policy targets, as no links could be found between targets and participation in its implementation.

Which periodic national monitoring exists that serves to track progress and- depending on the political ambition- account on the underlying developments or even to evaluate policy performance, in regards to SDG14?

A periodic national monitoring was presented with a limited set of indicators (4) on SDG14 in 2020 as well as 2019. Not all indicators presented in the dashboard are recent. The Wadden Sea was not taken into account in the reporting. Creating indicators remains a challenge due to a difficulties concerning data quality, disputed data interpretation, lack of direction from a competent authority as well as concerning the different policy frameworks for the North Sea and the Wadden Sea. The monitoring is used to indicate progress but lacks a monitoring objective. No accountability on underlying developments exists. Also no reporting on policy evaluation was found.

To what extent has the UN Sustainable Development Goal 14 'Life Below Water' been implemented in the Netherlands, in regards to the recommended adjustments on SDG implementation proposed by the 2016 PBL Netherlands Environmental Assessment Agency?

The adjustments recommended by the PBL policy study on SDG implementation concerning Sustainable Development Goal 14 has for a large part, not been found implemented.

Research units found existing in the Netherlands concern, coordinated policy efforts by authorities on different levels contributing to SDG14, existing participation in defining policy targets and contributions by societal organizations. The monitor on SDG14 is limited at it reported on four indicators. Not analyzed is the active participation in implementing policy targets. The assignment of an authority on policy coherence remains unclear.

6. Recommendations

The following recommendations are formulated, based on findings from this research. It is recommended to reconsider the adjustments recommended by the PBL policy study in light of the urgency to implement SDG14, as it lags behind in the Netherlands. This is further specified in the following recommendations:

- Translate SDG14 into a national ambition level, consisting of a clear, long-term vision supported by new and updated national policy targets for 2025, 2030 (Lucas et al., 2016).
- Determine an assessment framework with criteria on achieving SDG14 and targets.
- Determine a national implementation strategy, whereby society could contribute.
- Adjust the assignment of the SDGs at Foreign Affairs to a department with a mandate focused on the national level.
- Assign SDG14 and targets to ministries in order to integrate SDG14 in the departments and to organize accountability.
- Provide clarity on the authority assigned with responsibility on policy coherence.
- Involve societal groups in defining and implementing the national vision.
- Provide direction in the determination of indicators to measure progress on SDG14.
- Coordinate data collection and time-series on the marine environment with monitoring on SDG14.
- Increase coordination concerning the monitoring of the Wadden Sea and the North Sea.
- Determine a clear objective of monitoring to utilize its function for policy and governance.
- Provide an account on the underlying developments or even to evaluate policy performance, in regards to SDG14, depending on the political ambition (Lucas et al., 2016).

More research is needed concerning the active participation in implementing policy targets as well as the competent authority on policy coherence.

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Appendix

Included in the Appendix are the national long-term vision addressing themes linking to SDG14 (Appendix I). Appendix II presents the Environmental Targets from the *Marine Strategy* Part 1. This is followed by descriptions on responsible authorities and policy efforts on policy and management linking with themes of SDG14 (Appendix III). Appendix IV represents organizations, listed on the website of SDG Nederland that contribute to SDG14, without a clear indication on its contributions. In Appendix V, data is presented on SDG14, derived from a monitoring report from 2018, by Statistics Netherlands. Appendix VI represents the addressed questions to the respondents in interviews. The complete transcripts have been written in Dutch and are not represented in the Appendix. The transcripts can be acquired by contacting the researcher.

Appendix I- Long-term vision regarding SDG14 themes

No long-term vision on SDG14 was found. However, vision documents address the themes of SDG14 targets, of which an analysis have been described in this section.

Nature ambition great waters (2050-2100)

The nature ambition for the great waters provides a direction to nature policy as well as in agreements with other European counties on nature and environmental directives (Dijksma, 2015). It concerns the river areas, the south-west Delta, the coastal zone, Wadden area, Lake IJssel and the North Sea. The ambition focusses on the far-future on how robust nature looks like in 2050. Nature processes are given as much space as possible in all areas, naturally balanced against other uses. Interventions remain to be required and happens in a way that protects or even strengthens nature as much as possible. Customization has been described as important. Furthermore, it describes the objective of the government to focus on creating the right conditions for nature development and providing space for natural processes. In creating robust nature in this manner, a flexible use of nature can take place to strengthen ecology and economy and an approach of nature as a great value instead of a restricting factor. The four starting points are the following:

- Align with natural processes
 - Synergy with other user functions
 - Nature in the center of society
 - Align with autonomous developments
- (Government of the Netherlands, 2014)

The nature ambition describes fisheries as of great influence on the North Sea with interests for a clean sea and therefore the fishing industry can aid in the sustainable management of the sea. In the future vision, bottom disturbance by catch-methods are absent or limited in sensitive areas and methods that are more selective in regards to the prevention of discards. The starting point for sustainable fisheries is not only the sustainable management of fish stocks but also reducing the impact on the ecosystem. Concerning the Wadden Sea, innovative catch-methods in selected areas in order to manage shellfish banks. Fisheries needs to take place with respect for nature values and should be sustainable in light of the carrying capacity of the ecosystem. Also, fishing gear should not significantly disturb the bottom and catching mussel seeds without bottom disturbance (Government of the Netherlands, 2014).

North Sea 2050 Spatial Agenda and Policy Document on the North Sea

Based on this vision, emphasis in the period until 2050 will be laid on the themes of:

- building with North Sea nature
 - energy transition at sea
 - multiple/multi-functional use of the space
 - Connection between land and sea
 - Accessibility/shipping
- (Schultz van Haegen, 2014; Government of the Netherlands, 2015)

The long-term vision of the sea was partially described in the *Policy Document on the North Sea* and has been paraphrased from a letter to the House of Representatives from the former Minister of Infrastructure and the Environment, presenting the *North Sea 2050 Spatial Agenda* and is as follows:

It is in the interest of the Netherlands to have a safe, clean, healthy and ecologically diverse North Sea that contributes to economic and social needs. The sea also has an important social-cultural and historical meaning for the Netherlands and is a source of knowledge. The sea can only contribute in

optimum form if its natural resilience is further restored and expanded, and its appeal is retained for everyone. Traditional use of the sea is in transition. The core of the new policy for the North Sea is the joint management of desired use in space and time, ecology and economy and the further development of the natural potential of sea and coast. We strive to combine as many functions as possible. In some cases functions will need to be separated, for example for safety reasons or vulnerable ecology. (Schultz van Haegen, 2014, p. 2)

Draft National Strategy on Spatial Planning and the Environment

The *Draft National Strategy on Spatial Planning and the Environment* (Nationale Omgevingsvisie-NOVI) presents national interests and tasks in the physical living environment that address SDG14 themes. According to a future perspective for 2050, the *National Strategy on Spatial Planning and the Environment* presents a long-term vision with 21 national interests clustered in four priorities.

These are:

1. Space for climate adaption and energy transition
2. Sustainable economic growth potential
3. Strong and healthy cities and regions
4. Future-proof development of rural areas

National interests described that link to SDG14 themes are:

- 'Guaranteeing good water quality, sustainable drinking water supply and sufficient availability of freshwater' (Nr. 15)
 - 'Improving and protecting biodiversity' (Nr. 20)
 - 'Developing sustainable fishery' (Nr. 21)
- (Government of the Netherlands, 2019)

Appreciation of the IPBES report

In the letter to the House of Representatives on the appreciation of the IPBES report, the Minister of AN&FQ announces the interdepartmental program for the 'strengthening biodiversity'. Broadening and connectivity are central elements in the national nature policy as well as to make sectors 'nature positive'. The societal transition, advocated in the IPBES report, is only in the beginning stage towards a nature inclusive society. The Minister describes that with focused and coordinated efforts the decreasing trend of biodiversity could still be bend towards recovery (Schouten, 2019). The aim of the great waters program approach, is ecological healthy and future proof great waters and water quality as well as high quality nature that co-exists with a strong economy. With the approach by great system interventions and appropriate economic use ,the management of the environment and the great waters can be improved which will also improve biodiversity (Schouten, 2019).

Natura 2000

Out of the "coastal" Natura 2000 areas (North Sea Coastal Zone, Voordelta, Raan Flats, Delta waters), the management plan of the Delta waters dedicates a section on the long-term vision. It described that the national conservation objectives are expected to be achieved on the long-term of 2030 that was set in the year of publication (2016). A paragraph is dedicated to a description of a long-term vision of this Natura 2000 area, which is summarized as follows:

The Delta waters are still multifunctional in 2030, with great economic and recreational values. The management plan describes that it would be ideal when the unique nature values are found in robust ecosystems. Systems that are not too much dependent on expensive site management on the square meter and which, due to their size, are less sensitive to disturbance (National Water Authority, 2016).

6.1.1. Translated ambition level of SDG14 targets in national policy targets and horizon

Each of the SDG14 targets have been addressed separately with descriptions on (1) the target horizon of the policy documents, followed by (2) analysis of policy targets/ objectives of relevant policy documents.

In November, 2019 the motion of the member van den Hul, it was proposed, to give insight to which SDG a new policy is contributing, whereas it is important to gain a better understanding of how different ministries contribute to these development goals and thus to increase awareness of the Sustainable Development Goals (Van den Hul, 2019).

Appendix II- Marine Strategy targets and status

The Environmental targets of T14.1, T14.2 and T14.4 have been included in this section (Table 1-14).

T14.1 policy targets *Marine Strategy*

Table 1. Input of nutrients and organic matter- *Descriptor 5 (Government of the Netherlands, 2018, p. 42).*

Input of nutrients and organic matter	
Descriptor 5 'eutrophication'	
Good environmental status	<p>Overarching: the concentrations of winter DIN and DIP are below the level suggesting harmful eutrophication effects.</p> <ul style="list-style-type: none"> – D5C1 (coastal waters): in coastal waters, the nutrient concentrations in the winter comply with the WFD standards – D5C1 (offshore waters): the nutrient concentrations in the winter satisfy the assessment values of OSPAR. <p>Overarching: algal biomass (determined on the basis of chlorophyll -a-measurements) is not at a level that suggests harmful effects of enrichment with nutrients, pursuant to the assessment according to WFD and OSPAR.</p> <ul style="list-style-type: none"> – D5C2: algal biomass (determined on the basis of chlorophyll-a measurements) in coastal waters is not higher than the good status pursuant to the WFD for the relevant coastal water types. – D5C2: algal biomass (determined on the basis of chlorophyll-a measurements) in offshore waters satisfies the assessment values of OSPAR. <p>Overarching: no oxygen deficiency due to eutrophication in the deeper water layer (stratified waters) or in the surface water layer of mixed waters.</p> <ul style="list-style-type: none"> – D5C5 (coastal waters): the lowest water layer (stratified waters) or the surface water layer of mixed waters in coastal waters is saturated with at least 60 percent oxygen. – D5C5 (offshore waters): in the offshore waters, the lowest water layer (stratified waters) or the surface water layer of mixed waters contains at least 6 mg/l oxygen.
Environmental targets	<p>D5T1: reduced introduction of nutrients where they do not meet the WFD targets pursuant to its timeline for the river basin management plans.</p> <p>D5T2: concentrations of nutrients that do meet the WFD standards should not be allowed to rise and their introduction should as far as possible be further reduced.</p>

Supplementary policy assignment:	No (existing policy is sufficient), but there is a knowledge assignment in respect of the phosphate-nitrogen ratio.
Current environmental status	“Status improving but good environmental status not yet achieved”

Table 2. Input of other substances- *Descriptor 8 (Government of the Netherlands, 2018, p. 44).*

Input of other substances	
Descriptor 8 ‘contaminants’	
Good environmental status	<p>Overarching: concentrations of contaminants relevant for the marine environment, measured in the most suitable compartment (water, sediment or marine biota) are lower than the concentrations whereby negative effects can occur or demonstrate a downward trend.</p> <ul style="list-style-type: none"> – D8C1 (coastal waters): the concentrations of contaminants relevant for the marine environment, measured in the most suitable compartment (water or marine biota) comply with the environmental quality requirements used in the WFD in the 12-mile zone (for priority substances) or the 1-mile zone (for specific contaminants). – D8C1 (offshore waters): the concentrations of contaminants relevant for the marine environment, measured in the most suitable compartment (sediment or biota) comply with the Environmental Assessment Criteria (EAC) and/or Background Assessment Criteria (BAC) from OSPAR, or where target values have not yet been formulated, demonstrate a downward trend (pursuant to OSPAR). <p>Overarching: the health of the species is not harmed by contaminants.</p> <ul style="list-style-type: none"> – D8C2: downward trend as compared with Imposex 2012. – D8C3: the spatial extent and duration of significant, serious acute pollution events is reduced to a minimum.
Environmental targets	<ul style="list-style-type: none"> · D8T1 (coastal waters): reduction in the input of contaminants not yet meeting the WFD targets, pursuant to the timeline of the river basin management plans. Concentrations of contaminants that already meet WFD standards are not permitted to rise. · D8T2 (offshore): wherever possible reducing concentrations of contaminants. · D8T4: reducing input of heavy metals to the marine environment.

	<ul style="list-style-type: none"> · D8T3: regional monitoring of copper concentrations now that this heavy metal is used as a replacement for TBT (OSPAR). · D8T5: as quickly as possible eradicating acute pollution, wherever necessary in collaboration within the Bonn Agreement · D8T6: reducing the use of lead for example in sport fishing (WFD).
Supplementary policy assignment:	No (existing policy is sufficient), but there is a knowledge assignment in respect of emerging substances and copper.
Current environmental status	"Status improving, but good environmental status not yet achieved"

Table 3. *Contaminants in fish and other seafood for human consumption - Descriptor 9* (Government of the Netherlands, 2018, p. 46).

Contaminants in fish and other seafood for human consumption	
Descriptor 9 'contaminants in fish and other seafood for human consumption'	
Good environmental status	Overarching: the levels of contaminants (including PAHs, dioxins and heavy metals) in fish and other seafood for seafood for human consumption from the North Sea do not exceed the limits determined in EU regulation EC 1881/2006.
Environmental targets	– D9T1: the levels of contaminants in fish and other seafood for human consumption compliant with national and international legislation must not be allowed to rise, and if possible should be further reduced.
Supplementary policy assignment:	No (existing policy is sufficient).
Current environmental status	"Good environmental status achieved in 2012 and maintained"

Table 4. *Input of litter- Descriptor 10* (Government of the Netherlands, 2018, p. 48).

	Descriptor 10 'litter'- Input of litter
Good environmental status	<p>Overarching: the quantity of marine litter will decrease over time.</p> <p>– D10C1 (beach): significant downward trends in the total of the most common categories of litter (contributing to 80 percent of the total volume of litter) found on the</p>

	<p>beach.</p> <ul style="list-style-type: none"> – D10C1 (floating, short term): A significant downward trend in the number of northern fulmars with more than 0.1 g of plastic particles in their stomach during the past ten years. – D10C1 (seabed litter): significant decrease in the volume of litter on the seabed. <p>Overarching: the volume of micro litter at sea will decrease in the long term.</p> <ul style="list-style-type: none"> – As yet no quantitative description due to the absence of an indicator for microplastics and the accompanying baseline. <p>Overarching: the quantity of litter and micro litter ingested by marine animals is at a level that is not harmful to the health of the species in question.</p> <ul style="list-style-type: none"> – D10C3: see D10C1.
Environmental targets	<ul style="list-style-type: none"> – D10T1: at regional level working towards quantitative (regional) targets for beach litter (e.g. 30 percent reduction) and plastic found in stomachs of northern fulmars (10 percent of the birds; OSPAR EcoQO). – D10T2: at regional North Sea level working towards the development of an indicator for microplastics in sediment.
Supplementary policy assignment:	Yes (supplementary policy from 2012 to be continued), and knowledge assignment in respect of riverine litter and microplastics.
Current environmental status	“Status improving, but good environmental status not yet achieved (partially also unknown)”

Table 5. *Input of anthropogenic sound- Descriptor 11*
(Government of the Netherlands, 2018, p. 50).

Input of anthropogenic sound	
Descriptor 11 ‘input of energy’	
Good environmental status	<p>Overarching: distribution in time and space and sound levels of loud impulsive sound sources are such that the direct and indirect effects of loud impulsive sound do not threaten the favourable conservation status of maintenance of species.</p> <ul style="list-style-type: none"> – D11C1: for harbour porpoises, reduction of population size is prevented by imposing a limit on the number of harbour porpoise disturbance days <p>Overarching: distribution in time and space and levels of continuous sound sources are such that they do not threaten the favourable conservation status of</p>

	<p>maintenance of species.</p> <p>– D11C2: <i>for this criterion, it is not yet possible to draw up quantitative descriptions for good environmental status.</i></p>
Environmental targets	<p>– D11T1: continuation of stricter regulations concerning the prevention of harmful effects of impulse noise.</p> <p>– D11T2: development of a limit for the number of disturbance days at regional level (OSPAR).</p> <p>– D11T3: starting an international monitoring programme for continuous sound to map the level and distribution of continuous sound.</p>
Supplementary policy assignment:	No (existing policy is sufficient), but there is a knowledge assignment in respect of cumulation and continuous sound.
Current environmental status	“Status in respect of impulsive sound is improving, but good environmental status for continuous sound is not yet known”

T14.2 policy targets *Marine Strategy*

Table 6. *Birds- Descriptor 1* (Government of the Netherlands, 2018, p. 27).

Birds	
Descriptor 1 ‘biological diversity’	
Good environmental status	<p>Overarching: population densities and demography of populations of birds indicate healthy populations</p> <p>– D1C2: for each functional group, the population size of at least 75 percent of the species is above the threshold value for 1992 (OSPAR assessment value).</p> <p>– D1C2: populations of marine birds must comply with the national targets from the BD.</p> <p>– D1C3: for each species, a lack of breeding success may not occur in more than three years in six (OSPAR assessment value).</p>
Environmental targets	<p>D1T1: contributing to the further development of the assessment of bird populations and identifying the most important pressures at regional level (OSPAR).</p> <p>· D1T2: recovery of undisturbed situation for sea mammals and birds due to reduced fishery on the Raan Flats and in the North Sea coastal zone (in the framework of the VIBEG agreement).</p> <p>· D1T3: achieving the conservation objective for habitat types and species in the Natura 2000 areas at sea (BHD).</p> <p>· D1T7: monitoring of bird collisions with wind turbines in the framework of Wozep.</p>

Supplementary policy assignment:	Potential (existing policy may not suffice) and knowledge assignment in respect of causes of decline and cumulation and possible mitigation of effects of wind farms.
Current environmental status	“Good environmental status not yet achieved (on the basis of the OSPAR assessment), breeding birds abundance and breeding success in decline”

Table 7. *Sea mammals- Descriptor 1 (Government of the Netherlands, 2018, p. 28).*

Fish community, including commercially exploited fish species	
Descriptor 1 ‘biological diversity’ Descriptor 3 ‘commercially exploited fish and shellfish’	
Good environmental status	<p>Overarching: the population densities and demography of populations of fish suggest healthy populations.</p> <ul style="list-style-type: none"> – D1C2 – Commercially exploited fish populations: see D3C1en D3C2 – Commercially exploited fish – D1C2: rise in the proportion of vulnerable species of fish in the fish community (OSPAR assessment value). – D1C2: population of migratory fish must comply with favourable reference value for population size (FRP) from the Habitats Directive. – D1C2: improvement in the population size of sharks and ray in the North Sea and above all in the coastal zone. – D1C3: rise in the proportion of large fish in the fish community (OSPAR assessment value). – D1C4: spread of migratory fish in the river area complies with favourable reference value for population range (FRR) from the Habitats Directive. – D1C5: reduction in barriers in migratory routes so that at the latest by 2027 they represent no obstacle for sustainable populations in the river basin (WFD).
Environmental targets	<ul style="list-style-type: none"> · D1T5: research into sharks and rays in combination with the taking of mitigating measures as laid down in the Shark and Ray action plan: <ul style="list-style-type: none"> – communication and education – reduced unwanted by-catch – increased survival rates. · D1T6: tackling the remaining fish migration bottlenecks in the Netherlands to recover connectivity between water systems (WFD).

	<ul style="list-style-type: none"> · D1T8: research into the necessity of no-catch zones around engineering structures to promote migration opportunities for migratory fish (WFD). · D3T1: the management of all commercially fished stocks complies with $F \leq F_{msy}$ and a spawning stock biomass above the precautionary level MSY Btrigger. · D1T3: achieving maintenance targets for habitat types and species in the Natura 2000 areas at sea (BHD).
Supplementary policy assignment:	No (existing policy is sufficient)
Current environmental status	"Status is improving but good environmental status not yet achieved"

Table 8. *Sea mammals- Descriptor 1 (Government of the Netherlands, 2018, p. 30).*

Sea mammals	
Descriptor 1 'biological diversity'	
Good environmental status	<p>Overarching: the population densities and demography of populations of sea mammals suggest healthy populations.</p> <ul style="list-style-type: none"> – D1C1: by-catch of porpoises is lower than 1 percent of the best available population estimate (ASCOBANS). – D1C2: the population of the grey seal (H1364), harbour seal (H1365) and porpoise (H1351) must comply with a favourable reference value for the population size (FRP) according to the Habitats Directive. – D1C3: no reduction in the birth rate of the grey seal by more than 1 percent since the last assessment and not more than 25 percent reduction since 1992 (OSPAR assessment value). – D11C1: for impulsive noise: distribution in space and time direct and indirect effects of loud impulsive sound do not threaten the favourable status of maintenance of species (see further elaboration under D11). – D1C4: distribution of harbour porpoise and harbour seal satisfies the favourable reference value for population range (FRR) according to the Habitats Directive. <p>Also relevant is the extent to which the area and quality of habitats of sea mammals continue to develop:</p> <ul style="list-style-type: none"> – D1C5: preservation of the size and quality of the habitat of the grey seal (H1364), the harbour seal (H1365) and the porpoise (H1351) (HD)
Environmental targets	D1T2: recovery of undisturbed situation for sea mammals and birds through reduction of fishery on the Raan Flats and in the North Sea coastal zone (in the framework of the VIBEG agreement).

	<ul style="list-style-type: none"> · D1T3: achieving the maintenance targets for habitat types and species in the Natura 2000 areas at sea (BHD). · D1T4: implementation of mitigating measures in the framework of the 2012 Harbour Porpoise Conservation plan, including: <ul style="list-style-type: none"> – by-catch monitoring and research into the use of mitigating measures (pingers) – preventing and reducing the harmful effects of underwater noise on porpoise populations (Nature Conservation Act, also pursuant to the Ecology and Cumulation Framework) – further research into the effects of construction and operation of offshore wind farms on porpoise populations (in the framework of Wozep). · D1T8: further research into the cumulative effects within OSPAR.
Supplementary policy assignment:	Potential (existing policy may not suffice) and a knowledge assignment in respect of cumulation
Current environmental status	“Status is improving but good environmental status not yet achieved”

Table 9. *Benthic habitats- Descriptor 1 (Government of the Netherlands, 2018, p. 32).*

Pelagic habitats	
Descriptor 1 “biological diversity”	
Good environmental status	D1C6: for pelagic habitats, good environmental status will have been achieved if the spatial and temporal variation in the plankton community remains within a bandwidth that suggests good environmental status. The bandwidths to be used must still be determined on a regional basis, in cycle two.
Environmental targets	D6T4: further development and testing of regional assessment methods that can be used in the future for assessing benthic and pelagic habitats.
Supplementary policy assignment:	Unknown. There is however a knowledge assignment relating to the development of an assessment method.
Current environmental status	“Unknown”

Table 10. *Benthic habitats- Descriptor 1 & 6 (Government of the Netherlands, 2018, p. 33)*

Benthic habitats	
Descriptor 1 'biological diversity' Descriptor 6 'sea-floor integrity'	
Good environmental status	<p>Overarching: improvement in the size, condition and global distribution of populations of the community of benthos species.</p> <ul style="list-style-type: none"> – D6C3: improvement in the quality of the assessed areas and habitats in the Netherlands' part of the North Sea (Benthic Indicator Species Index). – D6C5: the diversity of benthos demonstrates no further downward trend in the assessed areas (OSPAR assessment value).
Environmental targets	<ul style="list-style-type: none"> · D6T1: 10-15 percent of the surface of the Netherlands' part of the North Sea will not be notably disturbed by human activities. · D6T2: improvement in the quality of the assessed areas and habitats. · D6T4: further development and testing of regional assessment methods (OSPAR and ICES) which can be used in the future for assessing benthic and pelagic habitats. · D6T5: return and recovery of biogenic reefs including flat oyster beds · D1T3: conservation objective for habitat types and species in the Natura 2000 areas at sea (BHD).
Supplementary policy assignment:	Yes (supplementary policy from 2012 to be continued) and a knowledge assignment in respect of the assessment method, cumulation and hard substrate
Current environmental status	"Good environmental status not yet achieved (partially also unknown)"

Table 11. *Food webs- descriptor 4 (Government of the Netherlands, 2018, p. 34).*

Food webs	
Descriptor 4 'food webs'	
Good environmental status	<p>Overarching: the effect of human interventions on interactions between different trophic levels in the food web is reduced.</p> <ul style="list-style-type: none"> – D4C1: the diversity (species composition and abundance) of at least three selected trophic guilds is at a level or within a bandwidth which indicates good environmental status. The trophic guilds and levels and bandwidths to be employed must still be regionally determined in the second cycle. – D4C2: the ratio in abundance between at least three

	<p>selected trophic guilds is at a level or within a bandwidth that indicates good environmental status. The trophic guilds and levels and bandwidths to be employed must still be regionally determined in the second cycle.</p> <p>– D4C3: the size structure (length) of the fish community remains above the historical minimum value.</p>
Environmental targets	<p>· D4T1: developing and testing regional assessment methods that can also be used in the future for assessing the status of food webs.</p> <p>· Targets for birds, fish, benthic and pelagic habitats (D1T2, D1T3, D1T4, D1T5, D1T6, D3T1, D6T1, D6T2, D6T5).</p>
Supplementary policy assignment:	No (existing policy is sufficient) although there is a knowledge assignment in respect of the assessment method and cumulation.
Current environmental status	“Good environmental status not yet achieved (partially also unknown)”

Table 12. *Physical disturbance on the seabed- Descriptors 1 & 6* (Government of the Netherlands, 2018, p. 39).

Physical disturbance on the seabed	
Descriptor 1 ‘biological diversity’ Descriptor 6 ‘sea-floor integrity’	
Good environmental status	<p>Overarching: physical disruption of the seabed due to human activities is restricted to ensure that the scale, condition and global distribution of populations of the community of characteristic benthos species increases, and targets for specific habitats are achieved.</p> <p>– D6C2: no significant rise in physical disturbance over time on the total seabed of the entire North Sea and the NCP.</p> <p>– D6C3: no rise in physical disturbance over time in the habitats described in the framework of the MSFD.</p> <p>– D6C3 for the habitats described in the framework of the Habitats Directive, the conservation objective for these habitats are achieved.</p>
Environmental targets	<p>D6T1: 10-15 percent of the surface of the Netherlands’ part of the North Sea is not notably disrupted by human activities.</p> <p>· D6T3: no rise in the physical disturbance due to fishing activities over time on the total seabed of the NCP and on the habitats described in the framework of the MSFD.</p> <p>· D1T3: achieving the conservation objective for habitat types and species in the Natura 2000 areas at sea (BHD).</p>

Supplementary policy assignment:	No (existing policy is sufficient) and a knowledge assignment in respect of cumulation.
Current environmental status	"Good environmental status not yet achieved (partially also unknown)"

Table 13. *Physical disturbance on the seabed- Descriptor 6 (Government of the Netherlands, 2018, p. 39).*

Physical loss of the seabed	
Descriptor 6 'sea-floor integrity'	
Good environmental status	<p>Overarching: physical loss of the seabed due to human activities is restricted to ensure that the scope, condition and global distribution of populations of the community of characteristic benthos species rises and targets for specific habitats are achieved.</p> <ul style="list-style-type: none"> – D6C1: no significant loss of the natural seabed as compared with the situation in 2012 as a result of 40 human activities. – D6C4: no significant loss as a result of human activities of the habitats described in the framework of the MSFD.
Environmental targets	See physical disturbance.
Supplementary policy assignment:	No (existing policy is sufficient).
Current environmental status	"achieved in 2012 and retained"

T14.4 policy targets *Marine Strategy*

Table 14. *Extraction, mortality or injury as a result of fishery of commercial and recreational fishery- Descriptor 3 (Government of the Netherlands, 2018, p. 37).*

Extraction or mortality/injury of species living in the wild as a result of commercial and recreational fishery	
Descriptor 3 'Commercially exploited fish and shellfish'	
Good environmental status	<p>Overarching: gradual recovery and maintenance of populations of fish stocks above a biomass level that can be achieved via the maximum sustainable yield.</p> <ul style="list-style-type: none"> – D3C1: for each commercially exploited fish stock, the fishing mortality rate (F) must be at or below a value which relates to the Maximum Sustainable Yield (MSY): $F \leq F_{msy}$ (CFP).

	<p>– D3C2: the biomass of spawning stock (Spawning Stock Biomass or SSB) of commercially exploited fish and shellfish is above the precautionary level MSY Btrigger (in line with ICES catch recommendations; CFP).</p> <p><i>It has been agreed internationally that good environmental status for commercially exploited fish species will have been achieved if for each commercially exploited stock, both criteria are satisfied. If this is not the case the species is not yet in good status.</i></p>
Environmental targets	<p>· D3T1: the management of all commercially exploited stocks satisfies $F \leq F_{msy}$ and a spawning stock biomass above the precautionary level MSY Btrigger.</p>
Supplementary policy assignment:	No (existing policy is sufficient).
Current environmental status	“Status is improving but good environmental status has not yet been achieved”

Appendix III- Coordination of policy efforts and responsibilities selected under SDG14 targets

Coordination of responsibilities

Roles of responsibility have been described according to the *Administrative Agreement on Water* and the *River Basin Management Plans*. The *Administrative Agreement on Water* (2011) was reached between the central government, the Dutch municipalities (Vereniging van Nederlandse Gemeenten); interprovincial consultation (Interprovinciaal overleg), Dutch water authorities (Unie van Waterschappen); and the association of water companies in the Netherlands (Vereniging van waterbedrijven in Nederland). It lays down the responsibilities of the different units of water management in the Netherlands, with the principle that no more than two administrative tiers will tackle a topic (Government of the Netherlands, 2015). The Agreement concerns the topics of water safety, good quality of water and sufficient fresh water (Government of the Netherlands, n.d.). The roles are determined as in Table 15.

Table 15. *Roles of responsibility according to the Administrative Agreement on Water and the River Basin Management Plans* (Government of the Netherlands, 2011; Ministry of Infrastructure and Environment, 2015).

Roles of responsibility according to the <i>Administrative Agreement on Water</i> and the <i>River Basin Management Plans</i>.		
Central government	<i>Administrative Agreement Water</i>	Is primarily responsible for setting standards for chemical and ecological water quality which are adopted from the European WFD. Within the framework, the government can deviate from the standards. The state is also the responsible authority for allocating functions in national waters
National Water Authority		Determines implementation measures that are necessary to achieve the national standards, and executes these. It supervises the measures that are necessary in national waters to comply with the designated functions and executes these
	<i>Summary river basin management plans</i>	Former ministry of Infrastructure and Environment: Management and Development Plan for State Waters, concerning objectives and measures of state waters
Provinces	<i>Administrative Agreement Water</i>	Are responsible for setting standards regarding regional waters and ground water and allocating functions concerning the regional waters and ground water

	<i>Summary river basin management plans</i>	Water and spatial plans concerning boundaries, status, objectives for regional surface water bodies, groundwater objectives and measures
Regional water authorities	<i>Administrative Agreement Water</i>	Determine the implementation measures regarding the regional waters
	<i>Summary river basin management plans</i>	Regional water Authorities: water management plans concerning regional surface waters
Municipalities	<i>Administrative Agreement Water</i>	Together with the regional water authorities, jointly determine the implementation measures for the urban area as well as to make agreements on its implementation
	<i>Summary river basin management plans</i>	Concerning the regional waters, the Water Law and underlying decisions describes roles of responsibility. The summary of river basin management plans describes the coordination in the management as 'intensive' as water quality is dealt with at all governments

Coordination of policy efforts

The *River basin management plans* provides an overview of the situation, problems, objectives and measures to improve water quality. It does not operate independently. Every Dutch government has to deal with water quality. According to the *summary of river basin management plans*, an intensive tuning of efforts exists between the *river basin management plans* with the water plans of other governments. Governments lay down objectives in their own plans (Ministry of Infrastructure and Environment, 2015). This is distributed as in Table 16:

Table 16. *Management plans on water, determined at different governmental levels* (Ministry of Infrastructure and Environment, 2015).

Governmental levels and their management plans on water		
Central government	<i>NWP</i>	Designation of water bodies for national waters and measures
Ministry of Infrastructure and Environment	<i>Management Plan of State Waters</i>	Objectives and measures concerning national waters
Provinces	<i>Regional water, or environmental/spatial plans</i>	Boundary, status and objectives for regional surface water bodies, objectives groundwater bodies and measures
Regional water authorities	<i>Water management plans</i>	Measures for regional

		surface waters
Municipalities	-	Measures that are determined in a decision is some cases.
Societal organizations, area managers and companies	-	Possibility to contribute

The *Administrative Agreement on Water* states that the state and provinces strive for plans in which policy is integrated as much as possible in order to prevent new separate water plans. On the individual level, the National Water Authority and the regional water authorities make agreements regarding the content and coordination between policy plans and management plans. Reporting to the central government takes place, concerning the progress and implementation of the management programs. Annual consultation takes place with provinces regarding the progress of the management programs of the regional water authorities, with the aim to acquiring current insights and at the same time tuning implementation efforts of the regional water authorities (Government of the Netherlands, 2011).

According to the *Integrated Management of the North Sea*, intensive cooperation takes place in the regions of all great river trajectories in the Regional Administrative Consultation, between the National Water Authority ,regional water authorities, provinces and municipalities, regarding the drawing up of the *River basin management plans* (Government of the Netherlands, 2015).

Conducted by the ministry of I&WM, The Steering Committee on Water is an administrative consultation with administrators of the regional water authorities, provinces, municipalities and drinking water companies with the aim of administrative coordination of water policy and its implementation and monitoring (Government of the Netherlands, n.d.). Concerning the coordination to improve water quality, the *NWP* describes that the former ministries of Infrastructure and Environment and Economic Affairs, together with the Steering Committee on Water, will exercise more control over the improvement of the water quality, after (Government of the Netherlands, 2015).

Coordination of responsibilities and policy efforts

In recent years, the provinces have become responsible for regional nature within its territory, which was determined in the negotiation agreement on decentralized nature policy. One of the tasks describes which was to be decentralized, links to SDG T14.2: 'Management of the biological diversity in the territory of provinces, by taking appropriate measures for the preservation of natural habitat and wild flora and fauna, mentioned in the BHD' (Government of the Netherlands, 2011). Provinces became responsible for nature development and management, with emphasis on the drawing up of nature policy instead of implementation. Provinces are responsible for the nature network in the Netherlands (Kompas2020, n.d.).

Concerning the Natura 2000 areas that border the coast (North Sea Coastal Zone; the Voordelta; Delta waters and the Raan Flats), responsibilities by different roles have been described (Tables 17, 18, 19 & 20). The areas have a shared responsibility between ministries and provincial and local authorities. Concerning Natura 2000 area 'Delta waters', The implementation of the measures and agreements has been described to be the joint responsibility of the former ministries of Economic Affairs and Infrastructure and Environment and the linked provinces of Zeeland, North Brabant and South-Holland (National Water Authority, 2016). Concerning collaborations to achieve the objectives, management plans differ in descriptions. According to the Delta waters management plan together

with the plans of the North Sea Coastal Zone and Voordelta, the state, provinces, water authorities, area managers and societal organizations work together to achieve the nature objectives. The plan of the Raan Flats state that ‘the National Water Authority, the ministry of Economic Affairs and other governments and stakeholders work together to achieve the nature objectives’ (Ministry of Infrastructure and Environment, 2016; National Water Authority, 2016; National Water Authority, 2016; National Water Authority, 2016).

Concerning the Wadden Sea, the website on the Natura 2000 areas refers to a different website for its responsibilities and management.

For each management plan, texts on the roles of responsibilities as well as on the coordination of policy efforts regarding a certain area were described. The management plan of the Voordelta, address roles regarding ‘administrative characteristics’ which was not found in other plans.

North Sea Coastal Zone

responsible authorities have been described according to the section on the drafting and determining of the management plan (Table 17):

Table 17. Roles of responsibility (Ministry of Infrastructure and Environment, 2016).

Roles of responsibility regarding creation and determining of the management plan	
<i>Coordinating manager and initiator in drafting the management plan</i>	National Water Authority
<i>Competent authorities</i>	Former ministries of Economic Affairs, Infrastructure and Environment/National Water Authority and provinces Friesland, Groningen, North-Holland
<i>Managers</i>	Former ministry of Infrastructure and Environment/National Water Authority, former ministry of Economic Affairs, ministry of Defense, Foundation for Nature Monuments*, the Forest Management Agency* It Fryske Gea
<i>Other governments: municipalities and regional water authorities</i>	Ameland, Bergen, Den Helder, Dongeradeel, Eems-mond, Schiermonnikoog, Terschelling, Texel, Vlieland, Zijpe
<i>Stakeholders</i>	Not specified

*Stichting natuurmonumenten; Staatsbosbeheer

The North Sea Coastal Zone regards the entire northern coasts, from Bergen (North Holland) until the Eems, above Rottum. The role of coordinating manager means coordinating the entire planning process of the creation of the management plan with also communication and coordination with other competent authorities. It does not mean it is the primary authority concerning the area. The plan is drawn up in consultation with competent authorities. A regional process to give substance to the management plan was organized by the National Water Authority, together with involved regional parties, which have not been further defined (Ministry of Infrastructure and Environment, 2016).

The regional process of the Wadden area, is also addressed in the management plan as it exists in conjunction with management plans of the Wadden Sea, and the islands of Texel, Vlieland,

Terschelling, Ameland and Schiermonnikoog. A steering group was formed under the board of directors for the Wadden Sea region, for drawing up of the Natura 2000 management plans of the Wadden area. Also on an official level, the above mentioned organizations have been frequently attuned regarding all relevant subjects (Ministry of Infrastructure and Environment, 2016).

The Voordelta

The responsible authorities have been described, both in a section regarding the creation of the management plan and on administrative characteristics and (Table 18):

Table 18. Roles of responsibility (National Water Authority, 2016).

Roles of responsibilities regarding creation of the management plan	
<i>Initiator in drafting the management plan</i>	National Water Authority
<i>Competent authorities regarding determination of the management plan</i>	represented by the Former ministries of Economic Affairs, National Water Authority under Infrastructure and Environment, and provinces Zeeland and South Holland
<i>Competent authority concerning granting permits</i>	Provinces and former ministry of Economic Affairs
<i>Managers</i>	National Water Authority, Foundation for Nature Monuments*, the Forest Management Agency* South-Holland Landscape Foundation*, Zeeland Landscape Foundation*
<i>Other governments</i>	Municipalities, and regional water authorities
<i>Stakeholders</i>	Not specified

*Stichting natuurmonumenten; Staatsbosbeheer, Stichting het Zuid-Hollands Landschap; Stichting het Zeeuwse Landschap

The administrative characteristics have been described in Table 19.

Table 19. Roles of responsibility (National Water Authority, 2016).

Administrative characteristics	
<i>Central government:</i>	The central government is responsible for the policy and management of the sea except for areas under the authority of provinces and municipalities. This concerns the largest part of the Voordelta.
<i>Ministries</i>	Ministries that are primarily involved in the implementation of the management plan are the former ministry of Infrastructure and Environment as coordinator regarding management of the North Sea and responsible for the water quality and safety. The former ministry of Economic Affairs is responsible for nature, fisheries and recreation.
<i>Provinces</i>	Provinces are the competent authorities concerning regional spatial planning such as drafting development directions and determining functions in environmental and regional plans. Also the provinces are the competent authority concerning nature and environment.
<i>Municipalities</i>	The municipalities are the competent authority concerning its territory which extends 1 Kilometer off the coastline. The authority concerns local spatial planning, public safety and environment.

Delta waters

The responsible authorities have been described according to the section on the creation of the management plan. The responsible authorities have been described according to the following different roles (Table 20).

Table 20. Roles of responsibility (National Water Authority, 2016).

Roles of responsibility regarding creation of the management plan	
<i>Initiator in drafting the management plan</i>	National Water Authority
<i>Competent authorities regarding determination of the management plan</i>	Former ministries of Economic Affairs, Infrastructure and Environment and provinces
<i>Competent authority concerning granting permits</i>	Provinces and former ministry of Economic Affairs
<i>Managers</i>	National Water Authority, Foundation for Nature Monuments*, the Forest Management Agency* South-Holland Landscape Foundation*, Zeeland Landscape Foundation*
<i>Other governments</i>	Municipalities, and regional water authorities

*Stichting natuurmonumenten; Staatsbosbeheer, Stichting het Zuid-Hollands Landschap; Stichting het Zeeuwse Landschap

Raan Flats

The responsible authorities have been described according to the section on the creation of the management plan. The responsible authorities have been described according to the following different roles (Table 21).

Table 21. Roles of responsibility (National Water Authority, 2016).

Roles of responsibility regarding creation of the management plan	
<i>Coordinating manager and initiator in drafting the management plan</i>	National Water Authority
<i>Competent authorities regarding determination of the management plan</i>	National Water Authority, under the former ministry of Infrastructure and Environment and the former ministry of Economic Affairs
<i>Regional and local authorities</i>	province of Zeeland and the municipalities of Vlissingen, Veere and Sluis as well as regional water authorities of Scheldestromen.
<i>Competent authority concerning granting permits</i>	Not specified
<i>Managers and stakeholders</i>	Not further specified

Wadden Sea

On ‘collaboration and coordination’, the management and development plan for state waters 2016-2021 (Beheer en ontwikkelplan voor de Rijkswateren (bprw) describes the drawing up of a plan of action regarding the collaboration on the management of the Wadden Sea. This was done at the request of the former ministries of Economic Affairs and Infrastructure and Environment and carried out by the Board of Directors Wadden Sea Region and the Management Board in 2014. In this coordination agenda, governments, nature organizations and knowledge institutions work on the improvement of Wadden Sea management with the ambition to have one manager from one integrated management and design plan (National Water Authority, 2015).

Governance of the Wadden area by one management authority

The Dutch Coalition Agreement includes that there will be one managing authority for the Wadden Sea that implements an integrated management plan, which provides better protection of nature areas, combined with a better management of fish. An exploration was carried out by AT Osborne on the current management authority of the Wadden Sea to gain insight into this issue. Reported are the involved governments in management of the Wadden Sea. The distribution of tasks, responsibilities and authorization are presented in Table 22 (Schouten & Van Nieuwenhuizen Wijbenga, 2019).

The outcome of the exploration was an improved coordination of management activities and a clear division between principals and contractors. An principal consultation where the ministries of AN&FQ, I&WM and the provinces, North Holland, Friesland, and Groningen are represented as formal competent authorities was set. Together they form the management authority of the Wadden Sea. Tasks are: providing frameworks based on policy; main decision-making; set priorities; have an integrated management drafted and determining and operationally driving a compact unit. This is led by two directors which are independent and not affiliated with existing management authorities. Their task, received from the principal consultation, concerns the drawing up of a cooperation

agreement where agreements are made on objectives, methods and tasks as well as stimulating cooperation and coordination between managers and the monitoring of progress (Schouten & Van Nieuwenhuizen Wijbenga, 2019).

Coordination between the three Wadden Sea provinces, Groningen, Friesland and North-Holland takes place in the Wadden Sea Provinces Steering Group. The Wadden Commissioners from the provinces are represented and meet immediately prior to the Management Board Wadden Region. This management board is where coordination takes place on the most important management issues. It is a strategic consultative and coordination body with an integrated view on the Wadden Sea. Besides the central government, provinces and municipalities, the regional water authorities, corporations, nature organizations and scientists are represented (Waddenzee.nl, n.d.).

Between Wadden islands, the partnership 'De Waddeneilanden' (the Wadden Sea islands) is a legal official administrative body for all Wadden islands, based on a joint arrangement. The general board consists of municipal councilors from all five islands and in an executive committee, 5 majors are represented. The individual municipal councils still have the final say regarding decisions (Waddenzee.nl, n.d.). The association of Wadden Sea coast municipalities work together on Wadden Sea policy. The Federation of coastal municipalities forms the platform where the partnership Wadden Sea islands and the association of Wadden Sea coast municipalities inform each other and where agreements are made concerning a joint Wadden Sea policy (Waddenzee.nl, n.d.).

Table 22. *Current distribution of tasks, responsibilities and authorizations concerning the Wadden area* (Bos, Kee, & Van Mil, 2018).

Tasks, responsibilities, authorizations	Nature management	Water management	Fisheries management
Policy	ministry of AN&FQ, provinces	ministry of I&WM	ministry of AN&FQ
Drawing up policy plan	National Water Authority	National Water Authority	N/A
Determining management plan	ministry of AN&FQ; ministry of I&WM; Provinces	National Water Authority	ministry of AN&FQ
Zoning and conduction	ministry of AN&FQ, Provinces*	National Water Authority	ministry of AN&FQ
Physic management (management and maintenance)	National Water Authority,	National Water Authority	Wadden unit
Physic management (design and recovery)	National Water Authority, TBO's*, SBB*, private individuals, Wadden Fund (Waddenfonds)	National Water Authority	Wadden unit
Granting permits	Provinces*, ministry of AN&FQ, Netherlands Enterprise Agency	National Water Authority	Netherlands Enterprise Agency
Enforcement	Provinces*, ministry of AN&FQ	National Water Authority	ministry of AN&FQ (Wadden unit)
Calamities response	National Water Authority		
Enforcement public order and security	Majors, police, prosecution		
Monitoring and research	National Water Authority	National Water Authority	ministry of AN&FQ
Education and information	TBO's, SBB, Wadden unit	National Water Authority	Netherlands Enterprise Agency
Promotion and marketing	Diverse	Diverse	N/A

*TBO's (terrain management organizations; Forestry Commission (Staatsbosbeheer) PRW: program rich Wadden Sea (Programma Rijke Waddenzee)

*Provinces: North-Holland, Friesland, Groningen

Appendix IV Societal organizations SDG Nederland

This section presents organizations, listed on the website of SDG Nederland that selected SDG14 as a Goal the organizations contribute to. However, the contribution to this Goal is not clear. In Table 23, a division was made between organizations that selected all SDGs and those that selected specific SDGs. The researcher takes into account that organizations might not contribute specifically to SDG14 but aims to contribute to the SDGs as the entire framework.

Table 23. Organizations listed at SDG Nederland with unclear contribution to SDG14.

Works on all SDGs <i>Not clear how it contributes to SDG14</i>	Works on selected SDGs, including SDG14 <i>Not clear how it contributes to SDG14</i>
Stichting Mission Sri Lanka (non-profit/ foundation/ NGO)	Platform Holland Circular Hotspot (others)
Next Circle- Radio (company)	ECORightsNOW! (non-Profit)
Paarde Mier (Social Enterprise)	Kossmann.dejong (company)
Stichting SDGHUB.NL (non-Profit)	Stichting Stedenband Haarlem-Mutare (Non-Profit)
Uitgeverij Prospera (company)	The Impacters (company)
Green Partner Audits & Consultancy B.V. (SDG-consultant)	Bordspel Klimaatjes (knowledge institute)
AGREEn (non-Profit)	Centrum voor Natuur en Milieu Educatie De Rollen (non-Profit)
Zinnige Zaken (social enterprise)	Voorkomen is goedkoper dan genezen (non-Profit)
Milcom b.v. (knowledge institute)	DesignWeek@School (social enterprise)
Ivo Boerdam (social enterprise)	Duurzaamheid in de Kappersbranche (non-Profit)
Fontys University of Applied Sciences (knowledge institute- higher education)	CNME Maastricht en regio (education, training & research)
TOSCA- Tribe of Sustainability Change Agents (SDG-consultant)	ARTIS (non-Profit)
Global Acquaintance (company/ SME)	Wellantcollege (knowledge institute)
Connecting Minds- Creating the Future (social enterprise)	Coffee Fresh (company)
Keurmerk Sociale Onderneming (others)	PINK! (others) (PJO Politieke jongeren organisatie)
Uitgeverij Prospera (company)	MK Group (social enterprise)
Double O Roos (company/ SME)	BrainMill (company)
ROC Noorderpoort (knowledge institute/ MBO)	The Green Scissors (SDG consultant)
Centrum voor Mondiaal Onderwijs (non/Profit/ foundation/ NGO)	Corendon (company)
Co-founder (company/ SME)	Sustainit. (company/ freelancer)
HZ University of Applied Science (knowledge institute)	University of Twente-ITC (education, training & research)
Volt Nederland (government/politics/(semi) public)	OCC (company)
Sketchy Business (company)	Stichting 040doet.nl (non-profit/ foundation/NGO)
Innovatieraad Alkmaar (knowledge institute)	Startup Apeldoorn (non-profit/ foundation/ NGO)

Snackbar van de Toekomst (others)	Ozarka B.V. (company) reducing plastic waste in general
AW Groep (company)	Origame (company)
A Brand New World (company)	Better Places Travel (others)
Volt Nederland (government/politics/(semi) public)	VNG International (government, politics and (semi) public) International Cooperation Agency of the Association of Netherlands Municipalities
	PNO Consultants (company/ SME)
	IPC Groene Ruimte (knowledge institute/ education institute)
	CNME Maastricht en region (education, training & research)
	Focus-C management en advies in civiel en duurzaamheid (company/ freelancer)
	Netherlands IHP-HWRP Committee (others)
	Deltares (non-Profit)
	Greenpeace Nederland (non-profit)
	National SDG Aruba Commission (government, politics and (semi) public)

14 Life below water

SDG targets, indicators and alternative indicators	Unit	Netherlands		EU ranking		source (NL value; EU ranking)
		year	value	year	value	
14.1 Prevent and significantly reduce marine pollution of all kinds						
14.1.1 Index of coastal eutrophication (ICEP) and floating plastic debris density Eutrophication in coastal waters (North Sea)	% not eutrophic % potentially eutrophic % eutrophic	2011-2013 2011-2013 2011-2013	6 81 13			WUR WUR WUR
Plastic waste on beaches	Pieces of plastic litter per 100m	2004/2015	342			North Sea Foundation (Stichting de Noordzee)
Clean water index (component of ocean health index)	Score on standardized index	2017	45	2017	18 (23)	Ocean Health Index
14.2 Sustainably manage and protect marine and coastal ecosystems						
14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches ^[1]						
14.3 Minimize and address the impacts of ocean acidification						
14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations	Average pH value of North Sea	2011	8.06			Marine Chemistry
14.4 Effectively regulate harvesting and end overfishing						
14.4.1 Proportion of fish stocks within biologically sustainable levels	Number out of 5 fish species caught for consumption purposes within sustainable level	2017	5			ICES
14.5 Conserve at least 10 per cent of coastal and marine areas						
14.5.1 Coverage of protected areas in relation to marine areas	%	2016	21.5	2016	6 (22)	UNSD; UNSD
14.6 Prohibit and eliminate subsidies which contribute to overcapacity and overfishing, and illegal, unreported and unregulated fishing						
14.6.1 Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing						
14.7 Increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources						
14.7.1 Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries						

[a] Official SDG indicator measured; [b] Alternative indicator.

[1] The Netherlands has realised or almost realised target; or target is not relevant for the Netherlands; [2] To be developed; maybe difficult to quantify.

For metadata on the indicators, see: <https://www.cbs.nl/nl-nl/publicatie/2016/44/meten-van-sdgs-een-eerste-beeld-voor-nederland> (English translation forthcoming). Indicators updated on 1 February 2018.

Figure 1. represents the statistics concerning the status of SDG14 indicators in the Netherlands in 2018 (Statistics Netherlands, 2018).

Appendix VI Interview questions (*Part B*)

Interview questions addressed in *Part B* Interview analysis (paragraph 3.2). Underlined units were added in the preparation of interviews to those to address based on *Part A*. Those indicated in *italic* were added during interview.

Respondent: Tavenier, J.

Role: SDG coordinator at ministry of Infrastructure and Water Management

Introduction

Sub-question 1

- Can you tell me why SDG14 targets are not completely covered by policy targets?
 - o Six questions to clarify answer
- Are policy targets attuned to the target horizons of SDG14 targets (2020, 2025, 2030)?
 - o One question to clarify answer
- *Are policy documents in your system sorted by SDG14 targets?*
- Is an assessment criteria defined for SDG14?
 - o One question to clarify answer
- Is a long-term vision formulated whereby organizations or people contribute also?
 - o One question to clarify answer

Sub-question 2

- Have the responsibilities been distributed concerning SDG14 targets?
 - o One question to clarify answer
- Can you tell me who is the responsible for SDG14?
- *Which areas concern your responsibility?*
- Does an responsible authority exist concerning policy coherence regarding SDG14?
- *What does it mean, "light coordination"?*
 - o One question to clarify answer
- *Is it logic that Foreign Affairs is the responsible ministry?*

Sub-question 3

- To what extent does participation exist concerning defining policy targets?

Sub-question 4

- Does reporting exist by ministries concerning accountability on underlying developments in achieving SDG14 (next to the *Fourth Dutch national SDG report*)?
 - o Two question to clarify answer

Additional question:

- Do you have suggestions on improvements of the implementation of SDG14?

Respondent: Vis, J.

Role: Coordinating policy officer Nature and North Sea, ministry of AN&FQ

Introduction

Sub-question 1

- Can you tell me why no long-term vision has been formulated?
 - o One question to clarify answer
- Can you tell me whether alterations have been made to cover SDG14 targets by national policy targets?
- Can you tell me why target horizons are not adjusted to SDG14 targets?
- Which target year is connected to the *Marine Strategy*?
 - o One question to clarify answer
- Is an assessment criteria defined for SDG14?
 - o Two question to clarify answer
- How is progress being measured in case such criteria lack?
- *What is the leading framework for policy concerning sustainability of the oceans?

Sub-question 2

- Have the responsibilities been distributed concerning SDG14 targets?
 - o One question to clarify answer
- Can you tell me who is the responsible for SDG14?
- Can you tell me who is responsible concerning policy coherence regarding SDG14?
- To what extent does the core-team of five persons exists with SDG Focal Points of the ministries since the plan of action indicated this in 2016?

Sub-question 3

- To what extent does participation exist concerning defining policy targets?
 - o Two question to clarify answer
- To what extent is the government utilizing societal participation to contribute to SDG14?

Sub-question 4

- Does reporting exist by ministries concerning accountability on underlying developments in achieving SDG14 (next to the *Fourth Dutch national SDG report*)?
- Does reporting exist by ministries concerning policy evaluation?
- Has the monitoring objective been determined?
 - o Two question to clarify answer

Additional question:

- Do you have suggestions on improvements of the implementation of SDG14?

Interview questions and answers compared between Tavenier, J. and Vis, J.

- Can you tell me why no long-term vision has been formulated?
- Can you tell me whether alterations have been made to cover SDG14 targets by national policy targets?
- Can you tell me why target horizons are not adjusted to SDG14 targets?
- Is an assessment criteria defined for SDG14?
- Have the responsibilities been distributed concerning SDG14 targets?
- Can you tell me who is responsible concerning policy coherence regarding SDG14?
- To what extent does participation exist concerning defining policy targets?
- Does reporting exist by ministries concerning accountability on underlying developments in achieving SDG14 (next to the *Fourth Dutch national SDG report*)?

Respondent: Van Soest, T.

Role: Senior Project Manager, SDG Nederland

Introduction

- On the website, the SDG charter (now SDG Nederland) started in 2013, can you explain this, as the SDGs were accepted by 2015?
- Why is the coordinator selected by this year?
- *What are his/her responsibilities?*
- *Does a link exist with Foreign Affairs?*

Sub-question 1

- Is a long-term vision known concerning SDG14?
- The *Fourth Dutch national SDG report* states that no national implementation strategy exists, do you know why?
- *Who is responsible to draw up such a strategy?*
- Is an assessment criteria defined for SDG14?
 - One question to clarify answer

Sub-question 3

- To what extent does participation exist concerning defining policy targets?
 - One question to clarify answer
- What does it mean when an organization selected SDG14 as a Goal to which they contribute?
- What do you think of the role of the government concerning utilizing societal participation?
- *Is civil participation concerning SDG14 known?*
- Is SDG14 sufficiently known in the Netherlands?
- *What do you think needs to be carried out by the government or civil society in order to make SDG14 known?
 - One question to clarify answer

Sub-question 4

- Are you familiar with reporting by ministries concerning accountability on underlying developments in achieving SDG14?
- ~~— Policy evaluation~~
- What do you think of the transparency of the government concerning the progress?

Additional question:

- Do you have suggestions on improvements of the implementation of SDG14?

Respondent: Coolen, E.

Role: Coördinator SDG14 Alliance, program director Programma Rijke Noordzee

Introduction

- Do you know why limited information can be found on SDG14?

Sub-question 3

- Can you tell me what a SDG alliance is and what it constitutes?
- Can you tell me why this alliance was realized in an earlier stage?
 - o Two questions to clarify answer
- Does a link exist with the ministerial Focal Points for the SDGs?
- What does it mean when an organization selected SDG14 as a Goal to which they contribute?
- Are other initiatives from society known to contribute to SDG14?
- Is SDG14 sufficiently known in the Netherlands?

Sub-question 1

- Is a long-term vision known concerning SDG14?
 - o One question to clarify answer
- The Fourth Dutch national SDG report states that no national implementation strategy exists, do you know why?
- Is an assessment criteria defined for SDG14?

Sub-question 2

- Is it familiar to you who is responsible of SDG14 and targets?

Sub-question 4

- Are you familiar with reporting by ministries concerning accountability on underlying developments in achieving SDG14?

Sub-question 3

- What do you think of the role of the government concerning utilizing societal participation?
 - o Two questions to clarify answer

Additional question:

- Do you have suggestions on improvements of the implementation of SDG14?

Respondent: De Jong, R.

Role: Leader cluster Sustainability- Monitor of Well-Being and SDGs

Sub-question 4

- Can you tell me the reason why just four indicators are reported in the two latest reports by Statistics Netherlands?
- To what extent are SDG14 indicators translated into the national situation?
 - o Three questions to clarify answer

Sub-question 1

- Is an assessment criteria defined for SDG14?
 - o One question to clarify answer

Sub-question 4

- To what extent is the Wadden Sea considered to integrate in the monitoring?
- How is progress interpreted to determine whether progress is positive?
 - o One question to clarify answer
- Has the monitoring objective been determined?
 - o One question to clarify answer
- *Can you tell me how Statistics Netherlands is measuring the status based on indicators?*
- Are you familiar with the objective of politics with the statistics?
- To what extent are explanatory factors reported concerning the status of this Goal?
- Does reporting exist by ministries concerning accountability on underlying developments in achieving SDG14 (next to the *Fourth Dutch national SDG report*)?
- What do you think about the transparency concerning the progress of this Goal?

Additional question:

- Do you have suggestions on improvements of the implementation of SDG14?

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