



DELIVERABLE 2.1

FEASIBILITY ASSESSMENT FRAMEWORK

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EXECUTIVE SUMMARY

This report presents the methodology for a feasibility framework to judge policy instruments that try to minimize nutrient pollution in water. The framework allows the assessment of different policy instruments from its design phase to the implementation (horizontal assessment) but also to analyze the interplay between different instruments (vertical assessment).

The Feasibility Assessment Framework looks at five areas/components: i) legal issues, ii) governance aspects, iii) resources, iv) implementation, and v) monitoring & reporting aspects related to nutrient reduction.

In the NAPSEA project, the framework will be applied to different policy instruments that tackle nutrient pollution in inland streams, rivers, lakes and estuaries that lead into the Wadden Sea, but it may also be useful for analyzing the feasibility of other environmental policy instruments.

1. INTRODUCTION

1.1. The NAPSEA project

This project researches the **effectiveness of Nitrogen And Phosphorus load reduction measures from Source to sEA, considering the effects of climate change (NAPSEA)**. The primary objectives of the NAPSEA project are to support national and local authorities in the selection of effective measures to reduce nutrient loads and create political support for their execution. The project employs an integrated approach spanning from pollution sources to sea, considering governance, nutrient pathways and measures, as well as ecosystem health. Geographically, the project focuses on the Wadden Sea catchment area, with specific case studies for the Rhine, Elbe, Hunze, and the Wadden Sea itself. NAPSEA serves as a platform to showcase practices in implementation that are socially acceptable, sustainable, and efficient measures. The project also considers the influence of climate change and the additional benefits of measures aimed at reducing greenhouse gas emissions.

The goal of Work Package (WP) 2 is to obtain improved support, with a set of guidelines to reach the policy vision of clean European seas by 2030. Efforts to combat eutrophication have significantly advanced in Europe, but certain challenges continue to exist, such as disjointed policies and limited public acceptance of measures. WP2 aims to analyse the policy and socio-economic aspects of nutrient management. This includes analysing barriers and highlighting good practices for implementing sustainable and effective strategies to reduce marine pollution – encompassing administrative, legal, financial, technical, and social dimensions.

The overarching objective of this report (Deliverable 2.1) is the development of a framework to evaluate current nutrient reduction policy instruments¹, judge their overall feasibility of reaching the objective and assess if they go in line with the Zero Pollution Action Plan². The framework will later be tested on the Wadden Sea to understand its feasibility and how it can be advanced. The framework is created to assess policy instruments and their enabling environment and does not consider the level of policy actions or measures. Within the same work package, other tasks deal with the measures level. The results and the revised framework will be presented in Deliverable 2.3. Furthermore, this WP will use obtained information for policy recommendations and create a report on the feasibility of measures to reduce nutrient inputs in the Elbe and Rhine (D.2.2), which complement the work of governance assessment concerning N&P reduction.

1.2. Background information on the Zero Pollution Action Plan

The European Commission has published its “Zero Pollution Action Plan” (2021), which is part of the Green Deal³, proposing actions that contribute to the UN 2030 Agenda for Sustainable Development⁴, and are harmonized with the 2050 climate-neutrality objective. This plan also weaves in the principles of the clean and circular economy, as well as the revitalization of biodiversity targets. One of the main objectives of the Zero Pollution Action Plan is to reduce nutrient losses by 50% until 2030, which is also written in the Biodiversity Strategy and the Farm to Fork Strategy. The principles to achieve this objective are set out in the figure below.

¹ Policy instruments are techniques used by the governing authorities (government or public) to promote certain policies to achieve a predefined set of goals. They are interventions designed by such authorities intending to motivate all stakeholders involved in the issue at stake. This can be a directive, a regulation, a strategy, or a program.

² European Commission (2021): EU Action Plan: ‘Towards Zero Pollution for Air, Water and Soil.’ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A52021DC0400&from=EN>.

³ European Commission (2019): A European Green Deal. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

⁴ United Nations: Sustainable Development Goals. <https://www.un.org/sustainabledevelopment/>

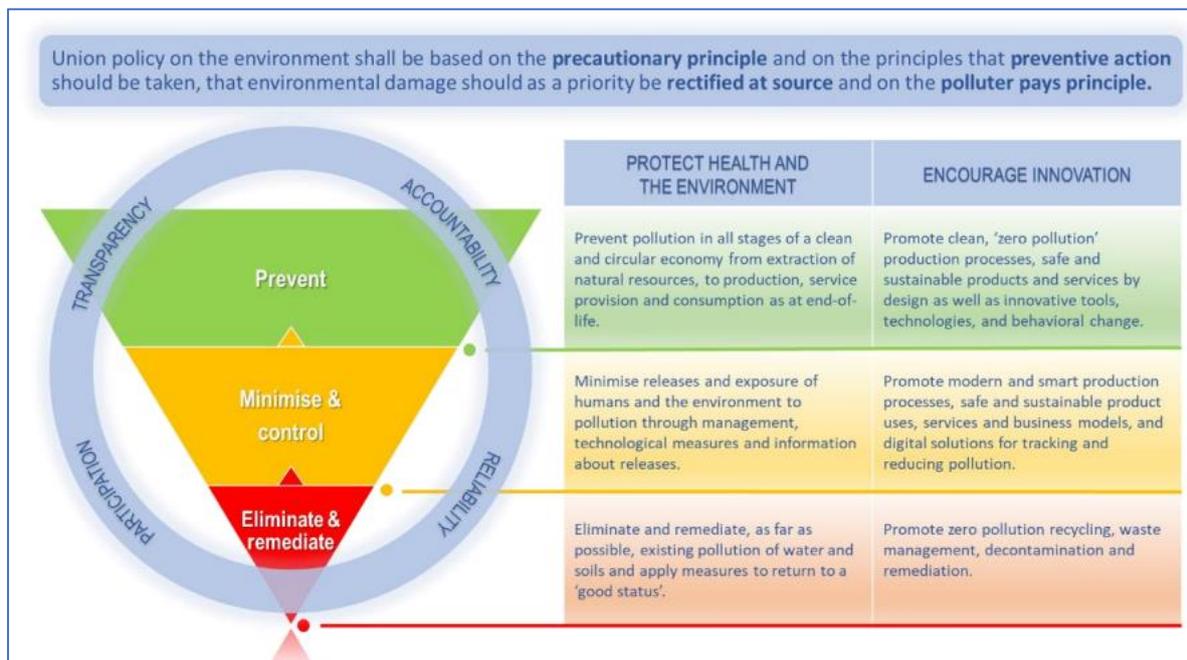


Figure 1: Zero Pollution Hierarchy⁵.

Before the Zero Pollution Plan was formed, the European Union had already implemented several legislations (e.g. Nitrate Directive) and other policy instruments, which partially contributed to the goals of the Zero Pollution Plan. The regulations and plans include guidance and partially specific programs of measures to give the Member States directions on how to meet the standards and thresholds, i.e. reaching good status in all rivers, lakes and transitional and coastal waters, and good environmental status for marine waters in the EU. One important policy instrument to guide how the nutrient reduction shall take place is the EU Integrated Nutrient Management Action Plan, where indicators distinguish sources of pollution and target values, it is expected to be published by the end of 2023.⁶

While the different legislations, directives and other policy instruments likely serve the zero pollution strategy in some way, it is not clear to what extent this takes place. However, currently, a systematic assessment to which extent the current policy instruments are contributing to the objectives of the Zero Pollution Action Plan and what this means for the Wadden Sea is lacking. Therefore, the developed framework in this report should support the assessment and analyze the results.

1.3. How this framework was developed

For the development of the framework, different policy documents were studied to understand the landscape of policies around the Wadden Sea protection and tailor the framework so that it investigates the policy landscape appropriately. For the content preparation international agreements on the protection of the Wadden Sea, EU legislation, Dutch and German Wadden Sea protection and management, and the North Sea catalogue of measures were considered. Next, for the development

⁵ European Commission (2021): EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil.' <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A52021DC0400&from=EN>.

⁶ European Commission (2022): https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12899-Nutrients-action-plan-for-better-management_de

of the framework existing methodologies such as the EU fitness check⁷ and policy analysis schemes⁸ have been studied and considered for the framework. The methodology was selected because it is relevant and fit for analyzing the interaction between policy instruments as well as evaluating the enabling environment. The quality of the framework was ensured by inviting comments from all consortium members and discussing the framework and how to make its features most useful in various meetings. For a first internal review, the template was circulated in the consortium in June 2023 and 7 responses were submitted and included in making the template stronger. Parallel, a list of policy instruments was created, which will be the policy instruments that the feasibility framework will be applied to in the upcoming months. This list was circulated amongst consortium members as well to ensure that all relevant policy instruments will be analyzed. The final list of policy instruments selected for analysis can be found in Annex III.

2. METHODOLOGY

Policy instruments and their interaction with one another can be complicated and it is challenging to plan and revise them to their best effect. Comprehending the feasibility of policy instruments and the underlying reasons is therefore essential. Even if the ex-ante assessment can indicate how a policy instrument will perform, only when tested in real-world scenarios the effectiveness of policy instruments can be truly assessed, along with identifying the challenges that might hinder their optimal functionality.

In the case of evaluating the feasibility of nutrient limitation strategies, additional challenges lie in the multitude of measures that are available for different sectors and impacting different stages of the DPISR framework⁹.

To tackle the challenge, this framework tries to better understand the policy instruments' feasibility by assessing the enabling environment, as well as the level of integration of the policy instruments across the governance levels and sectors.

Following the goal of the Zero Pollution Plan the framework developed should be able to answer the following questions:

Is the current legal framework relevant for the reduction of nutrient pollution in the EU but also on the OSPAR-MS Level (in particular Germany and Netherlands) sufficient to achieve the 50% nutrient reduction target in the EU zero pollution plan using the example of the Wadden Sea? Why? Why not?

Answering the questions above should allow us to derive recommendations on how to improve the existing policy framework and its implementation. The framework follows a simple matrix approach as shown in the figure below:

⁷ EU fitness check: A fitness check is a comprehensive evaluation of a policy area that usually addresses how a set of related legislative acts have contributed to the attainment of policy objectives. Fitness checks can also be conducted for horizontal issues, focusing on specific matters across many different legislative acts (e.g. reporting obligations). Fitness checks are particularly well suited to identifying regulatory overlaps, inconsistencies, synergies, digitalisation potential and cumulative impacts., Better Regulation Guidelines Fitness Check § (2021). https://commission.europa.eu/system/files/2021-11/swd2021_305_en.pdf, P. 10

⁸ Policy frameworks that were studied included: Methodology for SDG-indicator 17.14.1: Mechanisms in place to enhance policy coherence for sustainable development (https://wesr.unep.org/media/docs/projects/methodology_17_14_1.pdf); CDC's Policy Analytical Framework (<https://www.cdc.gov/policy/paeo/process/analysis.html>) and Pathways to policy integration: a subsystem approach (<https://link.springer.com/article/10.1007/s11077-022-09483-1>)

⁹ See <https://www.eea.europa.eu/publications/92-9167-059-6-sum/page002.html>

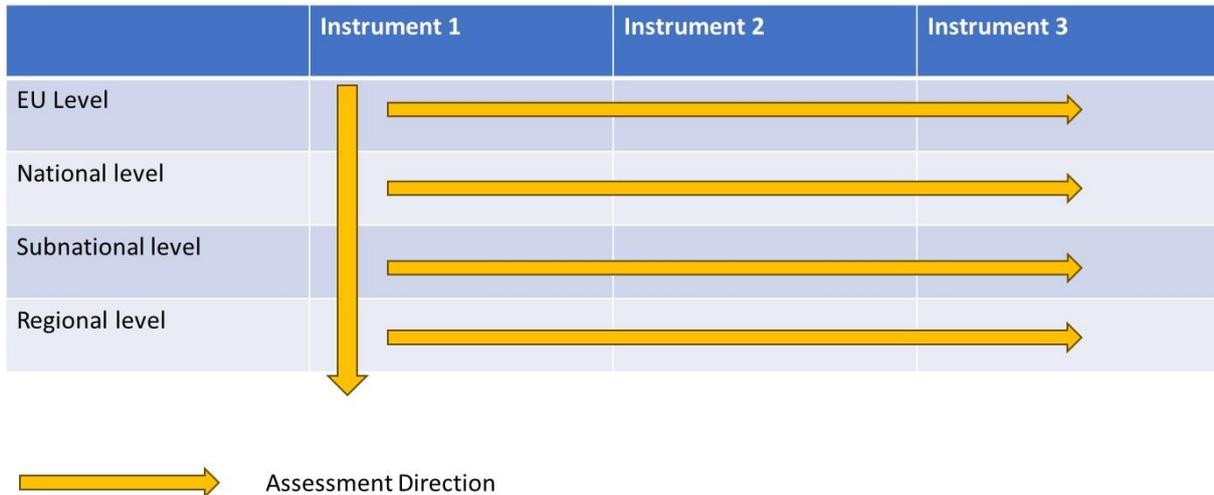


Figure 2: Assessment framework

The framework is implemented by applying three main steps as set out in the figure below:

STAGE	1) DATA COLLECTION →	2) DATA ANALYSIS →	3) DATA INTERPRETATION
ACTION	SCREENING PER POLICY INSTRUMENT FOR EACH GOVERNANCE CATEGORY: LEGAL GOVERNANCE RESOURCES IMPLEMENTATION MONITORING AND REPORTING	1) CREATING AN OVERVIEW 2) LEVEL OF INTEGRATION ACROSS GOVERNANCE LEVELS 3) LEVEL OF INTEGRATION ACROSS SECTORS	1) EVALUATING THE ENABLING ENVIRONMENT 2) JUDGING THE EFFECTIVENESS AND EFFICIENCY OF EXISTING NUTRIENT POLICY INSTRUMENTS
METHOD	filling in template + interviews	analysing per guidance question + collecting examples from the policy instruments	review through interviews + summarizing results

Figure 3: Feasibility Framework

Figure 3 gives an overall overview of how the framework is set up. The framework is split into three main stages that are summarized below and described in detail below:

2.1. STAGE I: Data collection (template and interviews)

Overall Goal: The goal is to collect data about each selected policy instrument regarding the way it works by answering questions about the governance categories.

2.1.1. Step 1: Selection of policy instruments

In the beginning, a list of policy instruments needs to be compiled, with all policy instruments that are potentially relevant to the environmental problem that should be assessed.

In the case of the NAPSEA project the policy instruments relevant to nutrient reduction have been selected based on research, the entire list of the policy instruments can be found in Annex III.

2.1.2. Step 2: Document review

What to do? For the data collection, each policy instrument (which can be multiple documents) and existing assessments are screened for all the relevant details, which are filled into the template (Annex I) by the assessor.

Table I contains a list of 5 governance categories (legal, governance, resources, implementation, monitoring and reporting) and their features for which information needs to be collected to carry out the assessment. For each of the governance features there is a question provided in the template (Annex I) to be filled out by the assessor to collect relevant information.

Table 1: Governance categories and their features provide a basis for the template of questions (numbers in the left column relate to the question order in the template).

<i>Legal</i>	
Nutrient reduction targets (1, 2)	<i>Specify goals for reducing nutrients mentioned in the policy instrument and specify with a roadmap, if available.</i>
Legally binding (3)	<i>Record any binding targets or goals in the policy instrument, and at which level.</i>
Repercussions and sanctioning (4)	<i>Outline the consequences of non-compliance scenarios in which the nutrient reduction targets or goals are not met. This could involve describing a range of actions, penalties, or corrective measures that will be taken in the event of failure to meet the required goals.</i>
Ratification in country (5)	<i>Give information about the transposition/ratification of the policy instrument in the country (national, subnational or local level). This especially applies to EU legislation.</i>
Non-compliance case (6)	<i>Report if there is a non-compliance case (i.e. infringement process) ongoing.</i>
Clear target audience (7)	<i>Define the groups or entities that the policy instrument is targeting. This could include industries, agricultural sectors, local communities, government agencies, and other stakeholders who play a role in nutrient reduction efforts.</i>
Geographic scope (8)	<i>Specify the geographical area to which the policy instrument applies (e.g. EU, Wadden Sea).</i>
Recommendations/ Binding statements (9)	<i>Provide any explicit recommendations, guidelines, or directives from the policy instrument. Please describe how the measures and actions are prescribed (Is there a programme of measures in place? Etc.</i>
Link freshwater and marine water issues (10)	<i>Describe how the interconnectivity between freshwater and marine ecosystems is addressed in the policy instrument.</i>
<i>Governance</i>	
Structure for implementation (across sectors) (11)	<i>Describe the structure or inter-ministerial body that is established to coordinate efforts across various sectors contributing to nutrient pollution (e.g. agriculture, industry, wastewater management). Furthermore, the way suggestions are implemented the way they are functioning (e.g. regular meetings), and the body's rights and responsibilities should be described.</i>
Structure for implementation (vertical coherence) (12)	<i>Describe the alignment and coordination between different levels of governance, such as EU, national, regional, and local authorities. This should include also the body's rights and responsibilities and the way of structure that is implemented for interaction between those levels.</i>
Vertical exchange mechanism (13)	<i>Describe to what extent the reporting across different governance levels is institutionalized, and whether objectives and targets set on the highest policy level are broken down to /quantified for the lowest level. Please also mention, whether different policy areas are actively forming the policy instrument, where necessary.</i>
Participation (14)	<i>Describe what mechanisms to involve stakeholders are included in the policy instrument (e.g. public consultations, advisory panels). Please include any good practices or guidelines.</i>
Reflection of Zero Pollution Principle (15, 16)	1) <i>Provide general information on which of the 3 stages (preventing, minimising and controlling, eliminate and remediate) the policy instrument serves</i>

	2) <i>Select from the checklist of relevant actions, which are tackled by the policy instrument</i>
Resources	
Financing mechanisms (17)	<i>Describe the sources of funding (e.g. different EU funds) mentioned or how measures can be financed that are suggested for implementation. Please note down the volume of funding as well as how it is distributed (conditions tied to funding, funding stability and flexibility etc.).</i>
Budget (18)	<i>Describe a budget plan or costs of measures and specify how the financial allocation for implementation should look. This involves breaking down the budget by activities, sectors, and timeframes.</i>
Cost-effectiveness (19)	<i>Give an overview of any structures that are in place to evaluate the cost-efficiency of the selected measures achieving nutrient reduction targets concerning the resources invested.</i>
Data centre/ Communication platform (20)	<i>Describe the communication system or platform that facilitates information exchange among stakeholders. Is it only available, or also made accessible? Please specify if it is useful across borders and updated regularly.</i>
Guidance format (21)	<i>Specify the format in which guidance, instructions, and directives will be provided to stakeholders for implementing the policy instrument (e.g. written guidelines, manuals, workshops, progress checks and training materials).</i>
Number of staff (22)	<i>Determine the required human resources for implementing the policy instrument.</i>
Implementation	
Capacity and skills (23)	<i>Describe the abilities of the authorities to implement nutrient reduction measures. This includes information on the sufficiency of available resources.</i>
Responsible body (24)	<i>Identify the government agency, department, or entity responsible for overseeing the implementation of the policy instrument. Clearly define their roles, responsibilities, and authority in coordinating the various aspects of implementation.</i>
Programme of Measures (PoM) (25)	<i>Outline a comprehensive PoM that details the specific steps to be undertaken on a national, sub-national and local level or how those measures already exist in a different threshold and how they align with the policy instrument.</i>
Timeline (26)	<i>Provide the timeline for the implementation of the policy instrument, as detailed as possible. This should include information about milestones reached or if the implementation strongly lags.</i>
Monitoring and Reporting	
Monitoring system (27)	<i>Detail the monitoring system that will be used to track progress towards nutrient reduction targets. This involves describing data collection methods, frequency, locations, and responsible entities for gathering data. Please indicate if an auditing system is in place and if independent controls take place.</i>
Use of information (28)	<i>Explain how the collected monitoring information will be utilized to assess progress and how this data will inform adaptive management strategies.</i>
Review and report (29)	<i>Explain how the collected monitoring information will be utilized to assess progress and how this data will inform adaptive management strategies.</i>
Re-evaluation (30)	<i>Describe if and how the policy instrument will be periodically re-evaluated to assess its effectiveness, relevance, and alignment with changing conditions. Specify the frequency of reviews and criteria (science-based approach) for determining whether adjustments are necessary.</i>

In total, there are 30 questions, with a mix of yes/no/partially and open-ended questions. Some questions have explanatory texts below that help to place the scope. Where possible, the assessor can also provide additional references and information that is not provided in the policy instrument to improve understanding and completeness.

2.1.3. Step 3: Interviews to gather details

What to do? Wherever gaps result from Step 2, the assessor should organize interviews with persons knowledgeable about the topic and possibly be able to close the gaps in the template. The format of the interview is semi-structured using unanswered questions from the template as a basis but also considers the aspects needed for the data analyses of stage II. During the interview, it is suggested to first write notes and then fill in a summary of the statement into the template, which makes the analysis easier in stage II. The notes will be shared with the interviewed person for approval.

2.2. STAGE II: Data analysis

Overall goal: The objective of stage II is to understand and evaluate how well the different nutrient reduction strategies are coherent and support one another. Based on the information from Stage 1, the policy instruments are analysed vertically and horizontally.

2.2.1. Step 1: Vertical Analysis: Overview tables for integration across policy levels

While national, sub-national and municipal governments face different challenges and opportunities in promoting reducing nutrient inputs, their policies and actions need to be coherent and strive towards the same overall objectives. Multilevel governance – coordination between different levels of government, private sector and civil society – is necessary for integrating environmental and economic priorities in pursuit of green growth. At the same time, local and national strategies need to be aligned with broader international agendas. This step aims to analyze if this coherence is vertically given.

What to do? Analyse each policy instrument along the following set of questions:

- Are the objectives and targets set on the highest policy level broken down to /quantified for the lowest level?
- If there are areas of a policy instrument that can be better supported by different policy levels, has this been done? Are roles and responsibilities regularly reviewed across policy levels to adapt to changing circumstances and if yes how?
- Is there a vertical exchange mechanism in place that ensures that those who are responsible for implementation are linked to those who design a policy instrument?
- Do agencies and municipalities (Germany) and provinces (Netherlands) at the local level have the capacity and skills to implement nutrient reduction measures? Is there clear guidance for implementation at the local level?
- Are there enough resources for the implementation of all policies at all levels?
- Is there a monitoring and reporting process in place that informs and reports along the implementation chain? Is this reporting process and impact- based?
- What kind of mechanisms are in place to address gaps, overlaps and conflicts of interest regarding the policy levels?
- In what form are people involved with nutrient reduction organized across the policy levels (across departments, expert teams, or just as individual experts)?

2.2.2. Step 2: Horizontal Analysis: Overview tables for integration across sectors

This step investigates how well different policy instruments are integrated to reach the overall goal together.

For the horizontal assessment, the following questions will be tried to be answered:

- Is there consistency between the objectives of the different policy instruments?
- Are there sectors contributing to the problem, which are not tackled by a policy instrument?
- Are there areas/sectors/activities which can be exempted from taking measures?
- What is the interplay between voluntary and mandatory actions?
- Is there a national strategy that ensures the coherent implementation of the different policies?
- Is there constancy in the implementation among the different levels?
- Are there enough resources for the implementation of all policies at all levels?
- Is there a holistic monitoring system in place that monitors the overall impact of the policy package?
- Are there coordination instruments in place between your institutions and other nutrient-reduction-relevant ministries and bodies to improve regulatory processes?

- Are there mechanisms in place to mitigate conflicts related to nutrient reduction between your institutions and institutions from other sectors?
- With which institutions (also private ones) do you cooperate in nutrient management and for which tasks?
- Are there transboundary coordination mechanisms in place at all levels (where relevant)?

STAGE III: Interpretation and recommendations

2.2.3. Step 1: Investigating the enabling environment further

Overall goal: Once stages I and II are completed, the goal of stage III is to put the results into context by recommending possible changes for the overall policy framework and its enabling environment.

What to do? Organize five interviews with experts knowledgeable about nutrient reduction policies. The interview partners shall:

- a) Check the results from stage II, by showing the tables and asking for their reflection. These guiding questions can help gather valuable input to confirm or edit the results:
 - What mismatches between the current policy objectives and the implementation gaps can be identified?
 - What are the bottlenecks for implementing measures reducing nitrate concentration in the Wadden Sea?
 - What type of structures in the national governance structure hinder the implementation of nitrate-relevant EU directives and regulations in their implementation?
 - To what extent are freshwater protection objectives included in other policy areas?
- b) Have the interviewees prove the collaboration across sectors by showing the results from step 4 from stage II.

2.2.4. Step 2: Summarizing results in a report

What to do? A report shall be generated including the governance category summarizing the information drawn together from stage II and provide details and make the links, both between policy levels and across sectors of what works well and what doesn't.

Why? To make statements and recommendations about the enabling environment it is necessary to check with experts if the findings are logical.

3. Concluding remarks

To reduce nutrient input from other waterbodies into the Wadden Sea successfully, it is necessary to look at the landscape of existing policy instruments and how they fit together. The challenge is that while there are many policy instruments in place, they are often hindered by not being coordinated sufficiently, and overlap or have gaps in effect.

The feasibility assessment framework presented in this report is developed as a methodology to fit the analysis of policy instruments in the Netherlands and Germany that aim to reduce nutrients, especially to avoid an accumulation of nutrients in the Wadden Sea. The framework will look at what barriers and cracks exist that enable or hinder the policy instruments from reaching their goal. It also checks how coherent the policy instruments are, both across governance levels (local to international) and judges the interactions between those levels, or across sectors. In 2023, and 2024, the framework will be applied to the policy instruments mentioned in this document to check the feasibility of nutrient reduction in the Wadden Sea. Also, information should be revealed which water category (inland waters, marine waters) is more effective to take action, when studied together with the assessment on measures in Task 2.3.

The methodology and the framework itself can also be applied to other topics of environmental governance across different regions in Europe and also be applied in a transboundary setting because

it provides a framework to a) map and analyse the status and the gaps of policy instruments and b) helps identify what enables and disables the policy instruments' success.

4. REFERENCES

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United Nations: Sustainable Development Goals. <https://www.un.org/sustainabledevelopment/>

ANNEX I: DATA COLLECTION TEMPLATE AS PART OF THE FEASIBILITY FRAMEWORK INCLUDING THE GUIDANCE FOR ASSESSORS

Name of the policy instrument:

Name of the assessor:

Contact details:

Legal

1. Are there clear quantified nutrient reduction targets and if so, does it have binding thresholds?		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Has the policy instrument targets and how are they described? If available also describe in the way of a roadmap, i.e. when or how binding targets have to be achieved.</i>				

2. The policy instrument aims at reducing...		Y	N	P
...emissions				
...concentrations in the environment/ water				
...both				
<i>Give details of what the policy instruments in/excludes in nutrient reduction.</i>				

3. Is the policy instrument legally binding (at what level)?		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Record any binding targets or goals in the policy instrument, and at which level.</i>				

4. Are there repercussions or a sanctioning mechanism in place? If yes, how are they controlled and take effect?		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Outline the consequences of non-compliance scenarios in which the nutrient reduction targets or goals are not met. This could involve describing a range of actions, penalties, or corrective measures that will be taken in the event of failure to meet the required goals.</i>				

5. Has the policy instrument been **transposed/ratified** in Germany or the Netherlands? If not, why?

	Y	N	P
EU			
National			
Sub-National			
Local			

Give information about the transposition/ratification of the policy instrument in the country (national, subnational or local level). This especially applies to EU legislation.

6. Is there a **non-compliance case** (i.e. infringement process) ongoing? What are the reasons for non-compliance?

	Y	N	P
EU			

7. Is there a **clear target audience** addressed by the policy instrument? If yes, which one(s)?

	Y	N	P
EU			
National			
Sub-National			
Local			

Define the groups or entities that the policy instrument is targeting. This could include industries, agricultural sectors, local communities, government agencies, and other stakeholders who play a role in nutrient reduction efforts.

8. Is there a clear **geographic scope** of the policy instrument? Which one?

	Y	N	P
EU			
National			
Sub-National			
Local			

Specify the geographical area to which the policy instrument applies (e.g. EU, Wadden Sea).

9. Does the policy instrument make clear **recommendations/binding statements** on which measures related to nutrients should be taken?

	Y	N	P
EU			
National			
Sub-National			
Local			

Provide any explicit recommendations, guidelines, or directives from the policy instrument. Please describe how the measures and actions are prescribed (Is there a programme of measures in place? Etc.

10. Are there efforts taken to interlink freshwater and marine water issues in the policy instrument?		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Describe how the interconnectivity between freshwater and marine ecosystems is addressed in the policy instrument.</i>				

Governance

11. Is there an inter-ministerial body or structure in place to coordinate the implementation of the policy instrument across sectors (horizontal coherence)? How regular are the meetings? Please describe in detail:		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Describe the structure or inter-ministerial body that is established to coordinate efforts across various sectors contributing to nutrient pollution (e.g. agriculture, industry, wastewater management). Furthermore, the way suggestions are implemented the way they are functioning (e.g. regular meetings), and the body's rights and responsibilities should be described.</i>				

12. Is there a body or structure in place to coordinate the implementation from the national to local level (vertical coherence)? How regular are the meetings? Please describe in detail:		Y	N	P
EU				
National				
Sub-National				
Local				
<i>Describe the alignment and coordination between different levels of governance, such as EU, national, regional, and local authorities. This should include also the body's rights and responsibilities and the way of structure that is implemented for interaction between those levels.</i>				

13. Is there a vertical exchange mechanism in place that ensures that those who are responsible for implementation are linked to those who design a policy instrument?		Y	N	P
EU				
National				
Sub-National				

Local		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Describe to what extent the reporting across different governance levels is institutionalized, and whether objectives and targets set on the highest policy level are broken down to /quantified for the lowest level. Please also mention, whether different policy areas are actively forming the policy instrument, where necessary.</i></p>				

	Y	N	P	
14. To which level is participation foreseen in the policy instrument and how should it be organized? Describe the level of participation, good practice examples or similar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
National	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sub-National	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Local	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><i>Describe what mechanisms to involve stakeholders are included in the policy instrument (e.g. public consultations, advisory panels). Please include any good practices or guidelines.</i></p>				

	Y	N	P	
15. What phase of the Zero Pollution Principle ² are reflected in the policy instrument? Please select all that apply:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a. 'preventing'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. 'Minimize and control'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. 'Eliminate and remediate'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><i>Describe which of the phases from preventing to remediating is covered by the policy instrument.</i></p>				

16. Please tick all actions from the Zero Pollution Strategy Annex, that the policy instrument covers, and share any consideration below the list. In case you want more information on the Zero Pollution Strategy, please refer to Annex IV.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 10: Revise the Environmental Quality Standards Directive and the Groundwater Directive (2022)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 11: Review and, if necessary, revise the Marine Strategy Framework Directive (2021-2023)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 13: Revise the Urban Waste Water Treatment Directive in synergy with the review of the Industrial Emissions Directive and the evaluation of the Sewage Sludge Directive (2022)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 17: Recommendations based on a fitness check on the implementation of the polluter pays principle (2024)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 22: Build capacity and improve knowledge on less polluting practices with national advisory services for farmers (as from 2023)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action 23: Compile and make accessible in a digital format all main obligations on nutrient management stemming from EU law to limit the environmental footprint of farming activities (2023)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><i>Describe here any direct links between the policy instrument and the actions from the zero pollution strategy (same wording as in the zero pollution strategy, direct uptake of the measures proposed etc.).</i></p>				

Resources

17. Are there **financing mechanisms** suggested in the policy instrument?

Describe in detail if possible.

	Y	N	P
EU			
National			
Sub-National			
Local			

Describe the sources of funding (e.g. different EU funds) mentioned or how measures can be financed that are suggested for implementation. Please note down the volume of funding as well as how it is distributed (conditions tied to funding, funding stability and flexibility etc.).

18. Does the policy instrument have a clear **budget**? If so, what is its volume (including the time- period) and what are the conditions tied to it?

	Y	N	P
EU			
National			
Sub-National			
Local			

Describe a budget plan or costs of measures and specify how the financial allocation for implementation should look. This involves breaking down the budget by activities, sectors, and timeframes.

19. Are there structures to evaluate the **cost-effectiveness** of strategies and measures to ensure that the selected measures are cost-effective?

	Y	N	P
EU			
National			
Sub-National			
Local			

Give an overview of any structures that are in place to evaluate the cost-efficiency of the selected measures achieving nutrient reduction targets in relation to the resources invested.

20. Is there a **data centre/communication platform** available that provides member states with relevant information? Describe the platform/link.?

	Y	N	P
EU			
National			
Sub-National			
Local			

Describe the communication system or platform that facilitates information exchange among stakeholders. Is it only available, or also made accessible? Please specify if it is useful across borders and updated regularly.

21. Is there a guidance format in place (e.g., helpdesk) to implement the policy instrument? Also, describe platforms for stakeholders or other services if available.		Y	N	P
EU				
National				
Sub-National				
Local				
Specify the format in which guidance, instructions, and directives will be provided to stakeholders for implementing the policy instrument (e.g. written guidelines, manuals, workshops, progress checks and training materials).				

22. Do municipalities and agencies at the local level have the capacity and skills to implement nutrient reduction measures?		Y	N	P
EU				
National				
Sub-National				
Local				
Determine the required human resources for implementing the policy instrument. Please mention any information in the policy instrument about the number of staff that is in place/needed.				

Implementation

23. Who is the responsible body for the implementation and control of the policy instrument?		Y	N	P
EU				
National				
Sub-National				
Local				
Identify the government agency, department, or entity responsible for overseeing the implementation of the policy instrument. Clearly define their roles, responsibilities, and authority in coordinating the various aspects of implementation.				

24. Is there a national, sub-national or local programme of measures (PoM) described in the policy? If yes, please describe. If no, to what extent does the policy instrument align with existing thresholds?		Y	N	P
EU				
National				
Sub-National				
Local				

Outline a comprehensive PoM that details the specific steps to be undertaken on a national, sub-national and local level or how those measures already exist in a different threshold and how they align with the policy instrument.

25. Is there a clear timeline for the implementation?		Y	N	P
EU				
National				
Sub-National				
Local				

Provide the timeline for the implementation of the policy instrument, as detailed as possible. This should include information about milestones reached or if the implementation strongly lags.

Monitoring and Reporting

26. Is there a regular monitoring system in place to check relevant parameters for nutrient reduction? If yes, how does it work at which level?		Y	N	P
EU				
National				
Sub-National				
Local				

Detail the monitoring system that will be used to track progress towards nutrient reduction targets. This involves describing data collection methods, frequency, locations, and responsible entities for gathering data. Please indicate if an auditing system is in place and if independent controls take place.

27. How is the reported information used?		Y	N	P
EU				
National				
Sub-National				
Local				

Explain how the collected monitoring information will be utilized to assess progress and how this data will inform adaptive management strategies.

28. Does this body have the mandate to regularly review and report the impact(s) of the policy instrument concerning...		Y	N	P
a. ...policy effects				
b. ... transboundary effects				
c. ... cross-sectoral linkages				

Space for further explanation:
Explain how the collected monitoring information will be utilized to assess progress and how this data will inform adaptive management strategies.

29. What kind of regular re-evaluation of the policy instrument is organized for the adaptation to technological and scientific advances? Is there a science-based approach expected?

	Y	N	P
EU			
National			
Sub-National			
Local			
<p><i>Describe if and how the policy instrument will be periodically re-evaluated to assess its effectiveness, relevance, and alignment with changing conditions. Specify the frequency of reviews and criteria (science-based approach) for determining whether adjustments are necessary.</i></p>			

ANNEX II: LIST OF DOCUMENTS SCREENED FOR THE CONTENT PREPARATION

The purpose of this document is to show which policy documents were taken into account for the content work within task 2.1. Task 2.1. team screened several policy documents to gain a better understanding of what policies are already in place and to ensure that the framework is fit from the content perspective.

International agreements on the protection of the Wadden Sea

- The [Trilateral Wadden Sea Cooperation](#) has managed and protected this valuable ecosystem since 1978. Today, almost the entire Wadden Sea coast is protected as national parks and nature reserves. The management system is a combination of the national management systems and the trilateral single integrated management plan (SIMP) and Wadden Sea Plan (WSP) implemented by the responsible authorities.
- The Trilateral [Wadden Sea Plan](#) (WSP) is the common policy and management plan for the protection and sustainable management of the Wadden Sea Area. It is also the management plan for the Wadden Sea World Heritage Site and thus the foundation for preserving its [Outstanding Universal Value](#). Adopted in 1997 ([Stade Declaration](#)) and updated in 2010 ([Sylt Declaration](#)), the WSP includes the Cooperation's common vision, principles, policies and constitutes a framework for measures.
- A revised [SIMP to Protect the Wadden Sea](#) was adopted at the Trilateral Governmental Conference (TGC), 28th Nov- 01. Dec 2022, The SIMP will be a political agreement of the Trilateral Wadden Sea Cooperation, meaning it is a legally non-binding document of common political interest. Existing policy documents and legally binding instruments at the trilateral, regional, national, or local level will not be altered or affected by this plan.
- For more info- An overview of the conference <https://www.waddensea-worldheritage.org/protection-and-management> and the timeline (in German): <https://www.bundesregierung.de/breg-de/service/gesetzesvorhaben/schutz-des-wattenmeeres-2147872>
- the basis of the SIMP is the [Leeuwarden Declaration](#) in 2018, which documents the intentions of a ministerial council meeting for the protection of the Wadden Sea. The document does not mention nitrate, phosphorus, nutrients or eutrophication at all. The document is non-binding but may be important in terms of identifying what topics and positions are already agreed upon on the ministerial level.

EU legislation¹

The European Union legislation in the field of the environment is of specific significance for the Wadden Sea and has increased in importance during the past two decades. Of the comprehensive list of environmental legislation, the [Birds](#) and [Habitats](#) Directives, forming the [Natura 2000](#) network, and the [Water Framework Directive](#) and [Marine Strategy Framework Directive](#) are the most relevant ones.

2. International Laws

The Wadden Sea is covered by several instruments of international law. The 1972 World Heritage Convention forms the basis of all World Heritage-related activities concerning the Wadden Sea. Moreover, a number of other multilateral environmental agreements concluded under the auspices of the United Nations also apply the [Convention on Biological](#)

[Diversity](#) (CBD), the [Convention on the Conservation of Migratory Species of Wild Animals](#) (CMS) and its daughter Agreements, i.e. the [Agreement on the Conservation of African-Eurasian Waterbirds](#) (AEWA), the Agreement on the [Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas](#) (ASCOBANS), and [Agreement on the Conservation of Seals in the Wadden Sea](#), for which CWSS provides secretariat services. The [Ramsar Convention](#) (Convention on Wetlands of International Importance), the [Convention on the Conservation of European Wildlife and Natural Habitats](#) (Bern Convention) and the [Convention for the Protection of the Marine Environment of the North-East Atlantic](#) (OSPAR) are also of relevance for the Wadden Sea.

National Protection and Management

- In **Germany**, the coastal federal states of Hamburg, Lower Saxony and Schleswig-Holstein are in charge of the implementation of the Federal Nature Conservation Act which sets the framework for establishing nature reserves and national parks. The World Heritage Site includes [three national parks](#): the National Park Schleswig-Holsteinisches Wattenmeer (established in 1985), the National Park Hamburgisches Wattenmeer (established in 1990) and the National Park Niedersächsisches Wattenmeer (established in 1986). The main objectives of the national parks are to protect the Wadden Sea and to allow natural processes to take place with a minimum degree of disturbances and other detrimental effects of human activities. Each national park is protected under a National Park Act by nature protection law of the respective federal state. The three national park authorities are responsible for the implementation of the respective legislation and management of the site.
- In the **Netherlands**, protection combines a unique national physical planning approach, the Key Planning Decision Wadden Sea, 3rd Policy Document Wadden Sea (PKB, since 1980), with a designation of the Wadden Sea under the Nature Conservation Act 1998, supported by an additional designation such as the Flora and Fauna Act. Together with the Ecological Main Structure (EHS), they form the basis for the protection and management of the Dutch part of the Wadden Sea. The PKB defines the overall objectives of conservation, management and use of the Wadden Sea and is binding for all state, regional and local authorities.

North Sea- Catalogue of Measures per member state

- No specific plans of measures or actions per member state
- There is an INTERREG NORTH SEA REGION PROGRAMME 2021-2027 SEA SCREENING - [FINAL REPORT](#), which shows that the programme does not have to be checked against a Strategic Environmental Assessment (SEA)
- OSPAR's assessment work is supported by monitoring under the Eutrophication Monitoring Programme. This includes long-term data collection under the OSPAR monitoring programmes for:
 - atmospheric inputs (Comprehensive Atmospheric Monitoring Programme – CAMP)
 - riverine inputs and direct discharges (Comprehensive Study on Riverine Inputs and Directive Discharges – RID)
 - concentrations and effects in the marine environment (Coordinated Environmental Monitoring programme – CEMP)
- Monitoring is complemented by modelling activities on nutrient reduction scenarios and transboundary nutrient transport, to help direct future actions in combating eutrophication.

-
- The implementation of the Eutrophication Strategy takes place within the framework of the obligations and commitments of Contracting Parties under other international agreements. This includes European Union legislation to reduce nutrient discharges and emissions, for example, the [Nitrates Directive \(91/676/EEC\)](#), [Urban Waste Water Treatment Directive \(91/271/EEC\)](#), the [Water Framework Directive \(2000/60/EEC\)](#) and the [Marine Strategy Framework Directive \(2008/56/EC\)](#).
 - OSPAR has Hazardous Substances and Eutrophication Committee

ANNEX III: List of selected policy instruments

EU level

- Nitrate Directive
- Water Framework Directive
- Drinking Water Directive
- Habitats and Birds Directive
- Water Re-use regulation
- Regulation (EU) 2021/2115, establishing rules on support for national CAP strategic plans, and repealing Regulations (EU) 1305/2013 and 1307/2013;
- EU Marine Strategy Framework Directive
- Urban Waste Water Treatment Directive (and revision thereof (draft))
- The National Emission Reduction Commitments Directive (NEC Directive)
- Groundwater Directive
- Sewage Sludge Directive
- Industrial Emissions Directive
- Gothenburg Protocol
- EU Zero pollution strategy
- EU Nutrient Management Plans under the Zero Pollution Strategy
- Farm to Fork
- Soil strategy for 2030 / upcoming EU Soil Health Law
- Action plan for organic production in the EU
- Nutrients – action plan for better management (forthcoming)

Wadden Sea level

- Wadden Sea Plan
- Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030
- HELCOM Nutrient input reduction scheme

National level – Germany

- Nationales Luftreinhalteprogramm Deutschland
- CAP strategic plans
- Zukunftsstrategie ökologischer Landbau
- Eiweißpflanzenstrategie des BMEL
- Wasserhaushaltsgesetz (WHG)
- Oberflächengewässerverordnung (OGewV)
- Grundwasserverordnung (GrwV)

National level – Netherlands

- Nationaal Samenwerkingsprogramma Luchtkwaliteit (NSL)
- Nationaal Programma Landelijk Gebied (NPLG)
- Deltaprogramma Agrarisch Waterbeheer (DAW)
- Nationale Eiwitstrategie
- Nationaal Programma Landbouwbodems
- Nationaal Programma Circulaire Economie
- Nationaal Water Programma
- Bestuursvereenkomst grondwater bescherming

ANNEX IV: INFORMATION SHEET ON THE ZERO POLLUTION STRATEGY

This document summarizes important information for the context of any policy work and strategy assessment protection of the wadden sea more generally, but also on nitrate and phosphate input to the wadden sea, and eutrophication specifically.

1. [Zero Pollution Strategy](#) + [Annex](#)

- The zero pollution ambition is a cross-cutting objective contributing to the UN 2030 Agenda for Sustainable Development and complementing the 2050 climate-neutrality goal in synergy with the clean and circular economy and restored biodiversity goals. It is part and parcel of many European Green Deal and other initiatives, and the Commission will continue including the zero pollution ambition in future policy initiatives (Page 3 of Zero Pollution Strategy).
- The main objective of this action plan is to provide a compass for including pollution prevention in all relevant EU policies, maximising synergies in an effective and proportionate way, stepping up implementation and identifying possible gaps or trade-offs. To steer the EU towards the 2050 vision of a Healthy Planet for All, this action plan sets key 2030 targets to speed up pollution reduction (Page 3 of Zero Pollution Strategy).
- **Relevance for NAPSEA:** The projects and WP2 objectives are closely aligned and serve the 4th objective of the Zero Pollution Strategy: Under EU law, Green Deal ambitions and in synergy with other initiatives, by 2030 the EU should **reduce by 50% nutrient losses, the use and risk of chemical pesticides, the use of the more hazardous ones, and the sale of antimicrobials for farmed animals and in aquaculture** (Page 3 of Zero Pollution Strategy).
- Target 3 (By 2030 the EU should reduce by 25% the EU ecosystems where air pollution threatens biodiversity) is also indirectly relevant: The Second Clean Air Outlook and its underpinning study calculated that, based on the full implementation of all measures announced by Member States in their first National Air Pollution Control Programmes (Article 6 of Directive (EU) 2016/2284), a reduction of 20% of the ecosystem areas measured as areas above 'critical loads' of nitrogen deposition can be achieved by 2030 compared to 2005. These estimates do not take into account the additional measures needed to achieve the 50% reduction of nutrient losses as set out in both the Farm to Fork and the Biodiversity Strategies and the nature restoration targets set out in the 2030 Biodiversity Strategy. Thus, a reduction of 25% compared to 2005 is proposed as a realistic ambition, achievable through the implementation of the measures already announced by the Member States in their first National Air Pollution Control Programmes in combination with the implementation of the additional measures needed to achieve the targets set in the Farm to Fork and Biodiversity Strategies.

Union policy on the environment shall be based on the **precautionary principle** and on the principles that **preventive action** should be taken, that environmental damage should as a priority be **rectified at source** and on the **polluter pays principle**.

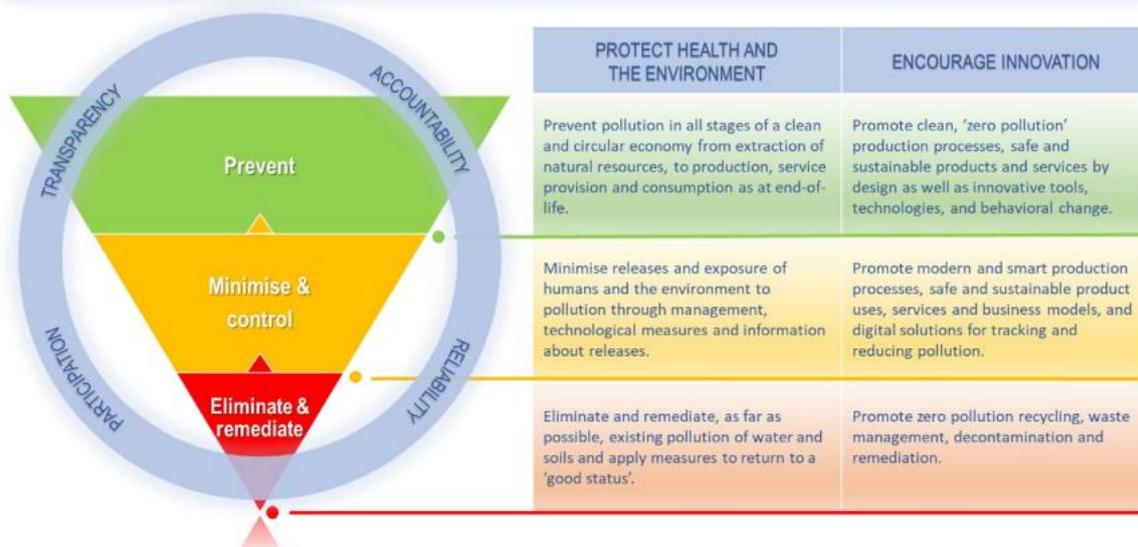


Figure 1: The zero-pollution hierarchy – reversing the pyramid of action, prioritising the approaches for tackling pollution, (Source: Zero Pollution Strategy 2021)

- The upcoming review of the Urban Waste Water Treatment Directive will, in synergy with the evaluation of the Sewage Sludge Directive, help to increase the ambition level to remove nutrients from wastewater and make treated water and sludge ready for reuse, supporting more circular, less polluting farming. This review will also support the concrete implementation of the future integrated nutrient management action plan, addressing holistically a long-standing environmental challenge, maximising synergies between policies and making best use of the green architecture of the new common agricultural policy, especially via conditionality and eco-schemes (Zero Pollution Strategy, page 8-9).

Relevant actions from the Zero Pollution Strategy Annex

Direct actions:

- Action 10: Revise the Environmental Quality Standards Directive and the Groundwater Directive (2022)
- Action 11: Review and, if necessary, revise the Marine Strategy Framework Directive (2021-2023)
- Action 13: Revise the Urban Waste Water Treatment Directive in synergy with the review of the Industrial Emissions Directive and the evaluation of the Sewage Sludge Directive (2022)
- Action 17: Recommendations on the basis of a fitness check on the implementation of the polluter pays principle (2024)
- Action 22: Build capacity and improve knowledge on less polluting practices with national advisory services for farmers (as from 2023)
- Action 23: Compile and make accessible in a digital format all main obligations on nutrient management stemming from EU law to limit the environmental footprint of farming activities (2023)

Indirect actions:

- Flagship 1: Reducing health inequalities through zero pollution Regularly feed pollution monitoring and outlook data into the Cancer Inequalities Registry and the Atlas of Demographies (As from 2022)

-
- Flagship 3: Promoting zero pollution across regions In cooperation with the Committee of the Regions, present a Scoreboard of EU regions' green performance to measure, in particular, efforts to achieve pollution-relevant targets (2024).
 - Flagship 8: 8 Minimising the EU's external pollution footprint Promote global zero pollution in all relevant international fora and work with the EU Member States and stakeholders (as from 2021).