# Biodiversity ambition analysis with Large Language Models

## Stefan Troost, Roos Immerzeel, Christoph Krüger

Netherlands Environmental Assessment Agency {Stefan.Troost, Roos.Immerzeel, Christoph.Kruger}@pbl.nl

#### Abstract

The Kunming-Montreal Global Biodiversity Framework (GBF) has 23 action-oriented global targets for urgent action over the decade to 2030. Parties committing themselves to the targets set by the GBF are required to share their national targets and biodiversity plans. In a case study on the GBF target to reduce pollution risks, we analyze the commitments of 110 different Parties, in 6 different languages. Obtaining satisfactory results for this target, we argue that using Generative AI can be very helpful under certain conditions, and it is a relatively small step to scale up such an analysis for other GBF targets.

#### 1 Introduction

The Global Biodiversity Framework (GBF), adopted at COP15 of the Convention on Biological Diversity (CBD) in 2022, represents a landmark international agreement focused on addressing the unprecedented decline in species and ecosystem health worldwide (Convention on Biological Diversity, 2022a). The framework consists of 4 overarching goals for 2050 and 23 supporting targets for 2030. Additionally, the framework is supported by a monitoring framework (Convention on Biological Diversity, 2022b). The GBF is a global framework, and its implementation depends on the Parties of the CBD. Parties must submit a new or updated National Biodiversity Strategy and Action Plan (NBSAP) and/or submit national targets to the Online Reporting Tool (ORT), which indicates the ambition a Party has regarding its contribution to implementation of the GBF. In a later stage National Reports will be submitted, reporting on the implementation of these ambitions. COP17, in 2026, progress in implementation of the GBF will be reviewed (Convention on Biological Diversity, 2024; Convention on Biological Diversity, 2025).

Still, several challenges impede effective and efficient assessment of progress towards the GBF's goals and targets. One of the key challenges that occur is the absence of a comprehensive analysis methodology to establish baseline conditions, evaluate country-level commitments, and identify additional measures needed to reach the global goals. This analytical deficit is further complicated by the large amount of data that needs to be assessed, as the GBF consists of 23 targets that will be translated to national policy by the 196 CBD Parties. National policy that is created up until this point has different formats which can be difficult to compare, not solely due to differences between NBSAPs and ORT data; the way in which national commitments are structured within those formats also looks different per country. Language differences add another layer of complexity, as the national commitments can be uploaded in any of the six official UN languages. Finally, analyses of country commitments are complicated by the risk of inconsistent interpretation when humans review these documents.

To address these challenges, we propose a novel approach leveraging a multi-lingual Retrieval-Augmented Generation (RAG) framework. This methodology enables automated analysis of country commitments at scale. The system can process multilingual documents, standardize terminologies, and generate comparable assessment metrics across different national contexts. Similar RAG frameworks have been used previously to assess SDG claims (Garigliotti, 2024) and sustainability reports (Bronzini et al., 2024). However, to the authors knowledge, it has

not been utilized to assess the GBF. We use GBF target 7 on pollution reduction as a case study. The aim is to create an aggregate view of the country commitments for the GBF target. This target refers to multiple sources of pollution to be reduced by 2030. The fact that Parties have uploaded National Targets that are aligned with this GBF target, does not necessarily mean that all sources of pollution are addressed, with similar ambition levels. We establish a framework of creating classes to identify differences and similarities in focus and ambition levels by analyzing national targets that are uploaded by Parties in the ORT. This way, we get a better understanding what pollution sources prioritized by Parties when translating the GBF to the national level.

## 2 Biodiversity ambitions

## 2.1 National level biodiversity ambitions

The GBF goals and targets are created aiming to reduce threats to biodiversity, to meet people's needs through sustainable use and benefit-sharing, and on tools and solutions for implementation (Convention on Biological Diversity, 2022a). To make it easier for CBD Parties to upload their national targets under the GBF according to the requested reporting template, the ORT was created. This tool should also make it easier for the CBD's Secretariat, and other stakeholders, to analyze national ambitions and implementation.

#### 2.2 Prioritization in target translation

A previous analysis by Kok et al. (2024) concludes that big differences can be observed between Parties regarding the type and amount of information uploaded to the ORT. Based on an analysis of 61 Parties and 6 GBF targets, it was found that not many national targets are specific and quantified. Regarding GBF target 7, on reducing pollution to levels not harmful to biodiversity (see Appendix A for the entire target text), around one third of the national commitments included some type of quantification, which was more than most of the other analyzed targets. However, GBF target 7 refers to all pollution sources that are harmful to biodiversity and Parties are not obligated to create national targets for all sources individually. This results in differences in prioritization within national targets as some Parties focus on the concept of pollution more

generally and others focus on specific pollution sources.

This paper aims to gain an insight into the number of Parties that specify types of pollution in their national target creation, in the degree to which these targets are quantified, and in the ambition levels Parties show regarding cutting back on these pollution sources.

# 3 Using a Large Language Model as an assistant

Large Language Models (LLMs) are known for their versatility. Many applications have emerged since OpenAI released ChatGPT in 2022. In the scientific research area, one of the more popular ideas is to use LLMs for document analysis. However, when using LLMs for this purpose, the most important drawback is the temporary character of the data the LLM was trained with: the specific document may not have been used for training of the LLM. Mainly for this reason, the RAG framework (Lewis et al., 2020) has become popular for document analysis.

#### 3.1 The RAG framework

The RAG framework that was used in this study (ChatPBL, 2024) was set up as a research project, with a focus on evaluation of the complete pipeline on several custom-made document-question-answer test sets.

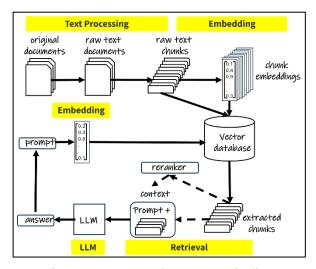


Figure 1: RAG question-answer pipeline

This means that most of the steps in the RAG pipeline (see Figure 1) have been parameterized: swapping between different choices for the components in the pipeline, whether it is for

splitting text into text chunks, embedding of the resulting text chunks, retrieval of relevant chunks from the vector database or the LLM itself, is simply a matter of changing parameters. We refer to Appendix E for the parameter settings used for this analysis.

Figure 1 shows the core question-answer functionality of the application. Our RAG framework also provides a "review" module that allows to ask multiple documents predefined questions sequentially, using this core functionality. All the answers and input that was used are stored for reproducibility purposes. The module has an option to summarize the answers to each of the questions into a synthesis. It is the review module that was used for this case study.

## 4 Experiments

## 4.1 Data processing

The ORT data was downloaded from https://ort.cbd.int/#0.4/0/0. For each submitted national target, the country must indicate at least one GBF target to which the national target is aligned. As this research is focused on GBF target 7, we only used the national targets that Parties aligned to this GBF target. The data was downloaded on January 29, 2025. At that time, 110 Parties submitted national targets aligned with GBF target 7 (see Appendix B).

After choosing the relevant columns (Government, National target title, Description, Main policy measures and Aspects of the goal or target are covered, see Figure 2), the texts were then merged together with their column titles and line breaks in between. If the country did not fill in the column 'nan' was added instead. After the merging we obtained a text file for each Party that could be used for further analysis.

The text of GBF target 7 mentions three sources of pollution in particular:

- 1. Excess nutrients
- 2. Pesticides and other hazardous chemicals
- 3. Plastics

For the first two types of pollution, GBF Target 7 specifically states a reduction of "at least half" by 2030. This is not the case for pollution caused by plastics, however for comparison purposes we

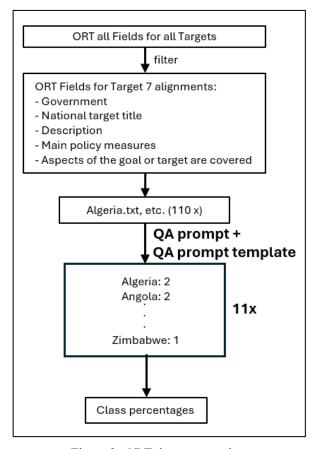


Figure 2: ORT data processing

defined the following classes for each of the three types of pollution:

- Class 1: the type of pollution is not mentioned in the country commitment
- Class 2: the type of pollution is mentioned, but there is no quantified reduction target
- Class 3: the type of pollution is mentioned and quantified, but the target is below the GBF target of at least 50% reduction
- Class 4: the type of pollution is mentioned and quantified, and the target is at or above the GBF target of at least 50% reduction

## 4.2 Prompting

For each pollution type, prompting the commitments was set up in 2 ways:

- A Question-Answer (QA) prompt was used to ask the Parties' documents (e.g. Algeria.txt) whether the specific pollution type was mentioned and if quantified targets were set for the type mentioned.
- This QA prompt was accompanied by a QA prompt template that instructs he LLM with the task to assign the commitment to one of the four distinguished classes

#### 4.3 Results

Experiments were executed with several different prompts and prompt templates until satisfactory results were obtained on a sample of Parties (the first 20 alphabetically). An analysis of the Parties' commitments learned that the texts had a length short enough for our LLM, gpt-40, to include them whole in the context. The commitment texts in the sample were manually reviewed by 2 reviewers and assigned to 1 of the 4 classes (see Appendix D). There were some cases where the manual reviews differed, which were discussed by both reviewers. In general, a consensus was quickly reached on these cases, but it is interesting to note that there were also cases where the language used was particularly difficult to interpret. For example, the following commitment description was found in the commitment text of Bangladesh and difficult to assign to a class: "By 2026, highly hazardous pesticides and chemicals will be identified. By 2030, identified highly hazardous pesticides and chemicals will be phased out." Depending on how one would read the last part, the phasing out can be interpreted to have ended in 2030 or to start in 2030.

After reaching consensuses for all cases where the manual reviews differed, the manual class assignments were compared with the RAG results. In 4 out of 60 reviews, the RAG results differed from the manual results, see Appendix D. Interestingly, in 3 out of those 4 cases, the manual reviewers also did not agree on a classification.

It was believed by the authors that the sample results were good enough to use the prompts on the complete set of commitments, keeping in mind that we are looking for the overall picture and not so much at the level of individual Parties. To test robustness of the results, the system was run 11 times, with the same settings. simple majority vote was taken for each country, meaning that the most occurring class was taken as the final class assignment.

When the prompts were applied to the full dataset, this resulted in the scores below:

	Target			
	excess nutrients	pesticides and other hazardous	plastics	
		chemicals		
Class 1	45.5%	39.1%	49.1%	
Class 2	31.8%	37.3%	35.5%	
Class 3	1.8%	1.8%	2.7%	
Class 4	20.9%	21.8%	12.7%	

Table 1: Class assignments for all Parties

From the table, we can observe that:

- The majority of the commitments either don't mention the pollution type, or don't quantify a target when they do mention them. This goes for all pollution types in this case-study. It should be emphasized however that commitments could have been given by Parties, using other terms and/or for other types of pollution which are out of scope of this case study (e.g. solid waste, light and noise pollution).
- Looking at the three distinguished types of pollution, pollution from pesticides and other hazardous chemicals scores best in terms of ambition levels. In 24 cases (21.8%), commitments to reducing this type of pollution were at or above the 50% reduction GBF target. This is slightly better than the score for excess nutrients and a lot better than the score for plastics, but still a relatively small number.

#### 5 Conclusions

We have learned from this case-study that:

- Formulating satisfactory prompts is not straightforward: several attempts were necessary to produce the prompts in Appendix C.
- Interpretation of the wording in the texts can be difficult, not only for the RAG system but also when reviewing manually. Domain knowledge is important.
- Although RAG classes differed from the manual classes in some cases in the sample of 20 countries, we feel that the method is robust enough for our goal to look at the overall picture regarding Parties' pollution reduction commitments.
- Since we now have established satisfactory prompts, it is very easy to update the analysis

as soon as more Parties upload their commitments.

#### 6 Further research

This analysis is based on a limited set of data and for illustrative purposes. It will be updated once all Parties have submitted commitments to the ORT. Available NBSAPs will also be analyzed in a similar way. Furthermore, this methodology will be used to analyze other GBF targets. Apart from analyzing if Parties include quantifications in their national target-setting, a similar method will be used to look deeper into the policy strategies Parties use to eventually implement their commitments. Together, this research helps in identifying implementation gaps and facilitating more informed policy adjustments at both national and international levels in a way that is feasible and standardized.

#### Limitations

Language-related challenges persist as biodiversity commitments contain specialized terminology that varies across languages and regulatory contexts. Even advanced multilingual models may struggle with nuanced ecological terms or region-specific biodiversity concepts, potentially missing critical details in commitments.

The non-deterministic nature of LLMs presents another challenge. This variability can complicate efforts to establish standardized assessment metrics and could potentially lead to fluctuating evaluations of national progress. In this case study we see that results between two consecutive runs can differ; however, the overall conclusions are not affected. We've shown the results of 11 runs in this paper, applying a mechanism of majority voting, in a way like it is used in Random Forest algorithm¹ for each Party.

This analysis focuses on two main aspects of national commitments related to the GBF's pollution target: if specific pollution types are mentioned and if commitments related to those types are quantified. The class assignment exercise as described in this paper therefore doesn't show the depth of policy behind the commitments. A manual analysis of the data showed that in some cases goals are not quantified but are backed up by specific measures to cut back on pollution, while there are also cases where highly ambitious

quantifications are given which are not supported by any measures (yet).

Another limitation is that this analysis depends on self-assessment of Parties of what national targets are linked to GBF target 7. It could be that national targets aligned with other GBF targets are also directly relevant to this pollution target, without this connection made in the ORT.

These limitations necessitate human oversight in any LLM-based biodiversity analysis system, with domain experts validating model outputs and methodology to ensure accurate representation of global conservation efforts.

\_

<sup>&</sup>lt;sup>1</sup> https://en.wikipedia.org/wiki/Random forest

#### References

Marco Bronzini et al. 2024. Glitter or gold? Deriving structured insights from sustainability reports via large language models.

Convention on Biological Diversity. 2022a. Kunming-Montreal Global Biodiversity Framework. (CBD/COP/15/L.25).

Convention on Biological Diversity. 2022b.

Monitoring framework for the Kunming-Montreal
Global Biodiversity Framework.

(CBD/COP/DEC/15/5).

Convention on Biological Diversity. 2024. Mechanisms for planning, monitoring, reporting and review, including the global review of collective progress in the implementation of the Kunming-Montreal Global Biodiversity Framework to be conducted at the seventeenth and nineteenth meetings of the Conference of the Parties. (CBD/COP/16/L.33).

Convention on Biological Diversity. 2025. Governments agree on the way forward to mobilise the resources needed to protect biodiversity for people and planet [Press release].

ChatPBL. 2024. Chat with your docs!

Dario Garigliotti. 2024. SDG target detection in environmental reports using Retrieval-augmented Generation with LLMs. In *Proceedings of the 1st Workshop on Natural Language Processing Meets Climate Change (ClimateNLP 2024)*, pages 241–250, Bangkok, Thailand. Association for Computational Linguistics.

Marcel Kok, Alexandra Marques, Michel Bakkenes, Jonathan Doelman, Jelle Hilbers, Roos Immerzeel, Christoph Krüger, Aafke Schipper. 2024. A prospective evaluation of the ambition of the Kunming-Montreal Global Biodiversity Framework: a contribution to the CBD review process', PBL Netherlands Environmental Assessment Agency, The Hague, The Netherlands.

Patrick Lewis, Ethan Perez, Aleksandra Piktus, Fabio Petroni, Vladimir Karpukhin, Naman Goyal, Heinrich Küttler, Mike Lewis, Wen-tau Yih, Tim Rocktäschel, Sebastian Riedel, Douwe Kiela. 2020. Retrieval-Augmented Generation for Knowledge-Intensive NLP Tasks, *Computation and Language*, arXiv:2005.11401. Version 4

## **Appendix A: GBF TARGET 7 full text**

"Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution."

## Appendix B: ORT data

The following 110 Parties uploaded their commitments to the ORT by January 29, 2025, related to GBF target 7, in alphabetical order:

Algeria, Angola, Australia, Austria, Azerbaijan, Bangladesh, Benin, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Central African Republic, Chad, Chile, China, Comoros, Cook Islands, Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Democratic Republic of Congo, Djibouti, Dominican Republic, Egypt, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, European Union (27), Fiii, Finland, France, Gabon, Ghana, Honduras, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Japan, Jordan, Kazakhstan, Kenya, Laos, Lebanon, Lesotho, Liberia, Luxembourg, Madagascar, Malawi, Malaysia, Mali, Malta, Marshall Islands, Mexico, Moldova, Mongolia, Morocco, Mozambique, Nauru, Nepal, New Zealand, Niger, Nigeria, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Russia, Rwanda, Samoa, Saudi Arabia, Senegal, Sierra Leone, Slovenia, Somalia, South Africa, South Korea, South Sudan, Spain, Sudan, Suriname, Sweden, Tanzania, Togo, Tunisia, Turkey, Uganda, United Arab Emirates, United Uzbekistan, Kingdom, Uruguay, Venezuela, Yemen, Zimbabwe

The majority of Parties use English as language for the commitment texts. The other two widely used languages are Spanish and French. Only 4% of the texts are in the other languages as depicted in Figure 3 below.

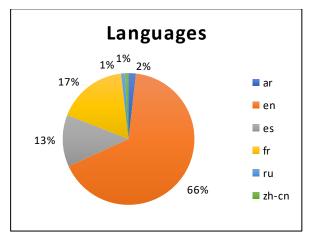


Figure 3: languages used, ar = Arabic, en = English, es = Spanish, fr = French, ru = Russian, zh-cn = Chinese

## **Appendix C: Prompts**

- 1. Question-Answer (QA) prompt for pollution from excess nutrients: "Does the text mention any targets specifically for reducing excess nutrients pollution? Excess nutrients pollution is defined as nutrients lost to the environment. Some examples of nutrients are nitrogen, phosphorus and fertilizer. If yes, is the target quantified? A quantified target is defined by a reduction in terms of a percentage, in terms of an absolute value or in terms of "reduce by half" or "phase out""
- 2. Question-Answer (QA) prompt for pollution from pesticides and other hazardous chemicals: "Does the text mention any targets specifically for reducing pesticides and highly hazardous chemicals pollution? If yes, is the target quantified? A quantified target is defined by a reduction in terms of a percentage, in terms of an absolute value or in terms of "reduce by half" or "phase out""
- 3. Question-Answer (QA) prompt for pollution from plastics: "Does the text mention any targets specifically for reducing plastics pollution? Plastics pollution is defined as the use of plastic, single use plastic, or the amount of plastic ending up in the environment. If yes, is the target quantified? A

quantified target is defined by a reduction in terms of a percentage, in terms of an absolute value or in terms of "reduce by half" or "phase out""

## 4. The QA prompt template:

"You are an AI assistant for a document analysis system. Analyze the retrieved document context and return a response based on the User Query below.

Context: {context}

*User Query:* {question}

Assign each country to one and only one of the following classes:

class 1: the context doesn't mention pollution from pollution>

class 2: the context mentions pollution from <pollution> but has no quantified target to reduce that type of pollution

class 3: the context mentions pollution from <pollution> but the quantified target is lower than 50% reduction

class 4: the context mentions pollution from <pollution > AND also the quantified target is at least 50% reduction.

Just return output in the format country: class number

#### Examples:

- if country X mentions pollution from <pollution> but has no quantified target to reduce that type of pollution, the output would be X: 2
- if country Y mentions pollution from <pollution> but the quantified target is lower than 50% reduction, the output would be Y: 3"

Above, <pollution> is either "excess nutrients", "pesticides and chemicals", or "plastics".

hazardous chemicals (Table 3), and plastics (Table 4)

C1 = pollution type not mentioned

C2 = pollution type mentioned, but no quantified reduction target

C3 = pollution type mentioned, but target below GBF target of at least 50% reduction

C4 = pollution type mentioned, and target at or above GBF target of at least 50% reduction

Rev1 = class assigned by reviewer 1

Rev2 = class assigned by reviewer 2

Rev12 = final consensus of manual review

RAG = class assigned by RAG system

	Rev1	Rev2	Rev12	RAG
Algeria	C2	C2	C2	C2
Angola	C1	C1	C1	C1
Australia	C1	C1	C1	C1
Austria	C4	C4	C4	C4
Azerbaijan	C4	C4	C4	C4
Bangladesh	C2	C2	C2	C2
Benin	C1	C1	C1	C2
Bhutan	C1	C1	C1	C1
Bolivia	C1	C1	C1	C1
Botswana	C2	C2	C2	C2
Burkina	C1	C1	C1	C1
Faso				
Burundi	C2	C2	C2	C2
Cambodia	C1	C1	C1	C1
Cameroon	C2	C2	C2	C2
Canada	C4	C4	C4	C4
Cape Verde	C1	C1	C1	C1
Central	C1	C1	C1	C1
African				
Republic				
Chad	C2	C2	C2	C2
Chile	C2	C2	C2	C2
China	C2	C2	C2	C2

Table 2: excess nutrients pollution reviews

# Appendix D: ORT commitment reviews

Manually assigned classes of the sample of 20 Parties' commitments, compared with the RAG system results (majority vote of 11 runs for excess nutrients pollution (Table 2), pesticides and other

	Rev1	Rev2	Rev12	RAG
Algeria	C2	C2	C2	C2
Angola	C1	C1	C1	C1
Australia	C1	C1	C1	C1
Austria	C4	C4	C4	C4
Azerbaijan	C2	C1	C2	C2
Bangladesh	C4	C3	C4	C2
Benin	C2	C2	C2	C2
Bhutan	C1	C1	C1	C1
Bolivia	C1	C1	C1	C1
Botswana	C2	C2	C2	C2
Burkina	C1	C1	C1	C1
Faso				
Burundi	C2	C2	C2	C2
Cambodia	C1	C1	C1	C1
Cameroon	C2	C2	C2	C2
Canada	C4	C4	C4	C4
Cape Verde	C2	C1	C2	C2
Central	C1	C1	C1	C1
African				
Republic				
Chad	C1	C1	C1	C1
Chile	C1	C1	C1	C1
China	C4	C3	C3	C2

Table 3: pesticides and other hazardous chemicals pollution reviews

	Rev1	Rev2	Rev12	RAG
Algeria	C2	C2	C2	C2
Angola	C1	C2	C2	C2
Australia	C2	C2	C2	C2
Austria	C1	C1	C1	C1
Azerbaijan	C4	C4	C4	C4
Bangladesh	C3	C3	C3	C3
Benin	C1	C1	C1	C1
Bhutan	C1	C1	C1	C1
Bolivia	C1	C1	C1	C1
Botswana	C4	C2	C2	C4
Burkina	C1	C1	C1	C1
Faso				
Burundi	C2	C2	C2	C2
Cambodia	C1	C1	C1	C1
Cameroon	C2	C2	C2	C2
Canada	C2	C2	C2	C2
Cape Verde	C1	C1	C1	C1
Central	C1	C1	C1	C1
African				
Republic				
Chad	C1	C1	C1	C1
Chile	C1	C1	C1	C1
China	C2	C2	C2	C2

Table 4: plastics pollution reviews

# Appendix E: ChatPBL parameter settings

Text chunking:

NLTKTextSplitter, chunk size of 126000 characters

Chunk embedding:

OpenAI "text-embedding-ada-002"

Retrieval:

Vectorstore retrieval based on similarity search LLM:

OpenAI "gpt-4o", model version 2024-08-06

# **Appendix F: Examples country files**

## **Example Ireland:**

Government: Ireland

National target title: By 2024, the Environmental

Impact Assessment (EIA) (Agriculture)

Regulations will be reviewed

Main policy measures: nan

Description: nan

Aspects of the goal or target are covered: nan

Main policy measures: DAFM will review the

EIA (Agriculture) Regulations

Government: Ireland

Aspects of the goal or target are covered: nan

*National target title: By 2030, the objectives of* the NBAP, where relevant, are aligned with and integrated, within the statutory landuse plans of the Regional Assemblies and Planning Authorities and within LBAPs

Government: Ireland

Description: nan

National target title: By 2030, address key issues in relation to the Management of Deer in Ireland

Description: nan

Main policy measures: All Regional Spatial and Economic Strategies, City and County Development Plans, Local Area Plans and Local Biodiversity Action Plans shall be aligned with the objectives of the National

Main policy measures: NPWS will continue to work with DAFM and all relevant stakeholders to develop recommendations with the aim of improving the effectiveness of managing wild deer in Ireland.

Aspects of the goal or target are covered: nan

Aspects of the goal or target are covered: nan

Government: Ireland

Government: Ireland

National target title: By 2030, shared responsibility for the conservation of biodiversity acted on

National target title: By 2025, Ireland takes enhanced measures to safeguard against the risk of fraud and other indirect effects of its renewable transport fuels policy and targets for the use of biofuels, considering the potential high ILUC-risk and detrimental impact to global

Description: nan

biodiversity.

Main policy measures: All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure

Description: nan

Aspects of the goal or target are covered: nan

National target title: By 2027, implementation of the National Restoration Plan is monitored

Government: Ireland

Description: nan

National target title: By 2024, the Industrial Development Agency (IDA) has delivered on the biodiversity measures in its 2021-2024 strategy Driving Recovery and Sustainable Growth

Main policy measures: DHLGH and all stakeholders across Government, will monitor implementation of the National Restoration Plan.

Description: nan

Aspects of the goal or target are covered: nan

Main policy measures: DETE will work with IDA *Ireland to develop biodiversity measures across* commitment to biodiversity measures outlined in IDA's 2021-2024 strategy, Driving Recovery and Government: Ireland

their property programme, in line with the Sustainable Growth

National target title: By 2027, implementation of a National Restoration Plan has begun

Aspects of the goal or target are covered: nan

Description: nan

Government: Ireland

Main policy measures: DHLGH and all stakeholders across Government, will put in place restoration measures as described in the National Restoration Plan, within the appropriate timeframes.

National target title: By 2024, OPW is working to enhance biodiversity at National Historic Property sites

Aspects of the goal or target are covered: nan

Description: nan

Government: Ireland

Main policy measures: OPW will conduct biodiversity audits at multiple sites, implement enhancements and recommendations, and share the data gathered

National target title: By 2026, a National Restoration Plan is published

Description: nan

Aspects of the goal or target are covered: nan

Main policy measures: NPWS and DAFM and other relevant stakeholders will work to align existing indicators and/or establish new ones for monitoring restoration of ecosystems. DHLGH,

Government: Ireland

in collaboration with DAFM, OPW and DECC, and other relevant bodies, will identify synergies between nature restoration and climate change mitigation/adaptation and disaster prevention, and prioritise these measures. DHLGH, in collaboration with DAFM, OPW and DECC will engage with stakeholders and the public during the development of a National Restoration Plan. DHLGH, in collaboration with DAFM, OPW and DECC, will develop a National Restoration Plan

Main policy measures: DAFM, NPWS and NFDM will continue to work with all relevant stakeholders to develop a national fire management strategy.

Aspects of the goal or target are covered: nan

Government: Ireland

Aspects of the goal or target are covered: nan

Government: Ireland

National target title: By 2024, Enhanced implementation of the Habitats and Birds Directives

National target title: By 2026, Ireland has actively enabled and contributed to the ongoing achievement of OSPAR's North-East Atlantic Environment Strategy 2030 (NEAES)

Description: nan

Description: nan

Main policy measures: NPWS will complete the selection and notification of sites for the protection of Annex habitats and species listed on the EU Habitats and Birds Directives. NPWS will publish detailed site-specific conservation objectives, along with the approach used, for all existing SACs and SPAs.

Main policy measures: DHLGH will continue to work nationally, internationally with OSPAR contracting parties, and with external organisations and bodies to support and ensure effective delivery of the 12 strategic objectives and 54 operational objectives set out in OSPAR's North-East Atlantic Environment Strategy 2030

Aspects of the goal or target are covered: nan

Government: Ireland

Aspects of the goal or target are covered: nan

National target title: By 2024, the Management of National Parks are underpinned by Management Plans

Government: Ireland

Description: nan

National target title: By 2030, address key issues in relation to fire management and emerging wildfire issues in Ireland

Main policy measures: Approve Management Plans for National Parks by 2024 in line with the NPWS Strategic Action Plan

Description: nan

110

Aspects of the goal or target are covered: nan

Government: Ireland

National target title: By 2027, the revised legislation arising from the NPWS review of the Wildlife Acts is in place

Description: nan

Main policy measures: NPWS will complete a review of Wildlife legislation; NPWS to publish legislation to provide a legal basis for National Parks.

Aspects of the goal or target are covered: nan

Government: Ireland

National target title: By 2025, the Strategic Action Plan resulting from the review of the NPWS is implemented

Description: nan

Main policy measures: NPWS will implement the Strategic Action Plan resulting from the NPWS Review

Aspects of the goal or target are covered: nan

#### **Example China:**

Government: China

National target title: 7. 生态空间保护

Description: 优化国土空间开发和保护格局, 将生物多样性保护作为国土空间规划的重要 内容。严守生态保护红线,加强生态保护红 线人为活动管控, 开展动态监测及保护成效 评估,强化生态环境监督。加强对生物多样 性保护优先区域的保护监督,筑牢重点生态 功能区格局,完善重点生态功能区配套政策 。优化海洋生态安全格局,完善围填海管控 和岸线开发管控制度,严守大陆自然岸线保 有率目标底线要求。充分衔接国土空间规划 分区和用途管制等要求,完善全域覆盖的生 态环境分区管控体系,建立差别化的生态环 境准入清单。依托生态空间相关监督平台加 强重要生态空间动态监测、评估和预警。将 生物多样性影响评价纳入大型工程建设、资 源开发利用等项目的管理要求,强化事前事 中事后全过程监管。到2030年,重要生态空 间得到有效保护,自然生态系统的原真性和 完整性得以保持,重要生态系统退化及栖息 **地丧失得到基本遏制。** 

Main policy measures: nan

Aspects of the goal or target are covered: nan

Government: China

National target title: 1. 生物多样性政策法规体系

Description: 加快生物多样性保护法治建设,加快出台国家公园法,持续推进野生动植物及其栖息地保护、生物安全、生物资源可持续利用、生物遗传资源获取与惠益分享、生态保护红线、自然保护地以及森林、草原、湿地、河湖、海洋等领域法律法规的制定修订工作,研究起草生物多样性相关传统知识保护条例,完善外来入侵物种名录和管理制度。完善生物多样性保护政策及制度体系,健全生态保护补偿制度,健全野生动物种群调控和致害补偿制度,完善生态环境损害赔

偿制度,完善打击野生动植物非法贸易制度,推行草原森林河流湖泊海湾休养生息,继续实施长江十年禁渔,健全耕地休耕轮作制度。鼓励各地因地制宜出台相应的生物多样性保护地方性法规政策。到2030年,生物多样性保护及可持续利用相关政策法规全面建立。

Main policy measures: nan

Aspects of the goal or target are covered: nan