

Environmental Principles, Governance and Biodiversity Targets

Welsh Government

The Young Foundation, June 2025



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Executive summary

The Welsh Government's White Paper, Environmental Principles, Governance and Biodiversity Targets for a Greener Wales, set out proposals to introduce a Bill into the Senedd that will embed environmental principles into Welsh law, strengthening environmental governance in Wales. As environmental protection is a devolved policy area, there is both a necessity and opportunity for Wales to introduce its own legislation.

This report provides an evaluation of each of the three key areas proposed for the Welsh Government's Bill:

1. embedding environmental principles into Welsh law
2. environmental governance, including the establishment of an environmental governance body for Wales.
3. a statutory targets framework to halt and reverse the decline of biodiversity in Wales

To ensure this work has been undertaken effectively we have:

- gathered evidence from different sectors (including from elsewhere in the UK) on similar or previous proposals
- identified potential risks associated with each of the scenarios
- reviewed the intended benefits of the proposals and suggested any benefits that may be realised based on the evidence gathered above
- undertaken a cost-benefit analysis and, as far as is possible, monetised the anticipated benefits and costs
- provided additional evidence to support a narrative description of benefits in situations in which it is not possible to quantify anticipated benefits

This report is divided into the following five sections:

- Introduction and overview
- Approach and methodology
- Literature review regarding the introduction of environmental bills and biodiversity frameworks

- Findings, including stakeholder feedback and an options analysis in each of the three key areas including unquantifiable risks, costs and benefits
- Conclusions



I. Introduction and overview

Summary

The Welsh Government's White Paper, Environmental Principles, Governance and Biodiversity Targets for a Greener Wales, set out proposals to introduce a Bill into the Senedd that will embed environmental principles into Welsh law, strengthening environmental governance in Wales. As environmental protection is a devolved policy area, there is both a necessity and opportunity for Wales to introduce its own legislation.

Following the Welsh Government's draft regulatory impact assessment, this independent external study was commissioned from The Young Foundation, in partnership with WPI Economics, in Autumn 2024 to help evaluate the three key areas proposed for the Welsh Government's Bill:

1. embedding environmental principles into Welsh law
2. environmental governance, including the establishment of an environmental governance body for Wales.
3. a statutory targets framework to halt and reverse the decline of biodiversity in Wales

This report summarises the findings of the independent study. It serves to inform the final regulatory impact assessment by enabling greater engagement with the priorities of stakeholders and providing an independent cost-benefit analysis.

The remainder of this section provides a background on the Bill and more detail on what the independent study has entailed.

Background to the Bill

Environmental protection has long been a priority in Wales, but its importance in legislation has come into particular focus since the UK's decision to depart from the European Union in 2016, and the subsequent requirements to monitor environmental protection and enforce environmental legislation. Environmental legislation is a devolved area of policymaking in the UK, providing the Welsh Government with the remit to establish its own approach to primary and secondary legislation and governance of environmental protection, nature recovery, and the response to climate change.

A consultation on the 2016 Environment Act and a Task and Finish Group, established in 2019-2020, recommended an Environmental Bill for Wales that would protect the progress made on environmental protection under the EU, and strengthen Wales's ability to further progress positive environmental change and restore Wales's unique biodiversity.

The 'Securing a Sustainable Future Environmental Principles, Governance and Biodiversity Targets for a Greener Wales' White Paper set out proposals to introduce a Bill into the Senedd that will embed environmental principles into Welsh law, strengthen environmental governance in Wales by establishing a new body to oversee compliance with environmental law by Welsh public authorities, and introduce a new and ambitious biodiversity targets framework to combat the ongoing nature emergency. The proposals reflect the Welsh Government's commitment towards "a greener Wales to tackle climate change and the nature emergency," as set out in the Programme for Government and Cooperation Agreement. The First Minister committed to bringing forward a Bill on these issues during this Senedd term in their 2024 legislative statement.

The proposals have been informed by previous consultation and engagement, including a 2019 public consultation exercise, a 2020 Task and Finish Group report, as well the establishment of the Interim Environmental Protection Assessor for Wales (IEPAW) and regular stakeholder engagement. The White Paper set out proposals for a Bill to cover three key areas and invited views from interested parties:

- (1) embedding environmental principles into Welsh law;
- (2) environmental governance, including the establishment of an environmental governance body for Wales;
- (3) a statutory targets framework to protect and restore biodiversity in Wales.

The White Paper built on this, articulating clear proposals for public consultation. The public consultation was concluded in April 2024 and received 1171 responses. Welsh Government welcomed the consultation and provided a response shortly thereafter.¹ This welcomed the broad endorsement for the proposals and responded to individual points of feedback.

A draft regulatory impact assessment was produced in 2024 introducing the option to place a duty onto Welsh Ministers to give due regard to environmental principles

¹ The summarised consultation responses and Welsh Government response is available at: <https://www.gov.wales/environmental-principles-governance-and-biodiversity-targets-white-paper>

(and any accompanying guidance) during the development of their policies and legislation. This would mean embedding the five principles within the Welsh statute book and placing a duty on Welsh Ministers to give regard to these principles. It would go further than the previous requirements of the EU legislation by putting environmental principles at the heart of Welsh Government policymaking and decision-making.

Overview of the study

This independent study builds on the draft RIA² that was produced to accompany the White Paper. It was commissioned to evaluate each of the three key areas proposed in the Welsh Government's Bill and to provide Ministers, the Accounting Officer, the Senedd and stakeholders with information on the likely impact of proposed legislation.

This report presents the findings of the study, which has entailed:

- gathering and present evidence from different sectors (including from elsewhere in the UK) on similar or previous proposals
- conducting an independent literature and evidence assessment of what is known of the risks and benefits of the three key areas proposed for a Bill
- conducting independent stakeholder interviews with public bodies, government, local government, community and voluntary sector in Wales and counterparts in Scotland and Westminster regarding each of the options
- reviewing the intended benefits of the proposals and suggest any benefits that may be realised based on the evidence gathered above
- undertaking a cost-benefit analysis, and, as far as is possible, monetising the anticipated benefits and costs. This includes analysis of the 'do nothing/business as usual' option, which is used as a baseline against which to assess the relative costs and benefits of the alternative options.
- providing additional evidence to support a narrative description of benefits where it is not possible to quantify anticipated benefits (e.g. social and environmental benefits) beyond what has already been identified in the White Paper

² Draft Regulatory Impact Assessment
<https://www.gov.wales/sites/default/files/consultations/2024-01/ria-environmental-principles-governance-and-biodiversity-targets-white-paper.pdf>

The report is divided into the following five sections:

- This section - Introduction and overview
- Approach and methodology
- Literature review regarding the introduction of environmental bills and Biodiversity Frameworks
- Findings, including stakeholder feedback and an options analysis in each of the three key areas including unquantifiable risks, costs and benefits
- Conclusions

II. Approach and methodology

To give this report the breadth of input required, we have engaged with a range of stakeholders to ensure their views on the Bill and the options available are captured. To enable this to happen, the team has run several engagement activities, including interviews and panel sessions, aimed at creating spaces where stakeholders feel comfortable to engage and share their opinions, research and experiences. This approach has involved engaging with relevant Welsh Government departments, non-governmental organisations, academics, local government, relevant UK and devolved government departments and unions.

The method we have followed for this project consisted of three stages:

- scoping
- modelling
- assessment

Each stage was designed to feed into the next, with the findings from the scoping stage informing how we conduct modelling, and the iterated models that emerged informing the assessment. This work has culminated in this final report.

Scoping

The project began with a scoping stage, collecting evidence from primary and secondary research on the expected benefits, costs and risks associated with the proposed legislation. This included identifying the co-benefits across a range of models, including economic, social and qualitative projections of social impact and wider co-benefits from nature recovery and regenerative strategies.

The project began with a desk review of the Welsh Government work to date, including:

- environmental principles, governance and biodiversity targets White Paper
- the previous draft Regulatory Impact Assessment (RIA)
- the annual report (2023-2024) of the Interim Environmental Protection Assessor for Wales, the Summary of responses of the environmental principles and governance in Wales consultation (2019)
- the report from the Environmental Governance Stakeholder Group (2020), alongside any other relevant documents

The project team then conducted a rapid literature review on the expected benefits, costs and risks of environmental legislation, which included:

- the principles and different ways of implementing them
- different environmental governance bodies
- technical response to the Welsh Government

The literature review identified a selection of best practice exemplars using positive deviance; an approach which focuses on examples of success and seeks to learn from them. These worldwide practices have been expanded on in the report, to inform potential approaches that could be undertaken by the Welsh Government.

The project team worked with Welsh Government colleagues to develop a detailed interview script and identify stakeholders to interview. It then ran a series of interviews that gathered a range of data, feedback and analysis on expected outcomes, and on the benefits of the proposed legislation. Where relevant, the interviews also enquired about the key principles that the emerging legislation should embody and could be assessed against.

Subsequently, we convened an evidence panel of expert voices and stakeholders from across Wales and the wider UK, with expertise in environmental, nature recovery, social, health, economic and place-based impact. The panel recognised the invitation to tender's focus on assessing societal benefits, as well as biodiversity and environmental targets. The panel members reviewed the gathered evidence, supported the project team with where to gather further evidence, advised on setting targets, and collaboratively assessed the expected outcomes and benefits of the proposed biodiversity legislation.

The panels were crucial in enabling the project team to decide on and conduct 'deep dives' on best-practice exemplars, identified through desk research and/or through the key informant interviews. They also offered us extra time away from the panel to help the team design and deliver the exemplars and respond to gaps in the evidence review.

Modelling

The next stage was to model the impact of the Bill, by building on the methods laid out in the draft RIA alongside the evidence gathered in the scoping stage.

The modelling estimates costs of the legislation over a 10-year period, starting in 2025 and ending in 2034. The calculated costs focussed on the set-up and operation of the structures created by the legislation.

The modelling of benefits is largely illustrative. This is due to the large number of unknowns around the activity that the legislation would lead to, and the scale of the benefits that can be realised.

Assumptions within the modelling are set out for each of the three parts of the legislation, with benefits set out in a standalone section in the conclusion.

The models we included for assessment in this process were:

1) Environmental principles

1A) Business as usual (baseline)

Under this option, no environmental principles would be introduced into the Welsh statute book, representing the baseline for comparison.

1B) Principles only (without a duty on Welsh Ministers or public bodies)

This option sees the reintroduction of environmental principles to the Welsh statute book. However, it does not foresee any duty on Welsh Ministers or public bodies to give “due regard” to the principles.

1C) Duty on Welsh Ministers to apply the principles

This option sees the reintroduction of environmental principles to the Welsh statute book, while placing a duty on Welsh ministers to apply the principles (and any accompanying guidance) to policies and legislation.

1D) Duty on Welsh Public Bodies

This option expands on option 1c (duty on Welsh ministers to apply the principles), extending the duty of giving due regard to the principles and accompanying guidance to relevant public authorities. This option considers three scenarios where the environmental principles are given due regard: i) only during the development of policies and legislation, ii) when acting as responsible authority and conducting environmental assessments, or iii) when acting as competent authority during Environmental Impact Assessments and subsequent decisions.

2) Environmental governance

2A) Business as usual (baseline)

This option considers the current state of environmental governance under the Interim Environmental Protection Assessor for Wales (IEPAW).

2B) Providing existing bodies with functions

This option considers the potential and/or limitations of extending the powers of existing bodies to play a role in Environmental Governance.

2C) Setting up a dedicated Environmental Governance body.

This option foresees the formation of a dedicated Environmental Governance body, under a range of models, and with different functions and powers.

2D) Engage the UK Government to extend OEP functions to Wales

This option would involve extending the remit of the Office for Environmental Protection (OEP) and the environmental review mechanism to Wales.

3) Biodiversity framework

3A) Business as usual (baseline)

This option maintains the current approach to the conservation and restoration of biodiversity. This means Welsh Ministers and public authorities must uphold the non-statutory Sustainable Management Natural Resources (SMNR) Aims, and the duties set out in Sections 6 and 7 of the Environment (Wales) Act 2016. This option is provided as a baseline for comparison, with no additional action to protect and restore biodiversity beyond the Global Biodiversity Framework's second target to restore 30% of all degraded ecosystems by 2030.

3B) non-legislative measures, including updating the existing Nature Recovery Action Plan

This option involves embedding the Wales Nature Recovery Strategy in National Natural Resource Policy (NNRP) alongside other components of the existing NNRP.

3C) Establish a statutory biodiversity targets framework

This option involves establishing a statutory targets framework which could entail:

- A new power for the Welsh Ministers to set biodiversity targets in regulations, provided they are satisfied that meeting the target would contribute to halting and reversing the decline in biodiversity, in particular through increasing the abundance of native species, enhancing the resilience of ecosystems, or increasing genetic diversity.
- A duty on the Welsh Ministers to set at least one target in each of the priority areas, and to lay a draft of those target regulations before the Senedd within three years of Royal Assent.
- Enhancing the Welsh Ministers' planning and reporting functions under section 6 of the Environment Act, to include the action they intend to take to achieve biodiversity targets, monitoring and reporting progress toward achieving targets (including setting indicators), as well as a new evaluation report assessing the impact and effectiveness of those policies and actions.
- A power for the Welsh Ministers, in regulations, to designate public authorities, therefore requiring those public authorities to take action to contribute towards the biodiversity target for which they have been designated.
- A duty on the Welsh Ministers to promote awareness of the importance of and threats to biodiversity.

The assessment of options included a description of the potential or existing models, including the structure, powers and limitations of each model, as well as the anticipated costs and benefits, both monetisable and unquantifiable.

Additionally, this work builds out the expected costs, challenges and risks associated with each of the models, with a clear reference to supporting evidence, leading to eleven iterated models used for quantification, monetisation and assessment in the next stage.

Assessment

The final stage focused on the quantification and monetisation of the costs and benefits associated with each of the eleven option models detailed above.

This process began with the identification of costs and benefits under each option. This included a description of where anticipated costs might arise, particularly in the case of governance models (e.g. staff, training and organisational change). We have also included explanations of the routes via which benefits arise, whether social (e.g.

higher wellbeing from a cleaner environment), environmental (e.g. a reduction in carbon emissions) or economic (e.g. the enhancement of a net zero economy).

The project team then undertook quantification of costs and benefits under each option. This included an assessment of the scale of costs and benefits that are likely to arise, and includes details of quantification methods where applicable.

The next stage of the assessment saw the team monetise the costs and benefits under each option. This included attributing a monetary value to each cost and benefit, using the HMT Green Book methodology³ as a key part of the modelling, meeting the tender requirements of constant prices within a set base year and calculating the net present value of the costs and benefits of each model.

The last step of the assessment, highlighted the unquantifiable and unmonetisable costs and benefits, displaying a list of outcomes flowing from each model that cannot credibly be quantified or have a monetary value attached to it. The unquantifiable costs and benefits are accompanied by a qualitative description of the likely impact and expected scale. The outcome of each assessment is brought together under a single presentation of the analytical outcomes.

Costs and benefits of the legislation

The Welsh Government's legislative proposals have a clear objective to deliver environmental benefits to the economy and society. Costs are incurred to deliver these benefits. The cost-benefit analysis (CBA) sets out:

- a description of the costs to which the legislation will give rise
- calculations of the costs it is possible to measure
- a description of the benefits the legislation could generate
- an illustration of how the legislation could contribute to future benefits, as part of a wider programme of environmental intervention
- the relationship between costs and benefits

³ HM Treasury, *The Green Book* (2024): <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

The 2024 White Paper on the legislation also assessed costs and benefits⁴, and the analysis presented here builds on the findings made in that report with the following research:

- findings from stakeholder interviews
- engagement with the Welsh Government, and other public bodies, to understand the legislative impacts
- desk research
- an exercise to quantify costs and benefits

Similar to when this type of analysis was conducted for England's Environment Act, there are complexities in understanding precisely how benefits relate to costs.

Where costs or benefits of the legislation were unquantifiable, the likelihood of their being achieved through the Bill was assessed using published case studies, evaluations, and reports on the introduction of legislation.

This process has been subject to the HMT Green Book standards for evaluation of evidence, and due consideration was taken of the feasibility of the legislation in Wales.

⁴ Welsh Government, *Environmental principles, governance and biodiversity targets: White Paper (2024)*

III. Review of relevant literature and legislation

This section presents the results of Stage 1: Scoping, where a literature review was undertaken with a focus on three thematic areas:

1. an overview of current Welsh policies and analysis of gaps
2. evidence of expected benefits, costs and risks of environmental legislation
3. national and international case study examples of similar or comparable legislation

The review used standard search engines to identify relevant sources relating to legislation and Google Scholar to identify academic sources relating to the three thematic areas above. The resulting documents and sources were then synthesised and analysed, with the results presented in the following section. For the review of Welsh policies, publications were sources from the Invitation to Tender (ITT), with supporting research on Welsh legislation which drew mainly on the Welsh Government website. Analysis of these policies informed the development of options presented in this report. The identification of expected benefits, costs and risks of environmental legislation drew on academic and grey literature, informing the cost analysis components of the report. Lastly, the review of national and international case study examples used a positive deviance approach to identify examples of best practice with similar contexts or content to the proposed legislation.

This research found that whilst there was a wide variety of scholarship on the benefits of environmental legislation, the research was often place-based rather than looking at national environmental legislation more broadly. Furthermore, when searching for the benefits of environmental laws and legislation, much of the literature took an economic cost-benefit analysis perspective. As such, the findings for the unquantifiable benefits of environmental legislation are limited to specific case studies or locations.

There is evidence that countries across the world have identified the need for environmental legislation and have taken steps towards acting on this need. Post-COP10, 184 countries have developed a national biodiversity strategy and action plan⁵. They have the aim of adopting or using this policy instrument to implement an effective, participatory and updated national biodiversity strategy and action plan. However, when compiling this literature review, we found there to be little detail on

⁵ Convention on Biological Diversity, *Post-COP10 NBSAPs*: <https://www.cbd.int/nbsap/about/latest>

these strategies, and they have not been compared, contrasted, or evaluated, leaving us with limited analysable materials.

A review of gaps in current Welsh policies

Wales has passed previous policies and legislation covering environmental protections. Several of these policies are summarised below and cover changing waste management, increasing focus on future generations' wellbeing, and improving air quality.

The Waste (Wales) Measure of 2010 was focused on reducing the amount of waste and litter in Wales, and contributed to more sustainable waste management approaches. Since being passed, several subordinate pieces of legislation have been made under the measure. A new recycling law went into effect in April 2024 and requires workplaces to separate out recyclable items, the same way households do. Enforcement of the new law is the responsibility of the local authorities and failure to comply could result in a fine⁶.

The Wellbeing of Future Generations (Wales) Act 2015 focuses on improving the social, economic, environmental and cultural wellbeing of Wales through a legally binding common purpose of seven wellbeing goals applicable to national government, local government, and other specific public bodies. The focus of the Act is to encourage public bodies to consider the long-term impacts of their work. In order to assess the progress towards the wellbeing goals, a long list of measurable indicators are included. Several of these indicators are directly related to environmental issues: renewable energy, healthy soils, waste not recycled, air quality, and energy efficiency of homes⁷.

The Environment (Wales) Act 2016 lays out a framework to ensure managing resources sustainably is a core consideration in decision-making⁸. The Act also places a duty on Welsh Ministers to set targets for reducing greenhouse emissions,

⁶ Welsh Government, *Changes to workplace recycling: guidance for workplaces* (2023): <https://www.gov.wales/changes-workplace-recycling-guidance-workplaces#:~:text=Wales%20is%20currently%20third%20in,of%20carbon%20emissions%20each%20year.>

⁷ Welsh Government, *Well-being of Future Generations (Wales) Act 2015: the essentials* (2015): <https://www.gov.wales/sites/default/files/pdf-versions/2025/2/2/1740501518/well-being-future-generations-act-essentials.pdf>

⁸ Welsh Government, *Environment (Wales) Act 2016 Factsheet* (2016): <https://www.gov.wales/sites/default/files/publications/2019-05/environment-wales-act-2016-overview.pdf>

and addresses several other issues such as marine licensing, waste, carrier bag charges, biodiversity, and climate change.

The Clean Air Plan for Wales was introduced in 2020 and has since been reviewed for the progress and effectiveness of the policy⁹. The process of clearly reviewing and assessing the progress in such a comprehensive way can serve as a framework for other policies to be transparently reviewed and can increase accountability to policies passed.

The gaps in evidence around biodiversity were reflected in the Invitation to Tender developed by the Welsh Government for this work, which referenced three reviews that we should consider as a starting point when assessing the gaps in the current evidence base:

- The Nature Positive 2030 Evidence Report for Wales¹⁰
- The Wales Environment Link review of nature recovery potential (2021)¹¹
- British Ecological Society review (2022) of Protected Areas and Nature Recovery¹²

Gaps in the availability of research and information on biodiversity policies affect both the findings of this report, and policymakers' abilities to use current data to make decisions. By reviewing the reports listed above, we have summarised the key gaps referenced in each document. These gaps must be considered during any decision-making by the Welsh Government, as well as how these gaps could be closed to enable better decision-making.

⁹ Welsh Government, *Clean Air Plan for Wales: Healthy Air, Healthy Wales* (2020):

<https://www.gov.wales/clean-air-plan-wales-healthy-air-healthy-wales>

¹⁰ Joint Nature Conservation Committee, *Nature Positive 2030 Evidence Report* (2022):

<https://data.jncc.gov.uk/data/6de7bf27-055e-4407-ad29-4814e1613d90/nature-positive-2030-evidence-report.pdf>

¹¹ Welsh Government, *The Nature Recovery Action Plan for Wales* (2020):

<https://www.gov.wales/sites/default/files/publications/2020-10/nature-recovery-action-plan-wales-2020-2021.pdf>

¹² British Ecological Society, *Protected Areas and Nature Recovery* (2022):

https://www.britishecologicalsociety.org/wp-content/uploads/2022/04/BES_Protected_Areas_Report.pdf

Gaps identified

Putting Wales on a path to nature recovery	Protected areas and nature recovery	Nature Positive 2030
<ul style="list-style-type: none"> • Lack of an outline of the architecture required to halt and then reverse biodiversity loss and the funding required to deliver this objective. • Creation of a framework/process/formula, that utilises current data to create biodiversity targets 	<ul style="list-style-type: none"> • Analysis on how to best deploy, support, and enhance existing protected areas in meeting the 30x30 target • Analysis on which biodiversity metrics can be implemented to ensure conservation targets can be set and assessed • Lack of information on the condition protected areas and no scheme for consistent assessment across sites • Few empirical studies focusing on protected areas through the lens of the communities who have a direct impact on the areas 	<ul style="list-style-type: none"> • Knowledge of marine environments • Information on less-charismatic species (e.g. fungi) • Data on the quality of habitats outside protected sites

In conclusion, it is crucial to recognise that the above findings in these reports are likely to only reflect some of the gaps in the biodiversity evidence base. This is reflected in other work currently underway, which aims to fill these gaps. One

example of this research is the Nature Recovery Taskforce built into the ACCESS Gap Review 2024. The taskforce has recently selected case studies of relevant policy developments, which they will review to establish the extent to which they were informed by social science, and whether gaps and unrealised opportunities for more social science inputs can be identified.

Expected benefits, costs and risks of environmental legislation

The literature review allows us to apply the findings to inform the proposed Environmental Bill, increasing its ability to provide broader benefits for the environment, society, the economy, and human wellbeing. There is detail on biodiversity policy in practice listed in section 3 of this review, however much of this legislation is new and therefore yet to be evaluated or even implemented. Additionally, the mechanisms for monitoring, evaluation and reporting of the benefits, costs and risks relating to specific environmental legislation vary significantly between countries – with limited access to credible information.

An example of the above challenge is the ‘polluter pays’ principle, which is a “commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment”¹³. It is part of a set of principles in the 1992 RIO Declaration¹⁴, which was designed to guide sustainable development worldwide. Our findings on the polluter pays principle (PPP), found that as a concept it was widely accepted, especially in the EU. However, efforts to implement it are piecemeal and narrow in scope, with its use in contemporary environmental law showing “considerable uncertainties and ambiguities”¹⁵. In most cases, only a specific industry is targeted. In broader terms this could be due to pieces of legislation in other countries that pursue biodiversity targets not being explicitly linked, or strategies not being updated to reflect the legislation that has been produced.

Biodiversity indicators comprise data that provides “an essential source of evidence for reporting biodiversity change and the impact of policies and actions to conserve

¹³ International Institute for Sustainable development, *How to Enforce the Polluter-Pays Principle* (2022): <https://www.iisd.org/articles/polluter-pays-principle>

¹⁴ UN General Assembly, *Report of the United Nations conference on environment and development* (1992): https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcomp/act/A_CONF.151_26_Vol.I_Declaration.pdf

¹⁵ Fitzmaurice, Malgosia. *International Environmental Law*. (2013): https://www.researchgate.net/publication/270786485_International_Environmental_Law_By_ULRICH_BEYERLIN_and_THILO_MARAUHN

biodiversity”¹⁶. This makes indicators crucial, if the Welsh Government is to track progress against their biodiversity policy commitments. The literature review found that explicit biodiversity legislation lacked clear indicators to measure the targets they had set. Searching for biodiversity indicators often led to the International Convention on Biological Diversity¹⁷ rather than the specific indicators used by countries to achieve these targets. Furthermore, NGOs such as the WWF have developed their own¹⁸. Whilst these are important, they are not necessarily influencing how countries themselves are measuring and achieving their biodiversity targets.

Actions to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols¹⁹, and other relevant international obligations, while also considering national circumstances, priorities and socioeconomic conditions.

Benefits

When exploring the unquantifiable social, economic, environmental, and wellbeing benefits of environmental legislation, nine key benefits were found.

1. Uncountable social benefits are generated from environmental protection, as all human populations and societies are recognised to be entirely dependent upon the environment²⁰ from both theoretical and empirical perspectives.
2. Natural environments have a positive impact on human wellbeing. This is supported by English, Scottish and EU empirical case studies²¹ as well as theoretical explorations into environmental justice²².
3. Large-scale environmental management schemes are found to have broader positive outcomes for the environment, such as eco-agricultural policies that

¹⁶ Joint Nature Conservation Committee, *UK Biodiversity Indicators* (2024): <https://jncc.gov.uk/our-work/uk-biodiversity-indicators-2024/>

¹⁷ Convention on Biological Diversity, <https://www.cbd.int/>

¹⁸ World Wide Fund for Nature, *Biodiversity risk filter*, (2023): <https://riskfilter.org/biodiversity/home>

¹⁹ United Nations, *Convention on Biological Diversity and its protocols*:

<https://www.un.org/ldcportal/content/convention-biological-diversity-and-its-protocols>

²⁰ Klaar, M. J., Carver, S. and Kay, P. *Land management in a post-Brexit UK: An opportunity for integrated catchment management to deliver multiple benefits?* (2020):

<https://eprints.whiterose.ac.uk/163543/>

²¹ DeVillie, N. V. et al. *Time Spent in Nature Is Associated with Increased Pro-Environmental Attitudes and Behaviors* (2021): doi:10.3390/ijerph18147498.

²² Walker, G. *Environmental Justice: Concepts, evidence and politics* (2012)

at implemented over large areas of land, rather than on a farm-by-farm basis²³. Environmental benefits mitigate forms of environmental harm such as air quality, flooding and heat waves²².

4. The more access people have to the environment, the more likely they are to have pro-environmental attitudes²¹. In turn, this helps to improve the social acceptance of environmental legislation. Thus, having equitable access to the environment, as discussed in the environmental justice literature²² is important.
5. Biodiversity and the natural environment were found to have a strong social value due to their connection to cultural and social identities, among other things. This was evidenced on a global scale²⁴ as well as national²⁵ and local scales²⁶.
6. The environment (specifically in a case study of British woodlands) was found to be a source of learning and education²⁷ and also has positive implications for human wellbeing.
7. The improvement of biodiversity is argued to have a broader positive impact on achieving climate change goals on both a global²⁸ and national scale²⁹. Specific reference was given to the ability of forest ecosystems to be carbon sinks. Biodiversity's ability to improve human wellbeing was also acknowledged³⁰.
8. There are economic benefits to environmental legislation, particularly if nature-based solutions are pursued. These economic benefits refer to reduced health costs if people had regular access to green spaces as well as the economic

²³ McKenzie, A. J. et al. *Landscape-scale conservation: collaborative agri-environment schemes could benefit both biodiversity and ecosystem services, but will farmers be willing to participate?* (2013): doi:10.1111/1365-2664.12122.

²⁴ Marden, E. et al. *Sharing and reporting benefits from biodiversity research* (2021): doi:10.1111/mec.15702.

²⁵ O'Brien, L. et al. *Cultural ecosystem benefits of urban and peri-urban green infrastructure across different European countries* (2017): doi:10.1016/j.ufug.2017.03.002.

²⁶ Pedersen, E., Weisner, S. E. B. and Johansson, M. *Wetland areas' direct contributions to residents' well-being entitle them to high cultural ecosystem values.* (2019): doi:10.1016/j.scitotenv.2018.07.236.

²⁷ O'Brien, L. and Morris, J. *Well-being for all? The social distribution of benefits gained from woodlands and forests in Britain.* (2011): *The International Journal of Justice and Sustainability*, 19 (4), pp.356–383.

²⁸ Díaz, S., Hector, A. and Wardle, D. A. *Biodiversity in forest carbon sequestration initiatives: not just a side benefit.* (2009): doi:10.1016/j.cosust.2009.08.001.

²⁹ Austin, Z. et al. *The co-benefits of biodiversity conservation programmes on wider ecosystem services.* (2016): doi:10.1016/j.ecoser.2016.06.002.

³⁰ Marden, E. et al. *Sharing and reporting benefits from biodiversity research.* (2021): Available at: doi:10.1111/mec.15702.

benefits of improving resilience to climate change through environmental legislation³¹.

9. Environmental regulations do not necessarily result in poor business economic performance³². Moreover, environmental legislation has improved the climate change resilience of some industries³³.

Risks

There are crucial risks that environmental legislation must consider, if it is to deliver on the social, wellbeing and economic benefits. The issue of unequal access to natural resources, including green and blue spaces, needs to be recognised as a systemic problem and addressed. Otherwise, there is a risk of compounding existing social inequalities by unequally distributing the benefits of access to nature.

There is an opportunity to combine social and environmental benefits, maximising the perceived benefits of environmental legislation and minimising individual trade-offs. This should be accompanied by social “safety nets” integrated within environmental legislation, ensuring that the pursuit of environmental goals doesn’t negatively impact individuals and communities in other ways. This contributes to positive perceptions of environmental policy. This points to a larger opportunity to increase awareness of environmental legislation and its benefits through concerted efforts.

Additionally, to be effective, environmental regulations need full political support so that regulatory agencies have the financial and human resources to monitor and enforce standards properly, which will be explored in section 3.

Examples of environmental principles, governance and biodiversity targets

(1) Environmental principles

We conducted a rapid review of the explicit and implicit use of environmental principles in legislation around the world. During our analysis, it became clear that there were some consistent themes, approaches and best practice that

³¹ Brotherton, P. et al. *Nature Positive 2030 – Evidence Report*. (2021)

³² OECD. *Assessing the social and economic impacts of environmental policies* (2022)

³³ Howe, C. et al. *Creating win-wins from trade-offs? Ecosystem services for human well-being: A meta-analysis of ecosystem service trade-offs and synergies in the real world*. (2014): doi:10.1016/j.gloenvcha.2014.07.005.

nations were taking, with nations tending to build upon Costa Rica's 1998 biodiversity act³⁴, which broke down their strategy into three areas:

- conservation of biodiversity
- sustainable use of resources
- fair and equitable sharing of the benefits arising from the utilisation of genetic resources

The EU's environmental principles are also broadly adopted, implicitly and explicitly. These are:

- precaution
- prevention
- rectification at source
- polluter pays

Beder (2013)³⁵ identifies six key principles as most prevalent: ecological sustainability, the 'polluter pays' principle, the precautionary principle, equity, human rights, and public participation. Of these, three are specific to environmental matters – ecological sustainability, the polluter pays principle and the precautionary principle – and three have wider social application – equity, human rights and public participation. The principles are explained in further detail below, alongside examples of legislation from around the world that include their application:

- Ecological sustainability emphasises the need for long-term ecological balance through the careful management of natural resources. It advocates for integrating ecological and economic considerations to ensure that human activities do not deplete the environment in a way that threatens future generations' ability to meet their needs.
- 'Polluter pays' was introduced in the 1970s due to concerns that pollution control laws might disadvantage the industries of some nations. The first international agreement on the polluter pays principle was incorporated in a

³⁴Future Policy, *Costa Rica's Biodiversity Law* (2024): <https://www.futurepolicy.org/healthy-ecosystems/biodiversity-and-soil/costa-ricas-biodiversity-law/#:~:text=Costa%20Rica's%20Biodiversity%20Law%20of,the%20utilisation%20of%20genetic%20re-sources>.

³⁵Beder, Sharon. *Environmental Principles and Policies* (2006): <https://doi.org/10.4324/9781315065908>

1972 Organisation for Economic Cooperation and Development (OECD) Council³⁶ recommendation. Inventories of pollutants have been established in several countries, including the USA, Canada, the United Kingdom, the Netherlands, Norway and Australia, as a contribution to fulfilling the public's right to know.

- Precautionary principles suggest that if there's a threat of serious or irreversible environmental damage, a lack of full scientific certainty should not be used as a reason to postpone cost-effective measures to prevent that damage. The principle emphasises proactive measures to prevent harm rather than waiting for harm to occur. It acknowledges that scientific certainty about risks is often incomplete, but this should not prevent taking preventative actions. The focus is on preventing potential harm, even if the exact nature or extent of the harm is not fully known.
- Equity. During the 1980s the concept of ecological sustainability was married with the idea of equity (or fairness), and particularly intergenerational equity, that is, the idea of justice and fairness to future generations. The 1980 World Conservation Strategy³⁷, produced by the International Union for Conservation of Nature and Natural Resources (IUCN) in collaboration with the UN Environment Programme (UNEP) and the World Wildlife Fund (WWF, now the World Wide Fund for Nature), called for four environmental principles and policies on the management of human use of the biosphere [the thin covering of the planet that sustains life]. These principles were put in place so that the biosphere may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations. The Earth Summit in Rio in 1992 reaffirmed the centrality of equity in its Rio Declaration¹⁴. Since then, the rhetoric of equity has been incorporated into numerous sustainable development strategies and policies.
- Human rights. It is clear from these statistics both that environmental protection is essential to safeguard human rights, and that human rights principles need to guide environmental policy. In 1984 the OECD agreed that the right to a 'decent' environment was a fundamental human right³⁸. The

³⁶ OECD, *The polluter-pays principle OECD Analyses and Recommendations* (1992): [https://one.oecd.org/document/OCDE/GD\(92\)81/En/pdf](https://one.oecd.org/document/OCDE/GD(92)81/En/pdf)

³⁷ International Union for Conservation of Nature and Natural Resources, ed. *World Conservation Strategy: Living Resource Conservation for Sustainable Development* (1980): <https://www.environmentandsociety.org/mml/iucn-ed-world-conservation-strategy-living-resource-conservation-sustainable-development>

³⁸ Lambert, Elisabeth. *The environment and human rights* (2020): <https://rm.coe.int/report-e-lambert-en/16809c827f>

right to a healthy environment has nevertheless been incorporated into the constitutions of countries, now legally recognised by more than 80% of UN member states³⁹.

- **Public participation.** The right to participation, often interpreted as the right to be consulted, did not spread far beyond EIA until the 1990s, when various international agreements acknowledged its importance to achieving environmental goals. It should be noted that international obligations on environmental procedural rights are binding for the UK, as a party to the Aarhus Convention, independent of EU law. These include public participation and access to justice in environmental matters⁴⁰. Public access to justice was also found to be an essential part of Scotland introducing their own Bill.

In addition to the principles proposed by Beder, the principle of integration comes up as relevant to environmental legislation. Integration of environmental protection requirements into cross-sectoral and sectoral institutional frameworks, legislation and policies is crucial for an effective and holistic approach to environmental governance. Integration, as a principle, is also in line with international efforts for mainstreaming, such as mainstreaming of procedural environmental rights, the ecosystem approach as developed under the Convention on Biological Diversity and evolving interpretations of precaution.

Accountability also comes up as a potential principle, which might come from an independent governance body. Scotland, for instance, has established an independent governance body to mitigate the potential loss of scrutiny and accountability after the departure of the UK from the EU.

The 'polluter pays' principle is a term that is mostly used within the EU. However, there is evidence of the principle in practice outside of the EU. The research shows that there may be many pieces of legislation in numerous countries that align with the polluter pays principle. However, as they are not always explicitly named as such, they are difficult to find. Recognising this means there are likely to be many more ways of implementing the polluter pays principle that the Welsh Government could use to design their own approach, despite them not being included here.

³⁹ Boyd, David R. *The Right to a Healthy Environment* (2024): https://justfair.org.uk/wp-content/uploads/2024/09/The-Right-to-a-Healthy-Envnt-Users-Guide_Boyd-2024.pdf

⁴⁰United Nations Economic Commission for Europe, *Public Participation*: <https://unece.org/environmental-policy-1/public-participation>

The one consistent theme for all nations, when reviewing polluter pays, is a lack of detail on how it will be funded and a rationale for the cost of the funding. This makes it difficult to analyse how the polluter pays principle (PPP) is policed effectively and for us to analyse what good looks like in terms of resourcing PPP.

Analysis of the PPP in the EU, found that even though the principle is accepted, efforts to implement it could be perceived as piecemeal and narrow in scope. This is because most cases/approaches, only target specific industries. This is reflected in an EU audit from 2021⁴¹, which elicited many complaints that the PPP wasn't implemented effectively. It has also been noted that the EU's approach to the PPP fails to determine who the polluter is, and that consumers end up paying for PPP through higher prices. This could mean that a more progressive approach would include better labelling of products, to help consumers choose greener options and avoid paying PPP.

Whilst there is evidence of this principle being put into practice within EU countries, their successes are unclear for two reasons. The first is that many policies have only recently been implemented, meaning that it is too soon to evaluate them. Secondly, an EU audit in 2022 elicited complaints that the polluter pays principle wasn't implemented effectively.

Case study: environmental principles and governance in Scotland

In the face of the UK's withdrawal from the European Union, the Scottish Government proposed an approach to environmental principles and governance for the nation. A consultation was conducted, gathering evidence for the future application of environmental principles and governance, with the results published in 2019⁴².

Responses to the consultation highlighted the need for any legislation also include the standard of a high level of environmental protection that can be found in many EU legal foundations (e.g. Arts 114 and 191 TFEU) as well as secondary legislation which, as an overarching objective, should serve as a benchmark against which action can be assessed. The consultation called for Scotland to have bold environmental aspirations that go beyond maintaining EU standards, for instance calling for the inclusion of human rights and equality within the principles

⁴¹ European Court of Auditors, *The Polluter Pays Principle: Inconsistent application across EU environmental policies and actions* (2021): <https://www.eca.europa.eu/en/publications?did=58811>

⁴² Scottish Government, Consultation on environmental principles and governance in Scotland (2019): <https://www.gov.scot/binaries/content/documents/govscot/publications/consultation-paper/2019/02/consultation-environmental-principles-governance-scotland-4/documents/consultation-environmental-principles-governance-scotland/consultation-environmental-principles-governance-scotland/govscot%3Adocument>

However, the claim that “a duty of due regard often has little impact on improving actual outcomes” (2019, p28) was critiqued. The findings from the advisory committee also pointed to the application of principles, calling for capacity building and “training of decision makers on the content of environmental principles and their practical implications” (2019 p.3).

(2) Environmental governance

Governance is a central element of environmental legislation, determining how decisions are made, who makes them and how they are enforced. Effective governance ensures that efforts to conserve biodiversity are integrated into broader policy frameworks, involves multiple stakeholders in the decision-making process, and maintains accountability and transparency.

Our rapid literature review identified the key elements of environmental governance based on the state of current practice in the UK and internationally. This has been synthesised into five key aspects, providing an overview of current practice:

Institutional frameworks. Environmental governance requires strong institutional frameworks to ensure effective decision-making, coordination, and enforcement of biodiversity policies. In England, a governance framework between the Department for Environment, Food and Rural Affairs and Natural England was agreed in the Natural England Framework document (2022)⁴³ which recognises Natural England’s role as the government’s statutory adviser and delivery body, carrying out its functions with regard to the strategic aims of Defra and the wider government, but without prejudice to carry out statutory functions with technical expertise, impartiality and transparency.

Multi-stakeholder participation. Effective governance requires the involvement of a wide range of stakeholders, including government bodies, local communities, non-government organisations, and academic and scientific institutions. This balances different interests, provides legitimacy, and ensures diverse input into the decision-making process. Norway’s Nature Diversity Act (2009)⁴⁴ represents a comprehensive approach to biodiversity governance in Norway, grounded in multi stakeholder participation, each with specific responsibilities in biodiversity conservation, which ensures that biodiversity goals are integrated across various levels of society. This

⁴³ UK Department for Environment, Food, and Rural Affairs, *Natural England framework document* (2022): <https://www.gov.uk/government/publications/natural-england-framework-document/natural-england-framework-document-2022#:~:text=2.4.,Natural%20England%20will%20be%20resolved.>

⁴⁴Norwegian Ministry of Climate and Environment, *Nature Diversity Act* (2009): <https://www.regjeringen.no/en/dokumenter/nature-diversity-act/id570549/>

includes the Ministry of Climate and Environment, the Norwegian Environment Agency, local municipalities and counties, the Norwegian Society for the Conservation of Nature, WWF Norway, Friends of the Earth Norway, as well as indigenous peoples and local communities. For example, the Act acknowledges the significance of the Sami Parliament in decision-making where the Sami people have cultural and economic interests. This integrates the Sami's traditional knowledge into conservation efforts with sensitivity, especially in areas where reindeer herding overlaps with wildlife protection. Norway is also using a strategy of payment for environmental services, whereby landowners and property owners within national parks, nature reserves and habitat management areas are entitled to financial compensation when environmental protections make the use of their land more difficult⁴⁵.

Monitoring and enforcement. Environmental governance must include systems for monitoring the status. Bolivia's State Political Constitution (2009)⁴⁶ outlines "the duty of the state and the population to conserve, protect and make sustainable use of natural resources and biodiversity", which has since been strengthened in landmark legislation recognising the Rights of Mother Earth in 2012⁴⁷, establishing a legal framework that prioritises conservation and indigenous knowledge with the aims of promoting sustainable development and protecting biodiversity. The recognition of the duties of both the state and the population have been realised through public participation in monitoring through citizen science⁴⁸. Enabling public participation in biodiversity monitoring through apps or community-based data collection can strengthen governance, especially for monitoring species populations, deforestation, or environmental changes at a local level. However, lessons can be learnt from Sweden about the need for flexibility in the enforcement of environmental governance. Sweden has protected land and water areas within 100 meters of the shoreline as shore protection areas. This can be extended up to 300 meters by the government or its appointed authority if needed for shore protection purposes. Recognising this, a new policy⁴⁹ has come into place to ease shoreline

⁴⁵ Policy Mix, *Case study: Norway* (2010): <https://policymix.nina.no/Case-studies/Norway/Case-Study-Norway-Full>

⁴⁶ Climate Change Laws, *Constitution of Bolivia* (2009): https://climate-laws.org/document/constitution-of-bolivia-spanish-constitucion-politica-del-estado_37f3

⁴⁷ Eco Jurisprudence Monitor, *Bolivia Law No. 300 Framework Law of Mother Earth and Integral Development to Live Well* (2012): <https://ecojurisprudence.org/initiatives/law-no-300-the-framework-law-of-mother-earth-and-integral-development-to-live-well/>

⁴⁸ Jansen, Martin et al. *Engaging Citizen Scientists in Biodiversity Monitoring: Insights from the WildLIVE! Project* (2024): <https://theoryandpractice.citizenscienceassociation.org/articles/10.5334/cstp.665>

⁴⁹ Sweden Herald, *The Government is Relaxing Shoreline Protection* (2025): <https://swedenherald.com/article/the-government-relaxes-shoreline-protection>

protections for some cases and areas, demonstrating a need for ambitious policies to respond to challenges experienced in their enforcement.

Financial mechanisms, such as payment for ecosystem services, biodiversity offsets, and conservation trust funds, are increasingly important for ensuring the implementation and sustainability of biodiversity governance. The New Zealand Biodiversity Strategy (2020)⁵⁰ outlines desired outcomes, offering restored protection across New Zealand's land, seas and communities. This is supported by an implementation plan⁵¹ including 204 actions, some planned and some in progress, and is exploring through public consultation to the establishment of a biodiversity credit system to incentivise collaboration and enable landowners to earn credits for action⁵². In Costa Rica, funds from fuel taxes, car stamp duties and energy fees are being channelled to pay for nature reserve management⁵³ and environmental services⁵⁴, implementing the principle of rectification at source. In the UK, The Green Recovery Challenge Fund (2020)⁵⁵ established a £80m fund across two rounds in response to the COVID-19 pandemic, designed to help nature recovery and conservation while creating and sustaining jobs⁵⁶. Innovative mechanisms for incentivising, seeding and scaling biodiversity efforts should be considered with the principles explored above in mind, with a recognition that those experiencing and responding to biodiversity challenges are rarely those responsible for creating them.

Cross-sectoral integration. Effective environmental governance must integrate conservation into other sectors, such as agriculture, forestry, fisheries, and urban development. South Africa's second National Biodiversity Strategy and Action Plan⁵⁷ (2015) outlines the roles and responsibilities of a range of stakeholders, including

⁵⁰ New Zealand Department of Conservation, *About New Zealand's biodiversity strategy*: <https://www.doc.govt.nz/nature/biodiversity/te-mana-o-te-taiao-aotearoa-new-zealand-biodiversity-strategy-2020/aotearoa-new-zealand-biodiversity-strategy/>

⁵¹ New Zealand Department of Conservation, *Implementing New Zealand's biodiversity strategy: Implementing Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020: Biodiversity*

⁵² New Zealand Ministry for the environment, *Helping nature and people thrive – Exploring a biodiversity credit system for Aotearoa New Zealand* (2023): [Helping nature and people thrive – Exploring a biodiversity credit system for Aotearoa New Zealand - Ministry for the Environment - Citizen Space](#)

⁵³ OECD, *Environmental Performance Reviews: Costa Rica* (2023): [Executive summary | OECD](#)

⁵⁴ UN Climate Change, *Payments for Environmental Services Program* (2023): <https://unfccc.int/climate-action/momentum-for-change/financing-for-climate-friendly-investment/payments-for-environmental-services-program>

⁵⁵ UK Government, *Government's £40 million Green Recovery Challenge Fund opens for applications* (2020): <https://www.gov.uk/government/news/governments-40-million-green-recovery-challenge-fund-opens-for-applications>

⁵⁶ Heritage Fund, *Green Recovery Challenge Fund evaluation* (2023): <https://www.heritagefund.org.uk/about/insight/evaluation/green-recovery-challenge-fund-evaluation>

⁵⁷ South Africa Department Environmental Affairs, *South Africa's 2nd National Biodiversity Strategy and Action Plan* (2015): <https://www.cbd.int/doc/world/za/za-nbsap-v2-en.pdf>

national parks, the weather service, water and sanitation, agriculture, forestry and fisheries, mining and many others. The revised NBSAP recognises that taking a broader view to integrate biodiversity into various aspects of natural resource management and socio-economic development is key, seeking to align with them, not replace or repeat them. South Africa has adopted poverty alleviation and biodiversity conservation as key integrated themes in the government's agenda. One of the main challenges the government has faced is that biodiversity, though making a crucial contribution to the livelihood of rural communities, is not considered in economic calculations such as the Gross Domestic Product (GDP), which are used to make decisions on land use⁵⁸.

(3) Biodiversity targets and legislation

Finding research and analysis of countries with biodiversity legislation proved to be difficult. In general, legislation focused on activities that would *affect* biodiversity, rather than goals that would specifically enhance biodiversity, or monitor the state of biodiversity itself. Implementation strategies outline how biodiversity might be monitored and why this is important, but do not go into much detail on the end goal, nor what the practical implementation of such biodiversity goals might look like in reality.

Given that the majority of biodiversity legislation is relatively new, much of it is yet to be evaluated or even implemented. Again, only a few countries were found to have implemented a biodiversity strategy. As with the 'polluter pays' principle, there may be pieces of legislation in other countries that pursue biodiversity targets but do not do so explicitly.

NGOs such as the WWF have developed their own indicators⁵⁹. Whilst these are important, they are not necessarily influencing how countries themselves are measuring and achieving their biodiversity targets.

⁵⁸ South Africa department of forestry, fisheries, and the environment, *National Biodiversity Strategy and Action Plan* <https://www.dffe.gov.za/national-biodiversity-strategy-and-action-plan>

⁵⁹ World Wide Fund for Nature, *Living Planet Report* (2024): <https://www.wwf.org.uk/sites/default/files/2024-10/living-planet-report-2024.pdf>

Countries that were found to have explicit biodiversity laws or legislation were Costa Rica⁶⁰, France⁶¹, Norway⁶², Sweden⁶³, Scotland⁶⁴, Japan⁶⁵ and South Africa⁶⁶. The EU also outlined a Biodiversity Strategy⁶⁷. There are likely to be many more countries with biodiversity laws or legislation, however access to them was challenging due to the complexities of national legislative documentation, as previously mentioned, and the fact that they might not be explicitly named as biodiversity legislation.

Having analysed a range of strategies, we can conclude that most focus on achieving biodiversity targets by regulating and/or monitoring activities that might have an effect on biodiversity. To put this in perspective, this is the approach taken by European countries such as Sweden and Norway and is reflective of the way in which the EU Biodiversity Strategy and the Nature Restoration Law have set out their expectations. These expectations have limited reference to monitoring and lots of focus on delivery. Because these strategies pay less attention to monitoring biodiversity in itself, it will be difficult to analyse in detail the impact that such work has had, meaning that the expected outcomes and conclusions on the exact impact of the work could be vague.

For those national strategies (Japan, South Africa, Costa Rica) that have focused on the monitoring of biodiversity, their plans currently lack detail about how biodiversity is measured and their end goal for biodiversity improvement. This could be in part, as there is a lack of research, and this means they are having to undertake this before they can set out their ambitions. However, it does call into question when these targets will be set and if they will happen in time to meet world biodiversity targets.

On top of the unique challenges that strategies with a focus on delivery or monitoring face, Analysis also points to two challenges, which all types of strategy

⁶⁰ World Future Council, *Costa Rica's Biodiversity Law* (2024): <https://www.futurepolicy.org/healthy-ecosystems/biodiversity-and-soil/costa-ricas-biodiversity-law/>

⁶¹ French Ministry for Europe and Foreign Affairs, *Climate and Environment* (2020): <https://www.diplomatie.gouv.fr/en/french-foreign-policy/climate-and-environment/>

⁶² Ministry of Climate and Environment, *Nature Diversity Act* (2009): <https://www.regjeringen.no/en/dokumenter/nature-diversity-act/id570549/>

⁶³ Government Offices of Sweden, *The Swedish Environmental Code* (2000): <https://www.regjeringen.no/en/dokumenter/nature-diversity-act/id570549/>

⁶⁴ Scottish Government, *Biodiversity Policy* (n.d.): <https://www.gov.scot/policies/biodiversity/>

⁶⁵ Japanese Law Translation, *Basic Act on Biodiversity* (2008): <https://www.japaneselawtranslation.go.jp/en/laws/view/3892/>

⁶⁶ Forestry, Fisheries and the Environment, *Publication of the draft national environmental management: biodiversity bill for public comment* (2024):

https://www.dffe.gov.za/legislation/gazetted_notices/draft2024nem.biodiversitybill

⁶⁷ Energy, Climate change, Environment (European Commission), *Biodiversity strategy for 2030* (2020): https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

have yet to clearly recognise, that could pose issues in delivering on their objectives:

- a lack of clear financial support to deliver the plans
- a lack of clarity on how these institutions can achieve these targets

France⁶⁸ and Scotland⁶⁹ have numerous targets, which could be perceived as optimistic and are not accompanied by any commitment to the financial and institutional ability required to achieve these targets. For example, the Scottish targets include enhancing water and air quality and undertaking water management measures to enhance biodiversity and reduce negative impacts⁶⁹ - which could be a huge undertaking and does not come with a financial, or institutional commitment, nor an accountability framework. This makes it hard to analyse the size of the challenge, as well as expected costs. Other nations' biodiversity plans, such as Japan⁷⁰ and South Africa's⁵⁸, are both also quite vague.

South Africa links its biodiversity aims with poverty alleviation⁷¹, as the government is keen to develop integrated solutions, rather than working against each one another.

With the aim of developing a better understanding, this approach could help them to implement biodiversity and poverty, into the usual indicator of economic growth, Gross Domestic Product (GDP). South Africa is currently experiencing economic growth, but without an increase in jobs, with worsening poverty, and declining biodiversity.

In the UK, biodiversity indicators are not set in stone and differ depending on the science and policy⁷². The 2020 suite of biodiversity indicators in the UK comprised 24 indicators, which are made up of a total of 52 measures, each assessed using a 'traffic light' system (with red highlighting a deterioration in the value of the indicator measure)⁷².

⁶⁸ French Government, *National biodiversity strategy 2030* (2023):

<https://www.ecologie.gouv.fr/sites/default/files/documents/National-Biodiversity-Strategy-2030.pdf>

⁶⁹ Scottish Government, *Biodiversity: delivery plan 2024 to 2030* (2024):

<https://www.gov.scot/publications/scottish-biodiversity-delivery-plan-20242030/pages/1/>

⁷⁰ Government of Japan Ministry of the Environment, *The National Biodiversity Strategy and Action Plan (NBSAP) of Japan 2023-2030* (2024): <https://www.env.go.jp/content/000280507.pdf>

⁷¹ South Africa department of forestry, fisheries, and the environment, *South Africa's Biodiversity* (2023):

<https://biodiversityinvestment.co.za/south-africas-biodiversity>

⁷² Joint Nature Conservation Committee, *UK biodiversity indicators 2020*:

<https://data.jncc.gov.uk/data/048f7e78-a2c6-4982-91c3-e496f063bf2b/UKBI-2020-A.pdf>

It was also difficult to find biodiversity indicators that were implemented nationally, as opposed to being published by NGOs or international organisations⁵⁹. As previously mentioned, a lot of the biodiversity legislation is new and still under development, meaning that many of the indicators are still being developed.

However, both the UK⁷³ and Ireland⁷⁴ have developed a set of biodiversity indicators to measure their respective biodiversity goals. It is worth noting that some indicators are still under development and data is yet to be collected.

Ireland has developed a set of eight national biodiversity indicators with sub-indicators⁷⁴. These sub-indicators are coded with traffic-light-style colours to show their current success, though not all the indicators have been operationalised yet.

The European Union has 102 actions to achieve targets under the following four categories: 'coherent network of protected areas', 'EU nature restoration plan', 'enabling transformative change', and 'EU external action and an ambitious global biodiversity agenda'⁷⁵ (European Commission, 2024).

Case study: biodiversity targets and legislation in France

France's National Biodiversity Strategy⁶⁸ (SNB for its title in French) aims to protect at least 30% of the national territory, including terrestrial and marine territory. This includes the creation of 400 new protected areas in mainland France and French overseas territories by 2027.

The French Government is looking to support biodiversity through a series of connected legislations and targets. They are targeting potentially invasive species, looking to reduce their prevalence by 50% by 2030. The French Government will continue to roll out "Trames vertes et bleues" (green and blue infrastructure) aimed at restoring terrestrial and aquatic ecological continuity to enable species to move between different environments. This is accompanied by assistance to smaller companies to gain a better understanding of their impacts and dependencies on biodiversity.

In addition, the French Government is targeting the use of pesticides and other plant protection products which might be causing pollution due to excessive nitrate levels.

⁷³ Joint Nature Conservation Committee, *UK biodiversity indicators* (2024):<https://jncc.gov.uk/our-work/uk-biodiversity-indicators/>

⁷⁴ National Biodiversity Data Centre, *The National Biodiversity Indicators have been updated*:
<https://biodiversityireland.ie/the-national-biodiversity-indicators-have-been-updated/>

⁷⁵ Energy, Climate change, Environment (European Commission), *Biodiversity strategy for 2030* (2020):
https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

Pesticides containing neonicotinoids were banned in 2018, and a target for reduction in use of other plant protection has been set for 2030.

To reduce marine pollution, the French Government is closing landfill sites along the coast that are at risk of being dumped back into the sea, and all coastal municipalities will be enrolled in a zero-plastic approach by 2030.

IV. Findings from stakeholder engagement, policy modelling and assessment

The following section provides the findings from Stage 2: Modelling and Stage 3: Assessment on each of the options explored under the three parts of the legislation.

The findings correspond to the models that are explored under each of the policy areas, and are presented as stakeholder views, cost-benefit analysis, key monetary costs, modelling assumptions and modelling results. Because descriptions of illustrative benefits and drawbacks are aggregated across the three parts of the legislation, these are described in a standalone section.

General stakeholder views on the legislation

Before exploring the options under each part of the legislation, we provide a brief overview of general stakeholder views on the initiative, as context for further commentary.

It is the view of stakeholders that progress towards environmental protection has been slowed or indeed, stalled, in Wales since the withdrawal of EU legislation from Wales upon the UK leaving the European Union. The consultation with stakeholders and supporting evidence and data review for this Report found the introduction of the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill to be supported by the overwhelming majority of respondents. There is a clear mandate amongst partners and stakeholders for the Bill's introduction into legislation, including from public authorities whose operations will be potentially most affected by the Bill's introduction.

Stakeholders raised the political risks of the timing of the introduction of the legislation, namely, that any delay may mean that it is not introduced prior to the next elections. Given the anticipated upheaval in the political leadership composition of Welsh local and unitary authorities, interviewees saw a significant risk and indeed – wasted cost – if the legislation missed the political window and the work on it was then backtracked or shelved.

Assuming the Bill is successfully introduced, stakeholders identified risks related to meeting the targets of the Bill itself, if there are delays to its implementation. Namely, if the time frame between the legislation being passed and the feasibility of its implementation in practice is lengthy, either due to resource constraints, change

in government, or a delay to provide guidance to Ministers, public bodies and stakeholders to uphold and implement the principles. Findings also raised concerns about the cost of transition from the existing interim assessor system to a new system, in terms of the need to retain institutional knowledge, and to stagger transition accordingly to not leave environmental protection completely exposed and uncovered if the unpredictable timelines of introducing the Bill left a gap between the existing arrangement and the new system.

The need to mitigate inefficiencies, which could be created by changing the system vastly (where it is working or where public authorities, in particular, are still accustomed to following similar EU processes, for example), is also important, due to the hidden and unquantifiable costs this may also entail. Nonetheless, the importance of a strengthened legislative mechanism – both practically and symbolically – was consistently upheld in this Report.

“In some cases, people still follow the process for doing things, and that process was largely governed by EU. The process of water quality collection has remained the same because despite the slightly different legislation; it’s too much hassle to change it. What you have lost is the mechanism of challenge” – Interviewee

It is clear that a calculation of the long term benefits of introduction of the Bill – economically and fiscally, but also in terms of the co-benefits to human health and wellbeing, social outcomes, the restoration and prosperity of local areas, as well as to nature and biodiversity outcomes themselves - is important to making the case for the Bill’s introduction, if challenging to execute in a robust manner. This is important to consider in relation to the cost-benefit analysis of introducing the different components of the Bill, as well as to maintaining the case for its preservation and investment which will need to be long term given the several decades long duration of action needed on this agenda.

Looking beyond the current administration, findings identified a risk that the level of investment required for upholding the new system and the public body may not be upheld under the next government. A reduced or deprioritised funding settlement would pose challenges for the efficacy of the Bill in progressing Wales towards its targets and goals and equally present an additional stretch on public authorities if the Bill was maintained but funding was reduced under the next government.

“I just feel like whatever cost-benefit analysis you do; you have to be very clear about the potential costs to human wellbeing of not acting, versus the costs of just introducing a governance body”. -Interviewee



1) Environmental principles

Stakeholder views

The following section presents the views of stakeholders on options 1A-1D on the application of environmental principles, followed by a cost-benefit analysis of each of the options.

1A) Business as usual

Across all the stakeholder interviews, business as usual was never seen as a viable option. Even amongst the minority (2) of the interviewees who saw environmental protection as secondary to either economic prosperity or human concerns and were not necessarily in support of a strengthened Environmental Bill for Wales, maintaining the status quo of having no unifying approach to environmental principles', with aspects of them split across other legislation in varying ways, was not seen as a viable option.

The business –as usual arrangements were primarily seen as unviable due to two main reasons: firstly, the risk of no further strengthening of environmental protection towards Wales's goals for a greener, carbon-neutral society, which was seen as untenable. Secondly, interviewees saw a significant risk and potential future cost to Wales losing political equity and autonomy if the country was the only devolved nation of the UK without its own legislation around environmental principles. Though environmental protection is devolved in Scotland, Wales, and Northern Ireland, stakeholders raised the risk that not introducing principles would leave Wales exposed and leave the exercising of this devolved power in doubt. It was also raised that it could lead to challenges if legislation or frameworks set by the government in Westminster towards environmental protection had an impact on the strategies and operations of different organisations and sectors active in both England and Wales.

Challenges and risks

This view that business as usual was insupportable, was supplemented by concerns over the rising – but largely unquantifiable costs – of an increasing gap between Wales and the EU on environmental legislation which could in time affect other areas such as trade, cooperation and even research and development funding. Considering the global level, retaining the BAU arrangement equally risks inconsistent application of UK/Global legislation within the vacuum left by EU legislation (e.g. some public

bodies have signed up to different international frameworks, raising frictions as a result) and equally, the risk of Wales being held to UK or Westminster frameworks that are not as ambitious as Wales might want to be, if a gap was left in the legal coverage of environmental protection.

A strong case was made by interviewees that whilst the cost-benefit analysis can clearly quantify the (lack of) costs of maintaining a BAU position on environmental legislation, other costs of the BAU option were much longer term and hard to quantify, namely the 'cost' of the nature crisis worsening and the ensuing effect on other outcomes – including health and wellbeing, social outcomes and degradation of local areas. These 'costs' of worsening outcomes and the impact on public services or the public purse in Wales were in turn hard to quantify, and the 'cost' of the nature crisis was described as not as visible or quantifiable as the cost of climate impacts, for example.

It was, however, well evidenced in qualitative reports that there is a hard-to-quantify cost to human wellbeing if the natural environment is left to degrade. This is in tandem with a well evidenced health equity cost in other studies, due to loss of green space access and natural ecosystem disruption. It was frequently raised that further work to calculate the associated social, wellbeing, economic, heritage and community risks and harms, and ensuing costs to the welfare state, local government and public and emergency services, that would arise from failing to ensure protection of Wales's natural environment and biodiversity, would be valuable to making the case for the Bill and justifying the disruption of its implementation.

Opportunities and benefits

No benefits were recorded for the business-as-usual approach; with stakeholders asserting that "a stronger framework was needed to ensure environmental protection principles were strengthened when making policy – both for environmental policy itself, and in strengthening environmental principles within other parts of social, economic, place-based and democratic policy".

This was because aspects of current environmental legislation were regarded by stakeholders as not strong enough to effect change on Wales's environmental, net zero and sustainability targets; with references to current Acts such as the Environment (Wales) Act 2016 and the Wellbeing of Future Generations (Wales) Act 2015.



1B) Principles only

The introduction of the principles as the core part of the Bill was seen as critically important to strengthen Wales's approach to environmental protection, particular when making policy, which will in turn improve environmental outcomes. Seen as equally important was the opportunity of developing an autonomous approach to environmental protection in Wales through the principles, and to ensure Welsh communities and Welsh governance had equity and parity with the other devolved nations when it came to environmental policy. The environmental principles for Wales were also seen as important to overcome policy challenges in respect of cross-border matters, if Wales and UK policy were to differ substantively in respect of their principles on environmental protection.

A clear need for *alignment* between the four nations on principles and, as far as possible, targets, was also raised. This was due to the interdependency of the ecosystem itself; the issue of border communities which could fall between two very different forms of legislation (for example, the communities in Tintern and Brockweir who already experience two different health policies and emergency protocols when they experience climate impacts); and the impact of areas of non-devolved policy that are necessary to progressing environmental protection, but which require cooperation in order to achieve momentum. The issue of funding coming from the HM Treasury and therefore the overall settlement on environment and nature being partly reliant on the UK Government in Westminster's prioritisation and targets, is also a key point to note in terms of alignment of the principles.

Challenges and risks

Substantial risks were raised, such as that principles could be introduced but not upheld – likely to result in inefficacy and wasted costs in court, due to differing timeframes and processes between policymaking and law. For example, a case could be brought against establishment of a new power plant, but it could be approved in policy before the legal challenge can be considered. In some ways, the introduction of principles only with no enforcement was seen as the weakest option, due to the disruption, lack of support and confusion of application it could potentially cause, without much impact, benefits or compliance to show for it.

“Another driver is the nature crisis itself. So to make sure that the government has not only the requirements, but also the power to set things like biodiversity targets to help future governments and our future selves respond to and tackle that crisis. And then the third (driver) is public opinion.”(Interviewee)

There is a risk in Option 1B that solely introducing the principles without necessary duties or enforcement, could introduce what was described as a ‘shaming’ function of government, where organisations, public bodies and indeed Welsh Ministers are criticised for not upholding the principles. This in turn could have associated political risks if there is not a duty placed on all ministers to uphold the environmental principles in law and policymaking, as attitudes towards environmental protection and biodiversity can then be easily used to polarise voters and form powerful campaigns in opposition parties, rendering the use of Environmental Bill as a ‘wedge’ issue politically that will cause frictions and put the progress towards achieving environmental outcomes and benefits from the Bill at risk.

“Probably for me the biggest risk is delivery timing and the risk of a woolly law.”
(Interviewee)

Opportunities and benefits

The introduction of environmental principles into law has a clear, but unquantifiable advantage of raising awareness about the importance of environmental protection to Wales, and a clear benefit in terms of visibility. This adheres to what the literature review found; namely that the introduction of environmental legislation and targets can only be impactful and effective if accompanied by a clear public case for support and communications. It was strongly proposed that the introduction of principles was accompanied by a public awareness campaign, to mitigate the risk of misinformation affecting public opinion should the principles be ‘weaponised’ as a wedge issue or seen as a mis-prioritisation compared to other policy areas such as health or addressing poverty.

A further unquantifiable benefit was the opportunity for specificity to the Welsh context of the assessment, accountability and sanction process. This reflected experience of the previous EU legislation which, whilst valuable in ensuring an enforcement and protection mechanism was in place for the environment, at times did not easily fit the scale, economy, culture, and procedural approaches of Wales. The opportunity to tailor the principles, procedures and the intended outcomes to the Welsh context was seen as an opportunity for greater feasibility and efficiency, as well as for innovation.

“The new Welsh system, because it’s part of our domestic frameworks, is actually more visible to the public or should be more visible to the public than the EU system.”
(Interviewee)

The principles present the opportunity to put in more precise drafting on environmental protections than in existing related legislation and bills (like the Future Generations Act and the Environment Act). The main benefit seen by stakeholders, which is corroborated in the wider literature, is that a stronger set of environmental principles and strengthened legislation will lead to stronger environmental outcomes through being an enabling power for organisations and policymakers in Wales, albeit on a voluntary basis, leading to greater compliance and agency, and more concerted political will. However, it is not possible to quantify this and worth noting that discussions those responsible for the English and Scottish equivalents reported that they similarly had not been able to propose quantifiably stronger outcomes from the introduction of stronger, clearer and tighter environmental legislation.

1C) Duty on Welsh Ministers to apply the principles

Option 1C was seen as a necessary extension of Option 1B. Without the duty, the principles were seen as being largely ‘rhetoric’ and there were concerns that the principles would regularly be deprioritised in cases such as approving energy policy or economic development policies (which were non-net zero or posed environmental risks); or would be the ‘poorer cousin’ to economic and social principles within the planning system. However, concerns still prevail in terms of whether the outcomes would be sufficiently improved on the basis of a duty on ministers alone.

Challenges and risks

The main risk identified is whether the duty on Ministers will achieve a significant enough increase in impact and outcomes against the aims of the Environmental Governance Bill, for the additional cost it takes to embed it within policymaking and ministerial duties. Stakeholders also raised the risk that goals, compliance and sanctions brought in under the new Environmental Bill, even if upheld by duties, would not be as severe as the EU system – at a time when stronger enforcement is needed to accelerate progress. There is a query of whether introduction of the legislation and associated costs produce sufficient impact *and* value for money. However, as is covered in the discussion of Option 1B, the political risks of introducing the principles alone without any duties or enforcement, were seen as a poorer option than business as usual, hence it is worth noting that duties are seen as essential to avoid a ‘woolly’ or ‘shaming’ law with no potential for enforcement (to quote directly).

Though this is being interpreted differently in devolved nations and within new mayoral authorities, there is a political risk of the current growth agenda from the Treasury, prevalent at the top level of Labour, affecting political decision-making and upholding of the principles at devolved nation level in policy. This is particularly a risk when it comes to trade-offs in policy and decision making around house building or new town development, for example (the airport expansion in England being another prominent trade-off mentioned). This risk is unquantifiable but could lead to inefficiencies in policymaking at a cost to civil service resources and ministerial offices, through an increase in ministerial impasses, incidences of hung votes, and /or political trade-offs between the environmental principles and other areas of policy.

One of the greatest concerns from stakeholders regarding Option 1C was that the principles would be applied at the 'top level' in devolved policymaking, and upheld by ministers, but without any increased support for sectors and parts of the economy to adapt to the new principles in law. Certain sectors such as agriculture and heritage were highlighted as at particular risk if principles and duties are applied, but no funding or support is provided to support compliance. It was also suggested that this could lead to an economic risk to certain farming communities, which are predominantly Welsh-language communities, due to being unable to comply with new legislation or policies, when the same policymaking in turn could restrict their ability to make economic use of their own land.

The vocal, if very small, minority group of stakeholders who were more opposed to the introduction of any option of the Environmental Governance Bill, raised concerns about a lack of awareness of the challenges of reconciling agricultural practices, the food system, and pressures on farming, with sustainability and biodiversity goals. The buying of farms by businesses (including from outside Wales) for non-traditional farming purposes, and the experience of the 2024 sustainable farming scheme (SFS) were raised as exemplars of a perceived disconnect between Welsh Government and the experience of farmers trying to sustain a livelihood and cultural way of life. The impact on farmers is perceived to particularly affect Welsh-language communities due to the strong overlap of Welsh speakers with rural and farming communities, which is an important consideration in how to communicate and promote the Bill and to manage, sequence or stagger its implementation in ministerial practice.

There is a further unquantifiable cost in how far - and at what resource cost- the principles could and would need to be upheld or reinforced by local policymakers, particularly civil servants in local government. The experience of the introduction of the Wellbeing of Future Generations (Wales) Act 2015, repeatedly raised during the interviews, identified that many local officials and local councils may not comply due

to stretched resources; confusion over implementation of the principles; or trade-offs with other localised policy issues that were a priority for the electorate. There was additionally a risk raised that upholding the duties would stop at a local level, due to the political make-up of members in certain local authorities.

“There's certainly been uncertainty and anxiety because we know that we're signed up to targets and commitments and yet you know what we'll be doing at a national level to actually make that happen. But I think one of the risks of delaying is that people just get cynical about it and say, well, we're never going to hit that, are we?” (Interviewee)

Opportunities and benefits

The value of independence and autonomy – seen as paramount in how Wales can lead its own progression on the environment and biodiversity – cannot be quantified, but was a primary benefit identified by stakeholders in the assessment of the Bill. This was frequently referred to as the ability to go ‘further, faster’ or to be ‘distinctive’ in terms of leading the field of environmental protection for the UK through the application of the principles in policymaking. This was seen as increasingly important given the devolution settlements across England, with a sense that Wales needed to be mobilising ‘all its powers’ and that to not have a means of applying the principles would look like a missed opportunity for Wales to exercise its devolved powers.

The primary unquantifiable benefit of Option 1C was thus seen to be the actualisation of the Bill and its principles within policymaking in Wales, with the added strength this gave to realising tangible impact from the Bill. This was not purely described in terms of impact on environmental outcomes; a duty on Welsh Ministers was seen to strengthen Wales’s independence and autonomy in mobilising environmental law, which were seen as paramount in terms of the political balance of the four nations in the UK, and in how Wales could lead its own progression on the environment and biodiversity.

The potential of Option 1C to accelerate tangible progress towards the net zero targets, with associated positive environmental outcomes as well as political outcomes in terms of momentum, was also identified as a significant benefit. These are challenging to quantify (the impact of going ‘further, faster’), but were seen as integral to maintaining concerted action on the environment and avoiding environmental law and policy being deprioritised due to scepticism. There was a recurrent theme that the current environmental targets for Wales, including the net zero target, were unlikely to be met due to the slowing of action since EU exit and

inconsistent commitment on behalf of governments, but stakeholders did not think it would be supportive of greater action or of value to delay them.

A further unquantifiable perceived benefit is the potential identified by stakeholders for greater political recognition and/or cross-party support for environmental protection and nature recovery. This benefit is not easily corroborated in the existing literature, as other evidence demonstrates that introduction of landmark legislation by one party can lead to the adverse 'rolling back' of legislation by other parties, due to the increasingly polarising nature of environmental issues at elections, if the administration changes dramatically. However, comparisons between the Bill and the Wellbeing of Future Generations (Wales) Act 2015 were made in terms of the way that Act had elevated the issue of sustainable development amongst political and public consciousness in Wales.

Questions of primacy of the new Bill compared to other landmark legislation which has some overlaps – such as the Environment (Wales) Act 2016 or the Wellbeing of Future Generations (Wales) Act (WFGA) 2015 – have been discussed with the Welsh Government, with acknowledgement that guidance and close attention to ways of working with related areas of legislation is needed. Stakeholders primarily noted that the Bill should be the superseding and 'umbrella' legislation under which other goals (such as the sustainability goals in the WFGA) fall. However, this view was challenged by some stakeholders who saw the Wellbeing of Future Generations (Wales) Act as more 'holistic'; even if it was unenforced. There are valuable insights from the introduction of previous acts and legislation that required a duty on ministers, if Option 3 is selected, regarding the embedding of principles and legislation within all ministerial briefs; and the importance of alignment with key other policy areas to embed the principles and the biodiversity targets, for example in Curriculum / Education Policy; or in employer legislation.

A further unquantifiable benefit is the potential for bi-lateral alliances with countries also focused on stronger environmental protections, sustainable development and green growth, and biodiversity, including potential future alignment or even rejoining of the EU.

"It's important from the point of view of national ownership and leadership, particularly in terms of Wales thinking of the wellbeing of future generations. There's also the opportunity to allow that kind of innovation, which wouldn't happen if everyone was just following along with whatever the UK Government was doing." - (Interviewee)

A potential Option 1C+) - Extending the duty to apply to Natural Resources Wales (NRW)

A further possibility, explored within this option, was to extend the duty to apply environmental principles to Natural Resources Wales. This could realise further benefits given their significant policy responsibility for the Environment in Wales. It could also help drive up consistency in policy making by ensuring the two main organisations in Wales involved in environmental strategic policymaking (Welsh Ministers, and NRW) are considering the same environmental principles in the same way.

1D) Duty on Welsh public bodies, including Ministers and relevant public authorities

Challenges and risks

Extending the duty to public authorities and bodies comes with a sixfold increase in costs to the introduction of the legislation but was nonetheless the option that was most welcomed by the majority of stakeholders.

This was endorsed, albeit with real areas of concern and frictions from stakeholders. Stakeholders consistently raised that anything that came un-resourced would be seen as a 'cost' by public bodies – even if they recognised and supported the principle of it. It was consistently identified that a hard-to-quantify cost was putting more responsibility on to public authorities, in particular local authorities, raising the impact of resourcing, time, and implementing the principles of the Bill. This was not solely seen as the cost of reporting and compliance, but also a question of improving *efficacy of the Bill*; that if the Bill was under-resourced in terms of the ask on public bodies, it would substantially limit the efficacy of what they would be able to do on the ground. Natural Resources Wales and local authorities were particularly seen by stakeholders as being at the 'coalface' of actually achieving impact on environmental protection through activities linked to legislation such as the Bill.

Despite the concerns over resourcing, added compliance and responsibilities, the majority of stakeholders welcomed the strong message and enforceable structure for public bodies and local delivery partners within Option 1D. The importance of recognising public bodies as vital to the delivery on environmental law and protection and biodiversity restoration was a critical part of why Option 1D was seen as preferred by the substantial majority of stakeholders; if the duty did not apply to

public bodies, it implied under-recognition or marginalising of their role and expertise which was seen as disempowering.

The unquantifiable benefits identified included that the duty on public bodies entails a strong message and enforceable structure to public authorities and local delivery partners. Stakeholders were mostly positive about the sharing of responsibility over environmental protection, while being cautionary about their levels of resource. There was a significant opportunity identified for (funded) innovation by public bodies and the governance body – and stakeholders thought that, if well supported and resourced, it could present tangible economic gains in terms of research and development, and public-private investment. However, these are very difficult to quantify, and only a comparative view can be seen from other isolated devolved case studies in terms of how strengthened legislation can give a mandate for ambitious partnerships and the securing of funding from R&D funders such as the UK Research Councils and the international funding community.

A small proportion of stakeholders also saw opportunities for collaboration across devolved nations, particularly Scotland, also wanting to go ‘further, faster’, in pursuit of innovation, excellence and progress towards environmental goals. This was asserted to have potential for wider benefits in terms of cooperation and reciprocity in other policy areas and parts of the economy (such as clean energy, skills, or technology) which are hard to quantify but nonetheless, could bring indirect benefits.

Cost analysis of environmental principles

Table one: legislative option, costs description and quantification method – environmental principles

Legislative option	Cost description	Quantification method
Option 1A - No legislative intervention, although note that some of the principles are already part of existing Welsh legislation	There are no costs associated with this option	N/A

<p>Option 1B - Principles reintroduced to the Welsh statute book, but no duty on Welsh Ministers or public bodies to give 'due regard' to the principles</p>	<p>Civil servant time required to develop and implement the environmental principles policy</p> <p>Time will also be required for some civil servants to familiarise themselves with the principles, e.g. by reading the educational material</p>	<p>Legislative development and implementation quantified based on the Welsh Government assessment that it would require three Grade 7 FTE staff member (with an annual salary of £97,317⁷⁶) over a two-year period</p> <p>No attempt was made to quantify familiarisation costs on the basis that the number of civil servants having to undertake familiarisation and the time it would take to do so are an unknown</p>
<p>Option 1C - Places a duty on Welsh ministers to give due regard to the principles (and any accompanying guidance) during the development of their policies and legislation</p>	<p>Civil servant time required to develop and implement the environmental principles policy, as with Option 2</p> <p>Time also required for familiarisation with the principles, as with Option B</p> <p>Educational resources developed to ensure government departments can demonstrate they have complied with the duty</p>	<p>See above calculation for Option C</p> <p>We have used an estimate of the average time of developing both e-resources and e-learning tools as being 73 hours in total⁷⁷, to which we apply the Grade 7 civil servant salary</p> <p>Welsh Government staff involved in policy making and development would</p>

⁷⁶ Welsh Government (2025) 'Average Pay Costs 2023-24'

⁷⁷ Association for Talent Development (2021) How Long Does It Take to Develop Training? New Question, New Answers.

		<p>need to be familiar with the resources to ensure that ministers are applying the principles. However, there is no detailed plan for implementation yet, meaning there is no figure for the number of staff that this would involve, nor how much of their time it would require. Hence it has been regarded as an unquantifiable cost</p> <p>We also assume the resources will need translation. We have estimated the translation costs applicable to the educational resources using cost guidance provided by the Translation Unit. We assume that the resources would be non-legislative, and would be around 8,500 words long (based on some draft guidance provided by the Welsh Government). This puts the cost estimate at £1,150, when considering the HEO staff time of 5 days required to translate one report of this length. We assume five separate reports would be published</p>
	<p>Ministers (and their departments) complying with the legislation.</p>	<p>Whilst challenging to quantify these costs, we have used proxy costs from a previous government report which estimates the annual public sector costs of complying with an energy efficiency scheme</p>

		<p>to be £12,704 (in 2025 prices)⁷⁸</p> <p>This cost is multiplied to cover the eight different Main Expenditure Groups in Wales, which are aligned with Ministerial responsibilities, and recurs every year once the legislation is enacted</p> <p>This proxy was chosen because it costs activity that may align with applying the principles. Namely, collation of environmental data, analysis of environmental information and working with an environmental regulator. It should be noted, however, that the proxy ultimately relates to a specific scheme and specific activities may differ significantly from applying the principles to specific legislation</p> <p>Note that Senedd reform increases the number of Welsh Ministers who can be appointed from 12 to 17 from 2026 (although potentially up to 19 with Senedd approval)⁷⁹. However, this does not necessarily mean that more ministers will be appointed</p>
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⁷⁸ Department for Business, Energy & Industrial Strategy (2017) 'Assessment of costs to UK participants of compliance with Phase 2 of the CRC Energy Efficiency Scheme'

⁷⁹ Welsh Government (2024) Senedd Reform, <https://www.gov.wales/senedd-reform>

		– hence, the CBA assumption estimates costs on the basis of the Senedd configuration today
<p>Option 1C+ - Places a duty on Welsh ministers to give due regard to the principles (and any accompanying guidance) during the development of their policies and legislation.</p> <p>Also places a duty on Natural Resources Wales</p>	<p>Incurs the same cost as Option C. Also incorporates additional cost of one public body being required with the legislation (see below in Option D)</p>	<p>See above calculation for Option C, and below calculation for Option D, however with only one public authority incurring compliance costs (rather than 67)</p>
<p>Option 1D - Place a duty on both Welsh Ministers and relevant public authorities to give regard to the principles (and any accompanying guidance) during the development of their policies and legislation</p>	<p>Incurs the same costs as Option C</p> <p>However, additional cost associated with other public bodies being required to comply with the legislation. Information from the Welsh Government suggests that there are 67 public sector organisations covered by the extension of the duties in Option D</p>	<p>We have assumed the compliance costs of £12,704 apply to 67 organisations⁸⁰ to roughly estimate the additional total per annum additional cost</p> <p>As with Option C, policy making staff would need to be familiar with educational resources to ensure application of principles. And likewise, there is no basis for understanding the number of staff that this would involve, nor how much of their time it would require. Hence it has been regarded as an unquantifiable cost</p>

Table two: Summary of legislative options, costs and cost calculations - principles

⁸⁰ Based on Section 9A of the Government of Wales Act 2006. The figure 67 was used as opposed to the 69 organisations listed so as not to double count the Welsh Ministers.

	Option 1A (BAU)	Option 1B	Option 1C	Option 1C+	Option 1D
Description	No legislation developed	Principles legislation	Legislation + Duty on Welsh Ministers	Legislation + Duty on Welsh Ministers and NRW	Legislation + Duty on Welsh Ministers and public authorities
Quantifiable / monetizable costs	N/A	Civil servant time to develop legislation	Civil servant time to develop legislation Educational resources for training and translation Ministerial compliance costs	Civil servant time to develop legislation Educational resources for training and translation Ministerial compliance costs Public authority compliance costs	Civil servant time to develop legislation Educational resources for training and translation Ministerial compliance costs Public authority compliance costs
Cost figure (relative to BAU) (2024 prices, discounted) ⁸¹ ₈₂	-	£0.574m	£1.36m	£1.45m	£7.83m
Cost figure (absolute)	-	£0.574m	£1.36m	£1.45m	£7.83m

⁸¹ A discount rate is applied to adjust future monetary values into a present value. The purpose of the discount rate is to reflect how people view the value of money over time, where generally they prefer to receive money today rather than the same amount at some point in the future.

⁸² The cost figures are expressed both (1) in terms of how far they go beyond the costs incurred in the Business As Usual Option ('Cost figure (relative to BAU)') and (2) the costs which stand without removing what is incurred in the Business As Usual ('Cost figure (absolute)'). The cost entries for these rows are the same, if there are no costs associated with the BAU.

(2024 prices, discounted)					
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2) Governance body

Stakeholder views

The majority view of stakeholders was that the Bill could not succeed without the introduction of a dedicated governance body. The importance of this was principally seen as a mechanism to hold public bodies, ministers and the government to account and to create a process of enforcing the Bill, its respective principles and the biodiversity goals and framework. The analysis of stakeholder feedback on the options for the governance of environmental protection in Wales is presented below.

2A) Business as usual

The option of business as usual and maintaining the Interim Assessor arrangements was not seen as viable for the enforcement of any of the four options (A-D) of the new Environmental and Governance Bill. Firstly, the current arrangement with the Interim Assessor holding only investigative powers without accountability and enforcement powers, was seen by many as more ineffective than helpful, by creating a ‘reviewing’ burden without the ability to enforce compliance. The Interim Assessor’s work was highly praised (see below), but stakeholders felt it created work without enforcing compliance.

Secondly, unquantifiable costs were raised in terms of rising numbers of individual court cases or challenges for public bodies, landowners or government, if Interim Assessor arrangement is left in place only. This risk was seen as real if there was no strengthened regulation but also impossible to anticipate in terms of how polarised or fragmented the system of complainants or challenges could become.

There were some concerns raised by a third of stakeholders about the need for another body, both in terms of the visibility of the Welsh Government investing in another public body at this tight time for fiscal finances, and, equally, the risk of confusion about how the responsibilities of the body will overlap with existing public bodies’ responsibilities, most prevalently Natural Resources Wales. It is evident that a clear demarcation between the functions and responsibilities of existing bodies and the functions of the new body is needed.

It should be noted that the Interim Assessor's role and work was nonetheless commended (some saw this as 'BAU', even though there is no guarantee this would be maintained under future administrations or arrangements if no other body or law was brought into existence). However, all interviewees recognised the current arrangements and role of the Interim Assessor as largely powerless to effect change on Wales's environmental protection, net zero and sustainability targets under current Acts such as the Environment (Wales) Act 2016 and the Wellbeing of Future Generations (Wales) Act 2015.

2B) Providing existing bodies with functions

The majority of interviewees felt any environmental governance body had to be a single public body, not distributed functions across existing public bodies. This was due to needing impartiality and independence of the enforcement functions of the body, with distributing powers seen as 'muddying' the notion of independence and the chance that public authorities responsible for delivering on environmental protection and biodiversity would end up regulating themselves on certain matters, which would render the enforcement aspect weak and open to scrutiny.

Despite the unanimous view of a single public body, this assessment recognises that significant areas of overlap or even offset could exist between the new Bill and other Acts and legislation – and thus risks of duplication exist in the function of different public bodies delivering on, for example, the Wellbeing of Future Generations (Wales) Act 2015, or the Sustainable Farming Schemes. Memorandums of Understanding, at the least, would support reducing duplication and assuring complementarity of the role and distribution of powers across different public bodies. It was strongly argued that there were substantial differences between the primacy and specificity of environmental protection and biodiversity restoration that would be enforced under this Bill, and the broader work of related Acts – and that distributing the powers between different bodies would weaken this specificity and the enforcement of the Bill compared to other legislation or Acts.

"It was questioned whether the Wellbeing of Future Generations Commissioner was a role that could take on environmental protection and biodiversity. And I argued strongly against that at the time because I think...it's replacing a very important role [that] the EU Commission had in terms of holding government to account."

Environmental protection is not the same as the wellbeing of future generations, which in my view, is about sustainability. The argument was then made for a separate

environmental governance body, but you have to balance the benefit of that against the economic cost, which is very difficult.” - Interviewee

However, stakeholders saw value in the potential of an advisory function for the public body (*how to deliver on environmental principles and biodiversity*), which wasn't seen as a suitable role of the body. Stakeholders all felt this should be a strengthened in the ecosystem of delivering the Environmental Bill in general (including principles, governance and biodiversity targets) but that the advisory function should be distributed across other bodies including National Resources Wales.

2C) Setting up a dedicated environmental governance body

Assessment shows that the perceived and unquantifiable benefits of a single, dedicated environmental governance body outweigh the unquantifiable risks and costs; however, the limitations of the body's priorities and how it should be structured are also important considerations.

Challenges and risks

The primary risk, other than how the cost of establishing a single public body would be scrutinised in this financial climate, was the risk of assuring clear independence of the body. The primary unquantifiable cost of introducing a single public body was how long it would take for the body to get up and running versus the timeframe of impact. To what extent the single public body would build on the legacy of the Interim Environmental Protection Assessor for Wales (IEPAW)'s work, and how rapidly it could start enforcing the principles and the goals under the new Bill, were the two strongest concerns in terms of difficult-to-quantify costs.

A further potential unquantifiable cost comes from the risk of added bureaucracy and a time burden, if the environmental governance body's functions elongate or add friction to already slow processes. For example, the risk that investigations and enforcement by the environmental governance body become another means by which to challenge the already heavily challenged planning system. However, it is worth noting that the Welsh Government has stated its specific intent for the body not to challenge or override existing planning decisions.

There is also a risk that the additional requirements on public bodies (such as National Resources Wales) from the new single public body cannot be easily met due to poor resources - laying them open to scrutiny at not complying, when this may

be due to capacity and financial constraint, not commitment to the principles or goals.

Furthermore, the body naturally focuses on overseeing other public bodies' compliance with environmental law and the effectiveness of that law. However, the perceived insufficiency of accompanying or aligned legislation and regulation in the private sector (energy and waste regulation, for example), could pose a risk to the efficacy of the body and the Bill. Therefore, resultant benefits were identified arising from introduction of the body, if carefully structured to work well with those regulating the private sector. Stakeholders recognised the potential benefit of a dedicated governance body on the efficacy of organisations.

"We would be absolutely in the frame for investigation by an environmental governance body on whether it was discharging its responsibilities appropriately, and again, that's a risk for the organisation. At the same time, I think it makes the responsibility of an organisation like us to do work far more effectively. And with far more impact than it does at present." - Interviewee

Opportunities and benefits

The main benefit from the introduction of the single public body is the opportunity to improve the efficacy and efficiency of compliance with environmental law, due to bringing the process 'closer to home', more visible, and more felt by bodies and Ministers. Another significant benefit could be reducing the time to resolution compared to that under the EU model, which was described as having been very 'removed' and 'deliberative' and, as a result, very inefficient and costly, especially for long-running cases and the demand for compliance time. A National public body within Wales was seen as having the opportunity to work with greater agility and pace, in turn reducing time per case or complaint. This time-cost saving is difficult to estimate but is worth taking into account for the long-term cost-benefit, which can be better quantified for introducing the body (see section on 'Cost-Benefit Analysis', below).

"The governance body would sit in quite a lonely place, above all other public bodies, including the Future Generations Commissioner, NRW, and the Welsh Government. And that's where it should be. It's like the watchdog of the watchdogs." -Interviewee

A further unquantifiable benefit identified through interviews is the opportunity to 'double down' on efforts towards stronger environmental outcomes, where public bodies already have responsibilities to monitor or lead progress. For example, where there are public bodies with an existing remit to restore or protect biodiversity within their strategy and governance, the introduction of national biodiversity goals could provide a further mandate to support or reinforce. A national public body may also improve efficacy of compliance by local authorities and local bodies, due to being more visible and tangible than the EU process.

A critical benefit of a single public body is that it provides Welsh citizens with the same rights as other citizens in the UK to report non-compliance with, or concerns around the effectiveness of, environmental law. This is highly unquantifiable as a political and human rights benefit, but is nonetheless significant to the fulfilment of the terms of Welsh devolution, and to the parity of environmental rights across citizens sharing UK identity citizenship. For the single public body to be effective, it is recommended that the Body would need the same level of clout and independence as a Supranational Body to fully realise the benefits outlined.

The introduction of the single public body comes with the most significant cost in quantifiable terms, and we have identified the following priorities for the body's function (in order of priority):

- enforcement: ensure environmental law is operating effectively and being upheld through compliance/courts process, and oversee remediation if breaches are identified and proved
- ability for court referral
- scrutiny of government
- execute formal upholding of law and make recommendations for updating of laws
- uphold the biodiversity target and oversee sanctions if biodiversity targets are not progressed, adhered to or met

"The worry I have is the public body will have responsibilities on it that it will not be able to fulfil, and therefore we'll end up having stuff in statute that has no function at all, and then somebody somewhere will say, "Oh, you're not doing this"." - Interviewee

There are further, unquantifiable costs if the single public body does not realise a tight operating model and prioritise its functions. A lean target operating model is required, with a recommendation (supported by the majority of stakeholder views) to have a smaller board and a larger executive, as the executive does the 'heavy lifting'. The recruitment of specialist staff for the Body is seen as a risk to its efficacy, due to the relatively small work force in this specialist area in Wales, and a shared back-office function is recommended to keep the Body efficient.

"Stick with a small Regulatory Body that holds other public bodies to account, and then put the rest of it somewhere else." (Interviewee)

2D) Engage UK Government to extend OEP functions to Wales

The approach taken in the Environment Act 2021 to extend the remit of the Office for Environmental Protection (OEP) and the environmental review mechanism to Wales was not considered sufficient by stakeholders, despite the OEP being regarded as a high standard in terms of its approach to environmental protection and evidence-based action.

The rationale for this not being the preferred option was related to devolution and autonomy in policymaking; with the need for Wales to exercise its devolved powers over environmental protection, rather than an arrangement that allowed the UK Government to legislate for Wales in a matter of devolved competence. There were concerns about the fluctuation in commitment to environmental protection and reversal of biodiversity decline under successive UK Governments, and the lack of pace in acting on issues that were seen as having paramount importance to Wales.

Overall, stakeholders saw no benefits to this option, aside from the opportunity to draw on the OEP as best practice to inform a specific governance body for Wales. The concerns of providing the UK Government with control over a high priority policy area outweighed the potential benefits and cost savings in the analysis of stakeholders' views.

Due to the lack of preference for this option, no further exploration is included of the potential costs and risks. Additionally, due to the lack of benefits identified by stakeholders, no potential opportunities and benefits are included for this policy option.

Costs analysis of governance body

Table three: Legislative option, costs description and quantification method – governance body

Legislative option	Cost description	Quantification method
Option 2A - Current governance arrangements continue, meaning the Welsh Government opts not to take measures to replace the EU Commission role in Environmental Governance, instead relying on existing Welsh legislation, oversight and regulatory bodies to ensure Wales retains a high level of environmental protection. This includes maintaining the current Interim Environmental Protection Assessor for Wales (IEPAW)	Ongoing running costs of the IEPAW , to continue its role	The current IEPAW budget of £675,000 per annum was used ⁸³ . We have applied no uplift to this, with the same applicable for the governance body options
	The costs incurred by other public bodies if they are reported to the IEPAW for investigation	The unit costs for the investigation process have been sourced from a similar Impact Assessment conducted for the Public Services Ombudsman (Wales) Bill ⁸⁴ . This is used as a proxy because cost estimates are built on staff time to respond to the Ombudsman regarding complaints that were made and investigated, which is a specific type of indirect cost raised in interviews to inform the CBA Based on the IEPAW's latest Annual Report ⁸⁵ , it is assumed the governance body would receive nine

⁸³ Welsh Government (2024) 'Securing a Sustainable Future: Environmental Principles, Governance and Biodiversity targets for a Greener Wales: Draft Regulatory Impact Assessment'; Welsh Government (2023) 'Written Response by the Welsh Government to the report of the Climate Change, Environment and Infrastructure Committee entitled 'Report on operation of interim environmental protection measures 2022-23'.

⁸⁴ Welsh Government (2019) 'Public Services Ombudsman (Wales) Bill: Explanatory Memorandum'

⁸⁵ Interim Environmental Protection Assessor for Wales (2024) Annual Report 2023 - 2024

		complaints per annum, eight of which would be taken
<p>Option 2B - Integrate into existing Welsh Body; providing an existing Welsh Oversight Body with the resources to deliver an Environmental Governance remit</p>	<p>Additional running costs for an existing organisation</p>	<p>We have combined segments of the existing staffing costs reported by Environmental Standards Scotland (ESS), combining staffing costs and external advice and support⁸⁶.</p> <p>Note that the running costs are assumed to be held constant in real terms over the period (consistent with Green Book methodology). It is possible that costs will increase in real terms. For example, there was a 4.3% real terms annual spending increase announced in the 2024 UK Government Budget⁸⁷.</p>
	<p>Transitional IEPAW costs</p>	<p>There is a transitional period in 2025 and 2026, when the IEPAW will still be operational before responsibilities are fully handed over to another body. A cost of £675,000 is therefore incurred in each of these years</p>
	<p>The costs for the other public bodies investigated under the new governance arrangements</p>	<p>Other public body costs have been estimated in the same way as Option A, however with a time lag of one year for the investigations to commence while the new arrangements are being established</p>

⁸⁶ Environmental Standards Scotland (2023) Business Plan 2022/23 - 2023/24

⁸⁷ HM Treasury (2024) Autumn Budget 2024

Option 2C - Set up a standalone environmental governance body for Wales	One-off set up costs for a new governance body	Set-up is reported in a Welsh Government budget document as 480,000 ⁸⁸ . The recurring cost once the governance body has been established (based on the wider funding envelope of the ESS) start at £2.79 million in 2026
	Running costs for new body	Assumed the governance body will cost £2.79m to run per year, once established. This is based on the legacy of the ESS
	Transitional IEPAW costs	As with Option B, however £337,500 would also be incurred in 2027
	The costs for the other public bodies investigated under the new governance arrangements.	Estimated in the same way as Option B
Option 2D - This option would involve extending the remit of the Office for Environmental Protection (OEP) and the environmental review mechanism to Wales	Extra running costs associated with the OEP extension	The median salary reported in the RIA for an OEP FTE (£120,000) applied to an estimated additional 15 FTEs for the Welsh Government
	Transitional IEPAW costs	As with Option B
	The costs for the other public bodies investigated under the new governance arrangements	Estimated in the same way as Options 2 and 3

⁸⁸ Welsh Parliament (2024) Scrutiny of the Welsh Government Draft Budget 2024-25

Table four: Summary of legislative options, costs and cost calculations – governance body

	Option 2A (BAU)	Option 2B	Option 2C	Option 2D
Description	IEPAW continues	Integrate into existing Welsh Body	Set up a standalone body	Extend the OEP to Wales
Quantifiable / monetisable costs	IEPAW running costs Other public bodies indirect costs	Existing Body additional running costs Other public Bodies indirect costs	Set up costs for new organisation Running costs for new organisation Other public bodies indirect costs	OEP additional running costs Other public bodies indirect costs
Cost figure (relative to BAU) (2024 prices, discounted)	-	£12.0m	£16.1m	£10.3m
Cost figure (absolute) (2024 prices, discounted)	£.5.56m	£17.5m	£21.6m	£15.8m

3) Biodiversity Targets Framework

Stakeholder views

The Welsh Government expects the biodiversity framework to play a crucial and strategic role in protecting and restoring nature and providing increased accountability and transparency. With the aim of driving ambition and actions to

reverse the decline of biodiversity, while strengthening the Welsh Government's accountability for delivery, by incorporating the latest evidence and principles.

To test the framework in its current format, we have undertaken a range of engagement methods with key stakeholders. This recognised stakeholders' understanding of the framework, what it could look like in practice, and unpack any concerns, alterations and considerations that could make it more impactful.

The stakeholder discussions were structured around some of the key components and opportunities for the Framework including non-statutory measures, updating the Wales Nature Recovery Action Plan and statutory biodiversity targets.

3A) Business as usual

Stakeholders were quite vehement in that they saw no option for continuing with the status quo of no strong or specific legislation over biodiversity recovery in Wales. This was founded on a strong, majority belief that there had been a significant lack of progress on reversing biodiversity decline in Wales, particularly since departing the EU. However, prior to Brexit, many examples can be found of how EU legislation, whilst valuable, had been too slow to implement and enforce to make the rapid change needed on this policy area.

3B) Non-statutory measures: update Wales Nature Recovery Action Plan

Stakeholders agreed that embedding the Wales Nature Recovery Strategy in National Natural Resource Policy (NNRP) alongside other components of the existing NNRP, would be a suitable mechanism for ensuring biodiversity policy is given greater consideration, if not the overall preferred option (see Option 3C).

Stakeholder collaboration was seen as crucial in supporting the Welsh Government to develop the strategy, due to the skills, knowledge and experience that stakeholders can bring to the process, ensuring that the strategic pathway for delivering the statutory biodiversity targets is realistic and achievable, while also being ambitious. It is important to recognise that this was the section of greatest concern for stakeholders. They outlined a range of policy concerns that they felt could prevent the Framework targets from being met, with a specific focus on the challenge policymakers face in ensuring that work is being delivered on time and at pace.

The most common concern raised by stakeholders was that attempts to ‘tackle too much at once’ could be a risk, given the breadth of the challenge. They suggested an alternative strategy: to evaluate what organisations in Wales have already developed and how they are setting their own targets, and to consider how existing work could support, or be built on, in the first phase of delivery objectives. For example, organisations in Wales are already undertaking in-depth examinations of how to further biodiversity renewal, which aim to effectively try and answer some of these questions, and which could support the Welsh Government with areas of ‘low hanging fruit’ or existing good practice that can be built on during the Framework’s first phase of delivery. It is worth noting that the Welsh Government is not taking an ‘everything, everywhere, all at once’ approach, but is committed to prioritising targets for the first tranche, to help provide the additional focus on the key areas to halt and reverse biodiversity loss.

Stakeholders highlighted key areas that they felt needed greater detail to ensure that the Nature Recovery Action Plan is impactful. The areas that they highlighted as requiring greater details were:

- a clear vision that gives clarity on what the framework is going to achieve
- the need for the vision to clearly reflect how it will enable the framework to be delivered at the pace required
- recognition of the range of approaches that will be required to deliver the Framework
- clear funding commitments

“Part of the issue around the 30 by 30 targets, is the lack of understanding of what the global Biodiversity Framework is trying to set out” - Interviewee

Funding was also a concern, particularly if the Framework is not statutory, with stakeholders unsure how much funding would be available to deliver against any new targets and how secure this funding would be, especially with the current cost-of-living crisis. How to protect progress and policy in the Nature Recovery Framework was also questioned, requiring greater clarity on where biodiversity is in the political hierarchy, so stakeholders could understand funding decisions.



3C) Powers to create statutory biodiversity targets

Following assessment of the three options, we found stakeholders were most supportive of Welsh Ministers having the powers and mechanisms to create statutory biodiversity targets, with the primary rationale for this being that the existence of targets would create a visible and accountable measure by which to ensure reversing biodiversity decline was factored into policy and decision-making.

Creating a Wales-specific suite of evidence-based biodiversity targets in secondary legislation was endorsed for similar reasons to the adoption of Wales-specific environmental principles; namely autonomy and devolved independence over biodiversity renewal. Stakeholders repeatedly stated that the powers to create targets will give the Welsh Government the chance to show its commitment to what Wales needs, and that if the process was done collaboratively, it could be used to build momentum, as a way of getting buy in from people and businesses.

Unpacking what this meant in principle, stakeholders were happy with the aims, focusing on reversing biodiversity loss, increasing resilience, addressing pressures and improving understanding. They were also pleased to see that the Framework would reflect the Global Biodiversity Framework and felt that this was a good starting point to ensure it delivered for both global and Welsh needs, with an emphasis on the need for the Framework to recognise any needs unique to Wales and how these could support global partners.

The importance of imposing a duty on Welsh Ministers to implement statutory biodiversity targets and to take steps to promote awareness of the importance of biodiversity and healthy ecosystems, was universally agreed by stakeholders; recognising that Welsh Ministers have a crucial role to play to ensure the long-term sustainability of the framework and long-term vision of a nature positive Wales. Extending a duty on Welsh Ministers to ensure implementation and promote awareness of their powers was seen as a vital accompaniment to the option of the powers for the creation of statutory targets, without which the powers were seen as a step forward, but with the risk of being ineffectual or easily deprioritised in policy and decision-making.

Challenges and risks

Concerns about the powers to create statutory targets did exist in relation to the *process* by which the targets might be created and operationalised. Stakeholders were in agreement that a clear roadmap outlining the Welsh Government's

commitment to nature recovery and protection are crucial, as they will signal the government's intent and allow stakeholders to understand the direction of travel, how they can be a part of the process and most importantly, what should be achieved so they can hold the government to account.

It must be noted that the Bill will not introduce timelines for the targets, but rather these will be set through subordinate legislation. However, linked to concerns about the process by which the targets might be created from the powers, were questions of feasibility, delivery, and public and stakeholder reception of the targets. For example, any targets that were the primary focus of the NRW could be very hard to achieve, due to their reduced budget and the resulting reduction in some services at NRW120, making it crucial that new targets considered Bodies' abilities to deliver on them.

There was also a concern that some targets could be seen as unachievable as soon as they are set, which would harm people's belief in the targets and reduce commitment to them. For example, marine protected areas, where the data on conditions are currently limited. As a worked example of some of the challenges of agreeing realistic, evidence-based targets that could be bought into, stakeholders were keen to point out that plans are in place to understand the extent and condition of marine features but predicted that these will be nowhere near the 30% currently stated to be required by 2030, creating concerns about realism if marine targets are to be included in the new targets and powers that are almost certain to be impossible to meet. This reflected how crucial it is that data and co-production are considered with the process of exercising the powers for target setting, and where the evidence base is more complex, that greater time is given to develop the data needed or set reasonable thresholds of what evidence is acceptable, before targets are set.

"I would rather have something that is achievable, meaningful and takes us in the right direction." -Interviewee

Accountability was referenced by the majority of stakeholders as crucial, due in part to previously missed global targets. Stakeholders felt it is essential that someone in the Welsh Government is accountable for targets and, when required, reports these failures to the Senedd. It was also felt that those accountable should establish what went wrong, so that a strong mechanism is created, to enable the required change and empower those accountable to get targets moving in the right direction.

For example, stakeholders were concerned that the Welsh Government could perceive that putting the framework and targets into legislation would mean that they do not have to invest as much in biodiversity, due to the responsibility falling on partners and stakeholders to deliver targets. If it were to happen, stakeholders felt that this approach would not be effective, due to the current state of the economy and the need for the Welsh Government to show leadership to ensure partners' buy in, making it crucial in their view that part of the framework is accompanied by a clear financial commitment.

"Governments as a whole tend to think that legislation answers questions and is cheaper than actually funding what is required." -Interviewee

Biodiversity is multifaceted, which makes it difficult to convey the size of the challenge, time it will take, and level of engagement required, making it crucial that there is long-term political buy in and commitment that is clearly seen by the Welsh people and enables them to understand the importance of the work that is being delivered.

"Biodiversity is complex, and people don't have an understanding of it. So, we have got to think about those entry points for people to understand that this is achievable". - Interviewee

Crucial to ensuring the success of the implementation and promotion undertaken by ministers, is ensuring that the messaging is correct. When asked what this meant, there were two common themes expressed by stakeholders:

- Ministers should be very clear on the major steps required and the reasons for these
- any advice given to communities and businesses needs to be clear and this must include being honest, even if what is being asked will be difficult

Wherever possible, Welsh Ministers should be optimistic and reference that what is being set out is achievable, including the benefits that people will gain. Welsh Ministers should also work to improve people's understanding of what biodiversity is and why it is important. This is due to research showing that the average person's fundamental understanding of biodiversity baselines is very low. For example, most people are unaware of the impact biodiversity has on food and water security, and

pollution control, which means that they are in turn unaware of the important role Wales's biodiversity plays in maintaining people's current quality of life. Additionally, data shows the potential challenge and opportunity of the Bill being a form of positive education around the reality of reversing biodiversity decline; the majority of the public presume that protected areas include the Wales National Parks in their entirety; however, this is not the case, as large areas are privately owned, and farmed, which reflects the challenge of ensuring broad engagement with the legislation. These two examples are included as a consideration for how the messaging and narrative about the Biodiversity Framework and the statutory targets needs to be approached, the starting point from which Wales will be working; and the need for promotion of greater awareness by the Welsh Government of the scale of the challenge.

The mainstreaming of biodiversity and the efficacy of the Programme for Government commitment to 'embed our response to the nature and climate crisis in everything we do', was noted, and led to discussions for how to ensure the Framework maximises crosscutting potential and finds cost effective and scalable ways of delivering the work, where possible through biodiversity projects which themselves span several areas of government and the strategy of public bodies. The reverse to this opportunity is the key risk, seen by stakeholders, for the potential for biodiversity policy to become siloed due to time constraints, leading to a lack of time for the Framework to get buy-in and support from other departments. Connected to this, the ability for the Welsh Government to be able to deliver on its policy agenda at pace, due to lack of resources, was also highlighted as a concern. Stakeholders felt that there are internal time lags within the Welsh Government that hold up progress towards key targets, that will need resolving if the legislation is going to come into force in time before the next election, and if the targets within any framework were to be met when it entered operational and delivery phase.

Engagement from policy makers with stakeholders on the cross-sector benefits of biodiversity in shaping the primary and secondary legislation was seen as essential and is an important consideration for the development of the secondary legislation for reversing biodiversity decline, with stakeholders citing important and valuable work that could contribute to the process of the specific setting of targets in secondary legislation and is currently underexplored. For example, the research undertaken by the Welsh Wildlife Trusts, outlines the eight cross-sectoral benefits that biodiversity can deliver, including health and wellbeing, supply chains and nature-based solutions.

Opportunities and benefits

When it came to analysing what the targets mean in terms of development and delivery, stakeholders were very clear that there are some crucial steps that must be taken. The majority view was that the targets need to be created through a theory of change-led approach involving participation of key stakeholders, as part of what was called a ‘biodiversity deep dive’, in order to understand what is needed in the secondary legislation. It is proposed this could be achieved by user-testing scenarios and modelling of different target options with current networks and projects, enabling networks to have much more complex discussions about Other Effective Area-based Conservation Measures (OECMS), which could then feed into the targets.

Focused priorities were also highlighted as crucial, and many stakeholders raised the opportunity – and risk – of timelines to taking a statutory target approach. Again, it must be noted that the Bill itself will not introduce timelines for the targets; however, stakeholders saw the target-setting as an opportunity to enable the Welsh Government to put in place clear and sufficient measures to ensure eventual net-zero targets are met. Benefits were also seen in how delivery partners and public bodies could work with the targets in terms of their own organisational strategy and performance. For example, enabling fair and effective management targets internally, that empower those leading on the work to set achievable and timely objectives for their staff, in turn reflecting their role in developing and delivering a pathway that will secure nature recovery.

“...breaking it down into what's going to be penetrable is really important, with a real focus on what is going to be digestible and actually make the most difference”. - Interviewee

Another consideration was the need for effective monitoring, reporting, and scrutiny around a framework and targets. Stakeholders were very positive about the possibility of targets complementing and enhancing the Wellbeing of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016. It was felt that this ensured that the Framework would be taken seriously, by grounding the work within other core policy areas and creating the chance for cross-cutting policy work.

Some respondents expressed caution that monitoring systems might not be enough to achieve the aims of the Framework and targets. These systems would need to be supported by developing relevant management tools and approaches, that enable

those delivering the targets to work in a consistent way and deliver at speed, with the aim of empowering delivery partners to have the resources they require to turn the biodiversity curve. Building confidence in these approaches will be crucial, especially as initial reporting could be quite negative, due to Wales starting this process behind other nations. This could have an impact on buy-in to the framework and targets. With the above challenge in mind, it was felt there was a need for the Welsh Government to build in reporting opportunities to recognise the positive work that is already happening, with the aim of building confidence in the Framework.

An important consideration is the issue that many risks/costs and benefits of introducing a specific Biodiversity Framework and goals will be unquantifiable. It is very hard to calculate, for example, what a loss of biodiversity means in terms of affecting human wellbeing; health; agricultural sustainability; or economic prosperity (four examples where relationships have been identified between nature and these factors in the literature). This is unlike the ability to quantify and qualify the costs of climate impacts such as flooding, which is becoming increasingly prevalent, including in Wales. This makes calculating the costs of nature crisis and loss more challenging and therefore, the process of setting the narrative around the creation of powers for the targets, complex. Nonetheless, stakeholders universally agreed that we need a way to value (in monetary and qualitative terms) the *loss* and the *gain/benefits* of biodiversity, in order that it can be 'valued' to the same extent in political decision making, policymaking, and law.

Costs analysis of biodiversity targets

Table five: Legislative option, costs description and quantification method – biodiversity targets

Legislative option	Cost description	Quantification method
Option 3A - No new targets / legislation developed	Recurring compliance costs of staffing requirements for adhering with existing Section 6 duties and the Global Biodiversity Framework	Data have been supplied by the Welsh Government. These have been adjusted to monetary values using Welsh Government pay scales (as with the principles strand), adjusting the pay grades according to the different staffing levels required

<p>Option 3B – Non-statutory measures and updates to the Welsh Government’s existing Natural Resources policy and Nature Recovery Action Plan</p>	<p>Recurring implementation costs of staffing requirements have been provided by Welsh Government to develop new biodiversity indicator targets under this option, monetised in the same manner as Option 3A</p> <p>Once time has been devoted to developing the new targets (one-off costs), we have assumed that the Welsh Government staffing requirements associated with conducting updated evaluation commence straight away</p> <p>Requirements on public bodies. There would likely be some reporting requirements on public bodies to support the monitoring and implementation of targets if set. This will take time and resource in addition to BAU. However, the amount of resource required – and its cost – remain unknown and therefore unquantifiable and unmonetisable at this time. This would be dependent on the number and complexity of any targets set.</p>	<p>Staffing requirements have been provided by the Welsh Government. There are also one-off costs incorporated which relate to seeking advice to consult the Joint Nature Conservation Committee (JNCC)</p>
<p>Option 3C - This option goes beyond Option 3B by setting statutory biodiversity targets to strengthen monitoring and reporting as well as</p>	<p>As with other options, the Welsh Government has provided its anticipated staffing requirement to develop new targets and legislation, which have been</p>	<p>This process takes a longer time than Option 3B, hence the increased implementation and evaluation costs do not set</p>

introducing a duty to implement, monitor, and report against these targets	monetised using reported pay scales. There are strengthened staffing resources incorporated for the monitoring associated with this option As with Option B, there will be a reporting requirement on public bodies that is unquantifiable and unmonetisable This would be dependent on the number and complexity of any targets set.	in until later under Option 3C
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Table six: Summary of legislative options, costs and cost calculations – biodiversity targets

	Option 3A (BAU)	Option 3B	Option 3C
Description	No new targets / legislation developed	Non-statutory measures including update to Nature Recovery Action Plan.	New targets developed + statutory legislation enacted
Quantifiable / monetisable costs	Existing costs associated with Section 6 duties and the Global Biodiversity Framework	Development of policy Costs associated with Section 6 duties. Costs associated with future target evaluation mechanisms	Development of targets and legislation Costs associated with Section 6 duties Costs associated with future target evaluation and monitoring mechanisms (including strengthened

			monitoring, reporting and evaluation)
Cost figure (relative to BAU) (2024 prices, discounted)	-	£4.76m	£9.72m
Cost figure (absolute) (2024 prices, discounted)	£0.824m	£5.59m	£10.5m

V. Conclusions

Reflections on quantifying and monetising benefits and drawbacks

The ultimate objective of the legislation is to deliver better environmental outcomes. The previous sections of this report have qualitatively described how these beneficial outcomes could arise from each part of the legislation. Yet there are significant challenges in quantifying and monetising these benefits for each part of the legislation:

Environmental principles. The policies and legislation that will be affected by the principles are unknown. But it is expected that they will apply to a broad range of policies (and could apply to a broader range if the Welsh Government gets more devolved powers). Even if the precise nature of the policies and legislation to which the principles were to apply were known, there is not a method of applying an objective judgment would change their design. For instance, how would the precautionary or integration principle be considered and applied in relation to a new piece of planning legislation? Moreover, some aspects of the principles are already legislated for to varying degrees, such as in the Environment Wales (Wales) Act 2016 and the Wellbeing of Future Generations (Wales) Act 2015, making it more difficult to discern the difference in monetisable benefits that the new principles would have beyond business as usual (BAU)⁸⁹.

Governance body. The areas of environmental law that the governance body will investigate compliance with is broad, not captured, or capturable, within a defined list. For example - at the time of writing (February 2025) - the last three OEP investigations covered saltmarsh habitat removal, the environmental status of marine waters, and water pollution from agriculture⁹⁰. The point being that the conclusions reached, action taken (if any), and the benefits arising from the interventions of the governance body will vary on a case-by-case basis and from year-to-year.

Biodiversity targets. Four priority areas will be listed in the legislation: reducing the risk of the extinction of native species; the effective management of ecosystems; reducing pollution; and the quality of information about biodiversity, access to that information and its use and application. However, the exact targets, how they differ

⁸⁹ A full description can be found in the Welsh Government consultation, Securing a Sustainable future: <https://www.gov.wales/sites/default/files/consultations/2024-01/environmental-principles-governance-and-biodiversity-targets-white-paper.pdf>

⁹⁰ OEP website, accessed February 2025, <https://www.theoep.org.uk/investigation/investigation-defras-duty-achieve-good-environmental-status-marine-environment>

from existing targets and the policies that will be required to achieve them are not yet known.

Within this context, the conclusion was reached that attempting to quantify and monetise the benefits for each aspect of the legislation offered extremely limited insight. Primarily because there is too little information, or even basis for assumptions, on the specific types of environmental outcomes that would change as a result of the legislation. Any calculation would, therefore, be highly speculative, heavily caveated, and of limited use. Hence, the benefits that have been qualitatively described are what those reviewing the costs and benefits of the legislation should focus on in determining the merits of the legislation.

These challenges were referenced in the IA attached to England's Environment Act 2021. This legislation also made provisions for the implementation of biodiversity targets and for an environmental governance body. It also did not monetise the outcomes of the legislation, using instead the logic that the legislation would improve environmental outcomes and – in general terms – improved environmental outcomes bring large benefits⁹¹:

“Most benefits resulting from the new measures were not monetised. Evidence suggests that there are large benefits to the environment, health and society from reducing the emissions of greenhouse gases, increasing resource efficiency and sustainability by helping to deliver a circular economy, reducing pressures on the water environment and improving resilience to floods, and mitigating chemical pollution to water bodies” (DEFRA, 2019)

The challenges in quantifying and monetising benefits apply to quantifying and monetising drawbacks (the negative impacts of implementing the legislation). Nevertheless, two categories of disbenefit that policymakers should consider in enacting the legislation have been highlighted from the qualitative research:

- **Negative impacts for businesses.** The legislation does not make provisions for specific measures that affect private entities directly. For example, the environmental principles apply to policymaking within the Welsh Government, the governance body applies to the application of environmental law by public bodies, and the design and implementation of biodiversity targets are enacted

⁹¹ DEFRA (2019), Environment Bill IA, <https://publications.parliament.uk/pa/bills/cbill/58-01/0009/Environment%20Bill%20Impact%20Assessment.pdf>

by public bodies. Nevertheless, the legislation does create and/or strengthen policy structures that could ultimately affect businesses. One example is the environmental principles potentially reducing the profitability of development in the built environment. Another example is biodiversity targets requiring additional regulation to be met that imposes costs on business (something that is especially relevant for agriculture businesses and landowners that may be the focus of additional regulation)⁹².

- **Negative impacts from not acting.** Related to the previous point, many would argue – backed by credible sources of evidence – that there are societal and economic consequences to not acting. This point is made in the Welsh Government’s White Paper when discussing biodiversity targets. It highlights research on the impact of invasive non-native species (INNS) to argue that not acting would cause damage to crops, buildings, with negative implications for the economy.

Of course, counter arguments could be made to both of the above. For example, England’s Environment Act 2021 IA set out that businesses would benefit from regulatory certainty, and that there would be new opportunities for investment, as well as potential for innovation driven through the application of environmental principles.

But again, the types of regulatory certainty, investment opportunities and innovation incentives will be specific to the areas of policy affected by the application of the legislation and not by the legislation itself. Again, as the English IA states about biodiversity targets:

“The ratio of private sector and public sector cost burdens will depend on the specific policies and actions implemented. The targets themselves put a duty on government, not business, and it is expected that the contribution of the private sector will primarily be voluntary or captured in other regulatory impact assessments” (DEFRA, 2022).

⁹² DEFRA (2022), Overarching Impact Assessment for proposed Environment Act (2021) targets (Consultation Stage), https://consult.defra.gov.uk/natural-environment-policy/consultation-on-environmental-targets/supporting_documents/Environment%20Act%20targets%20%20Overarching%20Impact%20Assessment.pdf



Illustrative benefits from biodiversity targets

England’s Environment Act 2021 IA did attempt to illustratively quantify benefits around the implementation of biodiversity targets. The draft RIA for the White Paper used this illustration to present potential benefits of biodiversity targets.

While England and Wales are not directly comparable – because the exact biodiversity targets are not yet known in Wales – the English IA does offer a useful proxy because it looks at biodiversity targets in similar areas to those being considered in Wales, e.g. species and habitat recovery.

The two-stage approach taken for illustrating the benefits of the legislation has included:

1. identifying the quantified benefits from England’s Environment Act IA
2. weighting the benefits to represent the population and land ratio of Wales

Each of these stages is now described in turn in more detail.

Benefits as described in England’s Environment Act 2021 IA

The IA looked at benefits for each environmental target using the Enabling a Natural Capital Approach - a method of valuing the natural environment for the people and the economy⁹³. Most of the focus of this approach is that the benefits will be felt by society as a whole. The benefits scoped as part of England’s Environment Act IA were categorised according to four areas (see table seven).

Table seven: Benefits from environmental targets and their description

Type of benefit	Description
Carbon sequestration	Benefits calculated by multiplying the value of carbon dioxide equivalent by the estimated amount of carbon dioxide equivalent sequestered through wetland and grassland habitats
Air quality regulation	Benefits calculated by measuring the human health benefits of removing

⁹³ DEFRA webpage (2023), accessed February 2025, <https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca>

	particulate matter from the air, focusing on the reduced healthcare costs from exposure.
Recreation	Benefits calculated by multiplying the number of visits to accessible green spaces and the welfare value and physical health benefits associated with the visits
Physical health	Benefits calculated by estimating how people gain physical health benefits from being active by visiting created or restored habitats and undertaking recreational activities

The benefits were split into two categories. First, those applying the wider habitats targets. Second, those applying to protected sites actions. The value of these benefits are set out in table eight:

Table eight: Estimated benefits, £m, 2024 prices

	Wider Habitats Targets (£m)	Protected Sites Actions (£m)
Carbon Sequestration	3,599	2,984
Air quality	N/A	919
Recreation	4,690	3,887
Physical health	1,454	1,241
Total	9,743	9,032

The IA stressed that given data limitations and evidence gaps, only a partial assessment of the benefits were made, meaning that overall, the monetised benefits of the targets are underestimated. Specifically, benefits relating to areas such as mental health, volunteering and food security were not captured.

Adjusted benefits to apply to Wales

The draft RIA applied to the Welsh Government's Environmental Governance White Paper used population ratios and land ratios to convert the identified benefits in England to a Welsh context. Neither of these methods are perfect. For instance, the geography of Wales and its land use differs to that of England and will not exactly align in terms of how benefits from environmental intervention occurs. Nevertheless, the benefits of environmental outcomes – in broad terms – are often calculated in relation to the population and to land use and so they make useful proxies.

Within this context, the RIA used two headline weightings applied to benefits set out in the Environment Act 2021 IA were as follows:

1. **population weighting.** Wales has a population 5.5% the size of England⁹⁴
2. **area ratio.** Wales has a land area 15.9% the size of England⁹⁵

A review of the RIA's approach found two elements that were subsequently amended in the following ways:

1. **Removal of the Barnett Formula 'comparability percentage' from the calculation.** This reflects how much of a UK department's services are devolved, i.e. it is set at 0% if none of a department's spending has been devolved. It was used in the Welsh Government's original RIA benefit calculations because it was part of the Barnett Formula, which was used as the basis for the population weighting. But this comparability percentage has no direct bearing on the benefits being derived, i.e. the extent of devolution does not affect the health cost savings from reduced air pollution. Hence it was not considered in the calculations for this
2. **Weight each benefit by the ratio most applicable to it.** For instance, the benefits arising from improved air quality, increased recreation and physical health are relevant to people, and therefore the population weighting is the most appropriate. The benefits from carbon sequestration are more relevant to land and therefore the area ratio has been applied.

⁹⁴ Based on ONS mid-year 2021 estimates, with Wales having an approximate population of 3.1m and England having an approximate population of 56.0m

⁹⁵ Defra (2002), Land by agricultural and other uses, 2002. Wales has an estimated 2,064 hectares of land and England an estimated 12,972 hectares

With these modifications, the illustrative benefits were calculated on the following basis:

- **low scenario.** Applying purely the Wales to England population ratio
- **central scenario.** Applying the most relevant of population and land ratios to each of the categories of benefit that could arise from biodiversity targets
- **high scenario.** Applying purely the Wales-to-England land ratio

Table nine shows the total benefits calculated using this method. The benefits accrue over 78 years – the timeframe within which the original IA calculated benefits – and total approximately £1.7bn. The total range of benefits is roughly £1.0bn-£3.0bn.

Table nine: Calculations of benefits on low, central and high scenarios

	Wider Habitats Targets (£m)	Protected Sites Actions (£m)	Total (£m)
Low (population weighting)	536	497	1,033
Central (mixed population and land weighting)	910	807	1,717
High (land area weighting)	1,549	1,436	2,985

Factoring in indicative costs to deliver policies to meet the targets produces a net benefit figure. These costs are estimated to be £664m and create a net present value for benefits of around £1bn on the central estimate. These net present value figures are set out in table ten, alongside calculations of low and high scenarios of net benefits (where the low estimate is presented using population weighting and the high estimate is presented using a land area weighting).

Table 10: Calculations of net benefits on low, central and high scenarios

	NPV (£m)
Low (population weighting)	369
Central (mixed population and land weighting)	1,053
High (land area weighting)	2,321

Conclusions from cost-benefit analysis

- The key conclusion from the cost-benefit exercise is that, across the three parts of the legislation, **the costs of implementing the legislation are small compared to the potential benefits of improved environmental outcomes.** For instance, total costs for the preferred options within the legislation total £27.2m over 10 years. This means the combination of the principles, the governance body and the biodiversity targets would only have to contribute to 2.6% of the benefits of better biodiversity outcomes for the cost of the legislation to be offset. Although it should be noted that this is just the cost of the legislation, and does not include the costs of any policy measures that may be implemented to further contribute towards environmental benefits, i.e. the £664m referenced in the preceding section.

Other key findings include:

- **Whether higher costs are justified is a judgement call.** For instance, the cost of applying principles to all public bodies is six times higher than simply applying to the Welsh Government. The judgement here is whether the application to all public bodies generates enough improved environmental outcomes to justify the increased cost.
- **There are significant limitations in the analysis.** While the costs and benefits of the legislation have been developed using the best available information and best practice techniques, this does not preclude the uncertainty of figures presented. Should more information and valuation techniques become available, we would advise conducting further analyses and revisions, which would especially be appropriate when the policies that the legislation enables are designed.

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Unquantifiable costs and benefits arising from introduction of the Bill

The table below summarises the unquantifiable costs and benefits arising from introduction of the Environmental Governance Bill as a whole, from analysis of the stakeholder interviews and when corroborated with available evidence.

Unquantifiable costs (of Bill being introduced)			
Social	Economic	Cultural	Procedural
Impact on agricultural rights and production due to environmental principles vs productivity/agricultural primacy over land	Risk of skills and capacity shortage for organisations in complying with Bill and new principles and enforcement processes	Marginalisation or risk to Welsh language communities due to strong overlap between Welsh language communities and farming communities	Impact on planning system efficiency/need to revise processes if Environmental Bill strengthens ability to challenge land use and development through planning Inefficiencies due to confusion over primacy of legislation between overlapping or contradictory legislations or directives in Wales, increasing burden on national and local policymakers and public bodies
Unquantifiable benefits (of Bill being introduced)			
Social	Economic	Cultural	Procedural
Improvement of human wellbeing at individual and collective level through engagement with nature Repopulation of certain areas due to restored	Improvements and diversification of land use with associated human, social and business/eco-tourism benefits	Greater inclusion and political recognition of certain communities currently 'left behind', through enshrinement of importance of	Improved political autonomy and international visibility of Wales (affecting bilateral relations and trade agreements) due to implementing

<p>natural environment and the economic and wellbeing benefits restored natural environment creates</p> <p>Enhanced gain in social equity as marginalised and climate-affected communities stand to gain most from mitigation of environmental loss and/or restoration (as they are disproportionately affected by degrading of natural environment and precarity of high-carbon status quo)</p>	<p>environment in law and progress of these communities on restoration of natural environment. (Many are Welsh language communities)</p> <p>Restoration of cultural connection between certain Welsh communities (particularly Welsh language communities) and a restored natural environment.</p> <p>Strengthening of national pride and identity in Wales seen as linked profoundly to the natural environment</p>	<p>ambitious devolved legislation</p> <p>Efficiencies through standardisation of enforcement processes and 'preventative policymaking' that mitigates risks to environment rather than permitting them as unintended consequences which then require trade-offs or 'clean ups'</p> <p>Unquantifiable economic, wellbeing, social gains from potential acceleration of progress towards net zero and environmental protection through introduction of Bill</p>
<p>Benefit of specificity and suitability of outcomes to Welsh context, across all areas, to ensure targeted place-based improvements; and efficiency of localised assessment, accountability and sanction process</p>		

Conclusions from stakeholder views

This assessment finds the following in terms of stakeholder views, with reference to the findings from the cost benefit analysis:

- Environmental principles:** The preference for the introduction of principles from stakeholders' perspective was Option 1D) Duty on Welsh public bodies. This was viewed as the only route that would guarantee enforceability and

had the clearest unquantifiable benefits. However, the Option 1D costs are six times higher than Option 1A (business as usual) costs due to the compliance of 50+ public bodies. We find good evidence from a theory and logic perspective of the benefits from this investment but must raise that the benefits are unquantifiable (as the English Impact Assessment also found). As a result, it is a judgement call as to whether that additional cost brings much better environmental outcomes as this cannot be specifically proven and quantified in the context of Wales.

- **Environmental governance:** There was unanimous support from stakeholders for Option 2C) Establishment of a dedicated environmental governance body, despite recognising the increased costs this could entail. The principal benefit seen for this option was the enforcement potential the single public body offers in upholding the legislation and assuring compliance with it, in order achieve real impacts in terms of environmental protection and biodiversity in Wales.
- **Biodiversity Framework:** The preferred option was 3C) the establishment of a statutory Biodiversity Targets Framework, with support for enforcement through Welsh Ministers.