

## **EPGBTWB 40 - Tystiolaeth gan: Y Gymdeithas Gemeg Frenhinol | Evidence from: Royal Society of Chemistry**

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Senedd Cymru | Welsh Parliament

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee

Bil yr Amgylchedd (Egwyddorion, Llywodraethiant a Thargedau Bioamrywiaeth) (Cymru) | Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill

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### **1. What are your views on the general principles of the Bill, and is there a need for legislation to deliver the stated policy intention?**

We welcome the overarching ambition of the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill 2025 to strengthen environmental protection and biodiversity in Wales. This Bill represents a long overdue and much needed step in filling the environmental governance gap that has existed since the UK's departure from the EU, providing a framework to ensure accountability, transparency, and action in response to Wales nature and pollution crises. Crucially, it offers an opportunity to reflect the unique environmental context and governance needs of Wales.

In particular we support the inclusion of four core environmental principles: the precautionary principle, prevention, polluter pays, and rectification at source, which align with EU environmental principles.<sup>1</sup> These reinforce the approaches that the RSC has consistently championed in policies that safeguard both the environment and human health. For example, in our vision for what a good chemicals strategy looks like <sup>2,3</sup>, and more recently through our work about tackling chemical pollution in the environment.<sup>4</sup>

The proposal to establish a new independent environmental governance body, the Office of Environmental Governance Wales (OEGW), is a significant and positive step. Similar to the roles of the Office for Environmental Protection (OEP) and the Environmental Standards Scotland (ESS), the OEGW has the potential to provide robust oversight, enhance transparency, and hold public authorities to account for their environmental responsibilities.

Whilst we welcome the core principles of the bill, we have several recommendations regarding the timing, scope, and framing of key provisions, particularly those relating to pollution and target-setting.

## Areas for Strengthening the Bill

### Ambitious Target Setting and Timelines

The proposed 2029 timeline for setting biodiversity targets is slower than the timelines already established or proposed in England, and Scotland<sup>5</sup>. For example, the Environment Act 2021 sets legally binding biodiversity targets to be achieved by 2030 in England.<sup>6</sup>

Given the urgency of the biodiversity crisis in Wales, and as we noted in our previous response<sup>7</sup> to Defra's consultation on the Environment Act 2021 targets<sup>8</sup>, action should not be delayed until all information is available. Committing to early and ambitious targets can help front-load mitigation, delivering environmental, health and economic benefits earlier in the target period.

Introducing such targets would also help drive earlier action, accountability and investment, allowing relevant stakeholders to adapt practices and deliver meaningful change early. Furthermore, acting sooner enables better alignment efforts across the UK, increasing coherence and amplifying the collective impact to shared environmental challenges.

Moreover, the current stipulation to set a target in respect of at least one matter within each priority area may not carry the necessary momentum the Bill's ambition warrants. There are a breadth of environmental challenges facing Wales, from biodiversity loss to pollution and climate resilience, yet the Bill only mandates target-setting in relation to biodiversity. While this is a welcome and necessary step, we encourage the Welsh Government to consider a broader suite of targets across other environmental domains to reflect the interconnected nature of environmental pressures. Setting a minimum of only one target risks underplaying the scale and urgency of the action required.

In its current form, the Bill does not include a provision for the regular review of the environmental targets. To ensure targets remain ambitious and responsive to emerging evidence, the Bill could be strengthened by including a statutory review cycle for targets in the primary legislation, rather than relying on secondary legislation to deliver this. For example, Section 7 of the UK Parliament's Environment Act 2021<sup>9</sup> requires the Secretary of State to review targets at least every five years and assess whether they would significantly improve the natural environment (the "Significant Improvement Test"). If not, new or revised targets must be set.

Embedding a similar review mechanism in the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill would ensure that targets remain ambitious, evidence-based, and responsive to emerging challenges. It would also provide a clear cadence for progress, helping to maintain momentum and public confidence. Waiting until all conditions are ideal before acting risks delaying the very interventions needed to reverse environmental decline.

### Pollution scope and framing

We welcome the Bill's recognition of pollution as a driver of biodiversity loss. However we note that it may adopt a relatively narrow view, treating pollution primarily as a driver of biodiversity loss, rather than recognising it as a critical and pervasive environmental and public health issue in its own right.

Pollution is only directly referenced once in the Bill, under section 6C(2)(c), where it is listed as one of the four priority areas for biodiversity target-setting. While the link between pollution and species decline is important, this framing risks subordinating pollution to biodiversity concerns, potentially overlooking its broader impacts on ecosystems, human health and long-term environmental resilience.

For example, the recent commitment to establish the United Nations Science Policy Panel on Chemicals, Waste and Pollution Prevention<sup>10</sup> aims to elevate pollution to the same level of global urgency as climate change and biodiversity loss. Like the respective panels of the Intergovernmental Panel on Climate Change (IPCC)<sup>11</sup> and Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)<sup>12</sup>, this new panel recognises pollution as the third pillar of the triple planetary crisis.

This reflects a growing international consensus that pollution must be addressed as a standalone priority, whilst also acknowledging its deep interconnections with climate and biodiversity challenges. Addressing pollution therefore requires an integrative and collaborative approach across sectors and disciplines.

The RSC has played a significant and proactive role in the establishment of this panel<sup>13</sup>, and will continue to engage with the panel's development, advocating for science-informed, multidisciplinary, and globally coordinated action on chemical pollution.

Furthermore, the Bill does not define the scope of pollution or explicitly prioritise chemical pollution, despite growing evidence of the risks posed by Contaminants of Emerging Concern (CECs).<sup>14</sup> These contaminants, such as

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pharmaceuticals, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), and microplastics, are increasingly detected in UK rivers and ecosystems. Without a clear definition or dedicated focus, there is a risk the Bill may not fully capture the cumulative, low-level and long-term risks associated with exposure to cocktails of contaminants.

Finally, as detailed above, the Bill lacks a clear mechanism to expand environmental targets in response to emerging risks and evolving scientific evidence. This could limit its ability to remain responsive and adaptive in the face of changing environmental challenges. As previously mentioned, action should not be delayed until all information is available, instead early and proactive measures are essential to mitigate harm.

#### Systems-based approach

We note the stated aim of the bill:

“The aim of the environmental principles provisions is to establish a robust framework for environmental governance in Wales. This framework seeks to address three core challenges: combating the combined impact of climate and nature emergencies, protecting the environment from harm, and responding to changes in environmental governance structures following the UK's departure from the EU.”<sup>15</sup>

In light of this ambition, the Bill presents an opportunity to adopt a more integrated or systems-based approach to environmental governance, one that recognises the interdependence of environmental, human, and animal health. Approaches such as One Health<sup>16</sup> offer a valuable framework for understanding how biodiversity, pollution, and climate change interact across sectors and scales.

Currently, the Bill's focus on biodiversity, while important, may unintentionally limit the scope for cross-cutting solutions or policy actions. To fully realise the Bill's ambition of establishing a robust framework for environmental governance, it is important to recognise pollution as having negative impacts beyond biodiversity loss. The drivers for action on pollution are broader, involving a wider range of stakeholders and sectors.

Establishing standalone provisions or targets for pollution reduction beyond its links to biodiversity would help ensure this. Alternatively, the Bill could be strengthened by explicitly referring to, and where appropriate aligning with, existing legislation and strategies where pollution is already targeted (see next section).

## Avoiding fragmentation

We note that, whilst air pollution is specifically referenced in relation to separate legislation (e.g. the Air Quality and Soundscapes (Wales) Act 2024), other major drivers of biodiversity loss (such as water, chemical, waste and resource management and plastic pollution) are not similarly addressed. This risks fragmentation in policy and review of this bill allow opportunities to link across to other key legislation to ensure harmonisation between.

Environmental issues do not exist in isolation. The Bill in its current form risks missing opportunities for joined-up action across environmental domains. Stronger harmonisation with existing legislation and clearer cross-referencing would help ensure a more coherent and effective environmental strategy for Wales. Greater integration and collaboration across these policy areas would not only support more impactful action but also explicitly acknowledge the complex, interrelated nature of environmental challenges.

1- Environment policy: general principles and basic framework,

<https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework>

2 - A chemicals strategy for a sustainable chemicals revolution, Policy Position, Royal Society of Chemistry, 2020 - <https://www.rsc.org/policy-and-campaigning/policy-library/a-chemicals-strategy-for-a-sustainable-chemicals-revolution>

3 - Principles for the management of chemicals in the environment, Royal Society of Chemistry, 2018 - <https://www.rsc.org/policy-and-campaigning/policy-library/principles-for-the-management-of-chemicals-in-the-environment>

4 - Tackling contaminants of emerging concern (CECs) in water, Royal Society of Chemistry, 2024 - <https://www.rsc.org/policy-and-campaigning/policy-library/tackling-cecs-in-water>

5- Natural Environment (Scotland) Bill, the Scottish Parliament - <https://www.parliament.scot/bills-and-laws/bills/s6/natural-environment-scotland-bill>

6 - Environment Act 2021, Legislation.gov.uk, <https://www.legislation.gov.uk/ukpga/2021/30/contents>

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7- Environmental Targets consultation 2021 – Royal Society of Chemistry response, 2022 - <https://www.rsc.org/policy-and-campaigning/policy-library/environmental-targets>

8 - Environment Act 2021: environmental targets - <https://www.gov.uk/government/consultations/environment-act-2021-environmental-targets>

9 - Environment Act 2021, Legislation.gov.uk, <https://www.legislation.gov.uk/ukpga/2021/30/contents>

13 - UN Science Policy Panel, Royal Society of Chemistry - <https://www.rsc.org/policy-and-campaigning/environmental-sustainability/chemical-waste-and-pollution#cec-in-water>

14 - Tackling contaminants of emerging concern (CECs) in water, Royal Society of Chemistry, 2024 - <https://www.rsc.org/policy-and-campaigning/policy-library/tackling-cecs-in-water>

15- Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill, Senedd Cymru Welsh Parliament, published 30/05/2025. <https://business.senedd.wales/mgIssueHistoryHome.aspx?IId=46004>

16 - UNEP One Health, United Nations Environment Programme - <https://www.unep.org/topics/chemicals-and-pollution-action/pollution-and-health/unep-one-health>

**2. What are your views on the Bill's provisions (set out according to Parts below), in particular are they workable and will they deliver the stated policy intention?**

- **Part 1 - Environmental objective and principles (sections 1 to 7)**

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**3. What are your views on the Bill's provisions (set out according to Parts below), in particular are they workable and will they deliver the stated policy intention?**

- **Part 2 - The Office of Environmental Governance Wales (sections 8 to 32 and Schedules 1, 2 and 3)**

**4. What are your views on the Bill's provisions (set out according to Parts below), in particular are they workable and will they deliver the stated policy intention?**

- **Part 3 - Biodiversity targets, etc (sections 33 to 38)**

**5. What are your views on the Bill's provisions (set out according to Parts below), in particular are they workable and will they deliver the stated policy intention?**

- **Part 4 - General (sections 39 to 45 and Schedule 4)**

**6. What are the potential barriers to the implementation of the Bill's provisions and how does the Bill take account of them?**

The Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill 2025 sets out a vital framework for improving environmental governance in Wales, but several barriers could limit its effective implementation if not adequately addressed.

Cross border collaboration and transboundary issues

Whilst environmental policy is devolved, pollution and biodiversity loss are not confined by national boundaries. Transboundary environmental issues, such as shared water bodies or air pollution, require consistent coordination between governments.

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Within the Bill (Schedule 2, Clause 1 (c)) requires “the OEGW to monitor the effectiveness of environmental legislation outside Wales and internationally”; however, there are no explicit provisions for cooperation with environmental governance bodies in other devolved nations.

It is important that, if this Bill is to deliver its objectives, the proposed governance body and relevant stakeholders have formalised approaches in place to work with their devolved nation counterparts to strengthen cross-border collaboration. This could be through engaging in regular dialogue, sharing information, data and best practice whilst also avoiding duplication.

### Resourcing, capacity and skills

#### a) OEGW establishment

The effectiveness of the proposed OEGW will rest heavily on its resourcing, remit, and ability to operate independently. Without adequate funding, staffing and scientific capacity, there is a risk the body will be unable to hold public authorities effectively to account. This concern applies not only to the OEGW but to wider public bodies expected to deliver the Bill’s objectives.

Whilst resourcing and appropriate skills is not directly within the scope of the Bill, it is a critical enabler of its success.

#### b) Regulators

Beyond the OEGW, the successful delivery of the Bill’s objectives will also depend on the capability of existing regulators and public bodies. Regulators play a vital role in protecting environmental and public health, yet there are growing concerns that they lack sufficient technical capacity and multidisciplinary expertise to keep pace with emerging threats and new technologies.

The RSC has consistently highlighted the importance of a skilled and well-supported regulatory workforce in delivering effective environmental governance. Evidence from the RSC’s Future Workforce and Educational Pathways report<sup>17</sup> underscores the need to “Build skills in the current workforce and ensure access to professional development, particularly in sustainability, data/digital technologies, and science communication.”

These findings are echoed in the UK Government’s Pro-Innovation Regulation of Technologies Review<sup>18</sup>, which identified significant skills gaps within regulators, particularly in scientific and technical expertise. Not addressing these gaps risk

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slowing the adoption of innovative, data-driven solutions and limiting the ability of regulators to respond to emerging environmental risks. Similarly, the Correy review<sup>19</sup> of England's environmental regulatory system emphasised the need to "embrace fully the opportunity of technological and digital approaches will need upfront investment in tech and skills".

To ensure the OEGW can fulfil its oversight role and that regulators are equipped to implement the Bill's provisions effectively, there must be sustained investment in training, scientific infrastructure, and cross-sector collaboration. Strengthening links with academic researchers, supporting interdisciplinary career pathways, and ensuring regulators have timely access to independent, high-quality scientific advice will be essential. Such measures will help translate emerging evidence into policy and effective action more rapidly.

#### Harmonisation with existing legislation

As outlined previously, successful implementation of the Bill to tackle environmental issues will depend on its integration with existing environmental legislation and planning frameworks. While the Bill establishes important guiding principles for policymaking, it remains unclear how it will align with other key environmental laws beyond its reference to the Air Quality Act, particularly those governing water, chemicals, resource efficiency, and waste management.

Without clear understanding of how these different environmental frameworks will interact, there could be a risk of duplication, regulatory gaps or unclear accountability, particularly if responsibilities are shared between different government departments.

The recent final report of the Independent Water Commission highlighted systematic challenges in the water sector in England and Wales including persistent pollution, aging infrastructure, and fragmented governance. The report acknowledged the unique and distinct water situation in Wales, and has recommended that legislative and regulatory reforms may be needed to strengthen the water sector.

This could present a timely opportunity: As potential water sector reforms are being considered in Wales, there is scope to ensure they are developed in tandem with the new environmental governance principles proposed in this Environment Bill.

Addressing Wales's complex and interlinked environmental challenges requires a joined-up, coherent approach to environmental governance. It is therefore

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important that the Environment Bill complements existing legislation, rather than operating in isolation. Ensuring alignment where appropriate across relevant frameworks will be critical for ensuring the Bill's effectiveness and long-term impact.

17 - Future Workforce and Educational Pathways report. Royal Society of Chemistry. Available at: <https://www.rsc.org/policy-evidence-campaigns/discovery-research-and-innovation/discovery-research-innovation-reports-surveys-campaigns/future-workforce-and-educational-pathways/>

18 - Pro-innovation Regulation of Technologies Review Collection. HM Treasury. Available at: <https://www.gov.uk/government/collections/pro-innovation-regulation-of-technologies-review>

19- Delivering economic growth and nature recovery: an independent review of Defra's regulatory landscape, Dan Correy, 2025. Available at: <https://www.gov.uk/government/publications/delivering-economic-growth-and-nature-recovery-an-independent-review-of-defras-regulatory-landscape>

20 - Independent Water Commission: review of the water sector, 2025 - <https://www.gov.uk/government/publications/independent-water-commission-review-of-the-water-sector>

## **7. How appropriate are the powers in the Bill for Welsh Ministers to make subordinate legislation (as set out in Chapter 5 of Part 1 of the Explanatory Memorandum)**

## **8. Are any unintended consequences likely to arise from the Bill?**

## **9. What are your views on the Welsh Government's assessment of the financial implications of the Bill as set out in Part 2 of the Explanatory Memorandum?**

**10. Are there any other issues that you would like to raise about the Bill and the accompanying Explanatory Memorandum or any related matters?**