



02.06.2023 / REPORT

Bridging the Gap: Understanding UK environmental data and reporting outside the EU



Institute ^{for}
European
Environmental
Policy **UK**

www.ieep.uk  

Contents

1. Introduction.....	5
2. Context	7
3. What has changed since the UK left the EU?	9
4. A declining imperative for the UK four nations to cooperate?	11
5. Process and procedure	13
6. Conclusions	19
Annex 1: List of EU directives, corresponding UK implementing legislation and main reporting requirements.....	21
Annex 2: Terms and Terminology	27

Tables

Table 1..... 21

Figures

Figure 1: Simplified data and information flows between the Member State and European Union..... 8
Figure 2: EEA member and cooperating countries (source: Eionet) 10
Figure 3: EU Industrial Emissions Portal, IED and PRTR datapoints for 2019 (left) and 2020 (right) (source: EEA) 14

Summary

This briefing is designed as an introduction to environmental data and reporting frameworks in the UK after exiting the European Union. It is to stimulate further discussion and enquiry on a variety of related topics but to answer the broad question:

What, if anything, has changed with regard to data and reporting in the UK since leaving the EU?

This briefing note accompanies a workshop that is being hosted by the European Union Delegation to the UK in London on 8 June 2023 and as part of this enquiry, further supplementary questions are raised, such as:

- What happens to all the data and information that the UK generates and used to share with the European Commission and technical agencies of the EU?
- Are current environmental data and reporting frameworks supporting the delivery of long-term environmental strategy?
- How is data and information quality controlled and checked and how is consistency and comparability within the UK and with international partners such as the European Union ensured?
- Is there a sufficient level of access to, and transparency of, data and information? And is this data and information being gathered, processed and reported on in ways that are informative and helpful for the public, Parliament and oversight/scrutiny bodies (like the Office for Environmental Protection), enabling them to understand the quality and state of the environment?

1. Introduction

Since leaving the European Union (EU), the UK and its constituent nations have begun to put in place new a framework of environmental laws such as the Environment Act (2021), the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021, the Agriculture Act (2020) and the Fisheries Act (2020). A new environmental governance landscape has begun to take shape too. Independent oversight bodies like the Office for Environmental Protection (OEP) in England and Northern Ireland and Environmental Standards Scotland (ESS) have been established¹ to replicate some of the functions previously undertaken by the European Commission. New long-term strategies and targets have been defined to replace EU framework targets and objectives; and policy makers in the UK are required to take account of *environmental principles*² when developing new laws similar to the principles enshrined in the EU Treaties.

Data and information underpin the impact and effectiveness of the implementation of these laws, strategies and targets. How can an assessment on whether the Environment Act or Fisheries Act is working or if progress is being made towards long term targets without adequate evidence - relevant data and information? Reporting obligations - that is, a requirement to tell another body/entity what those data and information are and what they mean is part of this process too. And yet, data and reporting³ often has a lesser profile in the environmental policy and legislative cycle despite its pivotal role in understanding whether we have a clean and healthy environment or not.

So, given the many changes since leaving the EU, what is the current status of the UK's environmental data and reporting framework? What happens to data and information that the UK generates and used to share with the European Commission and its technical agencies - is it being adequately quality checked, produced in a consistent and comparable way and utilised to support the delivery of long-term environmental strategy and objectives. Is there a sufficient level of access to, and transparency of, this data and information so that oversight/scrutiny bodies (like the Office for Environmental Protection) can make their assessments? Is the data and information being processed and synthesised into reports so that it is informative and helpful for the lay-public?

This paper is not designed to answer every question around data and reporting but is intended to stimulate discussion and shine a light on a topic that is not often examined. It is designed to 'bridge a gap'. It summarises the context in which this discussion is taking place and the main changes since the UK exited the EU. The paper then considers whether

¹ An Interim Environmental Protection Assessor (IEPA) has been appointed in Wales while a permanent body to oversee compliance with environmental law is being developed. The IEPA is not yet on an equivalent legal footing as the OEP and ESS, for example it cannot consider complaints about alleged breaches of environmental law.

² <https://www.gov.uk/government/publications/environmental-principles-policy-statement/environmental-principles-policy-statement>

³ The author has deliberately shortened the term, data and information and reporting to just, data and reporting for ease. Please also see text box, *Some commentary on terms and terminology...*

the absence of the imperative to report to the EU has changed the working relationship between the four nations on data and reporting, before discussing some of the other process and procedural changes that have taken place, such as ensuring data quality, the consistency and comparability as well as access to, and transparency of, data and information since the UK left the EU. There are two annexes, the first which provides a very selective list of a number of EU directives and the corresponding implementing legislation in the UK along with the main reporting requirements that they entail. The second is a very short guide to what is meant by the terminology used in this paper.

2. Context

When the UK was part of the EU, much of the environmental data collection and reporting undertaken in the UK was undertaken in response to requirements in EU law. Some of this was reported to the European Commission to show compliance with the law, some to EU institutions to support understanding of change in Europe's environment and some for use in practical UK management decisions. Almost all was required to be made available to the public.

Gathering data and information and then telling others about it (reporting), is an essential part of the legislative cycle. In some cases, requirements are set down in UK law, i.e., industrial operators monitor performance against permit conditions and report on this. Apart from their value to the plant operators and local interests, such reports are needed so that a compliance assessment can be made. But it is more than that; they help to build a wider understanding of the overall 'state of the environment', how this is changing and where we might end up in the future. Environmental data and reporting are used to help understand how current laws are working, how laws can be improved and whether objectives are being reached with the policies that have been put in place.

Perhaps most importantly, they are used to inform the public. Data and reporting are vital in understanding the delivery of long-term environmental strategy, goals and objectives such as the 25 Year Environmental Plan⁴ and its 2023 successor the Environmental Improvement Plan⁵.

Alongside the *why* data and reporting is important, the *how* should be mentioned too.

As a member of the EU (and put rather crudely), depending on the type of reporting obligation in question, a data holder or 'third party' would send data and/or information to a national Competent Authority, which would then package this up with other submissions and send them to the European Commission (or to other delegated bodies, like the European Environment Agency (EEA), which would analyse and produce a collated, EU wide report⁶), and then either release this information and data to the public, international organisations (e.g., as part of an international treaty obligation on behalf of the Member States) and to the European Parliament and Council. In the UK context, this often meant that a data holder would transmit data and information to a local authority or regulatory

⁴ <https://www.gov.uk/government/publications/25-year-environment-plan>

⁵ <https://www.gov.uk/government/publications/environmental-improvement-plan>

⁶ Although the EEA is the main body which supports the European Commission in environmental monitoring and reporting by collecting, analysing and producing reports on the data and environment from across the Member States, the Commission also uses other bodies too, such as the Joint Research Centre, and private contractors through framework contracts. The EEA is helped considerably by Eionet, a partnership network of the EEA and its 38 members and cooperating countries across Europe, consisting of circa 400 national institutions with expertise in environmental issues, who provide among other things peer-based support to one another on the technicalities of data and information sharing.

agency, which would then send it to Defra in London. This would then be combined with information from across the four nations of the UK and sent on to the European Commission and/or EEA⁷.

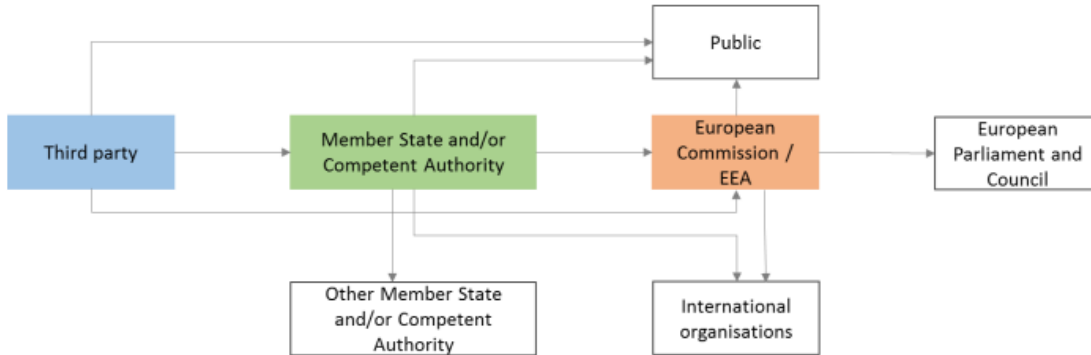


Figure 1: Simplified data and information flows between the Member State and European Union⁸

⁷ There were exceptions to this model (such as direct sharing of information from UK businesses to EU bodies), but this model accounts for most of the data and information movement prior to UK exit from the EU.

⁸ Support to the Fitness Check of monitoring and reporting obligations arising from EU environmental legislation, https://ieep.eu/wp-content/uploads/2022/12/ICFIEEP_2017_Support_fitness_check_MR_report.pdf, pp.13.

3. What has changed since the UK left the EU?

As a member of the EU, the UK transposed and implemented EU legislation on a wide variety of environment and climate issues and actively contributed to bloc wide objectives, for example to reduce emissions to air, land and water. It was the job of the European Commission to ensure that legislation was being implemented properly and the UK was meeting its share of EU wide targets and objectives. It did this for example by examining the environmental data and information that the UK supplied to the European Commission (and/or its agencies). Reporting obligations embedded within individual pieces of legislation set out what data and information was to be reported on and when. Over time the reporting obligations on EU Member States became more extensive and detailed as the ability to transfer large quantities of data became easier.

After exiting the EU, the UK was no longer obliged to share data and information about its environment to the European Commission or its agencies and consequently it has stopped doing so. The UK decided to withdraw from agencies such as EEA whose chief roles are to gather data and information on behalf of the EU institutions ready for the compliance assurance process to be undertaken by the European Commission, to check quality of data and information and undertake analyses of the state of the European environment.

Data and information about the UK's environment appear in EU reports in large part up until 2021 only. Maps and datasets produced by the EU and its agencies have begun to show the gap where the UK once was (see [Figure 3](#)). It is noteworthy that despite the UK withdrawing from technical agencies like the EEA⁹ and Eionet¹⁰, it has chosen to continue participation in 'Copernicus' the EU's Earth observation satellite programme which has several important environment related applications.

Even though the UK no longer reports to the EU, it remains a signatory of several multilateral environmental agreements (MEA) that require data and information to be submitted on a regular basis. Reporting to international conventions still requires, as it did before EU departure (*and* devolution within the UK), the cooperation and coordination of various agencies and government departments from across the four nations of the UK. The Marine Convention for the North East Atlantic, OSPAR, for example requires Defra to

⁹ It is important to recognise that the EEA is not just an EU-wide body. From its inception, and to reflect the needs of borderless environmental problems, the EEA was unusually designated to be open to countries outside the EU to act as a wider *European* agency collating data and producing reports of relevance across its diverse membership, which today comprises: all EU Member States, five non-EU countries (Iceland, Lichtenstein, Norway, Switzerland and Türkiye) and six 'cooperating' countries in the western Balkans: Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Serbia as well as Kosovo.

¹⁰ The European Environment Information and Observation Network - Eionet, is a network of the EEA with 38 member and cooperating countries and brings together technical experts to develop data, knowledge and advice.
<https://www.eionet.europa.eu/>

work with bodies like the JNCC, Marine Scotland, the Scottish EPA, Natural Resources Wales and DAERA to gather and collate environmental data and information before it is submitted.

For many Member States of the EU, and depending on the nature of the reporting obligation, the EEA carries out some MEA reporting on their behalf by collating and submitting a joint/unified EU wide response. It reduces the necessity for individual Member States to report both to the EU and to the MEA's of which they are a signatory thereby reducing workload. Though a relatively small change, the UK no longer has this option and the duty to report to MEAs, such as the UNECE Kiev Protocol¹¹, now rests with Defra or other relevant Government departments.

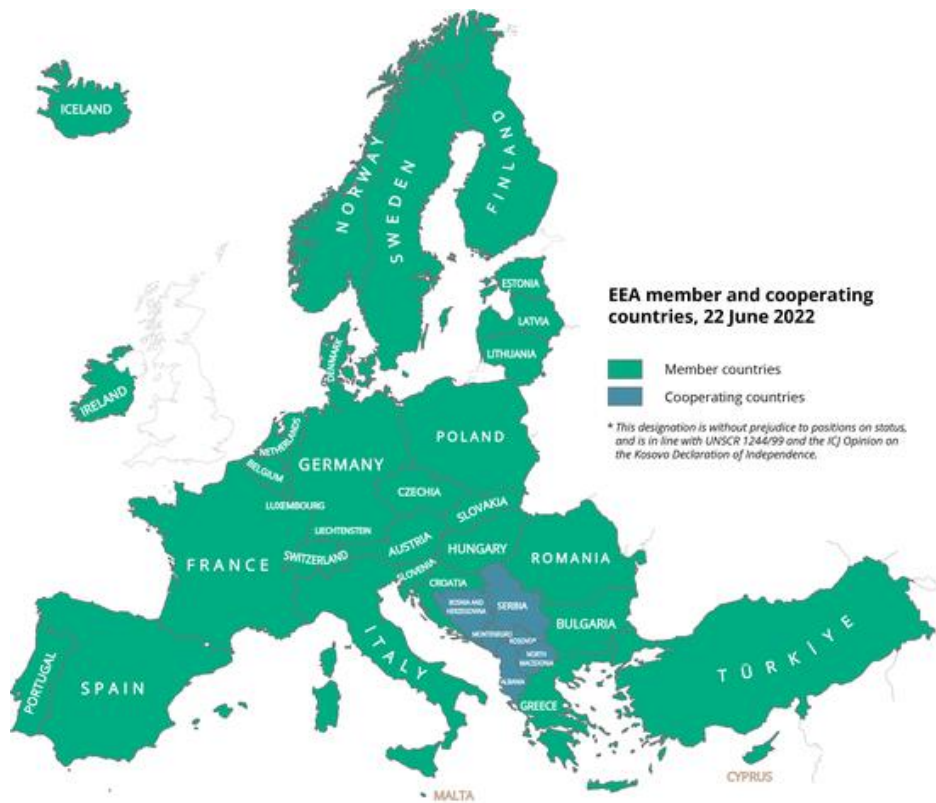


Figure 2: EEA member and cooperating countries (source: [Eionet](#))

¹¹ Kyiv Protocol on Pollutant Release and Transfer Registers, <https://unece.org/env/pp/protocol-on-prtrs-introduction>

4. A declining imperative for the UK four nations to cooperate?

As much of the environment and climate regulatory sphere is devolved in the UK, and there now fewer obligations to collate UK wide data and information (for example, to report to the EU), does this risk the carefully balanced nature of the four nations within the UK working together to cooperate and coordinate (and perhaps harmonise and standardise data collection and collation)? And if so, could this lead to an unhelpful divergence within the UK? The **Urban Waste Water Treatment Directive (UWWTD)** and the **Drinking Water Directive (DWD)** are good examples to examine.

The UK transposed the 1992 UWWTD in the early 1990's and has been compiling data and information about its implementation ever since. There are several main reporting obligations for the UWWTD (see **Annex 1**), including to:

- provide data and information on monitoring activities (Article 15),
- produce a *Situation Report* on the disposal of UWW and sludge (Article 16) and,
- produce *national implementation programme* reports (Article 17).

The DWD has been in place since the 1980's with a more recent directive in 1998 and a recast in 2020. The main reporting element (Article 13) consists of a quality report to be submitted on a tri-annual basis (see **Annex 1**) and data and information on both directives have been collated and submitted on behalf of the UK as a whole by Defra to the EU.

Since leaving the EU, on the UWWTD, UK domestic legislation in the four nations now mandates each of the four nations¹² to make accessible to stakeholders a report on the level of compliance, the identified reasons for non-compliance (where applicable) and proposed measures to achieve compliance. This is akin to a *national implementation programme* report (Article 17) as well as data and information on compliance (Article 15). There are essentially four reports now where there used to be one and no unified, UK wide report¹³. In addition, the obligation to produce a *Situation Report* (article 16) has been deleted from domestic UK legislation.

On drinking water, domestic UK legislation continues to require regular reporting; a tri-annual reporting in England and Wales¹⁴ and annual reporting in Northern Ireland¹⁵ and

¹² For England and Wales, see: <https://www.legislation.gov.uk/ukxi/2019/558/made>. For Scotland, see: <https://www.legislation.gov.uk/ssi/2019/26/made> and for Northern Ireland see, <https://www.legislation.gov.uk/ukxi/2019/112/regulation/5>

¹³ The frequency of reporting in domestic legislation in the four nations of the UK has been kept at once every two years, the same as the EU's UWWTD.

¹⁴ <https://www.dwi.gov.uk/consumers/triennial-report-2017-2019/>

¹⁵ <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/DWI%20-%20Annual%20Report%20on%20Drinking%20Water%20Quality%20in%20Northern%20Ireland%202021%20-%20Final.PDF>

Scotland¹⁶. Indeed, reports are presented on these. However, the underlying dataset which used to be sent to Eionet, which collated data from across the UK (required for Article 13 reporting), appears to be no longer accessible to the public. Is this a case where the UK will lose its ability to make comparative assessments from within the UK? And will divergent standards begin to creep into DW reporting over time because there is no longer a common method that the EU required a unified UK response on? Both the UWWTD and DWD cases suggest that without the obligation to report to the EU, there may be less sharing of data and information in the future.

Looking ahead, if the European Commission's recent proposals¹⁷ to update UWWT legislation are adopted (for example to set new standards for micropollutants and monitoring requirements for microplastics), and parts of the UK decide to keep pace with, or implement those additional requirements, then it will mean that does it matter that different parts of the UK will collect different data and information? Likewise, the 2020 recast of the 1998 DWD puts in place from January 2023 new requirements to take into account pollutants of *more recent* concern such as endocrine disruptors and microplastics. It is possible that some nations within the UK will collect more data and information¹⁸ than others and that collection and analytical methods change to incorporate these revisions and ultimately there will be less consistency and comparability within the UK as well as with the EU.

¹⁶ <https://dwqr.scot/information/annual-report/>

¹⁷ https://environment.ec.europa.eu/publications/proposal-revised-urban-wastewater-treatment-directive_en

¹⁸ For example, Scotland has a policy to seek to align where appropriate with EU developments, <https://www.gov.scot/publications/uk-withdrawal-from-the-european-union-continuity-scotland-act-2021-july-2022-regulation-making-power-under-section-1-statement-of-policy/#:~:text=Scotland%20will%20therefore%20seek%20to,Scotland's%20return%20to%20the%20EU>. This was reaffirmed by Cabinet Minister Angus Robertson on 09 May 2023, <https://www.youtube.com/watch?v=YBE2zQrGOMI>

5. Process and procedure

Process and procedure in data and reporting is very important indeed. Ensuring the quality of, consistency, and comparability of data as well as making information public, transparent and accessible are all key concepts discussed in this section.

As a member of the EU, UK data and reporting would undergo several steps to ensure its **quality** before being used for comparative purposes and compliance checking by the European Commission. Checks at local and national level would be complemented by checks at EU level by parties such as the EEA/Eionet.

Data and information submitted for example on the **Industrial Emissions Directive (IED)** is a case in point. Reporting obligations under the IED (see **Annex 1**) range from basic questions such as where a permitted IED installation is located, to more complex ones, for example demonstrating that best available techniques have been applied correctly, or combustion plant emissions (SO₂, NO_x and dust emissions) and energy input.

The EEA, with its sizeable team of data experts, would comb through large numbers of national datasets (to compare and contrast UK data with, say data from Germany or Romania). The EEA would carry out both a quality assurance role (such as searching for data anomalies and outliers and checking of granular details like the coordinates of installations) but also carry out an analytical role by carrying out year on year and trend analysis. Reports would be generated based on this work and key metric indicators could be drawn from this too.

Defra's most recent *UK National Implementation report* to the UNECE Kiev Protocol¹⁹ explains the processes for ensuring quality of data contained in national **Pollutant Release and Transfer Registry (PRTR)** reports such as validation checks on its online data entry systems (used by local authorities in England and Wales) and quality assurance checks for outliers. However, it also describes its reliance on manual quality assurance checks for those competent authorities which do not use online data entry systems and the report infers that quality checks previously carried out by the EEA will be continued after leaving the EU. If there is a reliance on manual checks, then workforce capacity will need to be sufficient for the task. The National Audit Office pointed out that agencies (the Environment Agency and Natural England) have existing workforce issues 'that have affected their ability to deliver their current workload. They will need further resource in the future to support the EIP...'. This is not unique to agencies but to local authorities as well²⁰ so there may be pressures in ensuring that quality control is maintained.

¹⁹ See Article 10 for a short discussion on the UK's effort to maintain quality control, *2021 United Kingdom National Implementation Report Kiev Protocol on PRTR*, https://prtr.unece.org/sites/default/files/2021-01/2021%20TC%20-%20UK%20PRTR%20Implementation%20Report%20in%20accordance%20with%20Decision%20I_5_1.pdf, accessed 21.04.23

²⁰ Local Government Association, *Financing Green Ambitions*, <https://www.local.gov.uk/publications/financing-green-ambitions>

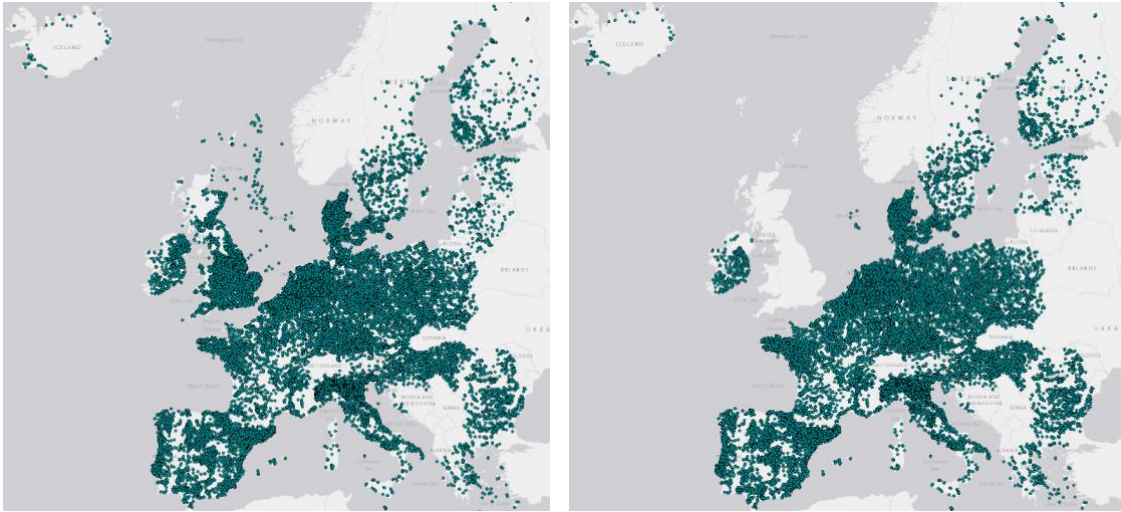


Figure 3: EU Industrial Emissions Portal, IED and PRTR datapoints for 2019 (left) and 2020 (right) (source: [EEA](#))

As mentioned in the previous section with the examples of UWWT and DW, ensuring **consistency** is challenging. To help overcome this and in part to aid good **cooperation** and **coordination** the UK has established a Common Frameworks (CF) process to ‘ensure a common approach is taken where powers have returned from the EU which intersect with policy areas of devolved competence²¹’. The CF’s cover a range of thematic areas and set out the need for things like ‘information sharing’ and remind the signatories of international convention obligations which often require cooperation and collaboration on reporting. This goes some way to building and/or maintaining networks of individuals within public administrations across the four nations to ensure the collaboration and coordination of data and reporting after the UK exited the EU.

Defra has also set up its own informal environmental reporting network, to manage the relationship between the four nations of the UK post EU membership. The environmental reporting network is akin to Eionet (which has 38 member organisations) but on a much-reduced scale. Its role is to share, on a practical level, information and knowledge and coordinate data collection as well as to discuss how the data and information are held, how they are exchanged and how best to aggregate data at a UK level so that it is fit for purpose e.g., to feed into those MEAs of which the UK is a signatory. Though much needed and perhaps nimbler to changing circumstances such as new data and reporting requirements, without being part of a deeper and wider knowledge network such as Eionet, the UK’s own environmental reporting network is likely to be more limited in terms of shared learning from peers.

²¹ <https://www.gov.uk/government/collections/uk-common-frameworks>

In some areas, such as marine policy, there continues to be a high degree of cooperation and coordination between the four nations of the UK - in fact it is required by law²². There are also international obligations which require cooperation so that the UK can submit data and/or information to MEA's like the UNECE Kiev Protocol. Both of these require that the four nation's competent authorities work together to standardise, or at least make consistent and comparable, data and information that can then be used to make joint reports to a MEA at the UK level. England and Wales, and England and Scotland, also share a common border and so there are transboundary issues at stake. The Severn River Basin District²³ for example should require Wales and England to work together to understand pressures, carry out monitoring in a consistent way, develop a programme of measures and so on. This necessitates a degree of consistency in approach and methodology.

In other areas though, like on UWWT or DW, where there are no transboundary issues at stake, or no international conventions to report to, one could ask why it matters that nations of the UK share data and information amongst themselves and try to ensure consistency and comparability? If a river basin district or groundwater source is wholly within one nation, then why cooperate to ensure consistency and comparability, especially if it is no longer a legal obligation to collate this at a UK level to be sent to the EEA or European Commission? In this context it is perhaps understandable that a Minister at UK level may ask, what added value does it bring, and 'can we reduce costs by not doing it anymore'? Indeed, a Defra Minister could conceivably conclude that England is their chief concern without reference to gaining a wider UK picture or understanding.

However, bodies like the Joint Nature Conservation Committee which was formed in 1991 was, in part, created to manage *unnecessary* divergence or potential divergence in approach to the designation of protected sites and aid consistency in approach across the four nations. Similarly, in the EU the formation of the EEA in 1994 was to aid policy makers with their *understanding* of environmental data and information and to do this a key driver was to build comparability, consistency and harmonisation (where possible). Those reasons have not lost their potency 30 years on.

Yet, there may have to be some trade-offs.

Ministers may have to decide for example what data and reporting to keep and what not to, based sometimes, on cost. Some degree of quality control may also have to be sacrificed due to cost pressures, for example, it is hard to see how the UK can replicate the level of quality assurance functionality that the EEA provided because the staff resources required to match that would be significant. Where a civil servant or agency may argue that specific data collection streams or reports are necessary for *understanding* wider environmental change, a Minister might argue it is too expensive or that simply because it is not set down as a requirement in law any more then it can be dispensed with. There may be a trade-off

²² The 2010 Marine Strategy Regulations (MSR), which implement the 2008 Marine Strategy Framework Directive (MSFD), legally requires coordination (Article 7) and cooperation (Article 8) between devolved policy authorities in implementing the marine strategy. <https://www.legislation.gov.uk/ukSI/2010/1627/contents/made>

²³ <https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/9>

between consistency versus subsidiarity as UK nations wish to prioritise different things or even change their environmental policy ambition level.

A more thorough examination or appraisal of the data and reporting framework as a whole of the costs and benefits may be necessary to get a fuller picture and make a more informed decision. The Retained EU Law (Revocation and Reform) Bill (REUL) and the attempt to revoke the National Emission Ceilings Regulations 2018 is a small but useful case in point. See Box 1 below.

Box 1: Retained EU Law (Revocation and Reform) Bill & the National Emission Ceilings Regulations 2018

At the time of writing this report the REUL bill is passing through the UK Parliament. One of the proposed laws to be revoked concerns the National Emission Ceilings Regulations 2018.

The Government has proposed to revoke Regulations 9 & 10 of those regulations and a Commission Implementing Decision (2018/1522). These relate to the requirement for the UK to produce a National Air Pollution Control Plan (NAPCP), to hold a public consultation on it and to abide by a specific common reporting format when producing it. The Government's view is that the NAPCP's current format is: "long, complicated, resource intensive and duplicative, and does nothing to improve the quality of the air we breathe. By repealing this item, we can better focus on what will actually help clean up our air, such as by delivering on the ambitious air quality targets we have set in statute through the Environmental Act". On the other side of this coin is an NGO view that reports such as these ensure transparency, openness and accountability because they set out what the Government will do to meet the emission ceilings set out in law.

Making environmental data and information open, **transparent** and **accessible** empowers the public and brings **accountability** for the policies that are implemented on our behalf by Government.

Without the European Commission 'checking' to see if the UK has implemented its legal obligations, other bodies have stepped into this role - the OEP in England and Northern Ireland and ESS in Scotland²⁴. These bodies need to have access to clear and unambiguous datasets and collated, synthesised reports to enable them to make compliance assessments of their own. But other bodies like the National Audit Office, the Environmental Audit Committee in the UK Parliament and the Climate Change Committee have a stake too and have a role in scrutinising implementation of environmental law and policy. And perhaps most importantly, it is the public who have the right to know whether the law is being complied with, and whether targets and objectives are being achieved.

²⁴ See footnote 1 above with regard to the *Interim Environmental Protection Assessor* in Wales.

To aid transparency and accessibility (of data and information to the public), both the EU and UK have developed online systems to display real time environmental data. UK AIR²⁵ and the EEA's European Air Quality Index²⁶ provide, for example, up to date measurement of air pollution from across a network of monitoring sites and stations. They also provide historical data as well as forecasts of air pollution. Both are interactive so the public can zoom in to maps or search for their local area to find out air quality around them.

The raison d'être of PRTR is to ensure that the public can be made aware of (mainly) point source emissions²⁷ (see **Annex 1**). EU Member States send data and information to the EEA which is displayed on the EU's Industrial Emissions Portal²⁸ which then combines data from about 60,000 industrial sites in Europe²⁹ from 65 different economic activities and including 91 pollutants. It covers installations in the energy sector, the mineral industry, waste management sector and intensive livestock production. The UK no longer contributes data and information to the EU's Industrial Emissions Portal and instead manages its own PRTR database³⁰ including information about the same 91 pollutants but across UK industries only. Despite there now being two systems and not one, making it less user friendly, especially when comparing and contrasting across countries, these online data tools are highly sophisticated and increasingly valuable. Their interactive nature are particularly beneficial in empowering citizens. However, for some they may be too complex. Synthesising data and information into broader, *State of the Environment*³¹ type reports help some users like the general public and those seeking to scrutinise the actions of Government and its agencies - to gain a more holistic, integrated and lay-person understanding of what is going on.

Defra has been working towards establishing a 'data reporting hierarchy' with an aim to establish a clear line of sight between base data (that is collected from non-departmental public bodies like Natural England and other third-party data gatherers), through to the production of targeted reports, statistics and integrated assessment on the next level and then finally through to the development of key metric dashboards on top. The common thread through these being that they consistently communicate the same message and give users an understanding of whether the environment is improving or deteriorating³². The development of Defra's Outcome Indicator Framework (OIF) key metric dashboard in England³³ is part of this effort to track progress against the ambition set out in the 25YEP

²⁵ <https://uk-air.defra.gov.uk/>

²⁶ <https://www.eea.europa.eu/themes/air/air-quality-index>

²⁷ Note that PRTR is an obligation arising from a UNECE international agreement to which the UK is still party, but EU regulations added further obligations beyond this.

²⁸ <https://industry.eea.europa.eu/>

²⁹ The EU plus Iceland, Liechtenstein, Norway, Serbia, Switzerland. The UK's data is included up to 2019 and Northern Ireland remains in the datasets post Brexit.

³⁰ <https://www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets>. The PRTR database mostly contains information about point source emissions and so this is closely linked with the National Atmospheric Emissions Inventory which contains information about some diffuse sources of emissions too.

³¹ <https://www.eea.europa.eu/soer>

³² The added utility is that it should clearly link different datasets into the hierarchy and thus give a justification for why that information or data is being collected.

³³ <https://oifdata.defra.gov.uk/>

and now EIP23). Though its full implementation has been delayed³⁴, this is an effort to address the gap in understanding about the state of the environment at a high level and by extension build in a level of accountability into the data and reporting system.

³⁴ The OIF is currently incomplete though at an advanced stage of development. The latest (2022) annual update includes data on environmental trends for 50 of the 66 outcome indicators being tracked, <https://oifdata.DefraDefra.gov.uk/latest-update/>

6. Conclusions

There have been several distinct changes to the UK's environmental data and reporting framework since leaving the EU. Chief of these is that the obligation to send data and reports to the European Commission or to its agencies such as the EEA has ceased. In some policy areas, without the imperative to collate data and information at a UK level (so that it can be 'packaged' and sent to the European Commission or EEA), a single UK wide dataset and/or report has also ceased to be produced and has instead been replaced by four separate datasets/reports produced at the national level.

Leaving the EU however has not affected the data and reporting framework to the same degree in policy areas such as air pollution or industrial pollution. For instance, the four nations of the UK continue to coordinate, and collate data and information ready for submission to international conventions. At a UK level, the four nations work together on matters such as on marine policy and have to cooperate on transboundary issues, particularly on freshwater matters.

In the absence of legal obligations to report to the EU, Ministers, particularly in London, may question why resources should be spent on putting together UK level data and following related formats and protocols in the way that was required in the past. Seen in this light, this may be an understandable response but the case for reducing data gathering and reporting needs to be balanced against the benefits of continuity and transparency and the continuing and evolving requirements of the UK and its constituent nations.

A thorough and *publicly available* appraisal of the data and reporting framework in the UK would have many benefits. This could include an analysis of the costs and benefits of collecting, collating and analysing different strands of environmental data and subsequently reporting on them. It involves dialogue between the Westminster and devolved authorities and ideally a shared understanding of the priorities for cooperation in data gathering and reporting if this is not already included within existing initiatives such as the Common Frameworks process.

Defra is progressing policy in this area. For example, it has been building an environmental reporting network as well as a data reporting hierarchy, to create a 'line of sight' between base/raw data, targeted reports and key metric dashboard indicators. This is a useful initiative.

However, the building of a new data and reporting framework preferably should be part of a wider transparent and collaborative process adopting an end user mindset. This could involve diverse groups including, public bodies such as OFWAT, the Office for National Statistics and the Joint Nature Conservation Committee; scrutiny bodies like the OEP, the National Audit Office and Parliament; relevant NGOs, and to some degree, international bodies like the OECD and EEA, as well as the scientific and academic community. This

would ensure that where possible wide-ranging stakeholders are able to extract what is needed for their particular purpose.

Clearly there will be trade-offs, particularly when it comes to the costs and resources required to produce a particular set of data or reports on a given theme or topic. But the public benefits of openly available data and consistent time series reporting need to be part of the equation. Also, of relevance here is the recent report from the National Audit Office stating that Defra has more to do to align governance arrangements with environmental targets and plans and has limited data on the effectiveness of environmental regulation to inform decisions about future activities³⁵.

Ensuring a high quality data and reporting framework that is open and transparent comes with a cost. However, it is an essential part of the policy and legislative cycle with a wider public interest concern as well as need to allow assessments of levels of policy implementation and progress towards targets, such as those in the Environment Act.

³⁵ See: National Audit Office, *Regulating to achieve environmental outcomes*, <https://www.nao.org.uk/reports/regulating-to-achieve-environmental-outcomes/> & Office for Environment Protection, *Post Implementation Reviews of environmental laws*, <https://www.theoep.org.uk/report/government-consistently-failing-complete-post-implementation-reviews-environmental-laws>

Annex 1: List of EU directives, corresponding UK implementing legislation and main reporting requirements.

Table 1 lists a very selective list of a small number of EU directives, their corresponding UK implementing legislation and the main reporting requirements involved.

EU Directive	UK implementing legislation	Main EU reporting requirements	UK reporting obligations	
			Pre-EU withdrawal	Post-EU withdrawal
Industrial Emissions Directive 2010/75/EU	<ul style="list-style-type: none"> In England and Wales: The Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154, as amended) (which consolidated and replaced SI 2010 No. 675, as amended) In Scotland: The Pollution Prevention and Control (Scotland) Regulations 2012 (SSI 2012 No. 360, as amended) In Northern Ireland: The Pollution Prevention and Control (Northern Ireland) Regulations 2013 (SR 2013 No. 160, as amended) 	<ul style="list-style-type: none"> Article 72.1 (and Implementing Decision 2012/795/EU) Reporting obligations on IED-installations (including data on competent authorities, permit information (e.g., derogations), and baseline reports) Article 72 (3) on Summary of inventories of combustion plant emissions and energy input 	<ul style="list-style-type: none"> Up to 2020, information can be found on the Industrial Emissions Portal³⁶ 	<ul style="list-style-type: none"> UK PRTR & IED data³⁷ with some diffuse data at the National Atmospheric Emissions Inventory³⁸

³⁶ <https://industry.eea.europa.eu/>

³⁷ <https://www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets#search-the-prtr-database-on-your-chosen-parameters>

³⁸ <https://naei.beis.gov.uk/>

<p>Urban Waste Water Treatment Directive 91/271/EEC (UWWTD)</p>	<ul style="list-style-type: none"> The Urban Waste Water Treatment (England and Wales) Regulations 1994³⁹ and later amended⁴⁰ and later amended by the UK Withdrawal Agreement⁴¹ The Urban Waste Water Treatment (Scotland) Regulations 1994⁴² and later amended⁴³ The Urban Waste Water Treatment Regulations (Northern Ireland) 2007⁴⁴ 	<ul style="list-style-type: none"> Information on monitoring results (Article 15) on compliance of discharges of UWW and amounts and composition of sludge Situation Report on the disposal of UWW and sludge (Article 16) National implementation programmes (Article 17) Also: <i>Latest report on state of implementation in the European Union</i>⁴⁵ 	<ul style="list-style-type: none"> Data related to implementation of Articles 15 and 17 up to and including 2018 can be found on the EIONET website⁴⁶. Situation Report (Article 16) UK's implementation in 1996⁴⁷, 2002⁴⁸, 2012⁴⁹ 	<ul style="list-style-type: none"> Data for England for 2020 is published in a report⁵⁰ and a dataset⁵¹. In Wales, Sensitive areas - bathing waters⁵², nitrates⁵³ and eutrophic⁵⁴. In Northern Ireland, sensitive areas⁵⁵
--	---	--	--	---

³⁹ <https://www.legislation.gov.uk/uksi/1994/2841/made>

⁴⁰ <https://www.legislation.gov.uk/uksi/2003/1788/made>

⁴¹ <https://www.legislation.gov.uk/uksi/2019/558/regulation/7/made>

⁴⁶ <https://rod.eionet.europa.eu/obligations/524/deliveries>

⁴⁷ https://cdr.eionet.europa.eu/gb/eu/UWWTD16/envudovgg/UK_Article_16_report_1st_edition_1996.pdf

⁴⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69582/pb6655-uk-sewage-treatment-020424.pdf

⁵⁰ <https://www.gov.uk/government/publications/wastewater-treatment-in-england/wastewater-treatment-in-england-data-for-2020>

⁵¹ <https://www.data.gov.uk/dataset/d7e2c57b-110a-462b-97a0-9833e7d26cc2/wastewater-treatment-in-england>

⁵² <https://www.data.gov.uk/dataset/028090e4-6c8d-49fd-a796-e3564940d625/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-bathing-waters>

⁵³ <https://www.data.gov.uk/dataset/33556b75-a7a6-4169-9f7d-c676681c0ebe/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-nitrates>

⁵⁴ <https://www.data.gov.uk/dataset/6a92bea2-9583-4b0a-85d6-658156caa539/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-eutrophic>

<p>Drinking Water Directive EU 2020/2184</p>	<ul style="list-style-type: none"> • For a good list of legislation relating to England & Wales, see: https://www.dwi.gov.uk/water-companies/legislation/ • In Scotland, The Public Water Supplies (Scotland) Regulations 2014⁵⁶ (as amended) and as amended in 2022⁵⁷ • In Northern Ireland, The Water Supply (Water Quality) Regulations (Northern Ireland) 2017⁵⁸ 	<ul style="list-style-type: none"> • Report on quality of water intended for human consumption (Article 13) every three years 	<ul style="list-style-type: none"> • The triennial report 2017-2019 for England and Wales is published on the Drinking Water Inspectorate's website⁵⁹. Earlier reports can be found via Eionet. 	<ul style="list-style-type: none"> • Subsequent reports for England and Wales must be published at intervals not exceeding three years⁶⁰ meaning that the next report is due at the latest by 31 December 2024. • Annual reports for Scotland are published on the Scottish Regulator's website⁶¹. • Annual reports on DW quality in Northern Ireland are published on the DAERA website⁶².
---	---	---	---	--

⁵⁰ <https://www.gov.uk/government/publications/wastewater-treatment-in-england/wastewater-treatment-in-england-data-for-2020>

⁵¹ <https://www.data.gov.uk/dataset/d7e2c57b-110a-462b-97a0-9833e7d26cc2/wastewater-treatment-in-england>

⁵² <https://www.data.gov.uk/dataset/028090e4-6c8d-49fd-a796-e3564940d625/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-bathing-waters>

⁵³ <https://www.data.gov.uk/dataset/33556b75-a7a6-4169-9f7d-c676681c0ebe/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-nitrates>

⁵⁴ <https://www.data.gov.uk/dataset/6a92bea2-9583-4b0a-85d6-658156caa539/urban-waste-water-treatment-directive-UWWTDd-sensitive-areas-eutrophic>

⁵⁵ <https://www.data.gov.uk/dataset/020cb2da-2cd8-435f-83f1-f64b956deb83/urban-waste-water-sensitive-areas-2nd-cycle>

⁵⁶ <https://www.legislation.gov.uk/ssi/2014/364/contents>

⁵⁷ <https://www.legislation.gov.uk/ssi/2022/387/regulation/2/made>

⁵⁸ <https://www.legislation.gov.uk/nisr/2017/212/made>

⁵⁹ <https://www.dwi.gov.uk/consumers/triennial-report-2017-2019/>

⁶⁰ <https://www.legislation.gov.uk/uksi/2016/614/part/12>

⁶¹ <https://dwqr.scot/information/annual-report/>

⁶² <https://www.daera-ni.gov.uk/publications/drinking-water-quality-northern-ireland>

<p>Marine Strategy Framework Directive 2008/56/EC</p>	<ul style="list-style-type: none"> The Marine Strategy Regulations 2010⁶³ and later amended⁶⁴ and by EU Exit regulations⁶⁵ 	<ul style="list-style-type: none"> Marine Strategy which includes, amongst other things, <ol style="list-style-type: none"> an initial assessment of the current state of national marine waters (Art.8), a determination of ‘Good Environmental Status’, (Art.9) setting of environmental targets and indicators, (Art.10) monitoring programmes (Art.11) and, programme of measures (Art.13). 	<ul style="list-style-type: none"> The UK Marine Strategy: <ul style="list-style-type: none"> Part One (assessment of marine waters, targets, indicators and GES) for 2012⁶⁶ and the update in 2019⁶⁷ Part Two (monitoring programmes) updated for 2022⁶⁸ Part Three (programme of measures) for 2015⁶⁹ and is currently being consulted on for an update⁷⁰. 	
--	--	---	---	--

⁶³ <https://www.legislation.gov.uk/ukxi/2010/1627/contents>

⁶⁴ The Marine Works (Environmental Impact Assessment) and Marine Strategy (Amendment) Regulations 2018, <https://www.legislation.gov.uk/ukxi/2018/287/contents/made>

⁶⁵ The Marine Environment (Amendment) (EU Exit) Regulations 2018, <https://www.legislation.gov.uk/ukxi/2018/1399/contents/made>

⁶⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf

⁶⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/921262/marine-strategy-part1-october19.pdf

⁶⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1125641/uk-marine-strategy-part-two-monitoring-programmes-2021.pdf

⁶⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/486623/marine-strategy-part3-programme-of-measures.pdf

⁷⁰ <https://consult.DefraDefra.gov.uk/uk-marine-strategy-programme-of-measures-3/uk-marine-strategy-part-3/>

<p>Habitats Directive 92/43/EEC</p>	<ul style="list-style-type: none"> • In England and Wales, <i>The Conservation of Habitats and Species Regulations 2017</i>⁷¹ and by EU Exit regulations⁷² • In Scotland, <i>The Conservation (Natural Habitats, &c.) Regulations 1994</i>⁷³ and by EU Exit regulations⁷⁴ • In Northern Ireland, <i>Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995</i>⁷⁵ and by EU Exit Regulations⁷⁶ • Also: <i>The Conservation of Offshore Marine Habitats and Species Regulations 2017</i>⁷⁷ & <i>The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001</i>⁷⁸ 	<ul style="list-style-type: none"> • Implementation Report (Art. 17) • National Report on Derogations (Art.16.2) • Information on Natura 2000 sites (SCIs and SACs) (Art.4) • Information on Compensation Measures (Art.6.4) 	<ul style="list-style-type: none"> • UK Article 17 report for period 2013-18 submitted in 2019⁷⁹ • Reports for Article 16.2, 4 and 6.4) can be obtained via Eionet. 	<ul style="list-style-type: none"> • The UK Government has stated that the 2019 EU Exit regulations require: • <i>A report every 6 years on implementation</i> • <i>Biennial derogation reports - reports on the licensed activities that are exceptions to the legislation.</i> • And, <i>The 2019 Regulations also place a duty on the Secretary of State to publish a composite report drawn from the 6-yearly reports of all the devolved administrations within 2 years of their publication</i>⁸⁰.
--	--	--	--	---

⁷⁹ <https://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019/>

<p>Birds Directive 2009/147/EC</p>	<ul style="list-style-type: none"> • See above. 	<ul style="list-style-type: none"> • Implementation report (Art.12) • National report on Derogations (Art.9) • Information on Natura 2000 sites (SCIs and SACs) (Art.4.3) • Information on Compensation Measures (Art.7) 	<ul style="list-style-type: none"> • UK Article 12 report submitted in 2019⁸¹ • Reports for Article 4.3, 7 & 9) can be obtained via Eionet. 	<ul style="list-style-type: none"> • See above.
<p>Pollutant Release & Transfer Register (PRTR) EC 166/2006 & 2019/1741</p>	<ul style="list-style-type: none"> • In the UK⁸² and amended⁸³ 	<ul style="list-style-type: none"> • Article 7 report covering data reported by industrial facilities on 91 pollutants 		

⁷² <https://www.legislation.gov.uk/uksi/2019/579/contents/made>

⁷³ <https://www.legislation.gov.uk/uksi/1994/2716/contents/made>

⁷⁴ <https://www.legislation.gov.uk/ssi/2019/113/contents/made>

⁷⁵ <https://www.legislation.gov.uk/nisr/1995/380/contents/made>

⁷⁶ <https://www.legislation.gov.uk/uksi/2019/582/contents/made>

⁷⁷ <http://www.legislation.gov.uk/uksi/2017/1013/contents/made>

⁷⁸ <http://www.legislation.gov.uk/uksi/2001/1754/regulation/2/made>

⁷⁹ <https://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019/>

⁸⁰ <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017#reporting-obligations>, accessed 12.05.23.

⁸¹ <https://jncc.gov.uk/our-work/article-12-report-2019/>

⁸² <https://www.legislation.gov.uk/eur/2006/166>

⁸³ <https://www.legislation.gov.uk/uksi/2018/1407/regulation/2/made>

Annex 2: Terms and Terminology

This topic is fraught with challenges in the use of terminology. Here are some signposts to explain what is meant in this paper.

- A set of **data** is numerical / quantifiable.
- **information** is a textual description of something.
- **Reports** are written accounts, a contextual description of something.
- **Reporting** is the transfer of data and/or information from one entity to another e.g., an Article 17 Habitats Directive report from the UK to the European Commission.

Monitoring, both in the broader sense of evaluation and assessment as well as the narrow sense e.g., of measuring emissions from a stormwater overflow pipe, is deliberately avoided in this briefing.



Institute
for
European
Environmental
Policy UK

The Institute for European Environmental Policy UK (IEEP UK) is a not-for-profit environmental sustainability think tank, with over 40 years of experience, based in the UK. As part of the broader IEEP family, we are dedicated to working with stakeholders, international bodies, academia, civil society organisations and industry to produce evidence-based research for impact-driven environmental policy solutions. Our work covers both short-term and long-term environmental strategic issues in the UK and its constituent nations (England, Wales, Scotland and Northern Ireland), as well as their interaction with policy in Europe and globally.

www.ieep.uk



DISCLAIMER:

The arguments expressed in this report are solely those of the authors, and do not reflect the opinion of any other party.

THE REPORT SHOULD BE CITED AS FOLLOWS:

M. Nicholson, (2023) 'Bridging the Gap: Understanding UK environmental data and reporting outside the EU', Policy Report, Institute for European Environmental Policy, UK

CORRESPONDING AUTHORS:

Michael Nicholson (mnicholson@ieep.eu)

ACKNOWLEDGEMENTS:

I gratefully acknowledge helpful reviews and comments from D. Baldock, A. Farmer, K. Hart and D. Stanners.

This report was commissioned by Delegation of the European Union to the United Kingdom.

© Photo by [Boys in Bristol Photography](#) on [Unsplash](#)