



# **Supporting the evaluation of Regulation (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register and its triennial review**

*Final report*

Prepared by  
Amec Foster Wheeler Environment &  
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## Executive summary

This study provides the findings of a Regulatory Fitness (REFIT) evaluation for the Regulation covering the European Pollutant Release and Transfer Register (E-PRTR) (EC/166/2006). The REFIT evaluation was carried out in tandem with the triennial review of the implementation of E-PRTR, which is a requirement of the Regulation under Article 16. In conducting this study it was recognised that the triennial review of implementation could provide valuable data towards the REFIT evaluation. To ensure clarity, this study report focusses on the main REFIT evaluation alone, drawing in the salient details from triennial reporting by Member States with all the information collected presented in the Appendices.

### European Pollutant Release and Transfer Register (E-PRTR)

The Regulation concerning the establishment of a European Pollutant Release and Transfer Register (EC/166/2006) placed a requirement for the development of a database of information to be made publically available. The Regulation supports the EU to meet the needs of the UNECE Kiev Protocol on pollutant release and transfer registers. Both the E-PRTR and Kiev Protocol have aligned objectives around enhanced public access to information through the establishment of coherent, nationwide pollutant release and transfer registers (PRTRs). The PRTRs were established in order to meet the wider ethos of the Aarhus Convention (under which the Kiev Protocol sits) for public engagement in decision making and fostering the relationships between industry, government bodies, and the general public, in reducing and managing the emission/release of harmful substances to the environment. The overarching principle behind the publication of the E-PRTR is that an informed public will be able to influence the behaviour of operators and enhance the awareness of all those involved to encourage the reduction of releases and transfers of pollutants.

The E-PRTR provides pollutant and waste data on 30,000 industrial facilities, spanning not only the EU Member States, but also the nations covered under the European Free Trade Area (EFTA). The information gathered annually, covers 91 pollutants (detailed in Annex II of the Regulation) across various economic activities (defined in Annex I of the Regulation). The E-PRTR also provides data on waste and pollutant transfers (waste water) and is publically available via the internet. This process includes data since 2007, replacing the previous system covered by the European Pollutant Emission Register. The E-PRTR allows users to compare facilities across the EU. This information is used, inter alia, by policy-makers for revising or introducing new policies or instruments. As such, the E-PRTR is a key tool to meet the objective of the 7th Environmental Action Programme to 'improve the knowledge and evidence base for Union environment policy'.

### Regulatory Fitness (REFIT) Evaluations

The EU REFIT programme was established in the 2012 Commission Communication on Regulatory Fitness (COM(2012)746). The evaluation applies core analytical questions, included in the 2012 Communication to the Regulation, regarding effectiveness, efficiency, coherence, relevance and EU added value.

### Scope of Evaluation

The evaluation focusses on E-PRTR as an instrument enhancing the consistency of data reported in national PRTRs and as a tool to enable data gathering at EU level. Furthermore, E-PRTR provides a website for publishing data at EU level. As there is interdependency between national PRTRs and E-PRTR, the evaluation also looks, where appropriate, at national obligations (e.g. reporting obligations of operators and national E-PRTRs) that are not direct results of the E-PRTR Regulation.

### REFIT Evaluation

For the evaluation a combination of literature review, stakeholder consultations, workshop, web statistics and Member States reports (Article 16) has been used.

The **effectiveness** of the E-PRTR was seen as having a fair performance against its objectives. The main weakness identified was the interpretation of data, leaving a need for additional information to allow its easy interpretation by the widespread public. On the other hand, the completeness and quality of the data is improving over time and the E-PRTR is a highly comprehensive and detailed data set that has few alternatives with similar quality.

When analysing the **efficiency**, the E-PRTR performed well. Meaning that for data providers, the required effort to meet the reporting requirements under E-PRTR that are additional to those put upon Member States as Parties to the Kiev Protocol was seen as minimal, and that for data managers the level of effort was seen as appropriate for the benefits provided by the E-PRTR. The efficiency of the E-PRTR could however be further improved by harmonised reporting with other environmental legislation.

Some **coherence** concerns were raised on how E-PRTR matches against the data reported in other related environmental legislation, particularly IED and waste. Opportunities to align the IED with the E-PRTR Regulation were mentioned. Ongoing work under INSPIRE and data templates does provide a valuable opportunity to help harmonise reporting issues, which would also have beneficial effects for the efficiency theme.

The **relevance** of E-PRTR was confirmed by the evaluation. Some concerns were raised that the data provided covers mainly large point sources and more should be done to ensure that diffuse emissions were equally covered. However, the detailed and comprehensive nature of the dataset and easy access ensures the relevance of the E-PRTR.

For **EU added value** it was agreed that the E-PRTR provides added value beyond the requirements of the Kiev Protocol by ensuring a consistent implementation of the Protocol across the EU and has clear application for policy makers, industry and general public. The supporting activities of the EEA and others at EU level are important to drive the added value of the Regulation. The presence of the E-PRTR improves the completeness and quality of national registers.

The evaluation demonstrates that the Regulation adds value on top of the implementation of the Protocol by the Member States. The EU level register is valued by users, because it provides transparency on the pollutant emissions from industrial activities and it allows comparative assessments between Member States and between different categories of industrial activity.

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## Glossary

BAT	Best Available Techniques	LCPD	Large Combustion Plant Directive
CLRTAP	Convention on Long-range Transboundary Air Pollution	NECD	National Emission Ceilings Directive
EEA	European Environment Agency	NGO	Non-governmental organisation
EFTA	European Free Trade Association	PRTR	Pollutant Release and Transfer Register
EM	Explanatory Memorandum	REFIT	Regulatory Fitness and Performance Programme
EPER	European Pollutant Emission Register	SME	Small and Medium Enterprises
E-PRTR	European Pollutant Release and Transfer Register	SED	Solvent Emissions Directive
GHG	Greenhouse gas	UNECE	United Nations Economic Commission for Europe
IA	Impact assessment	UWWTD	Urban Waste Water Treatment Directive
IED	Industrial Emissions Directive	UWWTP	Urban Waste Water Treatment Plant
IPPCD	Integrated Prevention and Control Directive	WFD	Water Framework Directive

# 1. Introduction

## 1.1 Objectives

This report concerns a contract (070201/2014/692088/ENV.C3) between the European Commission and Amec Foster Wheeler Environment and Infrastructure UK Limited ('Amec Foster Wheeler'), which relates to "supporting the evaluation of Regulation (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register and its triennial review". The work on this contract has been undertaken in association with the Institute for European Environmental Policy (IEEP). This document is the final report for this study.

This project supports the European Commission in meeting its obligations identified within the European Pollutant Release and Transfer Register (E-PRTR) Regulation covering triennial reviews but also within the broader body of work covering the Commission's Regulatory Fitness and Performance Programme (REFIT)<sup>1</sup>. Based on these obligations, the key objectives of the project are:

- Provide information to allow the Commission to fulfil its obligation under the Triennial reporting for the E-PRTR regulation – Article 7 of the E-PRTR Regulation;
- Include a comparison to the previous triennial report to allow the Commission to have a degree of continuity and overall assessment of how the regulation has met its obligations since the creation of the E-PRTR; and
- Use the evidence base developed – along with wider information sources – to carry out an evaluation of the E-PRTR regulation as per the requirements of the REFIT programme. This covers the five key headings of effectiveness, efficiency, coherence, relevance, and EU added value.

## 1.2 Requirements of EU REFIT programme

The EU REFIT programme, meaning "Regulatory Fitness", was established in the 2012 Commission Communication on Regulatory Fitness (COM(2012) 746), building on earlier initiatives derived in the successive Commission Communications on Better Regulation in the 2000s leading to the Communication introducing Smart Regulation<sup>2</sup>. The aim of the REFIT is to apply core analytical questions included in the 2012 Communication to the Regulation. These are:

1. **Have the objectives been met?** This is the evaluation of the **effectiveness** of the legislation. Legislation should be designed so that its objectives can be implemented.
2. **Were the costs involved justified** given the changes which have been achieved? This is the evaluation of the **efficiency** of the legislation. Objectives may be met, but at high cost. Alternative approaches might meet the same objectives at lower cost.
3. Does the action **complement** other actions or are there **contradictions**? This is the evaluation of the **coherence** of the legislation. Coherence as stated here involves the compatibility of means, but it also involves core issues of coherence of legal texts, etc.

<sup>1</sup> The E-PRTR evaluation fits into a wider exercise as announced in the 2016 work programme of the European Commission. This will cover horizontally all reporting under EU environmental acquis. More information available at: [http://ec.europa.eu/atwork/pdf/cwp\\_2016\\_annex\\_ii\\_en.pdf](http://ec.europa.eu/atwork/pdf/cwp_2016_annex_ii_en.pdf)

<sup>2</sup> COM(2010)543, Communication on Smart Regulation in the European Union <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC0543&from=EN>

4. Is EU action still necessary? This is the evaluation of the **relevance** of the legislation. Is the law **still addressing an issue that needs to be addressed** at EU level and is it covering this adequately (e.g. are there gaps or, alternatively, unnecessary obligations)?
5. Can or could similar changes have been achieved without EU action or **did EU action make a difference**? This is the evaluation of **EU added value**. There is a relationship with the evaluation of relevance, but rather than whether the legal action addresses a 'gap', this question is more concerned with whether EU level action was necessary to address that gap. Furthermore, EU added value might be in harmonising reporting leading to an increased usability and credibility of the instruments.

For any piece of legislation, these questions need to be elaborated to create an analytical structure specific to that legislation (as the project specifications do for the E-PRTR Regulation). Addressing these questions is the objective of this project, which will, therefore, contribute to the REFIT programme for this area of policy.

## 1.3 Background

### 1.3.1 Creation of E-PRTR

The European Pollutant Emission Register (EPER) was set up by Decision 2000/479/EC to implement the requirements of Article 15(2) of the IPPC Directive requiring that "the results of monitoring of releases [...] held by the competent authority shall be made available to the public." The EPER was the first European wide register for emissions to air and water. It was also providing a tool for monitoring the effects of implementation of BAT by EU industry.

In 1998 the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-making and Access to Justice on Environmental Matters (the Aarhus Convention) entered into force. The Kiev Protocol on pollutant release and transfer registers was adopted under this Convention in 2003. This Protocol was the first legally binding multilateral agreement on pollutant release and transfer registers to extend beyond the EU's borders. Under the Kiev Protocol, each signatory was required to establish a pollutant release and transfer register (PRTR) that would be coherent, integrated and publicly accessible.

In addition to the national implementation of the Kiev Protocol, which resulted in the adoption of national PRTRs, the E-PRTR Regulation was adopted in 2006 to implement the Kiev Protocol at EU level. All Member States with the exception of Italy are Parties to the Kiev Protocol and have adopted national PRTRs. As such the role of the Regulation was also to ensure consistency of the data being reported to national PRTRs. Under the new Regulation, the basic structure remained similar to the EPER, however, the scope of the releases to be reported was extended (e.g. additional activities covered). The E-PRTR Regulation went beyond the requirements of the Protocol by including inter alia, five additional pollutants and setting reporting thresholds for off-site transfers of waste water. The Regulation required that the information reported by Member States was made available online, as implemented through the E-PRTR website.

Key points to note from the relationship between the Kiev Protocol and the E-PRTR Regulation are:

- The Kiev Protocol was adopted under the Aarhus Convention, which focussed on public participation and access. This sets the context of the primary purpose of PRTR;
- The Protocol contained some alternative approaches for Parties (e.g. relating to thresholds), which were not included in the EU Regulation to ensure uniformity of approach across the EU and consistency within the EU Register; and



- The Regulation has a very limited number of additional elements to the Protocol (e.g. for water discharges).

### **1.3.2 Evolution of E-PRTR since 2007**

Since 2007, the first year of reporting under the E-PRTR, emissions to air, water and land were reported for 65 categories of economic activities across Europe (listed in Annex I of the Regulation). The Regulation currently applies to more than 30,000 industrial facilities for 91 pollutants listed in Annex II of the Regulation (including greenhouse gases, other gases, heavy metals, pesticides, chlorinated organic substances and other inorganic substances).

The economic activities described in Annex I have been grouped in nine main sectors: energy; production and processing of metals; mineral industry; chemical industry; waste and waste water management; paper and wood production and processing; intensive livestock production and aquaculture; animal and vegetable products from the food and beverage sector; and other activities. The first five categories mirror to some extent categories 1-5 of Annex I of the Industrial Emissions Directive (IED), with the remaining categories splitting up industrial activities identified in category 6 of Annex I of the IED. However, the E-PRTR also includes reporting from some activities that are not regulated by the IED (e.g. underground mining and intensive aquaculture).

When the thresholds indicated in the Regulation are exceeded, operators of facilities report, to the national competent authority, amounts of pollutant releases to air, water and land as well as off-site transfers of waste and of pollutants in waste water from their facilities. The reporting must include information on accidental release and method of deriving the emission (i.e. measured, evaluated or calculated).

In addition, it is stated within the Regulation that where appropriate, reporting on releases from diffuse sources should be improved in order to better contextualise the releases. Air releases are presented on the E-PRTR website and since 2015 diffuse releases to water have also been presented.

It is further stipulated that for emissions to water, the river basin where the water is to be released must be identified. The authority is then required to report this information to the European Commission by submitting a consolidated register of all pollutant releases and transfers from industrial activities. Member States are allowed to label some information as confidential but, when this is the case, they must specify the type of information being withheld and the reasons in accordance with. The use of the confidentiality feature is controlled and few sites have been considered to be eligible. The Member States are responsible for verifying the quality and the coherence of the data they provide to the EU. Data can be re-submitted in order to correct mistakes identified.

### **1.3.3 E-PRTR website**

The information reported by operators (through the national competent authorities) is available on the E-PRTR website. It presents emissions data for approximately 30,000 industrial facilities across the EU and the European Free Trade Association (EFTA) countries on the main pollutant releases to air, water and land as well as off-site transfers of waste from a list of 91 pollutants. Emissions are available for 2007 onwards and are updated on an annual basis. Different levels of aggregation of the data are available. Emissions data can be accessed at the following levels: facility, industrial activity, country, or river-basin. The website includes a link toward the EEA website where the full database of the E-PRTR and summary tables can be downloaded.

In addition to the information reported by operators, the E-PRTR website presents releases from diffuse sources to air and water. This includes emissions from sources such as road transport, shipping, aviation, domestic heating and agriculture. The data for diffuse emissions to air are based on datasets reported by Member States under the UNECE Convention on Long-range Transboundary Air Pollution, and cover emissions of nitrogen

oxides, sulphur oxides, carbon dioxide, ammonia and particulate matter. Diffuse emissions to water include nutrient loss maps from agriculture, derived from data collected by the EEA.

Information presented on the E-PRTR website includes a glossary on activities and pollutants. The access to data supports the access of European citizens to information on environmental and health protection, and promotes actions to reduce these environmental impacts.

### 1.3.4 State of play

An important part of the evaluation is to compare the actual results of an intervention against the expected outcomes. When proposed in 2004, the E-PRTR was expected to help contribute to preventing and reducing overall pollution as well as offering useful data to environmental decision makers. This would be particularly useful when formulating environmental policy while enhancing public access to environmental information through the establishment of a coherent, integrated, European-wide "Pollutant Release and Transfer Register"<sup>3</sup>.

The Regulation was also expected to help harmonise and make data collection and reporting more effective, which would ensure the quality and comparability of this information, while also making it overall more accessible<sup>4</sup>. This expectation was compared against the evidence collected on the effectiveness of the Regulation. Published opinion from the European Economic and Social Committee the adoption of the Regulation highlighted that it was expected that the E-PRTR Regulation would be an improvement over the previous EPER approach insofar that it would provide more information on releases to air and water including releases from diffuse sources. This expectation was also reviewed in the effectiveness part of the evaluation.

While the adoption of the E-PRTR was in order to implement the Kiev Protocol, there was also the expectation that it would lead to more legal certainty by synching the wording in the Annex with the IPPC Directive for which reforms were being considered then. This aspect, the compatibility of the E-PRTR with other legislation was reviewed in the coherence assessment.

An assessment of the cost and benefits of PRTRs was produced in 2002<sup>5</sup> which considered the economic impacts of a potential E-PRTR. It noted that since Member States were already required to implement the EPER (i.e. to report data), the costs would only be for new provisions covering the transfer of data between the Commission and the Member States and the storage of data. It was agreed that the Commission would bear the majority of these costs by setting up and maintaining the web page. Costs were identified only for operators previously outside the scope of the IPPC Directive for which monitoring and reporting releases and transfers would be a new expense and an administrative burden. These economic considerations were considered in details when assessing the efficiency of the Regulation.

## 1.4 Importance of reporting tools in EU environmental policy

The overarching principles behind the publication of the E-PRTR are that an informed public will be able to influence the behaviour of operators and enhance the awareness of all those

<sup>3</sup> Legislative observatory, <http://www.europarl.europa.eu/oeil/popups/summary.do?id=880716&t=d&l=en>

<sup>4</sup> Opinion on the proposal from the European Economic and Social Committee, 6 April 2005, [https://dm.eesc.europa.eu/EESCDocumentSearch/Pages/redresults.aspx?k=\(documenttype:AC\)\(documentnumber:0383\)\(documentyear:2005\)\(documentlanguage:EN\)](https://dm.eesc.europa.eu/EESCDocumentSearch/Pages/redresults.aspx?k=(documenttype:AC)(documentnumber:0383)(documentyear:2005)(documentlanguage:EN))

<sup>5</sup> *Analysis of the Cost and Benefits of PRTRs* produced by the Economic Analysis Division in 2002. CEP/WG.5/AC.2/2002/4.

involved to encourage the reduction of releases and transfers of pollutants. The register also allows similar facilities to compare their performance with facilities in other EU Member States, the EFTA countries and Serbia.

The E-PRTR allows users to compare facilities across the EU and understand the variations in releases and transfers reported. This information is also used by policy-makers for revising or introducing new policies or instruments. As such, the E-PRTR is a key tool to meet the objective of the 7th Environmental Action Programme to 'improve the knowledge and evidence base for Union environment policy' and is comparable to other reporting systems (e.g. WISE for water related information). Whilst the E-PRTR is primarily an information tool, it can also be used as a high level monitoring tool for progress made by individual sectors in meeting specific objectives, in particular those subject to the IED obligation to use BAT (Best Available Techniques).

## 2. Methodology

### 2.1 Scope of the evaluation

The E-PRTR Regulation is the implementing instrument for the EU of the Kiev Protocol. Due to Member States being parties to the Kiev Protocol and the EU, they have to comply with both the Protocol and the Regulation. In practice, E-PRTR is the instrument that ensures that national PRTRs contain comparable data. It ensures consistent implementation of the protocol by all Member States. This means that whilst the obligation of operators to report to national PRTRs stems from the Kiev Protocol, the E-PRTR Regulation provides the basis for consistency between data reported in the various Member States. This reporting, in many instances, matches or can be readily derived from the more detailed monitoring requirements imposed by national law and/or the IED. Furthermore, the E-PRTR website is the embodiment of the EU implementation of the Kiev Protocol.

The differences between the obligations stemming from the Kiev Protocol and those stemming from the E-PRTR Regulation are presented in Appendix K.

The evaluation will focus on the following aspects of E-PRTR:

- Instrument enhancing the consistency of data reported in the context of national PRTRs;
- Tool enabling the gathering of data at EU level; and
- Website for publishing data at EU level.

However, as there is interdependency between national PRTRs and E-PRTR the evaluation would have a higher added value if it also looks into a wider set of relevant issues, where appropriate. Therefore, other national obligations, which are not direct effects of the Regulation, will also be referred to, such as:

- Reporting obligations of operators;
- National E-PRTRs; and
- Permitting of facilities and monitoring and their emissions and releases.

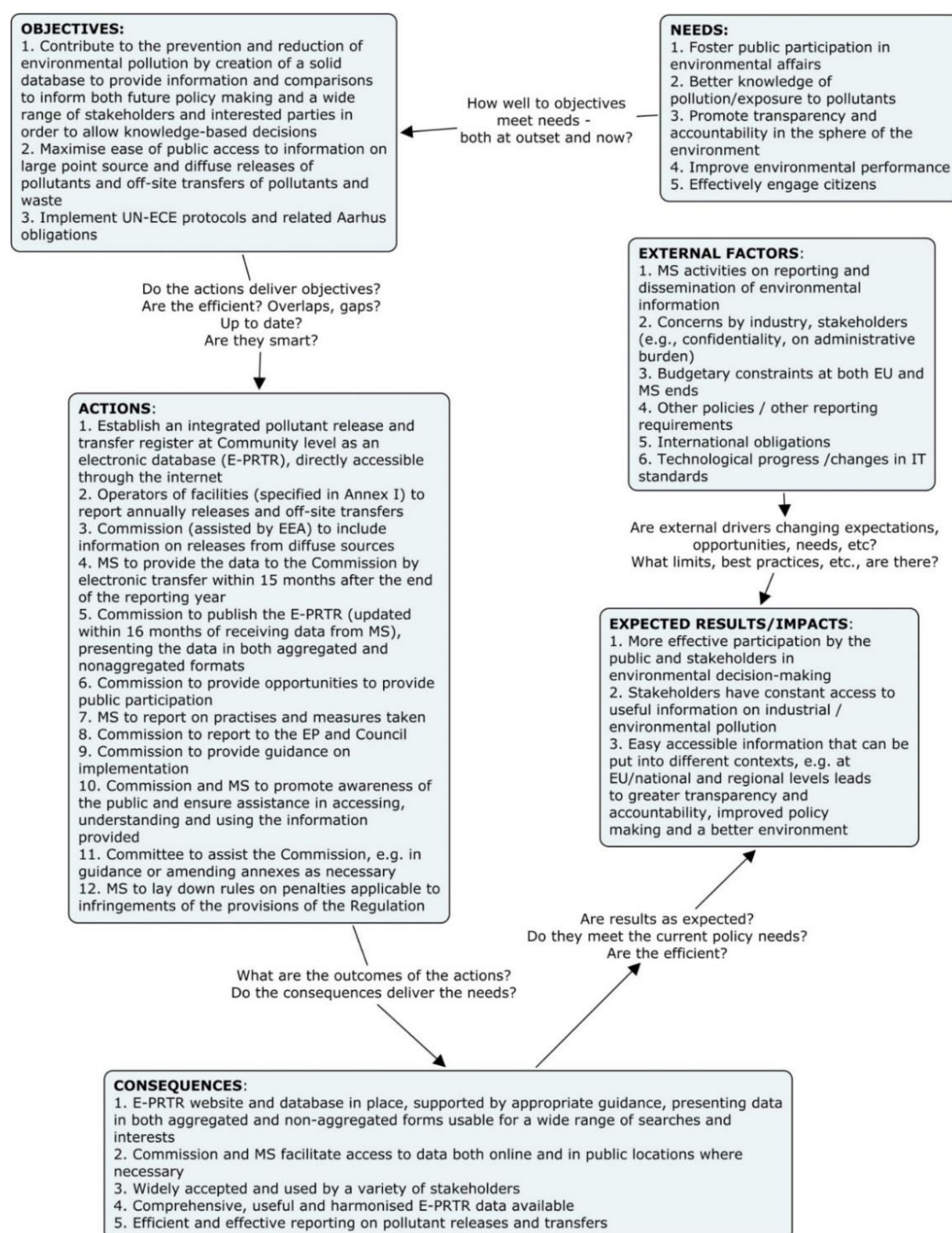
### 2.2 Intervention logic

The initial intervention logic is set out in Figure 2.1 and highlights how the different elements relate to each other. The starting point of the evaluation methodology is the “needs” of the Regulation. This looks back at the reasoning behind the adoption of the Protocol, but it also looks forward to whether the E-PRTR addresses today’s changing needs. The objectives of the E-PRTR are derived from the understanding of the needs. Of note, the intervention logic reflects a dynamic process with multi-faceted interactions between the different aspects that are not evident in Figure 2.1.

The objectives are translated into “actions” which are the specific elements of the instrument with obligations on operators, competent authorities, Member States, and EU institutions. Does the totality of the actions deliver the objectives? This is the first point of interaction. However, there are also questions of efficiency, cost and coherence that need to be considered. The actions have consequences and these lead to either impacts or results. As noted above, the interactions between the different aspects within the intervention logic are complex and are not reflected precisely in Figure 2.1.

Overall, the results should match the needs and have minimal unintended or undesirable consequences. In meeting the objectives of the E-PRTR, a range of external factors enter into play which may benefit or hinder the delivery of the objectives, outcomes or processes of E-PRTR.

Figure 2.1 Intervention logic for E-PRTR evaluation



The intervention logic was used as the basis for our evaluation. Our methodology considered that the expected E-PRTR Regulation results were the achievement of the objectives of the Regulation, thus fulfilling the needs originally identified while complying with the EU requirement to implement the Kiev Protocol.

The evidence revealed that over the 10 years the E-PRTR Regulation has now been operational, the policy landscape evolved and an evolution took place in the original set of needs defined at the inception of the Regulation. This evolution is reflected in the revised intervention logic presented in Figure 2.2 (needs, objectives, actions, consequences and expected outcomes), which has been developed following the completion of the evaluation and reflecting on the differences between the initial expectation of the E-PRTR state of play and the actual outcomes observed. Figure 2.2 highlights the occurrence of some new needs which have developed over time (in red in the figure), and further disaggregation of one need based on how the E-PRTR is being used by industry. These needs in turn have generated potential additional objectives and necessary actions to meet those objectives. In particular objective 1 has been disaggregated into a new objective 2 and 3, while objective 4 has been further expanded to provide clarity of what is required to meet the evolving needs.

New objective 6 within Figure 2.2 reflects scope for the E-PRTR to engage more fully with the general public, potentially as an educational tool. Key to the overall themes of both the Kiev Protocol and PRTR Regulation is the need to foster public engagement in decision making (Article 6 and Article 15 of EC/166/2006). Currently the E-PRTR has a targeted set of key users primarily within industry, government and policy development (particularly NGO organisations and consultancies). However in terms of reaching a broader audience it has been suggested that the E-PRTR is less successful. Part of the reason for this is how the data is presented within the E-PRTR. A number of stakeholders during the targeted consultation and again at the workshop noted that where the E-PRTR provides raw data on 91 pollutants, it can be difficult to make sense of this without additional contextual information to help explain the meaning of the data and data trends.

New needs 2, 3 and 4 follow on from new objective 6, on reaching a broader audience through the development of contextual information to help make sense of the information held by the E-PRTR. A method for meeting this objective is suggested within the actions of in Figure 2.2. Currently the European Environment Agency provide an informal review report of the E-PRTR, which details how the E-PRTR is performing and any quality issues within the data. One option might be to make use of this report and expand it to include chapters on 'trends and highlights', to explain in non-technical language what the data represents. This would help add meaning and context to the data presented by the E-PRTR, which together with policy and health information would provide the details to assist the general public in becoming informed. Alternate methodologies to help provide contextual information to the data held by the E-PRTR could be a library resource on the E-PRTR website. Linking this resource to relevant reports and studies which have been conducted using the data or relating to relevant policy under the European Commission would add further depth. Other alternatives could be an expansion of the E-PRTR library descriptions on the E-PRTR website, linking to other relevant web-pages held by the European Commission, European Environment Agency or UNECE which help provide further explanation of the data and related policy.

Additional to new objective 6, objective 4 has been further expanded to reflect the way that the E-PRTR is being used by industry. During the targeted consultations and workshop, a number of industry stakeholders highlighted the importance of the E-PRTR as a benchmarking tool for environmental performance. The E-PRTR regulation already has an objective for pollution reduction and monitoring (item 3 of EC/166/2006), with the E-PRTR acting as a key tool to communicate how environmental performance is changing over time. However the industry stakeholders raised concerns that where the data in E-PRTR provides emissions/releases data only, it is not possible to make informed calculations on how any given facility is performing. In terms of benchmarking, where a

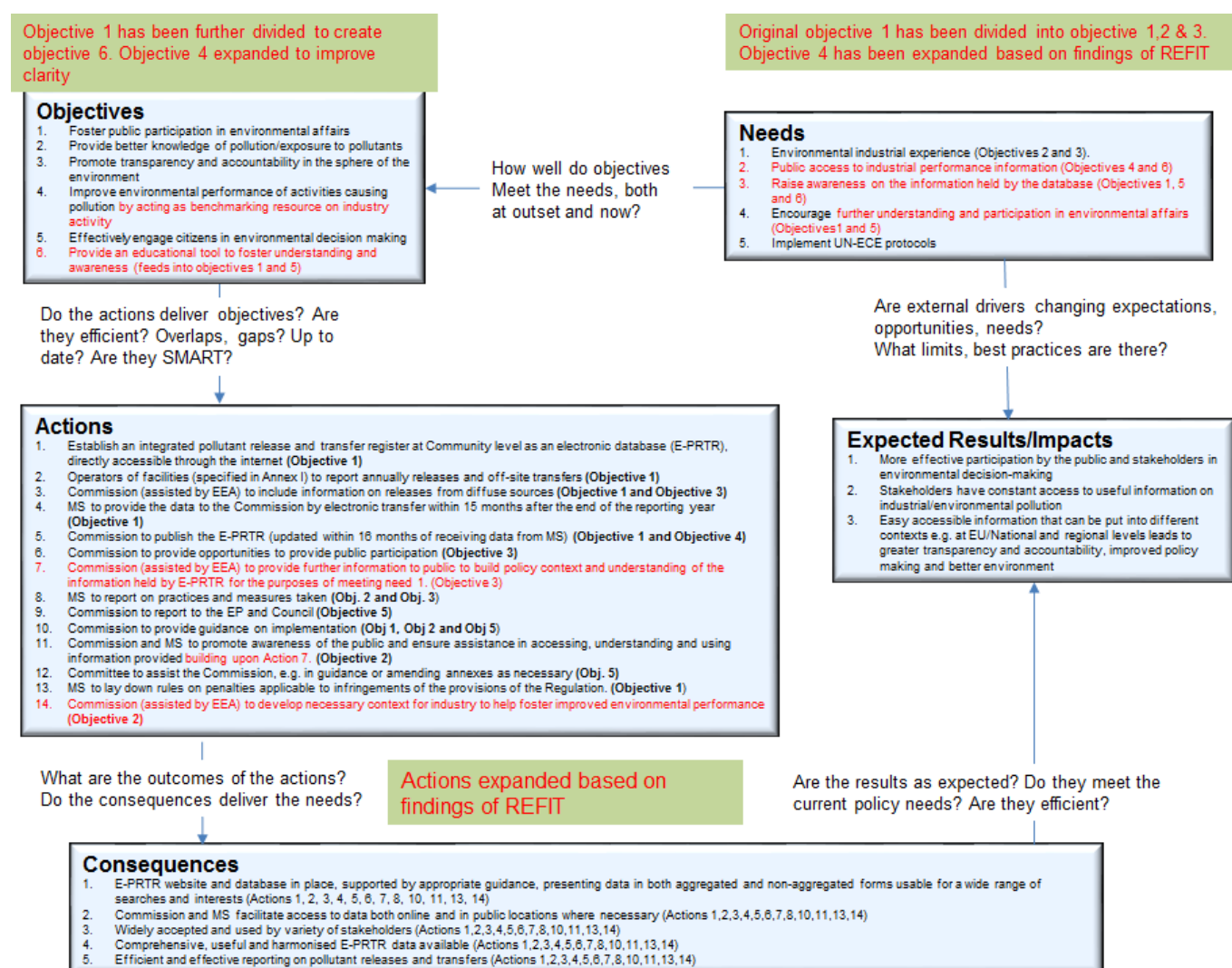
given operator may wish to understand how their facility compares against other facilities from the same economic activity, the data currently provided within E-PRTR makes this difficult. Stakeholders consulted stated that they would like to see more meta-data, particular production rates which would allow derived emission factors/environmental performance to be calculated. This was a key issue during the workshop, with concerns raised by a number of delegates on how such meta-data could be gathered and presented (including issues of confidentiality), how facilities and activities are defined under E-PRTR compared to other legislation (particularly IED), and the care that is required when comparing data from across the EU and EFTA countries.

The new need 2, translates into the objectives, particularly expanded objective 4, with an objective to help provide information which could help industry make further use of the E-PRTR for understanding environmental performance. In terms of actions to address the expanded objective, the options are less clear and a general item has been added to the action list (action 14). The delegates at the workshop suggested that links could be used to make environmental permits more accessible. These permits would include the kind of meta-data that could aid industry with assessment of environmental performance. However other delegates highlighted that the permits are not always fully available, will only be in the language of the country where the facility is located and are not always detailed enough to allow such assessments to be made. There would also potentially be an issue with how facilities, installations and plants are defined within permits (as part of IED) compared to the definition of facility within the E-PRTR, which could lead to errors in calculations.

Overall the revised intervention logic displayed in Figure 2.2, shows that all of the original key objectives and need remain, but where the E-PRTR provides a detailed and valuable data-set, it's potential use has grown to support other needs. The new needs identified and detailed here do still align closely with the original aims of both the E-PRTR and Kiev Protocol, but represent a bigger issue for the E-PRTR. Namely where the E-PRTR provides a comprehensive and detailed data-set spanning 8 years (and growing) there is a need for greater awareness and utilisation of that data-set. This in turn requires other underpinning data to make the most of the information that has been reported.



Figure 2.2 Amended intervention logic based on the findings of the REFIT evaluation



## 2.3 Evaluation questions

For each REFIT theme evaluation questions have been defined by the Terms of Reference. The questions for each theme are as follows:

- Effectiveness:
  1. How well does any progress towards the objectives of the E-PRTR Regulation match the initial expectations?
  2. To what extent can this progress be reasonably linked to measures of the E-PRTR Regulation? What other influencing factors (e.g. implementation by Member States, action by stakeholders, interaction between industry and authorities) can be identified, that contributed to the changes?
  3. What unexpected or unintended changes resulting from the Regulation can be identified (positive or negative)?
  4. To what extent do the reported data and possibilities for searching the data serve the objectives? Taking into account the objectives to improve the knowledge and evidence base for Union environment policy and to reduce the associated burdens in connection with the existing legislation related to industrial activities, to what



extent did the reporting mechanism help to maximise the achievement of these objectives?

- Efficiency:
  5. To what extent is the effort/ are the costs justified compared to the benefits and usability of the reported information (monetary and non-monetary) associated with compliance with the Regulation in the different Member States and at EU level? If any inefficient provisions or disproportionate sources of cost can be identified (e.g. in relation to implementation, administration, compliance, monitoring etc.), what is causing them?
    - a. What have the overall costs associated with implementation been?
    - b. What have the overall impacts/benefits associated with implementation been?
    - c. Are the costs proportionate and are there inefficient provisions?
  6. If there are any significant cost differences between Member States, what is causing them and do they have impacts on the benefits?
  7. How can the costs be rated in comparison to other comparable reporting measures?
  8. What evidence for simplification and streamlining with applicable regulations in the field of industrial emissions and reporting can be detected?
- Coherence:
  9. To what extent is the E-PRTR Regulation coherent internally?
  10. To what extent is the E-PRTR Regulation coherent with other applicable regulations in the field of industrial emissions and reporting which have similar objectives (see under chapter 1.5)? What, if any, overlaps, discrepancies, contradictions or similar issues can be identified which hamper achievement of the E-PRTR objectives?
- Relevance:
  11. To what extent do the objectives (still) correspond to the current needs within the EU?
  12. What (if any) obsolete, unnecessary or missing provisions or gaps in the Regulation can be identified, which are affecting its performance?
  13. To what extent does the Regulation contribute to the priority objective 5 of the 7th Environment Action Programme 'to improve the knowledge and evidence base for Union environment policy'?
  14. How has the Regulation (and its implementation through the E-PRTR website) adapted to technical and scientific progress?
  15. Are there any new needs that could be addressed?
- EU added value:
  16. What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels? (e.g. comparisons at European scale, track trends at European level, compare Member State, compare facilities across Europe, harmonisation of measuring and reporting practices, improving data quality)
  17. What is the overall perception of the E-PRTR and available information on industrial pollution among stakeholders and citizens in general?
  18. How have the different provisions of the Regulation been accepted by the stakeholders?
  19. Do the issues addressed by the Regulation continue to require action at EU level?

A detailed overview of the judgement criteria, indicators, methods and sources used for each evaluation question can be found in Appendix A.

### 3. Evidence collected

The collection of evidence was undertaken in accordance with the data and information needs identified. A detailed data needs matrix is presented in Appendix B.

#### 3.1 Literature review

Following an examination of the available literature sources, the information collected was grouped and used as evidence both for the review of the implementation and for the evaluation of the Regulation. Additional use was made of references that included reviews of the E-PRTR data quality such as the EEA informal analysis and industry guidance for emissions reporting. The literature review also extended to academic publications. A more detailed overview can be found in Appendix C.

*Table 3.1 Overview of the literature review*

Source	Summary
<b>EEA informal analysis, 2014</b>	The informal review is conducted annually and consists of a series of checks, termed initial and extended checks. The initial checks concentrate on the internal consistency of the reported E-PRTR data while the focus of the extended checks is the consistency of data with data reported under other reporting obligations. Overall, the checks indicate that reporting of releases to air is quite complete, especially for the main air pollutants (NO <sub>x</sub> , SO <sub>x</sub> and PM <sub>10</sub> ). However, potential inconsistencies in reporting across the time series have been identified where a large number of facilities reported at least one high release inconsistently between the years. Further, although across the range of sectors only a few percent of the facilities report releases that are not within the probable range (for most pollutants), most of the facilities with (one or multiple) releases out of the probable range can be found in the sector 1.c (thermal power station above 50 MW), thus suggesting reporting difficulties are experienced in this sector.
<b>Air pollutant emission estimation methods for E-PRTR reporting by refineries (Concawe)</b>	The report provides the estimation algorithms and emission factors for uncontrolled releases of air pollutants from stationary sources at oil refineries which Concawe recommends for E-PRTR reporting purposes, where measurements have not been undertaken. One observation to emerge as a result of the analysis is that emission estimation guidelines do not exist for all of the E-PRTR listed pollutants.
<b>Air emissions from the refining sector. Analysis of E-PRTR data 2007-2011 (Concawe)</b>	This report provides an overview of the E-PRTR for air pollutant data for oil refineries submitted by national authorities for the years 2007 to 2011. Detailed analyses are provided of the emissions of the five pollutants reported for the majority of refineries (SO <sub>x</sub> , NO <sub>x</sub> , NMVOCs, CO <sub>2</sub> and benzene). The report identifies that the extent of data handling and transfer involved in E-PRTR reporting means that there is a relatively high risk of transcription errors occurring, which impacts reporting, particularly in the case of Annex I activity 1(a) concerning methane, HCFC and HFC emissions, and the NACE inventory for naphthalene.
<b>Evaluation of the E-PRTR emissions inventory: the Galician case (Dios et al)</b>	This article reviews reporting to the E-PRTR for the Galicia region in Spain. It finds that in 2010, 45% of reported atmospheric emissions data were accepted without any correction, while in 2008 17% of data were accepted. The most common error in 2008 was "no information", however in 2010 the percentages across error types are homogeneously distributed (errors include: failure to declare emissions, no information, miscalculations, inappropriate choice of methodology to calculate emissions, failure to report no emissions, and uncorrected errors). The increased submission of valid data in 2010 is linked to a greater contribution of complementary information provided by the installations, in order to justify their reported emissions.

Source	Summary
<b>PRTRVAL (PRTR validation software tool) (Dios et al)</b>	This article presents the merits of the PRTRVal, an emission validation tool developed in order to improve the need of transparency and reproducibility in emission validation. The tool considers whether a declared emission value can be considered as acceptable by comparing it to a maximum deviation value. This validation tool was applied in Galicia, Spain. A comparison of the results obtained with PRTRVal between 2008 and 2010 E-PRTR inventories evaluation show a significant percentage of declared emissions which required corrections, in order to improve the quality of PRTR submitted data. The article remarks that although the percentage of errors fell from 79% in 2008 to 55% in 2010, the share reported in 2010 is still high, with a lot of these errors repeated year by year for the same facility, regarding the same pollutant.
<b>INSPIRE Mid-term evaluation</b>	The review identified that only two of the INSPIRE actions are on track: the creation of metadata and the establishment of network services. The interoperability of spatial data sets also shows progress within the deadlines set by the Implementing Rules. With respect to the remaining actions, most of the measures to ensure interoperability have yet to be implemented and the outcome of the public consultation indicates that this strand of INSPIRE is considered to be highly technically complex and requires more support.
<b>Diffuse water emissions in E-PRTR (Deltares)</b>	This project aimed to gather available data on diffuse releases to surface water, and develop an alternative estimation method as well as a methodology to derive disaggregated spatial data for diffuse emissions. Of relevance to the E-PRTR, the project found that the existing data regarding EU diffuse emissions is limited, and that where data is available, the quantification methods and the reliability of the underlying data are unclear. Further, the project found that a high contribution of the source UWWTPs (Urban Waste Water Treatment Directive) is not reported to the E-PRTR. The project estimates the missing loads regarding the large UWWTPs (>100.000 p.e.). It was also reported that even for the well-known and relatively well-measured substances like nutrients (TOC, Nutrient-P and Nutrient-N) E-PRTR seems to only cover less than half of the “real” total loads (as calculated for the Deltares project). This discrepancy is due to large point sources emissions from UWWTPs. Although the study reported that many of these UWWTPs do not report under the E-PRTR, it is not clear why because the starting point of the E-PRTR Regulation was that about 90% of point source discharges would be covered by the definitions and thresholds included in the Regulation.
<b>Using E-PRTR data to determine environmental performance of reporting facilities</b>	A number of studies by researcher, Mahelet G. Fikru, have examined the potential to use E-PRTR data for determining the environmental performance of reporting facilities and the resulting limitations of using E-PRTR data. The main limitations identified across the series of papers are missing reporting requirements, and a lack of transparency when setting the reporting thresholds (Fikru, 2011a; 2013). Despite the limitations recognised, the series of papers use E-PRTR data to determine the environmental performance of facilities in the manufacturing (Fikru, 2011b; 2013) and waste management sectors (Fikru, 2011a; 2012; and 2014). The indicators are based on a normalised value for each facility derived from the percentage of a pollutant reported over the reporting threshold – whereby a higher normalised value indicates a higher impact and vice versa. This is then used to determine the size of the facility, which in turn allows the environmental impact to be determined.

Source	Summary
<b>AMEC, 2014, Contribution of industry to pollutants emissions to air and water</b>	<p>The report noted some limitations in the comparability of air emissions data presented in E-PRTR with other datasets such as LRTAP due to the different approaches adopted in the datasets. The E-PRTR database is a facility-based (bottom-up ) reporting system which only includes point source emissions and only those above the size/capacity and pollutant thresholds whereas LRTAP is a national level (top-down) reporting system which requires signatories to include all sources (point and areas sources) within the NFR 09 classification categories. In addition, both datasets cover different pollutants.</p> <p>Similarly, the comparison of water emissions data presented in the E-PRTR was found to be limited (e.g. WaterBase).</p>
<b>AMEC, 2015, Assessing the potential emission reductions delivered by BAT conclusions adopted under the directive on industrial emissions (IED)</b>	<p>The study highlighted several limitations in the data, in particular the difference of the geographical coverage of EPER and E-PRTR databases were an issue to derive historical emissions and trends. In addition, EPER and E-PRTR data were limited for some activities, in particular for newer activities covered by the IED such as the production of magnesium oxide (3(1)(c)), the production of wood-based panels (6(1)(c)) and the preservation of wood and wood products (6(10)). Other activities highlighted included: aggregation of waste management activities, animal and vegetable raw materials which are not a combined category such as activity 6(4) (b) (iii) of the IED. More generally, some reporting inconsistencies were highlighted using the example of the Iron and Steel sector. In most cases around Europe, the installations are integrated and include different Annex I activities e.g. 1(d) "Coke ovens" and 2(b) Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting". During the analysis of the emission it was observed that very little data are reported under the 1(d) activity while the majority of the data is reported under 2(b). The study identified that this reporting could create problems in mapping the pollutants and emissions to the BAT-AELs in the Iron and Steel BAT conclusions and lead to an overestimation or underestimation of the emissions of the two activities and of the sector as a whole, given that there are pollutants with BAT-AELs in only one of the activities and not in the other.</p> <p>Finally the study noted that for some pollutants for which BAT-AELs were derived in the relevant BREFs and BAT conclusions, no emissions data were reporting in the E-PRTR.</p>

## 3.2 Regulation implementation review

Every three years, the E-PRTR Regulation requires Member States to respond to a questionnaire on the implementation of the E-PRTR Regulation. As the implementation review was combined with the E-PRTR evaluation launched, the latest questionnaire covered the reporting period 2010-2013.

The questionnaire, the responses and a more detailed summary can be found in Appendix D.

### 3.2.1 Overall implementation

All Member States have submitted a triannual implementation report. The majority of the Member States completed the questionnaire with mandatory and voluntary questions. However, the voluntary questions on cooperation and assistance remained mostly unanswered. The other Member States responded to the questionnaire that included only mandatory questions.

The analysis of the implementation of the E-PRTR Regulation for the 2010-2013 period found that the Regulation has been implemented in all the Member States.

The responses provided by Member States included details on the competent authorities responsible for the implementation of the Regulation. In most Member States the responsibility is split between several competent authorities.

### 3.2.2 Penalties and fines

Article 20 of the E-PRTR Regulation requires Member States to lay down rules for the application of penalties applicable to infringements. Member States reported a range of administrative and criminal procedures. Fines ranged from €29 in Lithuania for failing to disclose information relating to the state of the environment, up to €250,000 in Belgium. Taking action through criminal proceedings, including applying sanctions such as imprisonments, was reported in Belgium, Cyprus, Germany, Luxembourg, the Netherlands and the UK.

During the reporting period, penalties were reported as having been issued by Austria, Belgium France, Poland and Sweden. Ireland and the Netherlands both indicated that infringements proceedings were initiated against operators but the majority of these cases were solved by the threat of penalties.

Denmark, Finland, Hungary, Italy, Luxembourg, Malta, Romania and Spain indicated that no penalties were applied during the reporting period.

### 3.2.3 Reporting practices

Limited information was included on the steps adopted to avoid duplication and integrate the requirements of the E-PRTR within national reporting mechanisms. Bulgaria, Czech Republic, Ireland, the Netherlands and the UK all indicated that the E-PRTR reporting is fully integrated within the national reporting mechanisms. Romania and Slovakia added that the integration has been initiated.

The majority of Member States cover the same pollutants as those included in Annex II of the E-PRTR Regulation with the exception of the Czech Republic, France and the Netherlands. The Czech Republic monitors emissions to air of styrene and formaldehyde and pollutant transfers in waste. France's national PRTR covers 88 air pollutants, 150 water pollutants and 70 soil pollutants. Finally, in the Netherlands, some pollutants have been added for emissions to air and a number of thresholds lowered.

#### *Overall difficulties*

Member States were encouraged to report difficulties experienced in relation to reporting E-PRTR data. The most commonly reported difficulties related to information technology and technical problems and the lack of knowledge of operators, leading to mistakes in substances reported and units. The lack of alignment between the E-PRTR and the IED was also highlighted as source of difficulties in particular for activities related to management of waste and landfills.

#### *Deadlines for reporting to competent authorities*

Delays in operators meeting the deadlines for reporting to competent authorities were reported by nine Member States. The majority of the Member States indicated that the delays were due to uncertainties from operators on reporting requirements and technical issues. Furthermore, the responses submitted by Member States suggest that the delays were mostly resolved by reminding operators of the deadlines.

#### *Electronic reporting*

The majority of Member States reported that E-PRTR data are submitted electronically. Denmark, Finland and Sweden added that reporting on paper is not allowed. In Slovenia and Greece there is no electronic reporting tool and the data are reported in hardcopy (paper).

### 3.2.4 Data flows

Information on resubmission was requested as part of the targeted consultation and several industry stakeholders indicated that data were resubmitted in Czech Republic, the

Netherlands, Romania and the UK. In all cases, the respondents indicated that mistakes in the units were the reason for data to be resubmitted. Romania and the UK respondents added that mistakes on selected pollutants were also noticed during the annual national verification of PRTR data. In the Netherlands, data were also resubmitted due to issues noticed in modelled emissions and changes in monitoring of emissions.

### 3.2.5 Quality control

All Member States have reported that quality control systems are in place to ensure data submitted to the European Commission are complete, consistent and credible. However little information was included on whether these systems were efficient and limited information was included on the improvement in the quality of data during the reporting period. Only three Member States reported that the quality of the data had improved and three other Member States stated that the quality of the data reported is 'generally good'.

### 3.2.6 Confidentiality

Eight Member States indicated having made use of the confidentiality provisions, including Belgium, Bulgaria, Denmark, Germany, Ireland, Luxembourg, Romania and the UK.

### 3.2.7 Public participation

The implementation questionnaire asked Member States to provide information on public participation. All Member States responded that their submissions to E-PRTR are published and accessible online. Some information was included on national PRTR websites, in particular from Germany, Spain and Sweden. Sweden's response highlighted that its national PRTR website's popularity had increased by 50% between 2011 and 2013.

## 3.3 Targeted stakeholder consultation

Part of the remit of the E-PRTR Regulation is to raise awareness of its existence and allow members of the community, including the general public, to get involved in how policy is shaped for environmental concerns. The stakeholder consultations have been designed to obtain opinions to help understand how the E-PRTR is used within the EU community and contribute to the analysis of information required under both the review of the implementation and the evaluation of the Regulation.

Considering the large number of interested stakeholders, a representative sample was selected for the targeted consultation. Approximately 150 stakeholders were consulted in order to get information from all different categories of stakeholders. Stakeholders were distinguished as presented in Table 3.2 and the consultation aimed at consulting all these categories of stakeholders. A detailed analysis of the targeted consultation is presented in Appendix G.

*Table 3.2 Identification of stakeholders*

Stakeholder	Role
Member State competent authorities	Collating data from national sites to provide to E-PRTR
Industry Operators	Data providers
European Environment Agency	Collation, QA checking and maintenance of E-PRTR website
European Commission Directorates Generals, including Commission services	Likely a heavy data user
Non-Governmental Organisations	Likely a heavy data user
Private researchers and consultancies	Likely a heavy data user
Academia	Data user
International organisations (UNECE, WHO, OECD, UNEP)	Data user
Wider public	Data user

Two questionnaires were developed and distributed to the stakeholders identified. These questionnaires contained around 30-40 questions each. One questionnaire focused on topics relevant for data providers and managers while the other captured topics relevant for data users. Copies of the questionnaires are included in Appendix G.1.

In April 2015 an introduction letter was sent to Member States' competent authorities to alert them of an upcoming consultation. The following week, the two questionnaires were sent to stakeholders, allowing them to select the one most appropriate to the role they have in relation to the E-PRTR.

At the issue of this final report in April 2016, 78 responses have been received. Responses were received from 23 Member States, 31 European or national industry associations, one NGO, one research institute and one EU institution representative<sup>6</sup>.

To follow-up on the targeted consultation, phone consultations were organised between September 2015 and January 2016 with academics and other selected respondents. The aim of this additional consultation was to get a deeper understanding of some specific topics (e.g. use of the E-PRTR data by academics, context of other PRTRs).

A total of five academics were identified as particularly relevant and contacted as part of the research task for this study. One of the five academics provided feedback on the use of the E-PRTR for academic purposes. In addition, 26 other stakeholders were approached for follow up conversations. Discussions were successfully held with seventeen of them. The details from the discussions are presented in Appendix H.

From the responses received from the stakeholder consultations, the key messages were:

- The E-PRTR is a useful and valuable tool for policy makers and academics;
- Aggregation of data can be complicated and there are some difficulties in matching activities with reporting activity codes under E-PRTR;
- There may be some benefits in integrated all the environmental reporting requirements within one tool;
- Despite improvement, there are data gaps;
- There are varying views on the usefulness of the thresholds and for some stakeholders it leads to additional complications in the reporting which is unhelpful;
- There are challenges for engaging the public and increasing public participation; and
- The use of E-PRTR for other environmental reporting is useful but could be improved (e.g. waste reporting and urban waste water reporting).

### 3.4 Public consultation

The REFIT process requires a public consultation (the questionnaire and analysis are included in Appendix I). To meet this requirement, the project team developed an additional questionnaire that was published on the 'Your Voice in Europe' portal.

In addition, the public consultation conducted fulfils the obligation included in Article 13 of the Kiev Protocol to provide for public participation during the development of PRTRs. The public consultation questions were structured around the following themes:

- Scope of E-PRTR;
- Providing data to the register;
- Checking and forwarding data;

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<sup>6</sup> Note that some Member States provided two responses: one as data users and one as data providers. This explains why the number of responses received is higher than the number of respondents.



- Understanding the register website; and
- Usefulness of the register.

The public consultation ran from 15 August 2015 until 15 October 2015 and a total of 67 responses were received.

From the responses received to the public consultation the key messages are:

- The majority of respondents use the E-PRTR to consult their own data, followed by comparing emissions with other sources. Emissions to air and water are the most often examined;
- For those responding on national registers, just under twice as many responded that provision of data was easy to provide given other monitoring and reporting activities. For those responding on the EU register there was an even split between those who thought data provision was easy and those who did not;
- All respondents indicated that data collection is time consuming. The activities highlighted as time consuming are data collection, calculations of mass emissions, verification and uploading of data. Specific activities such as data on dust collectors, assessing off-site waste shipment, were noted as particularly time consuming;
- Some suggestions on making the registers more useful were: adding links to web pages of national competent authorities, and including links to companies previous year's data to be able to compare evolution and provide more feedback on the way emission were reached (e.g. estimated or calculated); and
- Broader comments included the difficulty to combine the E-PRTR based on mass emissions with the information included in permits that set concentration limits as basis of monitoring. The reporting thresholds were also highlighted by some respondents as raising issues of comparability between sectors, and being set too high (i.e. not capturing 90% of the release of the specific pollutant).

### 3.5 Stakeholder workshop

A workshop was held in Brussels on 4 November 2015 to discuss the preliminary findings of the evaluation and gather additional feedback and evidence. The background paper workshop report are presented in Appendix J.

The aim of the workshop was to complete the following tasks:

- To discuss the E-PRTR and its value at European and wider international levels;
- To contribute towards the identification of issues and areas for improvement against the intervention logic and five REFIT criteria;
- Feedback to the delegates on the finalised set of issues identified to seek opinion on which issues hold the highest need for prioritisation; and
- To share views on the contribution of the register to capacity building, public awareness and support in decision making.

Key conclusions were drawn for each of the five REFIT criteria:

- On effectiveness:
  - The value of the E-PRTR Regulation was highlighted, the E-PRTR website is one of few tools that provide comprehensive data over a long time series;
  - There was a clear difference in perspective between industry operators and competent authorities regarding fostering public participation: Industry operators believe that the E-PRTR does a good job of fostering public participation, while Competent Authorities believe public participation is poor. This difference in view may be down to how the respective parties



interpret the meaning of 'public participation' in environmental policy making;

- The barriers to make a better use of the E-PRTR were acknowledged but there were resistance in transforming the E-PRTR too radically. Contextual information on pollutants and their source of emissions, data quality and meta-data were welcomed. Information such as production outputs were deemed more difficult to get;
- To be of more use when defining benchmarking, and to be able to use the E-PRTR as a tool for environmental performance, it was felt that more data was needed; e.g. on environmental performance ratings, production data, size/ age of plant, abatement technology used; and
- Some users highlighted data quality issues / data gaps as a possible barrier to making the E-PRTR as effective as it could be, with reporting thresholds in particular a part of this issue affecting data completeness across the EU and with regard to how the data is worked out (e.g. estimated, calculated or measured).
- On efficiency:
  - Feedback was uneven on the differences in the systems used for the E-PRTR and the IED, for some Member States this does not appear to be an important issue while for others it monopolise the majority of their support resources however respondents highlighted that the sectors covered by the Annex I economic activities were defined in a way that does not enable useful comparison to other environmental legislation, particularly IED.
- On coherence:
  - Discussions focused on how to increase the potential for use of E-PRTR as a tool to help gauge the industry performance (e.g. with BAT) needs to be reflected upon, there was not a clear agreement on the fact that E-PRTR should be used for this purpose;
  - Stakeholders reiterated that the extended time-series allowing assessment of trends, are an important component to the dataset that needs to be maintained; and
  - The difference between installation level and facility level can be valuable and warrants further discussion.
- On relevance:
  - The scope boundaries of the E-PRTR (e.g. thresholds for reporting; activities included) mean that while a useful set of data can be compiled for aiding public participation in environmental matters; data completeness issues (data gaps, below threshold data, diffuse emissions) means that the data-set constrain the capacity to see the 'whole' picture. E.g. total emissions being made up of Industrial emissions vs diffuse emissions;
  - Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data; and
  - Reporting on treatment of waste under the Waste Statistics Regulation is not complementary to the requirement to report on the transfer of waste under the E-PRTR Regulation, such as in relation to on-site waste generation and management and the use of EU waste codes. This therefore poses the question on how well does the E-PRTR correlate to the waste shipment and waste statistics data and what needs the E-PRTR fulfils in this area?
- On EU added value:

- The findings showed that the value of the EU level register and the processes to deliver this as provided by the Regulation were strongly supported. The specific aspects of added value that are cited included:
  - The provision of an EU-wide database;
  - Harmonisation of reporting;
  - Harmonisation of monitoring practices;
  - Development of a common approach and understanding in data collection and reporting;
  - Enhanced comparability across reporting countries; and
  - Higher quality of data due to QA efforts deployed by the European Environment Agency (EEA), however national data quality were highlighted as an area of uncertainty.
- The purpose of the database (and against which EU added value needs to be judged) is for public information and benefits derived from that functionality. The findings showed that public use of the EU Register is sporadic and may link to specific events or news items. Its users are more likely to be professional actors (policy makers, industry, NGOs, etc.). Public engagement with registers was more obvious at national level.

### **3.6 Conclusions on evidence**

Based on the wide range of information and evidence collected it was found appropriate to cluster the key messages received and focus the evaluation on each of these key aspects of the E-PRTR. The key aspects are:

- Completeness and quality of data;
- Level of public participation;
- Overlaps between reporting for E-PRTR and other Regulations;
- Use of E-PRTR data in other Policy Areas; and
- Implementation costs.

## 4. Evaluation

The evaluation of the E-PRTR Regulation is structured around the five overarching themes of REFIT:

- Effectiveness;
- Efficiency;
- Coherence;
- Relevance; and
- EU added-value.

Each REFIT theme is organised according to the specific evaluation questions (mentioned in Section 2.3).

### 4.1 Effectiveness

An assessment of the 'effectiveness' of a legislation considers the extent to which it has led to the observed changes/effects, how far these changes/effects can be credited to that law and to what extent the observed effects correspond to its objectives.

The objectives of the E-PRTR Regulation are to:

- A. Foster public participation in environmental affairs;
- B. Provide better knowledge of pollution/exposure to pollutants;
- C. Promote transparency and accountability in the sphere of environment management;
- D. Improve environmental performance of activities causing pollution; and
- E. Effectively engage citizens in environmental decision making.

However, it is important to recall that the E-PRTR Regulation does not aim for complete delivery of these objectives on its own. Rather it is a contributing instrument. For this reason, the assessment of effectiveness takes account of this limitation.

Therefore, the assessment of effectiveness examines the extent to which the progress towards the objectives of the E-PRTR Regulation can be reasonably linked to measures of the E-PRTR Regulation and what other influencing factors (e.g. implementation by Member States, action by stakeholders, interaction between industry and authorities) might have contributed to the changes. It also considers what unexpected or unintended changes resulting from the Regulation can be identified (positive or negative). In particular identifying unintended positive impacts requires a clear statement from those affected that the impact was unexpected.

This Section examines the effectiveness of the Regulation according to the following evaluation questions:

- EQ.1 – How well does any progress towards the objective of the E-PRTR Regulation match the initial expectations?
- EQ.2 - To what extent can the progress made towards the objectives listed in the question above be reasonably linked to measures of the E-PRTR Regulation?
- EQ.3 - What unexpected or unintended changes resulting from the Regulation can be identified (positive or negative)?
- EQ.4 – To what extent do the reported data and possibilities for searching the data serve the objectives of the Regulation? Taking into account the objectives to improve the knowledge and evidence base.

#### **4.1.1 EQ.1 – How well does any progress towards the objective of the E-PRTR Regulation match the initial expectations?**

One of the key aspects of the assessment of the effectiveness of the Regulation is to understand to what extent the objectives of the E-PRTR Regulation have been fulfilled. To achieve this, specific questions were asked during the targeted consultation, its follow-up and, the public consultation. Feedback included in Article 16 reports and comments received during the workshop also provided relevant evidence for assessing this question.

##### *A. Foster public participation in environmental affairs*

###### *Public Consultation*

The public consultation (Appendix I) asked respondents if the registers provided data to enable an understanding of local environmental concerns. Overall there were similar proportions of respondents who thought that registers had enabled public understanding to those who thought that had not done so, or had done so only partially.

With regard to the objective of more public participation in environmental affairs, the analysis of the evidence collected indicates that the E-PRTR Regulation has partially succeeded. The responses from the targeted consultation (Appendix G) showed that while some (3) competent authority respondents considered that the Regulation had provided no impact on this aspect, more respondents (7) considered that the Regulation had contributed to a significant extent to the increase of public participation in environmental affairs. Most competent authorities' respondents (13) considered that this objective was achieved to some extent. Interestingly, the industry was more emphatic in its view of delivery of this objective, with 16 respondents stating that it had been delivered to a very large to significant extent.

###### *Workshop*

In addition, discussions on the objective of public participation were held during the workshop (Appendix J) where participants agreed that this objective was partially met. The importance of identifying the target audience and tailoring the data and the website to their needs were highlighted. The types of users identified included the general public, academia, authorities (national and foreign) and technical engineers. Participants noted that different users have different needs from E-PRTR data, for example engineers are more interested in emission concentrations rather than tonnage, while academics would rather download the data set in order to conduct their own data analysis. Being able to engage all users using one website was recognised to be a challenge. Easy access to E-PRTR data was also identified by participants as being important for achieving effectiveness. Examples of good practice were noted in some Member States, while others have struggled with making the data easily accessible to public as evidenced by the small number of hits national websites receive.

###### *Member State Reports*

This is supported by information reported by some Member States (Bulgaria, Ireland, Romania, Slovakia and the UK) in their triennial reports (Appendix D). They indicated that their national PRTR websites include additional features that are not available in the E-PRTR that allow members of the public to comment, request information or notify mistakes or inconsistencies.

Overall there is an indication that the E-PRTR has partially succeeded in increasing public participation in environmental affairs. Challenges of engaging all users within a unique website was underlined, and some Member States provided examples of features of their national PRTRs that are considered to increase public participation (e.g. feedback options).

##### *B. Provide better knowledge of pollution/exposure to pollutants*

###### *Targeted Consultation*

With regard to the objective of better knowledge of pollution and exposure to pollutants the E-PRTR is considered to have been successful. The responses received to the targeted consultation (Appendix G) were mostly positive with regard to the achievement of this

objective and only one respondent (others category) stated that the E-PRTR had failed to deliver on improved knowledge.

#### *Workshop*

Further, participants at the workshop (Appendix J) highlighted the usefulness of the information on pollutants, in particular due to the availability of trends and evolution of data in the context of the pollutants and activity thresholds, as well as information on the characteristics of each pollutant. However, some feedback received at the workshop indicated that to improve the effectiveness of the E-PRTR, more information could be provided on pollutants and their impacts.

#### *Interviews*

While stressing the value of improved information within E-PRTR over time, interviewees (Appendix H), also noted limitations on the data. For example, studies in Germany on mercury emissions have concluded that waste water treatment plants effectively discharge mercury below E-PRTR thresholds, so E-PRTR would no longer capture information on this important substance.

Participants to the workshop (Appendix J) discussed how the current lack of contextual information means that the data can be misinterpreted and either not used at all or used inaccurately.

Overall there is an indication that the E-PRTR has encouraged a better knowledge of pollution and exposure to pollutants. Limitations, for example the lack of information on pollutants' impacts were also identified.

### *C. Promote transparency and accountability in the sphere of environment management*

With regard to the objective of more transparency and accountability in environment management, a range of responses was observed through the different consultation exercises. Overall, the competent authorities and others viewed the delivering of the objective as more significant than the industry respondents.

#### *Public Consultation*

The public consultation (Appendix I) also asked respondents if they thought the register had increased transparency in environmental information and decision making. Out of 67 responses, more than half (35) indicated that the E-PRTR contributed at least partially to more transparency and accountability in environmental management. An observation from the responses was that the percentage of those who thought it had not increased transparency was greater for those commenting on national registers.

#### *Workshop*

During the workshop (Appendix J) an issue linked to the accountability was identified, which is the quality assurance process and the many bodies involved in the process from the facilities, the local and regional authorities, the regional coordinators, and the national submission to the European Commission. It was highlighted that it is important to ensure that this process is running effectively.

Furthermore, the nature of transparency was also questioned by participants. While the data are visible, there are very little details included on how these data have been either calculated, measured, monitored or estimated. Participants to the workshop indicated that an EU level guidance on these topics would support more transparent data.

*Overall the competent authorities and others viewed the delivering of the objective of transparency as more significant than the industry respondents. This mixed view reflects the consideration that visibility of the data does not mean increased transparency because little information is available on how the data presented in the E-PRTR have been obtained (e.g. calculated, monitored or estimated).***D. Improve environmental performance of activities causing pollution**

#### *Targeted Consultation*

The 'others' category of the respondents to the targeted consultation (Appendix G) stated that the objective of improved environmental performance for (industrial) activities causing pollution had been achieved to a large extent. However, some competent authorities and the industry did not consider any contribution to this objective from the E-PRTR Regulation. However, the majority of the responses were between these extremes. Therefore, the interpretation of this evidence is that the impact of E-PRTR is one contributor to the environmental performance of industry, but there are other important drivers (such as IED) and views on the importance of E-PRTR as a driver varied in the targeted consultation.

#### *Interviews*

Interviews held during the project indicated that to various stakeholders it was not clear if E-PRTR had contributed to improved environmental performance. Interviewees suggested that the improved performance was mostly due to the implementation of IPPC/IED, which has resulted in the reduction of emissions of some pollutants below E-PRTR reporting thresholds. More information on the relationship of E-PRTR with IED is included in Section 4.3.

#### *Workshop*

The role of the E-PRTR Regulation in improving environmental performance of activities was also discussed during the workshop (Appendix J). Respondents highlighted that due to the type of data reported and thresholds, there is insufficient data to assess the environmental performance of a specific facility. This leads to some misinterpretation of the data where the top 10 releasers of a specific pollutant are often described as 'top 10 polluters' whereas, in actual fact these installations may be environmentally performant. The absence of data for benchmarking was repeatedly identified as a gap, making it difficult for the public to judge the environmental performance of industrial activities, but also for industries to use E-PRTR data for benchmarking purposes.

#### *Public Consultation*

Respondents to the public consultation (Appendix I) were mostly positive when asked if the data were useful for benchmarking installation performance across Europe, with 80% stating that the data are used, or partially used, for this purpose. On the issue of whether the registers had increased accountability of operators, nearly two thirds thought the registers had done this, or partially delivered this outcome. It is important to note that the outcome of improved benchmarking and improved accountability should be shown as contributing to improved prevention or reduction of environmental pollution. However, nearly half of the respondents to the public consultation thought that the registers had not led to this outcome, with only 15% positively stating that they had achieved this.

#### *Interviews*

Interviews held during the project (Appendix H) indicated that governmental and NGO stakeholders recognised the importance of benchmarking, but that E-PRTR data are often too limited for this; the lack of further comparator data (e.g. performance and capacity) means that interpretation of comparative emissions is difficult or impossible.

#### *Targeted Consultation*

The stakeholder targeted consultation (Appendix G) produced the most positive results. With very few outliers, most competent authority and industry respondents reported that the E-PRTR Regulation had delivered the five stated objectives of the Regulation (listed above) to a significant extent or to some extent (with industry providing slightly more

positive responses than competent authorities). The majority of positive responses were related to improved transparency and public knowledge and participation. Responses concerning improved environmental performance of industry were less positive (but still more positive than the public consultation). Overall, therefore, the evidence from this source indicates that the E-PRTR Regulation has been largely effective in delivering its objectives.

Overall there is a clear indication that the E-PRTR has participated in improving the environmental performance of activities causing pollution. Other measures and technical improvements were also quoted as source of this improvement.

#### *E. Effectively engage citizens in environmental decision making*

The objective of engagement of citizens in environmental decision making was addressed through all evidence gathered.

##### *Public Consultation*

13% of the respondents to the public consultation (Appendix I) thought the registers had increased public engagement in European environmental information and decision making. 28% of the respondents thought that it had increased transparency and 24% thought it had partially done so.

While there were some differences between the responses of competent authorities and industry, these differences were not that marked and may reflect the different geographic distribution of the respondents. The variability of views also probably reflects genuine experience on the ground – some industry groups have reacted to the consequences of providing the required information, while others have not (so resulting in different views on the effect of the Regulation); similarly different prior conditions for transparency and public participation would affect views on the additional effect that the Regulation has had.

Finally, respondents were asked if the registers had increased public engagement in the local environment and/or environmental decision making. For those who commented, the majority thought that the registers had not increased engagement and this was particularly marked for those commenting on national registers. Of those who thought that registers had increased public engagement at local level, most thought that this was only partial.

##### *Workshop*

During the workshop (Appendix J), respondents expressed diverging views, some indicating that the E-PRTR Regulation has allowed citizen to get an understanding of the local environmental concern to other stating that the main interest of E-PRTR was to support policy decision making rather than citizen knowledge. The discussion on effectiveness at the stakeholder workshop centred on which aspects of the E-PRTR are important for achieving optimum effectiveness.

##### *Interviews*

The ability of the public to engage with PRTRs is assessed by considering elements such as the frequency to which the public consult with registers. Interviews held during the project (Appendix H) suggested that this was positive in several countries, e.g. in Germany the length of time individuals spend on the website is relatively long, suggesting deliberate engagement. However, the Madrid 2015 conference on global PRTRs noted that in some advanced non-EU countries (e.g. US, Canada) registers have better displays of information (graphics, etc.) stimulating more engagement with the public. Further, interviewees recognised the problems of linking PRTRs with other environmental reporting (at Member State and EU level), but also that when the public ask questions about environmental issues, answers may lie in other databases and this is an inefficient way to communicate with the public.

##### *Public Consultation*

Respondents to the public consultation (Appendix I) were asked to indicate whether the registers provided data to enable an understanding of local environmental concerns. There



were very similar levels of response overall, although those responding on national registers were more likely to state that the registers did not provide the requisite data compared to those responding on the EU register. Respondents were also asked if the registers had increased public engagement in European environmental information and decision making. Fewer thought that it had than those who thought it had partially done so, or not done so.

To effectively support public participation in environmental decision making, it was felt that the emissions data under the E-PRTR would have more value if supported by further information, such as on activity level or capacity of the facilities. More information could be provided to users on the pollutants and the impacts of the pollutants. Participants discussed how the current lack of contextual information means that the data can be misinterpreted and used inaccurately. One suggestion to improve effectiveness was made with respect to aligning the reporting unit under the E-PRTR (in kilograms) with the reporting by operators to regulators under the IED (as concentration to check compliance with emission limit values) by developing guidance for users on how to convert E-PRTR data so that it can be comparable.

Lastly it was noted that to improve effectiveness the public feedback process should be made more accessible.

Overall, it was found that the E-PRTR Regulation has partially increased the engagement of citizens in environmental decision making.

#### **4.1.2 EQ.2 - To what extent can the progress made towards the objectives listed in the question above be reasonably linked to measures of the E-PRTR Regulation?**

This question seeks to determine whether progress towards objectives is actually attributable to the E-PRTR Regulation. This was not explicitly addressed in the public consultation or the stakeholder workshop. E-PRTR is one of a suite of measures at EU level which foster public transparency, and prevention and reduction of pollution by the industry. Further measures may support these objectives at Member State level. Distinguishing the particular contribution of E-PRTR is, therefore, difficult. For example, the IED requires public consultation of permit applications and transparency regarding final permits. Its primary purpose is the prevention and reduction of pollution from, largely, the same industrial facilities as covered by E-PRTR. Distinguishing the relative impact of IED and E-PRTR is, therefore, very difficult.

##### *Targeted Consultation*

The targeted stakeholder questionnaire (Appendix G) sought to elicit views from experts on the extent that progress made towards the objectives of E-PRTR could be reasonably linked to measures of Regulation. Only one response considered that progress towards the objectives was not attributable to the Regulation. The majority (70%) viewed such progress as being attributable 'to some extent' and this was a similar proportion for competent authority, industry and other experts. Key points that were made by stakeholders are summarised below.

In general, linkages are difficult to quantify, as other factors significantly contribute to progress. Compliance measures and enforcement of conditions of licences and permits also leads to improved environmental performance of industrial activities. The availability of information (e.g. via online registers) about monitoring and environmental performance of facilities simplify knowledge of industrial activities. The availability of this information, in addition to other processes such as the licensing application process, facilitates the engagement of citizens in environmental decision making.

The ability to access the data leads to more transparency and accountability in environment management, which may have the effect of improved environmental performance of activities. However there are some limitations due to how recent the data are when it is published (e.g. 2013 E-PRTR data were published in 2015).



In some Member States, many of the objectives in the E-PRTR were already achieved through existing national registers. The E-PRTR has enabled easier inter-comparison between different countries. Whilst the usefulness of this capability is not being disputed, there is a danger that simplistic conclusions and related decisions will be drawn from the data due to a lack of adequate contextual information. The achievement of objectives at European level may be hampered by lack of consistency in the way Member States check and quality assure data.

Stakeholders also noted other factors influencing the achievement of E-PRTR objectives, such as action by stakeholders, interaction between industry and authorities, which have contributed to the changes. Competent authorities considered that the main contributing factors are the implementation by Member States of the information provisions and the interaction of those authorities with industry.

#### **4.1.3 EQ.3 - What unexpected or unintended changes resulting from the Regulation can be identified (positive or negative)?**

While the assessment of the effectiveness should consider the progress made against expected objectives, it is also important to assess whether any unexpected effect, either positive or negative, can be identified.

Feedback on this point was gathered from the targeted consultation, the public consultation and the stakeholder workshop. Respondents were asked generally about unintended consequences of the Regulation.

One of the main unexpected changes identified was the fact that E-PRTR can contradict other reporting systems, due mostly because it presents emissions above a specific threshold, for activities conducted above a set threshold. This in turn limits the usefulness of the data collected for E-PRTR to be used for other reporting obligations. From the evidence collected, it appears that the role of the emission thresholds has been misconstrued. Thresholds were introduced in order to capture a significant share of the emissions and thus reduce the reporting burden for smaller emitters. However, the feedback from operators is that emissions have to be monitored in order to determine whether the thresholds of emissions are reached or not.

##### *Targeted Consultation*

The responses from competent authorities in the targeted consultation show a similar pattern for both positive and negative unintended consequences. The clear majority of respondents state that the consequence has occurred to some extent, with a much smaller number stating that it has either not occurred or to a large extent (with one minor exception). The implication is that the Regulation is having a large number of knock-on effects. This seems to be quite striking and should be tested to determine if these are parallel issues and really attributable to the Regulation.

On increased uncertainty on environmental performance of industrial installations it is noteworthy that the overwhelming majority of industry responses (22 out of 33) indicated that the E-PRTR had to 'no extent' led to this effect. This suggests therefore that the E-PRTR has contributed to providing useful information on environmental performance of industrial installations.

The majority of industry respondents and to a lesser extent competent authorities have indicated that data in E-PRTR can contradict other reporting systems. This was echoed by comments made by participants to the workshop (Appendix J). Due to the fact that E-PRTR presents only emissions emitted above a set threshold for activities produced above a set threshold, there is a limited comparability with data presented in other database taking a more holistic approach to emissions. The review of the coherence of air and water emissions presented in Appendix F. In addition, it was highlighted that there is some incoherence in the pollutants reported for the same activity in different Member States. One industry association has identified some facilities reporting under the wrong activity

in some Member States which lead to an erroneous picture of the environmental impact of the sector.

Furthermore a majority of competent authorities have indicated that the data presented in the E-PRTR are to some extent incompatible with other reporting requirements. This related to three main incompatibilities:

- Other reporting requirements for atmospheric emissions (e.g. NEC, CLRTAP or LCP emissions inventory) require total emissions to be reported, not emissions above a specific threshold;
- Permits for the facilities reporting in E-PRTR are mostly expressing emissions limits as concentrations. As a result, tonnes of emissions are not directly comparable; and
- Data reported under E-PRTR, waste framework Directive and waste statistics Regulation are based on different coding for waste and, therefore, there is an issue of consistency in comparing results.

#### *Workshop*

Competent Authorities indicated that E-PRTR reporting requirements overlap to some extent with other obligations whereas the majority of industry responses indicate that the overlap is to a large extent. Examples were discussed during the stakeholder workshop (Appendix J), which included the overlaps existing between the data required under future implementation reporting for the IED as described in Annex II of Decision 2012/795/EU<sup>7</sup>.

#### **4.1.4 EQ.4 – To what extent do the reported data and possibilities for searching the data serve the objectives of the Regulation (taking into account the objectives to improve the knowledge and evidence base)?**

##### *Targeted Consultation*

Evidence on this question was gathered through the targeted consultation. Only one respondent stated that the possibility to search data had had no effect. The majority of responses from all respondents' categories are similar and state that the Regulation has contributed to some extent. Points that arose in the consultation included:

- Some had difficulties using the data to compare environmental performance because:
  - The information available is not representative/comparable and could be misleading;
  - The fact that PRTR data relate to total emissions can be misleading when interpreting the numbers analysed by not taking into account production levels;
  - There are differences between Member States on the pollutants reported for the same type of facilities ; and
  - The E-PRTR codes are very wide in scope.
- In contrast several others did consider that the possibility to search the data in E-PRTR is considered to be useful for comparing emissions and sectors, noting that there are limitations to the comparisons possible for authorities, industry, public and journalists.

There is, therefore, a diversity of views about the extent of usefulness of E-PRTR. It is likely that this reflects the degree of detail that users require for their particular analytical purposes. E-PRTR is viewed as useful for comparative information as a general picture, but it is insufficient in detail to provide a detailed comparison of two similar activities in

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<sup>7</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:349:0057:0065:EN:PDF>

two different Member States (which an industrial operator or policy analyst might wish to do).

The targeted consultation also asked if there were features of national registers that should be in the E- PRTR. Some key aspects highlighted included:

- Use of additional search tools and data visualisation;
- Links to the permits for the activities covered;
- Inclusion of activity levels of installations so that comparisons of performance are more robust; and
- Some suggested including additional pollutants (e.g. radioactive substances) or removing emissions thresholds for reporting (as is the case in Spain).

Finally, recognising the need to improve the quality of data reported to the E-PRTR register, the EEA has initiated an annual data review process in recent years, providing feedback to the competent authorities in each country responsible for compiling facility data (e.g. ETC/ACC, 2010). More information on the latest annual review is included in Appendix F. It is considered that attention should be given to further checking by national regulators before data are reported to the E-PRTR, particularly to address completeness of data and to identify outlying values. Such checking is to some extent facilitated by the annual updating of the E-PRTR, which allows the identification of facilities whose emissions vary significantly between years.

The evaluation also attempted to identify the impact of the annual reporting obligation in the achievement of the objectives of the Regulation. Feedback received mostly supports that the annual obligation to report helps to maximise the achievement of the objectives listed above. However, it is not clear if the response is due to the fact that reporting per se has to deliver the objectives or if it is a response on the fact that the reporting is annual as opposed to any other time interval. Several emphasised the importance of data quality as critical and noted, for example, the role of trade associations and NGOs in highlighting data issues in both national PRTRs and the E-PRTR.

#### **4.1.5 Conclusion on Effectiveness**

The evidence gathered shows that there is effectiveness in being part of a series of instruments contributing to the objectives. It is important to recall that the E-PRTR Regulation is one of the available means to reach the objectives. For example, the E-PRTR Regulation aims at contributing to the objectives of public participation in decision making, rather than being responsible for it on its own. This context affects the views presented.

Two aspects have arisen from the effectiveness analysis, namely:

- Some limitations on the quality and completeness of the data in the register; and
- Limited contextual information that limits the understanding and use of E-PRTR data.

As demonstrated by the implementation review (Appendix D), both the completeness and the quality of the register are improving over time the findings of the review should be acted upon in order to enhance the effectiveness of the Regulation.

The second matter shows that additional information can add value and purpose to the data of the register. The public might have difficulties understanding the meaning of the emissions data, such as whether the facilities are compliant with their legal obligations and what a tonne of a specific pollutant actually means for the environment and human health (i.e. their impacts). Some industry stakeholders have also stated that including information on production data could aid in delivering assessment of environmental effectiveness and provide a basis for benchmarking (which is also of value to national authorities). Not having this additional information limits the extent of delivery of the objectives of E-PRTR.

## 4.2 Efficiency

The assessment of efficiency is done by analysing the costs of implementing the E-PRTR Regulation. It is important to note as the E-PRTR Regulation implements the Kiev Protocol in EU law, many of the costs arising from its implementation are due to the provisions of the Protocol. Where the Regulation includes provisions not found in the Kiev Protocol, these costs can be considered to be additional to those derived from implementing UN law.

An efficient regime is one that delivers its objectives at the lowest cost. Therefore this part of the evaluation covers an assessment of the core costs of implementing E-PRTR and on whom these fall (e.g. operators, MS authorities and EU bodies), how the costs vary between Member States, and whether they are proportionate to the objectives of the regime.

The costs from the Regulation are carried by operators (initial providers of data), Member States authorities (collecting, collating, checking and providing data) and the European Commission and EEA (European Environment Agency) at EU level (collating, checking, making data available).

An issue in the identification of costs is to distinguish the costs arising directly from the E-PRTR from those from other reporting activity. This may be particularly difficult for operators that are subject to a range of reporting obligations. Where Member States (and others such as the EEA) work specifically on E-PRTR data (e.g. collation, presentation) the identification of costs would be more straightforward.

The European Commission and EEA are working on possibilities to streamline the reporting on industrial emissions, for example by linking E-PRTR reporting to the reporting on LCP emission inventories. The streamlining is integrated in the section on coherence (Section 4.3).

The analysis of efficiency is structured according to the evaluation questions:

- EQ.5 – To what extent is the effort/are the costs justified compared to the benefits and usability of the reported information associated with compliance with the Regulation?
  - SubQ-5.a Overall costs associated with implementation;
  - SubQ-5.b Overall impacts and benefits associated with implementation; and
  - SubQ-5.c Are the costs proportionate, is there inefficient provisions?
- EQ.6 - Are you aware of significant costs differences for the implementation of the E-PRTR Regulation between countries?
- EQ.7 - How do you rate the costs of implementing the E-PRTR Regulation compared to other similar reporting measures?
- EQ.8 – What evidence for simplification or streamlining with applicable regulations in the field of industrial emissions and reporting can be detected?

### 4.2.1 EQ.5 – To what extent is the effort/are the costs justified compared to the benefits and usability of the reported information associated with compliance with the Regulation?

To assess costs and benefits of the Regulation, their comparison and, hence, an understanding of efficiency is important. This analysis approaches this by first examining the evidence for costs and then evidence of benefits through two sub-questions. It is important to note that evidence for benefits overlaps strongly with the evidence in the section on effectiveness. This is because the main benefits of the Regulation are seen through achieving its objectives and, therefore, it is evident that the extent to which these are achieved (i.e. effectiveness) is a key determinant of the extent of benefits.

### *SubQ-5.a Overall costs associated with implementation*

To understand the implementing cost of the E-PRTR, the activities to which the costs may be assigned have been identified:

- monitoring/calculating/analysing emissions and providing an annual report to Member State authorities (done by operators);
- collecting data, performing quality assurance verifications and providing the data to the Commission (done by Member State authorities); and
- analysing the received data, performing quality assurance and maintaining the register/website (done by EEA).

However, assigning all of these costs to the E-PRTR Regulation is not appropriate as most of the activities would also have taken place if the Regulation had not been adopted. Firstly because the monitoring and collecting of emissions data by operators and the reporting to the respective competent authorities is required by other EU environmental law (and national law). And secondly because the requirements for operators to report under the Kiev Protocol (and Member State authorities to check this and maintain their own registers) predates the E-PRTR.

Taking this into account analysis has to consider whether costs are justified focusing on those costs that are additional costs due to implementing the Regulation that go beyond the Protocol and other EU environmental law. The summary provided in this section draws on the more detailed analysis of additional requirements of the Regulation<sup>8</sup> (Appendix K), which are:

- A. The need to report on additional water pollutants.
- B. The need for MS authorities to report to the Commission.
- C. The entire activity of the EEA to operate the European register.

#### *Impact Assessment evidence*

When considering the evidence gathered for the assessment of the efficiency of the Regulation, it is worth starting with conclusions relating to costs presented in the Impact Assessment (hereafter IA) accompanying the original proposal<sup>9</sup> for the Regulation. The Explanatory Memorandum of the proposal also referred to a study<sup>10</sup> undertaken during the development of the Protocol under the UN, which it notes all Parties could contribute to, comment on and was accepted by all Parties for publication. The IA noted that the costs of implementing pollution registers could not simply be applied to the European register proposed in 2004 for two reasons:

- Member States are also obliged to establish their own national PRTR according to the Protocol, so the provisions relating to this in the Regulation are not additional costs; and
- Key elements of the European PRTR (data collection systems, electronic tools) were already in place under EPER.

As a result, the IA focused its cost assessment on the additional costs of the Regulation. Specific conclusions on costs stated in the IA were:

- The costs would be low and the IA stated that these would mainly accrue to the Commission, since it would publish the data on the internet and deliver guidance and review documents. However, much of this work has been undertaken by the EEA (which the IA noted would need "a small yearly budget");

<sup>8</sup> Appendix K includes comparison on the requirements of the Protocol and the requirements of the Regulation

<sup>9</sup> COM(2004)634

<sup>10</sup> "Analysis of the Costs and Benefits of PRTRs" 2002. Prepared by the ECE Economic Analysis Division. Document no. CEP/WG.5/AC.2/2002/4, 11.02.2002.

- Additional but limited costs may arise for compiling a national report;
- The reporting requirement of Article 8(3) of Directive 91/689/EEC on hazardous waste would be repealed, so saving some costs;
- More generally, the harmonising and streamlining of reporting by facilities would enhance and facilitate future development of coherent and effective monitoring and reporting; and
- The potential for coordinating reporting and optimising business costs could be explored where there is a high degree of integration of similar facilities based on the same site e.g. sharing a common waste water treatment plant.

#### *A. Need to report on additional water pollutants*

The E-PRTR Regulation, in implementing the Kiev Protocol in EU law, includes the full range of pollutants that are required to be reported under the Protocol. However, the Regulation also includes a requirement to report on emissions of five additional water pollutants. Therefore, any costs associated with the collection and reporting of data for these five pollutants would be additional to any costs arising from implementation of the Kiev Protocol.

The extent of costs will depend on the number of facilities affected. According to the register, the number of facilities reporting on the additional substances is small compared to the 30,000 facilities reporting under E-PRTR (in 2013 this was 63 for Fluoranthene, 40 for Octyphenols and Octyphenol ethoxylates, 34 for Benzo(g,h,i.)perylene, 8 for Isodrin and 2 for Hexabromobiphenyl). Furthermore, the number of facilities reporting should certainly be larger, for example Hexabromobiphenyl is reported by two WWTPs in France, whereas it is almost certainly discharged by more WWTPs across Europe. However, while the number of facilities affected by the additional requirements to date is small, costs do need to be considered for individual businesses as well as collectively.

It is not possible to calculate the costs of reporting on the additional water pollutants. At one extreme it might be argued that including these pollutants in the Regulation has led not only to a requirement to report, but also a requirement to monitor (with additional costs). At the other extreme, the limited number of reports for these pollutants might lead to the conclusion that they are only being reported where monitoring and reporting is already taking place (so no additional costs). There is no evidence to support either possibility (or any intermediary). Therefore, the costs of this very limited additional obligation in the Regulation are not known. This is both the case for the costs that are currently being incurred and for the costs that should be being incurred for all of the facilities that must be emitting these pollutants, but are not reporting them.

#### *B. Need for MS authorities to report to the Commission*

The reporting of Member States to the EEA involves the transfer of the data and dealing with queries from the EEA regarding those data. The collection and compilation of the data is not part of these costs as these are required by the Protocol. The additional costs of this movement of data are unlikely to be significant compared to other costs of the national PRTR registers. When asked about costs (see following sub-sections), competent authorities highlight costs arising from the processing of data from operators (including quality assurance, queries, etc.). Once these data are collected, processed, checked and made available on a national register (the costs of all of these activities arising from the Kiev Protocol, not the Regulation), the additional obligation of the Regulation is to provide those data to the EU level.

The guidance produced to support implementation of the Regulation avoids the problem of collection of data at Member State level not being compatible with supply of those data to the EU level (for which costs would arise). If the data collected at Member State level are properly checked, then supply of data to the EU level may be sufficient for the Member



State to meet its obligations. Where the EEA identifies problems with the data, this will require additional time by Member State authorities to address those problems. However, it is reasonable to argue that if these problems arise from poor quality control at national level, these costs are not additional costs arising from the Regulation, but they arise from a failure adequately to implement the requirements for quality assurance that implementation of the Kiev Protocol already requires at national level.

### *C. The activity of the EEA (and other EU institutions) to operate the European register.*

The most significant additional costs of the Regulation are those incurred by the creation, operation and maintenance of the EU level register and website. These costs are borne by the EEA and the European Commission. Unfortunately no further information was gathered on the actual costs borne by the EEA. For the European Commission costs are borne within Unit C4 of DG ENV. The Commission estimates that this involves 1FTE staff per year, costing around €150,000.

#### *Public Consultation*

In the public consultation (Appendix I) industry respondents were asked to provide estimates of the time they spent undertaking tasks to support the registers. The responses showed a wide range of figures, from relatively small amounts of time, to significant investments in time. However, an estimate of 22 hours per year is within the range of the figures given. Assuming a full time equivalent staff post to work 220 hours per year, this time input, therefore, represents around 0.015 FTE. 0.015 FTE is a cost to business, but it is not a high cost when compared to time spent on other regulatory requirements (e.g. environment, health and safety, accounting, etc.). Therefore, an interesting outcome of the consultation is that the absolute figures for time spent is not particularly large for business, but all responded felt that the requirements were time consuming to implement.

It is important to note that specific **cost information separately for SMEs** was not identified during the research of this project, nor provided by respondents to the public consultation, targeted consultation or stakeholder workshop. This is probably partly due to the fact that the thresholds used in the regulation mean that many SMEs are not captured in its scope, but also that the consultation processes used within the evaluation methodology tend to be more accessible to companies with more resources and with greater attention to EU level developments.

Authorities did not provide quantitative estimates of the time taken. However, verification was identified as time consuming, as was difference in report formats. However, it was noted that some data activities are required for more than PRTR and, therefore, identifying separate costs is not possible.

#### *Targeted Consultation*

In the stakeholder targeted consultation (Appendix G), competent authorities were asked to provide a qualitative assessment of the costs of implementing the Regulation and also quantitative figures. The majority of the competent authorities indicated that the E-PRTR had increased administrative burden to some extent, while industry has indicated it has increased administrative burden to a large extent. Some authorities have difficulties isolating the costs of the Regulation (and state this is the case). More report that start-up costs are moderate/low, but there is an even split on the extent of costs for recurrent reporting.

The costs reported vary, but in summary of the targeted consultation and stakeholder interviews (Appendix G and Appendix H), start-up costs to authorities varied from €130,000 to €1-2 million. All such costs have, of course, passed and many are costs that would have arisen from implementing the Protocol rather than the Regulation itself. Annual running costs were also variable, where reported. Most reports estimated staff time (a few person days per year). The total annual national budget for PRTR (national and EU) is, for example, in Spain estimated at €150,000-€170,000. Thus the recurrent costs do vary. Again, these are costs for PRTR as a whole and not any additional costs of the Regulation.

Furthermore the integration of reporting obligations (explicitly stated by Portugal and the Netherlands, but probably the case in many countries) would indicate that the separation of PRTR costs themselves is impossible for some Member States.

The only respondent in the targeted consultation to comment specifically on the marginal costs of E-PRTR compared to PRTR was a UK industry response, which stated that these are “relatively small”.

#### *Workshop*

The stakeholder workshop (Appendix J) also discussed costs and efficiency. A German competent authority noted that costs reflect the complexity and size of facilities. For example, a large chemical company with 230 installations has an integrated environmental management system, so the actual cost of data management for PRTR for one facility is low. Other companies might have more disaggregated systems, which would lead to higher costs.

The workshop (Appendix J) also discussed operators finding reporting requirements across different regulations to be repetitive and time-consuming. Examples of integrated environmental reporting were provided by a few competent authorities, where operators are only required to report once and the data are then allocated to the respective reporting systems. It was discussed how such a system at an EU level may deliver efficiencies for operators. INSPIRE was referred to as an example of a reporting format at EU level that frames emission data and contextual information and, therefore, can be a tool to enhance practical integration of reporting and aid practical coherence – although how feasible this initiative is in reality was questioned.

Another factor affecting efficiency was noted by the Netherlands competent authority in the stakeholder interviews, which argued that the activity thresholds in the E-PRTR Regulation create inefficiencies. This is the case especially for activity 5.a (waste) and to a lesser extent painting of ships (activity 9(e)). Companies have to collect information in case they will at some point of the year meet the threshold. This also raises legal issues with some companies challenging the legality of having to fill requirements of reporting they are not finally subject to. The French competent authority, however, noted that in France operators can report emissions above and below the thresholds and the competent authority undertakes the filtering, easing burdens on business.

In practice, Member State information systems can also be used to improve efficiencies. For example, in France and in the Netherlands, the website integrates several reporting including Solvent Emissions Directive (SED), Large Combustion Plant Directive (LCPD) inventories, waste storage, National Emission Ceilings Directive (NECD), greenhouse gas (GHG) emissions and CLRTAP. In France it also allows reporting of methane and PM from agriculture activities and it includes calculation tool that helps farmers to estimate their emissions. This is well beyond the E-PRTR, but avoids businesses and authorities having to work with several different databases.

#### *SubQ-5.b Overall impacts and benefits associated with implementation*

The evidence concerning this sub-question of the evaluation was gathered mostly using the targeted stakeholder consultation and the public consultation. This explored benefits framed around the stated objectives of the E-PRTR Regulation. Hence it is important to refer to Section 4.1 which explored the effectiveness of the Regulation in delivering those objectives.

#### *Public Consultation*

The public consultation (Appendix I) included several questions in relation to the efficiency of the Regulation by asking about the perception of burden and absolute figures for the burden of implementing the registers. When industries respondents were asked if data collation is time consuming, all respondents stated that it was. The main activities that were highlighted as time consuming are data collection, calculations of mass emissions and, verification and uploading of data. Specific activities such as gathering data from dust



abatement systems and assessing off-site waste shipment, were also noted as time consuming.

Respondents to the public consultation were also asked about the nature of the processes for data transmission and how they perceived these processes. All industry respondents stated that they submitted their data electronically (thus avoiding time consuming and inefficient paper-based systems). However, when asked whether they thought it was simple to submit the data, responses were divided. For the national authorities, the few responses stated that they found verification to be time consuming.

#### *Targeted Consultation*

The targeted consultation (Appendix G) demonstrated the following:

- With regard to the potential benefit of public participation in environmental affairs, the majority of industry respondents stated that this benefit was very significant, and most competent authority respondents considered it to be of some extent;
- With regard to the potential benefit of better understanding of pollution and exposure to pollutants, the majority of industry respondents stated that this benefit was very significant, and most competent authority respondents considered it to be of some extent;
- With regard to the potential benefit of transparency and accountability in environment management, most industry respondents and competent authorities considered that the benefit was significant;
- With regard to the potential benefit of improved environmental performance of (industrial) activities causing pollution, the responses were more diverse. Several competent authorities did not see this as a benefit, while the industry identifies this as a benefit;
- With regard to the potential benefit of engagement of citizens in environmental decision making, the majority sees the benefit as being of some extent and a sizeable number of competent authority respondents (and some industry) do not see this as a benefit;
- With regard to the potential benefit of advancement in process science driven by better understanding of the inputs and outputs, most see this as a benefit to some extent. A few see it as a benefit, but a proportion of both competent authority and industry respondents do not see the benefit; and
- With regard to the potential benefit of improvement of industry's environmental performance due to comparison with performance of industry at EU level, most respondents are positive. More specifically, the industry respondents find the benefit of greater significance than the competent authorities.

To explore benefits further, the targeted consultation asked respondents explicitly whether benefits outweighed the costs, or vice versa. Overall, the views were divided. Competent authorities view the benefits as greater than the costs, while industry is evenly split on this (including a similar number that view the costs and benefits as similar). When considering relative costs and benefits, it is important to take into account the findings of the previous sub-questions on absolute costs. Further, the targeted consultation also found that most respondents (competent authorities and industry) consider that there has been an increase in benefits over time to some extent, demonstrating the improved value as the registers become more robust year on year.

#### *SubQ-5.c Are the costs proportionate, is there inefficient provisions?*

Efficiency is increased through the use of electronic reporting. The implementation review (Appendix D) found that the majority of Member States reported that there are electronic systems for submitting E-PRTR data, but there are still cases (Brussels region in Belgium and Greece) where there is no electronic reporting tool and data are reported on paper. Some Member States have both paper and electronic systems. Clearly there is a move

towards the greater efficiency of electronic reporting, but there are still efficiency 'gaps' that can be addressed. This is a matter for Member State action, rather than for EU level intervention.

#### *Targeted Consultation*

The question of whether micro sized enterprises and/or SMEs had been disproportionately impacted by the Regulation was addressed in the targeted consultation (Appendix G). The large majority of competent authorities considered these businesses have not been disproportionately impacted. However, the following points were raised:

- Micro sized enterprises have fewer resources and environmental awareness. In order to meet the obligations of the E-PRTR Regulation they usually need external technical and financial support. For some small installation sectors like textiles and farming, reporting can be a burden; and
- Many SME are not within the scope of the E-PRTR Regulation and some PRTR source categories in the EU Members States could be better understood if they were included.

#### *Workshop*

The stakeholder workshop discussed wider efficiency issues (Appendix J). Concerns were raised that if the reporting thresholds (both activity and pollutants) were lowered, the administrative burden would increase for many facilities; however, it was also recognised that all facilities are required to monitor emissions to check they are below the reporting thresholds. Lowering of reporting activity threshold was particularly considered to be an issue for waste management operators (where in one Member State only 1% of operators are above the reporting threshold). Further, in one Member State, to facilitate the completeness check of reporting at national level, if thresholds are exceeded one year, the facility is obliged to report the following year regardless of the threshold.

The workshop also discussed if there are any opportunities for efficiency savings. There was general consensus that efficiency savings are being made at Member State level, but that these are not being made at an EU level, such as the development of single reporting portals for environmental reporting. It was stressed that this is not a question of losing or adding reporting requirements, rather it is about streamlining the reporting processes to attain efficiency savings.

Opportunities to improve efficiencies within the reporting practices were explored. Authorities and operators would benefit from improved guidance, such knowing when calculating is better than measurement. The quality assurance process was identified as time-consuming by some - therefore any means of improving the quality in the first instance would improve efficiencies in this area.

#### **4.2.2 EQ.6 - Are you aware of significant costs differences for the implementation of the E-PRTR Regulation between countries?**

This question was explored mostly through the targeted stakeholder consultation (Appendix G).

Most competent authorities are not aware of significant differences in costs of implementation between Member States. A competent authority noted that the more decentralised a country is administered (especially federal countries), the higher the costs for implementing any regulation, not only E-PRTR. Indeed in federal countries the costs are not simply about duplication of data movements, but of issues such as complexity of data assurance. Germany has, therefore, instituted a country-wide approach to complex data quality management<sup>11</sup>.

<sup>11</sup> Ulrike Schueler, 2015. Verification of Data Quality within the PRTR Process Chain in Germany. Presentation to the Madrid PRTR Conference.

The implementation analysis (Appendix D) also provides evidence relevant here on differences between Member States and related difficulties. It examined streamlining of reporting activities between E-PRTR and other reporting activities. The results found three situations:

- Member States where no integration is undertaken, e.g. Greece;
- Member States where the E-PRTR is fully integrated to national reporting mechanisms, which is the case in Bulgaria, Czech Republic, Ireland, the Netherlands and the United Kingdom; and
- Member States where the integration has started and is being completed, which is the case in Romania and Slovakia.

These actions to enhance efficiency are Member State initiatives. However, actions at EU level to integrate reporting (as being examined in the reporting fitness check) can help facilitate this (e.g. by overcome barriers between different areas of EU law).

#### **4.2.3 EQ.7 - How do you rate the costs of implementing the E-PRTR Regulation compared to other similar reporting measure?**

A particular measure of the costs of E-PRTR is how it compares to other reporting obligations. The targeted stakeholder consultation (Appendix G) found that while most view the costs as similar, there are divergent views on whether costs are higher or lower. For example, one competent authority stated that "E-PRTR is a fully electronically organized reporting obligation, from facilities to competent authorities and other relevant levels of national administration all the way to the EU level. This works very well and creates much less administrative burden on all levels than with other reporting obligations." Comparisons were made with a range of other reporting obligations, including IED, UWWTD and Bathing Water Directive.

A comparison of absolute costs (e.g. E-PRTR compared to IED) is less useful than for example the relative costs for the different benefits derived or amount of data provided. Unfortunately no data are available to make such an analysis. One reporting regime will be more costly than another, but there is no information to allow determining if this is justified or if it is more efficient.

It is important to note that further research is being undertaken to support the Commission's current Fitness Check of environmental reporting, including the costs of reporting under different areas of environmental policy. Therefore, further comparative evidence will emerge as the Fitness Check proceeds<sup>12</sup>.

#### **4.2.4 EQ.8 – What evidence for simplification or streamlining with applicable regulations in the field of industrial emissions and reporting can be detected?**

In addition to the elements identified in previous sections, the evidence gathered across the study identified actions at EU level to reduce burdens on business and simplify the reporting process:

- An examination of reporting requirements across similar EU legislative reporting areas would be helpful to identify opportunities and best practice to harmonise and streamline reporting;
- Develop an online reporting tool common to all EU Member States so that facilities may report in the desired format;
- A multi query search function with additional reporting parameters / access to other key information would facilitate considerably the efficiency of the E-PRTR; and
- Further harmonization between the E-PRTR and IED scope/definitions could foster a better streamlining of the data flow management, thus reducing the administrative

<sup>12</sup> [http://ec.europa.eu/environment/legal/reporting/index\\_en.htm](http://ec.europa.eu/environment/legal/reporting/index_en.htm)

burden for the reporting facilities and also reducing mistakes due to having to provide almost the same dataset through different reporting formats.

#### **4.2.5 Conclusion on Efficiency**

Consideration of efficiency should be linked to that of effectiveness – the delivery of value from the E-PRTR, which then becomes a question of cost-effectiveness. Where stakeholders have highlighted some challenges for the effectiveness of the E-PRTR in delivering certain objectives (e.g. for benchmarking businesses across Europe), it is possible that while adding a requirement might come with additional costs, this might be cost-effective in delivering an objective of E-PRTR.

A focus on the absolute costs (i.e. monetary or time) can lead to misplaced conclusions. For example, as seen in the figures provided by companies, the time spent by companies is rather limited. However, this should not be interpreted as being unimportant as there are ways to improve the efficiency of the implementation processes and all marginal cost savings are important.

The following conclusions can be drawn on the implementing cost of the Regulation:

- Reporting costs to operators generally stem from the Kiev protocol and are not allocated to E-PRTR. The additional elements to be reported under the Regulation are limited to a small number of water pollutants and these are reported by a small minority of operators across the EU. Overall, the reported time spent by operators on the tasks is estimated to be around 0.015 FTE;
- It is not possible to identify costs specific to SMEs. No evidence was available or provided on this issue;
- The main additional cost of the Regulation is the cost of competent authorities providing data to the EU level. Most respondents reported the overall recurrent costs for operating PRTR and not the additional costs for E-PRTR;
- Competent authorities highlighted that reporting obligations under other policy areas are more likely to be a burden than E-PRTR and that data from other regimes (e.g. IED) are likely to be used for E-PRTR reporting; and
- Overall, stakeholders considered the costs to be justified when compared to the benefits. If, therefore, a key criterion for efficiency is the comparison of costs to benefits, the conclusion from this stakeholder view is that the Regulation is largely efficient.

### **4.3 Coherence**

#### **4.3.1 Introduction**

The 'coherence' analysis examines the extent to which the Regulation is coherent with other interventions which have similar objectives. It also relates to what extent the E-PRTR Regulation is coherent internally. In examining coherence, it is important to stress that coherence does not mean 'the same'. Two laws may use different language, definitions, etc., but they work together well (so they are coherent), whereas others may create problems and barriers to practical application (so are not coherent).

This section examines two issues: the internal coherence of E-PRTR and its external coherence (i.e. with other legislation). It should be noted that the public consultation did not include specific questions on coherence.

#### **4.3.2 EQ.9 - To what extent is the E-PRTR Regulation coherent internally?**

Internal coherence concerns the way that different parts of a law work with other parts of the same law.

The targeted consultation (Appendix G) sought views on internal coherence. The majority of the competent authorities and industry respondents stated that the Regulation is coherent to some extent, and some stated that it is internally coherent to a large extent. Concerns were raised about improving implementation, limitations of the Regulation and external coherence. No evidence was provided of specific significant internal coherence problems. The only specific comment was that reporting on emissions to air and water have to be provided in kilograms, but waste transfers are reported in tonnes.

#### **4.3.3 EQ.10 – To what extent is the E-PRTR Regulation coherent with other applicable legislation?**

The Explanatory Memorandum accompanying the proposal for the Regulation discussed coherence with other EU law. The following conclusions were reached:

- The E-PRTR Regulation is consistent with existing EU legislation on Public Access to Environmental Information, Public Participation in Decision making and Access to Justice. Articles 11 and 13 on confidentiality and access to justice, referring directly to the relevant EU legislation;
- With regard to air, water and waste law, the provisions are consistent with that law. One exception for the definition of the capacity thresholds for the activities cement and ceramics industry in Annex I of the E-PRTR Regulation, which differs from those set out in Annex I of the IPPC Directive, but were necessary for compliance with the provisions of the Protocol;
- The E-PRTR Regulation should be seen as a separate legal instrument and not preempt a future amendment to the IPPC Directive, including any revised definitions for the Annex I activities. The Commission will inform the Parties regarding possible changes to the E-PRTR Regulation which could result from an amendment to the IPPC Directive;
- To harmonise and streamline reporting requirements, the E-PRTR repeals Article 8(3) of the Hazardous Waste Directive 91/689/EEC and includes further provisions to harmonise the obligations from the UN-ECE Protocol with existing EU legislation.
- In order to streamline with the Water Framework Directive [8] and its Annexes IX and X (Priority substances), the list of substances of the UN-ECE Kiev Protocol is extended by three substances; for five other substances on the UN-ECE list additional reporting of releases to water is asked for; and
- In order to streamline future reporting on persistent organic pollutants under the proposal a Regulation on persistent organic pollutants another additional substance is included.

#### *E-PRTR and the Industrial Emissions Directive (IED)*

There are several strands in the relationship between IED and E-PRTR, including:

- The direct legal cross-referencing between the instruments;
- The specific requirements for reporting for specified types of installations within IED (e.g. LCP);
- Coherence with some detailed elements of IED, such as definitions;
- The non-legal processes in place, such as reporting Schemas; and
- There are issues with different definitions, exact scope of activities/installations.

Emission limit values (ELVs) in IED permits may not be set to cover all the E-PRTR pollutants from an installation. As a result, the monitoring (conducted to verify compliance with the permit conditions) may cover fewer pollutants than ELVs. Reporting to a regulator draws on monitoring to show compliance and only limited data from this sub-set are required under Article 72 (for LCPs) to be reported to EU level.

This overlap of E-PRTR and IED does present an opportunity to develop tools for practical coherence of the reporting activities as to date there have been different reporting tools

for administrative and geographical data related to industrial point sources (e.g. different existing approaches for assigning IDs). The EEA has been working on this practical coherence and work is taking place to improve streamlining between the processes by developing a single identifier based system for all industrial point sources.

Regarding coherence with IED, the majority of respondents in the public consultation (Appendix I) viewed the coherence as strong. Some disagreed and commented that IED has included new activities and some thresholds in Annex I that are not the same as E-PRTR activities. Some also consider that the system of collection of data from installations/activities that are regulated under the IED and E-PRTR is not integrated, complementary or coherent (although this probably reflects situations in particular Member States). It was suggested that BREF process should specifically address the pollutants that are covered by E-PRTR in terms of the emissions and monitoring requirements so as to provide more accurate release data.

Feedback from the targeted consultation (Appendix G) highlighted the following coherence issues:

- The activity list needs to be harmonized with IED, for example intensive animal rearing.
- There is a lack of harmonised methodology regarding calculation of pollutants and this leads to different approaches and hence different results.
- The data are only a subset of the overall emissions 'footprint' for industrial activities due to the thresholds applied and it can be difficult to interpret the significance of yearly variations as facilities can move above and below the thresholds.

#### *E-PRTR and water law*

Evidence collected during the targeted consultation (Appendix G) highlighted that several respondents consider the pollutant list to be outdated, particularly for water. There are various interactions between industrial emissions and EU water law and policy. Emissions are important pressures on water bodies and could cause problems in meeting the good status objectives of the Water Framework Directive 2000/60/EC (WFD). However, the clear point of interaction between E-PRTR and EU water law where coherence issues might arise is with Directive 2008/105/EC on environmental quality standards in the field of water policy (EQSD). Member States are required to produce inventories of the emissions of these substances and report on these. Article 5 sets out the requirements on the inventories of emissions, discharges and losses and that this shall include E-PRTR information. Indeed Recital 21 states the aim for coherence "in order to avoid duplication of work by establishing those inventories and to ensure the coherence of those inventories".

There are differences between the substances covered by E-PRTR and the EQSD. The substances covered by the EQSD are evolving, taking account of new threats, such as endocrine disrupters. However it is more of a practical challenge to the Member States than a coherence issue. The EQSD simply states that Member States should use E-PRTR data in developing their inventories. Where substances are not covered by E-PRTR, other data will need to be sought. A similar point arises when considering sources covered. A further difference concerns the timing of reporting. The E-PRTR is an annual report, while the Priority Substances Directive requires a report on an inventory every six years. This also does not present a coherence issue – it is simply a difference. Also as E-PRTR establishes thresholds for reporting purposes, this creates data gap issues when dealing with the creation of an inventory of emissions, discharges and losses as required under the EQSD (Article 5).

Regarding coherence with WISE, the majority of respondents viewed the Regulation as coherent with WISE, with some viewing it as not fully coherent. WISE data relies on E-PRTR and information provided by Member States on concentrations of organic parameters in surface water. However many of these substances either do not feature in E-PRTR or are not reported, due to the high thresholds.



A specific point of interaction with EU water law is with the Urban Waste Water Treatment Directive (UWWTD) – as E-PRTR requires reporting on discharges from WWTPs covered by the UWWTD. The threshold for reporting under E-PRTR is WWTPs with a population equivalent of 100,000 or more. This does not match thresholds for much of the UWWTD (e.g. 150,000 p.e. or 10,000 p.e. for sensitive areas). Thus there is some potential issue of coherence here. Further, reporting under UWWTD is slow, and data tend to be older (although this is being addressed through a greater use of electronic reporting). Further, reporting tends to be on capacities and levels of treatment rather than specific substances and certainly not the range of substances covered by E-PRTR. Finally, reporting under UWWTD is used to populate an online viewer, with additional information such as on compliance of individual treatment plants. This is not possible with the E-PRTR database.

On the coherence of the data on release to water presented in the E-PRTR with Waterbase, a study<sup>13</sup> found that E-PRTR data for emissions to water was generally more precise than the Waterbase data and limited to specific activities.

#### *E-PRTR and EU waste legislation*

The coherence analysis between E-PRTR and EU waste law is driven by coherence issues within the waste acquis itself. Regulation (EC) No. 2150/2002 on waste statistics and Commission Decision 2015/955/EU on the list of waste have different definitions and categorisations for waste. Further, the Waste Shipment Regulation uses waste codes derived from the Basel Convention. Additionally some EU countries have not (yet) implemented the European List of Waste or have their own additional waste codes which do not exist in other countries/regions. This makes it very difficult to compare waste statistics. E-PRTR, in its collection of data on waste transfers, is an element in this landscape.

The result of this lack of consistency is either that Member States report quite different figures to the Commission and Eurostat (according to the relevant legislation) or that they generate data using one approach and use these data for all reporting. The problem of the former approach is that there can be major differences in the numbers reported by Member States for the same type of waste. The proposed revision to the Waste Framework Directive (COM (2015) 595) in the circular economy package includes a reference to E-PRTR. The proposal foresees that information should be collected on hazardous waste and made this available through electronic registries. Member States may also establish registries for other waste streams. The proposal states that Member States shall use the data on waste reported by industrial operators in E-PRTR.

Regarding coherence with the Waste Statistics Regulation, the majority of respondents agreed that it is coherent (with a few considering the coherence as strong). However, again a proportion disagreed with this position. Comments on this included:

- Where facilities treat the waste that they generate on-site this is not captured through reporting on transfers of waste under E-PRTR. The differing reporting needs means that facilities have to be surveyed more than once (depending on monitoring and reporting systems within countries);
- Reporting on economic sector (NACE) of the facility is required for both the Waste Statistics Regulation (waste generated dataset) and E-PRTR so there is some overlap in that requirement; and
- The reporting is not consistent as E-PRTR should also list the relevant EU Waste codes for the waste transfers.

#### *INSPIRE Directive 2007/2/EC*

The INSPIRE Directive is a key item of EU environmental law when considering any aspect of data collection or reporting, such as E-PRTR. However, the consideration of the

<sup>13</sup> Deltares project – see Appendix A

interaction with INSPIRE is not so much an issue of legal coherence, but of practical integration. The EEA/JRC has been working to develop an approach to integrating pollution emission information within INSPIRE. This work includes not only E-PRTR, but also IED and Seveso III. This includes technical identifier issues such as namespaces and links to mapping. The coherence between E-PRTR and INSPIRE is delivered by integrating the systems.

Most respondents to the public consultation (Appendix I) viewed the Regulation as coherent with INSPIRE. Several noted that INSPIRE 'only' defines formats and the geo-coded results of PRTR are available as an INSPIRE compliant service.

#### *Other legislation*

Regarding coherence with EMEP reporting under Directive 2001/81/EC on National Emission Ceilings for certain pollutants (NECD), the majority of respondents to the public consultation (Appendix I) agreed that it is coherent, but it was noted that the informal review of the European Topic Centre for Air Pollution and Climate Change (ETC/ACM) has shown that there are discrepancies between data reported under EMEP and E-PRTR. No stack information is required in E-PRTR, but it is needed for large combustion plant reporting under the LCP Directive. Similarly, emissions of SO<sub>x</sub> are required instead of SO<sub>2</sub> emissions.

Regarding coherence with the Seveso III Directive 96/82/EC, some stakeholders stated that the Regulation and the Directive were not coherent with each other, but the only specific example given was on clarification of "facility", and "unit".

Regarding coherence with the EU Emissions Trading Scheme Directive 2009/29/EC, the majority of respondents agreed that it is coherent. Some expressed the following coherence problems:

- Activities and thresholds are not the same as in E-PRTR and the scope of the two laws is different;
- CO<sub>2</sub> emissions are hard to compare because of different definitions of installations in EU ETS and facilities in E-PRTR; and
- E-PRTR data include all CO<sub>2</sub> emissions, while those under ETS do not include renewable sources.

### **4.3.4 Conclusion on Coherence**

Though there is an overall high level of coherence, some issues have been identified in the interactions with the IED (particularly Annex I definitions and for LCP inventories), EU waste law, ETS Directive (differences in activities and thresholds compared to E-PRTR), water law and INSPIRE. The improvement of these relations would present opportunities to further enhance coherence.

## **4.4 Relevance**

### **4.4.1 Introduction**

Legislation should be relevant to the needs of the society. A relevant law is a law which is well designed to meet specific identified needs. For example, for the E-PRTR, relevance could consider whether there is a need to collate information on pollutant emissions and whether the Regulation delivers this.

In assessing the relevance of legislation it is necessary to look back at the objectives and reasons for the legislation. While the assessment of effectiveness considers how far objectives have been delivered, relevance assessment asks if those objectives remain valid. It is also important to look at the present and future and consider if there are new or modified objectives that the Regulation ought to address. This could cover new needs



of society or new opportunities provided by technology (e.g. is it relevant to today's means of providing information to stakeholders.).

The evaluation of relevance takes into account how technology and society has evolved, and determines whether the legislation is still in tune with possible changes in today's society compared to the societal/environmental context when the legislation was originally adopted.

Relevance is analysed according to the following evaluation questions:

- EQ.11 - To what extent do the objectives of the E-PRTR still correspond to current needs within the EU?
- EQ.12 - Are there any obsolete, unnecessary or missing provisions or gaps in the Regulation that is affecting its performance?
- EQ.13 - To what extent does the Regulation contribute to the 5th objective of the 7th Environment Action Programme 'to improve the knowledge and evidence base for Union environment policy'?
- EQ.14 - Has the adaptation of the Regulation to scientific and technical progress been appropriate and involved stakeholders?
- EQ.15 - Are there any new needs that should be reflected in the E-PRTR Regulation?

#### **4.4.2 EQ.11 - To what extent do the objectives of the E-PRTR still correspond to current needs within the EU?**

As noted earlier, the objectives of the E-PRTR Regulation are to:

- A. Foster public participation in environmental affairs;
- B. Provide better knowledge of pollution/exposure to pollutants;
- C. Promote transparency and accountability in the sphere of environment management;
- D. Improve environmental performance of activities causing pollution; and
- E. Effectively engage citizens in environmental decision making.

It is, therefore, not only to ask whether these objectives are being met (effectiveness), but also whether they are still relevant.

The E-PRTR is the only relatively complete database of emissions from industrial activities across the EU. It is not thought that the fundamental objectives and this 'need' are no longer relevant. However, it is important to determine whether the nature of the data gathered (e.g. substances, activities), the timing on data transmission and annual amounts, are all still appropriate for the management of environmental decisions under different regulatory regimes (e.g. water management) that could use such data. It is possible that some elements will be no longer needed or that data on emissions provided in different ways would add value to environmental decision making.

#### *Targeted Consultation*

The targeted consultation (Appendix G) asked if the objectives of the E-PRTR Regulation correspond to current needs. The respondents saw the objectives as either largely relevant or relevant to some extent. Comments received show that there are limitations within the application of the Regulation which affects the delivery of the objectives. These included the failure to use new IT tools, such as apps, and limitations on the data (such as compliance information, thresholds, as noted in Section 3). However, the Regulation only aims to contribute towards its objectives, so that while improvements are possible, full delivery requires the overall application of a range of policies.

#### *Workshop*

The stakeholder workshop (Appendix J) discussed relevance with respect to the original objectives of the E-PRTR regulation as well as potential emerging objectives. These

included the provision of emissions data to facilitate public participation in environmental decision making, and the provision of data for assessing environmental performance. There was consensus that the E-PRTR is relevant to the objective of providing free emissions data to the public. To make it more relevant to public participation in the environmental decision making process, data comparability between other datasets would be necessary.

In conclusion, the evidence indicates that the five objectives do remain relevant to today's needs in the EU. Public participation, information and transparency are seen as critical to ensuring good decision making at local, national and EU level. Further, while industrial pollution has reduced, the need to continue improvement in industrial performance is recognised and E-PRTR has a role to play in this.

#### **4.4.3 EQ.12 - Are there any obsolete, unnecessary or missing provisions or gaps in the Regulation that is affecting its performance?**

In reviewing the Regulation and its processes for implementation, there does not appear to be clearly obsolete provisions. The provisions of the Regulation are of the following types:

- Requirements specifying what substances are to be reported on from what activities;
- Requirements for operators to supply additional information alongside the pollutant data; and
- Requirements for how to report the data and the operation of the EU level register.

It is difficult to determine which substances should be reported on and from what activities. In fact this overlaps with the issue of coherence (Section 4.4) - pollutants of concern may be driven by other policy fields and data needs for pollutants or from activities may be addressed in legislation adopted in those policy fields. For example, for water policy, the EQSD requires an inventory of pollutant emissions which have been identified as of concern. Some of these are not covered by E-PRTR, but the EQSD captures them, so the E-PRTR does not need to.

One 'gap' in the coverage of pollutants and activities in E-PRTR could be argued to be the emissions below the pollutant specific thresholds prescribed in the Regulation (as highlighted in the Section 4.3), which could affect the relevance of the E-PRTR to serve other policy areas. For example, the previous triennial report highlighted that for waste transfers in particular the thresholds were potentially too high with a significant proportion of data not included within the E-PRTR. Previous work<sup>14</sup> for DG Environment has shown that many pollutant emissions are not reported in the register. It should be noted that for some businesses the thresholds cause additional work as they have to process sets of available data to separate those data which exceed E-PRTR).

E-PRTR also requires additional supporting information from operators, such as that to identify the installation and its location. The geo-referencing of the information is coherent with subsequent developments (e.g. for INSPIRE –Appendix K). However, one use of the register is to benchmark or compare installations (e.g. of the same type in different Member States). The problem is that simply analysing the total pollutant emissions does not provide sufficient information to perform a comparison given the unavailability of contextual information on installation operation (capacity, production activity, etc.). Therefore, this could be considered to be a gap in the information provided.

The processes for data collation, verification, transmission and the maintenance of the EU register do not include obviously obsolete provisions. The do not prescribe specific means

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<sup>14</sup> AMEC, 2014, Contribution from industry to emissions

of data transmission which could become obsolete over time. Rather such practical issues are developed subsequently and can be updated without recourse to the law.

#### *Public Consultation*

The public consultation (Appendix I) did not ask specific questions on whether there were obsolete provisions or gaps in the coverage of the Regulation. However, the responses to other parts of the evaluation are pertinent here. For example, one use of registers highlighted by business was for comparison and benchmarking and the gap in information available in the registers does hinder this. Another operator stated that they did not report on more than 90% of the emissions of their installation as these were below thresholds. The implication is that this undermined the value of the register.

#### *Targeted Consultation*

The targeted consultation (Appendix G) sought views on potential obsolete, unnecessary or missing provisions in the Regulation on a range of pollution types and sources or process issues. Only a minority of respondents provided considered there are obsolete, unnecessary or missing provisions. The most commonly reported missing provisions concern diffuse pollution, quality assurance, confidentiality and penalties. The most commonly reported obsolete provision concerns the guidance on E-PRTR. Several highlighted problems with the waste data that these are limited and are of little value compared to data derived from other EU waste law. These comments highlight that some users view other parts of EU law as more relevant to specific issues than E-PRTR.

With regard to new needs, the targeted consultation highlighted issues surrounding the thresholds of E-PRTR (as noted in Section 4.3), the ability to make information more accessible (e.g. through apps), use of supporting information for users (e.g. commentaries), whether emerging pollutants should be included and the wider issue of coherence of reporting processes with IED and other instruments.

The implementation review (Appendix D) provided further evidence on relevance. It found that three Member States (CZ, FR and NL) cover more pollutants than those included in Annex II of the E-PRTR Regulation. The Netherlands indicated that these substances were added in order to gain sufficient insight into their emissions and to guide national policy. Thus this evidence shows that increasing the scope of reporting under E-PRTR can increase its relevance.

#### **4.4.4 EQ.13 - To what extent does the Regulation contribute to the 5th objective of the 7th Environment Action Programme 'to improve the knowledge and evidence base for Union environment policy'?**

Article 2 of the 7th Environment Action Programme (7EAP) states that it shall have a series of priority objectives, including "(e) to improve the knowledge and evidence base for Union environment policy". The scope of the knowledge base and the extent of improvement desired are specified in the Annex to the 7EAP. Several points are highly relevant to evaluation of E-PRTR. The 7EAP highlights the need to maintain and strengthen the information and knowledge base on the environment in order to address future challenges and sets objectives for 2020 for the knowledge base. However, it notes that data collection and quality remain variable and multiple sources make access difficult. This highlights the need for examination of practical synergies and coherence of E-PRTR with other data and reporting regimes and applications.

E-PRTR is able to contribute in providing information industrial pollution performance and how this is changing and this is an important part of the understanding of the transition to a green economy. In this, it is a source of data for environmental policy development and it is an important point for provision of data for citizens.

#### *Targeted consultation*

The targeted consultation (details in Appendix G) asked about the extent to which the Regulation had contributed to those 7EAP objectives. Most thought that it had to some extent, with fewer to a large extent. Comments ranged from that E-PRTR "is essential for

the achievement of the objectives” of the 7EAP to that as the register does not link this to effects on EU environmental standards, it only contributes “to some extent” to achievement of the 7EAP objective of improving the knowledge base.

It was further commented that while it might be the view of a stakeholder that E-PRTR contributes to 7EAP objectives, this is based on the assumption that the Commission has used, and will continue to appropriately utilise, the E-PRTR to inform the development of EU environmental policy.

The knowledge base that the 7EAP aims for is one that provides a better understanding of the complex interaction of human activities and the environment and informs decision making underlying complex issues such as climate change what is now termed the circular economy. E-PRTR provides information about mass emissions of a wide range of pollutants from industrial activities. However, as other Sections in this evaluation find, it does not include further information which would enhance the value of this information, such as on industrial performance. Such information would enable a better comparative understanding of, for example, the relative environmental efficiency of industrial facilities.

In summary, E-PRTR is relevant to the 7EAP objective, but that relevance could be enhanced.

#### *Contribution to EU policy making*

A further approach to the analysis of the question is to consider whether the Regulation has contributed to policy development in relevant areas of the acquis. The following policy areas can be included when considering how E-PRTR may interact with policy making: air quality, water management, industrial pollution control and waste management policy.

On the relevance of E-PRTR to policy development, the public consultation (Appendix G) asked if the register provide data that are useful to inform policy development (national or EU). However, many respondents stated that they did not know. Respondents were also asked which data in the registers is most useful for policy development. Just under a half did not comment, but of those that did, just a half referred to data on emissions to air and water as of most use, with waste transfers the next most useful.

#### *Air quality policy*

Air quality policy includes two main aspects:

- Establishment of air limit values and management actions to achieve them; and
- Establishing national ceilings for air pollutants and planning to deliver them.

On air limit values, the E-PRTR does not interact with the determination of these values nor, for Member States in determining if these are at risk. Further, while air quality management plans need to understand emissions which threaten the achievement of limit values, the information that is needed is from regular monitoring (e.g. under IED) of concentrations in emissions rather than annual mass emissions. Therefore, E-PRTR only tangentially interacts with this aspect of air quality policy.

However, the E-PRTR is far more relevant to the NEC Directive. Emissions under E-PRTR are key contributors to the pollutants covered by the NEC Directive (SO<sub>2</sub>, NO<sub>x</sub>, VOCs and NH<sub>3</sub>). The models informing the revision of the directive link emissions and impacts and economic aspects which depend on emission sources. Therefore, PRTR data have a potential use. EMEP has its own reporting processes and MS do use common data sources for PRTR and EMEP reporting. Thus, there are other links than the European register. In conclusion, E-PRTR is relevant to, and feeds into, NEC Directive revision, but other data sources and models are also critical.

#### *Water management policy*

EU water law potentially interacts with information on emissions from installations covered by E-PRTR in the following ways:

- It regulates specific types of installations which are covered by E-PRTR (i.e. waste water treatment plants);
- Inventories of discharges of specific substances are required by EU water law, which include substances covered by E-PRTR; and
- The Water Framework Directive requires an understanding of all pressures affecting the achievement of the objectives of the directive and this may include discharges from installations covered by E-PRTR.

With regard to emissions from waste water treatment plants, these are regulated by the Urban Waste Water Treatment Directive 91/271/EEC. The latest reporting requirements for the UWWTD were set out in a 2014 Commission Implementing Decision<sup>15</sup>. However, the data requirements for reporting do not include emissions of specific substances. For UWWTPs covered by the directive, the emission information concerns the load entering the WWTP and the type of treatment applied. Thus the only overlap with E-PRTR concerns the identification information of the plants themselves.

EU water law requires emissions to be assessed. This is found in two contexts. The first is under the Water Framework Directive. In this case emission information is required in order to understand pressures on water bodies. This analysis is needed where pressures represent a risk to meeting the WFD requirements, in which situations all emission inventory data, including PRTR data are relevant.

However, E-PRTR has one key interaction with this policy framework and that is in the development of the EQSD. Along with setting standards for priority substances, the directive requires Member States to develop inventories of emissions of the substances. It further refers to E-PRTR as the starting point for such inventories

Therefore, the E-PRTR has proved to be relevant in key aspects of water policy development which is of most relevance – control of chemical pollution.

#### *Industrial pollution control policy*

The core former EU legal instrument for industrial pollution control, the IPPC Directive, provided the origin of E-PRTR, as it created EPER, from which the Protocol and then E-PRTR developed.

IPPC was replaced, following review, by IED. Clearly some of the changes in IED are raising problems with regard to E-PRTR (Sections 4.1 and 4.3). However, E-PRTR should not be a constraint on evolution of the core industrial pollution control policy, even if it is relevant. IED has further interactions due to its inclusion of other directives such as LCDP, which include reporting of emission inventories. The E-PRTR is relevant to such inventories. However, the influence of E-PRTR in formulating the provisions in IED is questionable. For example, as the Section 4.3 discusses, there is current work on integrating LCP and E-PRTR reporting, which could have been more explicitly addressed at the time of adoption of the directive.

Emission information has also helped to understand sources of key pollutants for other policy developments. The mercury strategy is an example and E-PRTR data were relevant to it in helping to understand the relative importance of different sources.

A further relevance of E-PRTR within industrial pollution control policy development has been to understand the extent of emissions regulated under IED from those not regulated. This has highlighted the importance of emissions from medium sized combustion plants. A proposal to regulate these emissions has, therefore, been made. E-PRTR, therefore, has proved relevant to industrial pollution control policy development.

<sup>15</sup> Commission Implementing Decision of 26 June 2014 concerning formats for reporting on the national programmes for the implementation of Council Directive 91/271/EEC (notified under document C(2014) 4208) (2014/431/EU)

### *Waste management policy*

Waste management policy has developed significantly and been subject to review since the adoption of E-PRTR. The key potential interaction relates to data on waste transfers under E-PRTR and, therefore, whether it is relevant to EU waste policy development.

A fitness check was undertaken, with reviews covering the recycling directives. These directives are based on specific products or materials and introduce requirements on producer responsibility. These do not relate to waste transfers under E-PRTR and revisions that have developed from reviews (e.g. on WEEE) have not interacted with E-PRTR.

There is more potential for interaction with the Waste Shipment Regulation, which was recently amended to, primarily, improve inspection and enforcement. Waste transfers from facilities may form the start of certain waste streams which would be controlled under the WSR. Data from E-PRTR did not influence the revision of the WSR, but they are relevant at Member State level to its implementation (e.g. for the Art. 50 inspection requirements which may focus on the sources of waste being moved).

Landfills are a further area of interaction on waste policy. E-PRTR is relevant due to overlap. However, the Landfill Directive predates E-PRTR, so the relevance of the Regulation has not been one of influence on policy development.

The Waste Framework Directive has, however, been revised since the adoption of E-PRTR. The key data influence for the WFD relates to the targets that Member States have to meeting. However, waste transfers from facilities are not major contributors to these waste categories. Thus the relevance of E-PRTR to the policy revision is limited.

The key area of interaction with waste policy is the Waste Statistics Regulation. This interaction is explored further under the Section on coherence. However, it is important to note that the Waste Statistics Regulation forms the primary source of information for waste policy development, indicating the successes and problems in policy implementation and challenges that policy revision should address, including how changes to EU policies would affect different Member States. The Waste Statistics Regulation, therefore, overshadows E-PRTR in the influence and relevance for EU waste policy development. As Annex I states, there is likely to be a review of waste statistics in the near future and this be part of the wider Fitness Check of environmental reporting. This would be able to address a number of broader questions of waste information needs and practical solutions which are beyond the scope of analysis from the perspective of industrial waste transfers under E-PRTR in this evaluation.

Finally, it is important that consideration of the contribution of E-PRTR to EU policy making is linked to the effectiveness and coherence questions. Therefore, further points are raised in these Sections.

#### **4.4.5 EQ.14 - Has the adaptation of the Regulation to scientific and technical progress been appropriate and involved stakeholders?**

The provisions of the Regulation may need to be amended to take account of scientific or technical progress in order to remain relevant, either by:

1. Amendment through the ordinary legislative procedure;
2. Amendment of Annex II of the Regulation through comitology. To date, there have been no such amendments.

### *Targeted consultation*

Targeted consultation respondents (Appendix G) were asked whether the adaptation of the Regulation to scientific and technical progress been appropriate and involved stakeholders. Few did respond and that, of those that did, most thought this had been appropriate and involved stakeholders to some extent.



Questions were also included on technological advancements or changes to industrial processes which meant that the activities included under Annex I of the Regulation were no longer suitably matched to modern industrial activities. Issues highlighted included:

- Inclusion of new substances;
- Taking account of improved monitoring of emissions, including continuous monitoring;
- Improvements in delivering data quality;
- Taking account of the limitations of the thresholds in E-PRTR (Section 4.3); and
- Potential inclusion of new activities, such as hydraulic fracturing.

#### *Workshop*

The stakeholder workshop, in discussing relevance, concluded that technical and other developments have occurred which should affect the scope of reporting or means of reporting. These include possible new issues to report and new technical approaches to reporting. It was noted that these new issues can be driven by developments in other policy areas and, therefore, overlap with the analysis of coherence addressed elsewhere in this evaluation.

In conclusion, the Regulation has not been amended to take account of technical progress. However, potential issues were raised during the evaluation, several of which are related to issues identified under the coherence criterion, e.g. taking account of changes introduced by IED. Furthermore, some aspects of the guidance document are becoming out of date. Finally, technical progress is most relevant to data transfer processes as systems evolve rapidly. As the Regulation establishes the principles for data transfer, adaptation of systems has been possible

#### **4.4.6 EQ.15 - Are there any new needs that should be reflected in the E-PRTR Regulation?**

This question considers whether the Regulation ought to address needs that have arisen since its adoption.

#### *Targeted Consultation*

The results of the targeted stakeholder consultation (Appendix G) showed that the core needs of stakeholders were reflected in E-PRTR. However, stakeholders highlighted actions that could be taken to help improve the delivery of those needs:

- Review the thresholds for some of the parameters;
- More accessible information (e.g. disclosure through apps, etc.);
- More commentaries and explanations about the reported pollutants;
- E-PRTR should be complementary to new environmental reporting schemas (IED Directive, for example); and
- The addition of certain activities that are now covered by the IED Directive.

#### *Workshop*

Participants at the stakeholder workshop (Appendix J) discussed emerging needs. They concluded that there is an emerging need for data allowing environmental performance to be determined and that E-PRTR is relevant, but not always sufficient, to do this. The issue of enhancing the value of data in the registry, such as on the capacity/activity of facilities, is discussed elsewhere in this report, but is relevant to the perceived needs of users.

#### *Interviews*

In interviews comments (Appendix H) a competent authority noted that for agriculture emissions the E-PRTR threshold for ammonia is too high, as only 10% of ammonia emissions from agriculture are reported to the E-PRTR. Ammonia is an important issue for many Member States and has formed a particularly strongly focused area of debate in the development of the proposed revision to the NEC Directive (and subsequently to the

publication of the proposal). Therefore, better information on emissions could help inform the needs of this important current debate.

A data provider noted that a new issue to address could be water and energy consumption. This should be added in order to provide a context and to help the public to understand the data. LCP already reports energy consumption. However, to do this could be politically difficult, but some facilities already do this in their environmental report which are already public in Sweden.

#### **4.4.7 Conclusion on Relevance**

Overall, the evidence collected shows that the E-PRTR Regulation is still relevant to the needs of the EU today. In particular the key objectives of the Regulation on transparency, participation and improving industrial performance are strongly supported by stakeholders as being relevant today. Indeed, stakeholders do not highlight major new objectives for which the Regulation should be altered, but rather focus on enhancing the provisions of the Regulation to deliver the objectives it already has.

Stakeholders raised very limited suggestions on obsolete provisions. Effectively these concerns were that provisions for reporting on waste water and on waste transfers would be better addressed through reporting under other legislation.

On missing provisions in the Regulation, the analysis and stakeholders raised two types of issues:

- The lack of development of the Regulation to address legal developments since its adoption, such as IED. This is an issue also explored under coherence; and
- Provisions in the Regulation which would allow greater value to be obtained from registers, such as including additional reporting requirements such as on production/activity data of facilities, flow rates with waste water discharges, permit/inspection information, local environmental information, etc.

It is important to note that stakeholders highlighted that relevance could also be enhanced by improved publicity, such as through new media, the introduction of analytical commentaries on issues to help in interpretation. Provision of data in new formats, such as apps, has also been suggested. Relevance could also be increased by integration with other reporting processes (e.g. on waste, with WISE information, etc.), particularly in communicating with the public.

With regard to policy making, E-PRTR has relevance where the policy developments take into account overall emissions from the sectors covered by the register. This has included analysis to support the revision of the NEC Directive, the EQSD in water policy and development of a proposal on medium combustion plants under industrial pollution control policy.

The Regulation has not been adapted to scientific or technical progress through the different potential legislative routes. However, it is important to note again that any legal change at EU level would either need to be for aspects not prescribed by the UN Protocol, or for the EU and Member States, as Parties to the Convention, to seek for amendment to the Protocol first before the EU law is amended.

## **4.5 EU added value**

### **4.5.1 Introduction**

EU added value examines the justification for EU level intervention. The provisions of EU law might be needed and work, but the question is whether or not these could also be delivered through MS laws and policies.

The analysis of the EU added value cannot be separated from the other REFIT evaluation themes. If the Regulation is to add value it must remain relevant and that value will not



be realised if it is ineffective in achieving its objectives. Poor coherence between the Regulation and other policies would hamper EU added value, while good coherence can enhance the intended added value. Finally, efficiency is also relevant to added value, as high costs could, for example, counter the value of data harmonisation. Therefore, the evidence and conclusions on these issues set out elsewhere in this report should also be taken into account.

It should be noted that, though the E-PRTR is considered as a single entity, it contains data of various types. The level of EU added value can therefore vary across the data categories.

The analysis of the EU added value is structured according to the following evaluation questions:

- EQ.16 - What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?
- EQ.17 - What is the overall perception of the E-PRTR and available information on industrial pollution?
- EQ.18 - How have the different provisions of the regulation been accepted by stakeholders?
- EQ.19 - Do the issues tackled by the Regulation continue to require action at the EU level?

#### **4.5.2 EQ.16 - What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?**

##### *EU added value for Member States and the context of the Kiev Protocol*

As previously discussed, the E-PRTR Regulation has a particular role within EU and MS law, as it implements UN law. As a Party to the Aarhus Convention and its Kiev Protocol, the EU is required to implement its commitments. Thus as the Explanatory Memorandum to the Commission proposal for the E-PRTR (COM (2004) 634) stated "As the European Community signed the Protocol and aims at its ratification, there is no alternative to the creation of an appropriate legal act at Community level to ensure compliance with the obligations of the Protocol." However, does this require the full range of provisions to be prescribed in the Regulation?

It could be argued that the provisions of the Protocol, as far as they apply to operators of facilities, could be established in Member State legislation as all Member States are Parties to the Protocol. For this to be practicable, the provisions in the Protocol would need to be precise and unambiguous. However, as the Protocol contains options, a consistent application across the EU, an EU level instrument, is justified to avoid the variability that separate MS implementations of the Protocol might have caused.

##### *EU added value highlighted at the time of adoption of the Regulation*

The EU level creation and operation of a register (an obligation of the EU as a Party) requires an EU level instrument. Therefore, these provisions of the Regulation are EU added value of the Regulation and justified accordingly.

The EM justified EU level intervention as contributing to the Treaty objectives for environmental and health as it is "an essential tool to ensure public awareness on environmental issues and to promote better implementation of environmental legislation". The EM also noted that Community level intervention was already in place with EPER, and E-PRTR would build further on this.

##### *EU added value of E-PRTR data supply*

The process of supplying data to the E-PRTR has raised questions of data quality, checking, comparability between Member States, etc. This has resulted in guidance on provision of data and, consequently has raised aspects of data collection, quality checking and presentation at national level.

Thus, the process of inputting data into E-PRTR helps to highlight issues in individual Member States, which can lead to them being addressed, which might not have been the case with a national register. The EEA quality assurance process takes this further in directly examining data quality issues, and so enhancing the EU added value. This also benefits national PRTRs.

A similar point concerns the completeness of data – both in its presence or absence in the register or from comparative analysis undertaken by the EEA. Identification of data gaps at EU level, leads to them being addressed at national level, which might not have been the case without the European register.

The guidance produced as a requirement of Art. 14 of the Regulation added value by promoting consistency of the methods used by Member States. Furthermore, EU level processes such as Expert Groups, workshops, and analytical reports, also provide support, helping the Member States in delivering their national registers.

#### *EU added value of use of E-PRTR*

The public use of the register provides significant EU added value. Whilst for local emission data, national registers could be consulted, the E-PRTR adds value by being a comparator of emission data for different types of industry across the EU and for providing cumulative data for assessments of various types. Through a search function, the E-PRTR allows to make comparative analysis of 28 national registers.

Issues of data completeness and quality need to be noted, as they affect the comparative added value. Similar data issues occur in national registers, but they become more visible at EU level when comparisons are sought between Member States.

Overall, though there is potential to add more value if the issues of data completeness were to be addressed, the E-PRTR adds value to the usefulness of the data it provides to users.

#### *Public Consultation*

The public consultation (Appendix I) found a strong recognition of EU added value with respect to harmonisation and comparability.

The consultation also highlighted issues such as the benchmarking installation performance across Europe. Responses stressed this is an important added value, but that the data in the register limit its ability to deliver the value. In particular, additional information on the performance or capacity of activities is needed to interpret emission information for benchmarking, and concerns on variability in data quality would need to be addressed.

The public consultation suggests limited added value with regard to public engagement, because:

1. The public is mostly interested in local environmental issues, and in access to local information for their concerns (e.g. the national registers).
2. The public found the available data incomplete for some pollutants or categories of pollutants, and it does not always cover their interest field.

The first point is beyond the design or function of an EU register, but the second issue of incompleteness of data, should be addressed.

#### *Targeted Consultation*

The targeted consultation also discussed the EU added value of E-PRTR (Appendix E). It highlighted important EU added values, such as:

- harmonisation of reporting and monitoring practices;
- development of a common approach and understanding in data collection; and

- enhanced comparability across reporting countries and higher quality of data due to QA efforts deployed within Reportnet.

Competent authorities emphasised that the value of E-PRTR has grown as users become more familiar with it, but it remains limited by its data limitations.

#### *Workshop*

The stakeholder workshop (Appendix J) demonstrated that the E-PRTR sets out changes over time and can be used to show the significance of sectors at EU level. Another EU added value was that it can be useful for identifying key environmental issues.

Additionally, it was noted that a major EU added value of the E-PRTR is that it provides an EU wide knowledge base with comparable data between Member States that can be used for policy making and evaluation.

#### **4.5.3 EQ.17 - What is the overall perception of the E-PRTR and available information on industrial pollution? EQ.18 – How have the different provisions of the regulation been accepted by stakeholders?**

The E-PRTR is publically accessible. The Register adds value by being a comparator of emission data for different types of industry across the EU and for providing cumulative data for assessments of various types. Furthermore the E-PRTR dataset is recognised to be continuously improved.

The targeted consultation (Appendix G) demonstrated that the majority of respondents had a positive overall view of the E-PRTR. This positive perception was stronger among the competent authorities than the industry. The large majority of respondents stated they trusted the E-PRTR data and that the E-PRTR was valued by users.

#### **4.5.4 EQ.19 - Do the issues tackled by the Regulation continue to require action at the EU level?**

Respondents were asked whether there is still a need to address issues through an EU level Regulation. The evidence gathered through the stakeholder workshop and public consultation all highlight support for E-PRTR and the need to improve it. The lack of criticism of the E-PRTR provision across the information gathering exercises demonstrates a high acceptance of the E-PRTR by all categories of stakeholders.

#### **4.5.5 Conclusion on EU added value**

For the E-PRTR Regulation, the concept of EU added value effectively concerns the provisions relating to the transfer of information from national to EU level and the operation and use of an EU level register.

The analysis showed that, though the EU added value was sometimes limited by the lack of additional information or completeness of data, the E-PRTR adds value above that of the implementation of the Protocol by the Member States alone. The E-PRTR is valued by users by improving transparency of industrial activities. The Register promotes comparability of data published by Member States and enables comparing industrial emissions across the EU. These added values are recognised by all categories of stakeholders in the various consultation processes of the REFIT analysis.

## 5. Conclusion

The REFIT evaluation of the E-PRTR Regulation has provided a detailed view on how the E-PRTR data are used. The theme that stood out from discussions with the stakeholders was the importance of the E-PRTR both in terms of having an EU wide inventory, of the data held within and of the enhanced consistency of this data across the EU. Regarding the data within the E-PRTR and its easy access, it represents a highly valuable dataset with very few alternatives to compare against. All categories of stakeholders consulted during this REFIT evaluation commented on this tool as perceived of high value.

To provide a concluding statement on the REFIT evaluation of the E-PRTR Regulation, a diagrammatical representation is provided within Figure 5.1. It has been created based on the weight of evidence gathered during the evaluation and can be used as a guide to understand how the E-PRTR is performing. For each criteria, a rating has been allocated based on the overall evidence collected and the expert opinion of the team conducting the evaluation.

*Figure 5.1 Diagrammatical illustration for REFIT evaluation of E-PRTR*

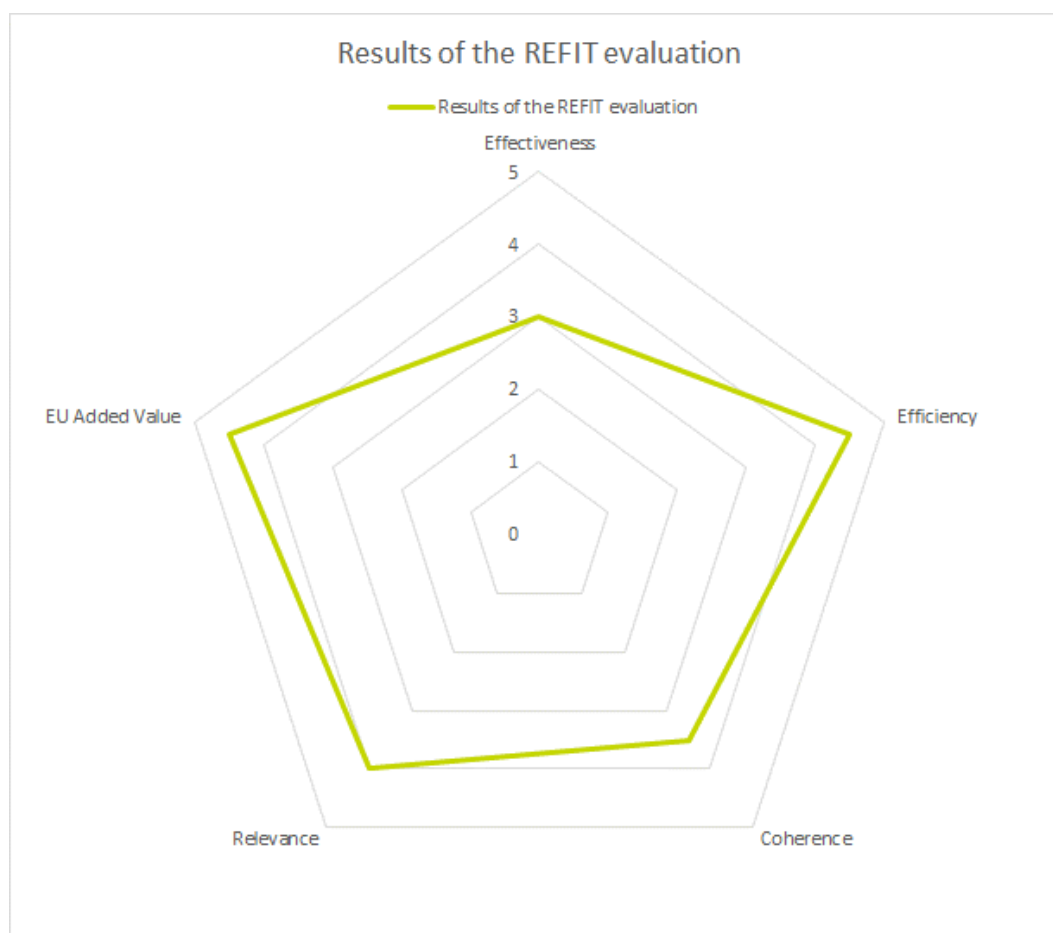


Figure 5.1 illustrates that across the five themes of the REFIT, the **efficiency** theme is ranked as close to meeting the objectives identified in Section 1.1. This reflects that for data providers, the required effort to provide data was seen as minimal (partly off-set by the reporting requirements of other reporting), and that for data managers the level of

effort was seen as appropriate for the benefits provided by the E-PRTR. The efficiency of the E-PRTR could be further improved by harmonised reporting with other environmental legislation. This could also have positive benefits for the coherence criterion.

The relevance and EU added value themes for E-PRTR were seen as having good performance against the objectives (ranked 4/5 and 4.5/5 respectively in the diagram on Figure 5.1). For **relevance**, concerns were raised that the data provided covers only large point sources and more should be done to ensure that diffuse emissions were equally well covered. However, the detailed and comprehensive nature of the dataset and easy access ensures that the E-PRTR is a valuable tool with few alternatives providing such a library of information.

For **EU added value** it was agreed that the E-PRTR provides added value beyond the requirements of the Kiev Protocol by ensuring a consistent implementation of the Protocol across the EU and has clear application for policy makers, industry and general public. The reason EU added value was awarded 4/5 was because the coherence issues discussed below mean it could add further value if these issues were tackled.

The themes on coherence and effectiveness for E-PRTR were seen as having a fair performance against the objectives (ranked 3.5/5 and 2.5/5 respectively in the diagram on Figure 5.1). For **effectiveness** the main weakness identified is how to interpret the data in order to fully engage with policy making. For the general public, NGOs, and education centres more background information is needed to help understand and use the data held by the E-PRTR, while for environmental performance additional data (e.g. activity data, capacity of facilities) is needed for benchmarking. This additional information would make the E-PRTR a more effective tool and allow it to fully meet the objectives of the E-PRTR Regulation and Kiev Protocol.

For **coherence**, there are issues with how E-PRTR matches against data reported in other related environmental legislation including some related policy, particularly IED and waste. Ongoing work under INSPIRE and data templates does provide a valuable opportunity to help harmonise reporting issues, which would also have beneficial effects for the efficiency theme.

## Appendix A Analytical framework of the Evaluation

The evaluation addressed the evaluation questions under the five REFIT themes in a coherent and structured manner in accordance with the analytical framework which is presented in this Appendix. In sum, the analytical framework maps the following elements by evaluation criterion:

- Evaluation Questions (EQ) that were derived from allow a focussed and operational examination of the questions derived from in the terms of reference;
- Success/ judgment criteria specifying the aspects of the evaluated intervention that allow its merits or success to be assessed. These allow us to focus the question on the most essential points for the judgment;
- Qualitative and quantitative indicators used to inform our judgment on the questions and issues and assess success. Some indicators might be used to answer several evaluation questions. The list of indicators determines the type of information to be collected and potential sources for data;
- Methods and tools used to gather and assess the necessary evidence to respond to the evaluation questions, on the basis of the indicators identified. Where possible, the analysis is based on several perspectives and data sources ("triangulation") to avoid a one-sided approach and biased results; and
- Comments providing insights to guide the assessment of the evaluation questions and detailing any potential issues or limitations that may hinder such assessment.

### A.1 Evaluation of the Effectiveness of the Regulation

<b>EQ 1</b>	<b>How well does any progress towards the objectives of the E-PRTR Regulation match the initial expectations?</b>
<b>EQ 2</b>	<b>To what extent can this progress be reasonably linked to measures of the E-PRTR Regulation? What other influencing factors (e.g. implementation by Member States, action by stakeholders, interaction between industry and authorities) can be identified, that contributed to the changes?</b>
<b>Judgement Criteria</b>	That there are clear indicators of progress on the five objectives and that there is understanding of the contribution that E-PRTR has made to each and of other factors.
<b>Indicators</b>	Quantitative and qualitative indicators for the five objectives such as whether emissions from IED installations have declined, whether stakeholders state that engagement has increased, whether regulators state that their knowledge base has increased. Commentary/ examples of the role of E-PRTR.
<b>Method</b>	Quantitative analysis of the literature/ data for each of the objectives such as calculation of changes to emissions from IED installations, statistical analysis of consultation responses. Qualitative analysis from information gathered through consultation and interviews with stakeholders and Member State authorities on the role of E-PRTR and of other factors.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- The Regulation implementation review (Section 3.2) with analysis updated where necessary during the course of the project</li> <li>- Review of relevant literature sources</li> <li>- Consultation and questionnaire analysis</li> <li>- Public consultation</li> </ul>
<b>Comments</b>	Identifying change in the five objectives vary. Declines in pollutant emissions are clearly measurable and quantifiable, but public engagement is likely to require a qualitative assessment. Particular attention was paid here to other factors or instruments that could affect the delivery of these objectives, e.g. how far have pollutant emissions declined due to IPPC/ IED compared to E-PRTR?
<b>EQ 3</b>	<b>What unexpected or unintended changes resulting from the Regulation can be identified (positive or negative)?</b>

<b>Judgement Criteria</b>	The identification of any unintended or unexpected changes and their consequences.
<b>Indicators</b>	The list of the unintended or unexpected changes and their consequences. Reasons for their occurrence.
<b>Method</b>	Qualitative description, categorisation and assessment of unintended/ unexpected consequences.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Assessment of implementation undertaken as part of the Regulation implementation review (Section 3.2).</li> <li>- Consultation with Member State Authorities and with industry.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	Identification of unexpected or unintended changes due to E-PRTR implementation is not simple. At one level it can be argued that the adoption of the Regulation was expected to facilitate many (unidentified) outcomes that better information provision on emissions from facilities would provide once known to authorities and stakeholders alike. Identifying unintended positive impacts, therefore, requires a clear statement from those affected that the impact was unexpected. For negative effects, it is easier to identify, although cost issues were addressed under efficiency.
<b>EQ 4</b>	<b>To what extent do the reported data and possibilities for searching the data serve the objectives? Taking into account the objectives to improve the knowledge and evidence base for Union environment policy and to reduce the associated burdens in connection with the existing legislation related to industrial activities, to what extent did the reporting mechanism help to maximise the achievement of these objectives?</b>
<b>Judgement Criteria</b>	An understanding of the extent to which E-PRTR delivers the evidence base for EU policy making and reduction in burdens.
<b>Indicators</b>	Identification of clear cases where E-PRTR has been, or is expected to be, a useful evidence base for EU policy making and other uses. This has to be by judgment of those involved in policy making, including those who know what has been used and what has not.
<b>Method</b>	<ul style="list-style-type: none"> <li>- Outputs from the Regulation implementation review (Section 3.2).</li> <li>- Consultation with EU and Member State policy makers.</li> </ul>
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Outputs from the Regulation implementation review (Section 3.2).</li> <li>- Consultation with EU and Member State policy makers.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	This question includes one of the most important elements of the evaluation of E-PRTR – has it been useful in providing data to help develop EU environmental policy, in particular by providing an improved evidence base? To achieve this, there has to be an alignment between the type of information gathered and the policy agenda. Since the adoption of E-PRTR a number of policy agendas have been 'active' and, in theory, could have benefited from information gathered within the E-PRTR. To respond to this question it must be identified how far information contained within the E-PRTR has contributed to these policy developments and, in particular, which elements have been most helpful (or which aspects have proved unable to contribute the necessary evidence).

## A.2 Evaluation of the efficiency of the Regulation

<b>EQ 5</b>	<b>To what extent is the effort/ are the costs justified compared to the benefits and usability of the reported information (monetary and non-monetary) associated with compliance with the Regulation in the different Member States and at EU level? If any inefficient provisions or disproportionate sources of cost can be identified (e.g. in relation to implementation, administration, compliance, monitoring etc.), what is causing them?</b>
<b>SubQ-5.a</b>	<b>What have the overall costs associated with implementation been?</b>
<b>Judgement Criteria</b>	The costs (monetary/ non-monetary) to Member State & EU public authorities, the public and private organisations (including micro sized enterprises and SMEs) were assessed and understood.



<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Costs for different types of operator (including SMEs) in supplying data to national authorities (compared to operational costs).</li> <li>- Views on comparison of costs to benefits that arise.</li> <li>- Costs for national authorities to supply data to EU level.</li> <li>- Costs of operating the database at EU level.</li> </ul>
<b>Method</b>	Primarily through consultation with industry, Member State authorities, EEA. Use of proxies to ensure comparability of data and the use of the Administrative Burdens Calculator and Standard Cost Model. Important to determine where costs arose from reporting generally or reporting specifically for the E-PRTR.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Stakeholder consultation.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	Collection of cost data was dependent on the provision of information via consultation and was limited for some aspects (e.g. information on jobs). For public authorities in the Member States, regulatory and administrative costs was considered at the national level. Understanding the differences in costs of implementation between Member States is important in understanding the nature of costs arising from the Regulation. It is important to note that comparison of costs between Member States for E-PRTR would need to take account of differences in the distribution of activities which may have different costs to meet E-PRTR requirements (e.g. complex installations).
<b>SubQ-5.b</b>	<b>What have the overall impacts/benefits associated with implementation been?</b>
<b>Judgement Criteria</b>	The associated benefits/ impacts (monetary/ non-monetary) were assessed and understood. Note that the indicators for the 5 objectives of E-PRTR described earlier are effectively indicators of benefits and so need to be considered here also. Evidence of a change in benefits over time was also identified (i.e. as E-PRTR has become more extensively implemented).
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Job creation through implementation of technical requirements. Value of the information provided – this draws on the results of the analysis of the 5 objectives, the use in policy making, etc.</li> <li>- Qualitative analysis of participation, information, policy benefits.</li> </ul>
<b>Method</b>	Quantitative/Qualitative analysis
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Literature review.</li> <li>- Discussion with sectors/regulators.</li> <li>- Public consultation responses.</li> </ul>
<b>Comments</b>	Quantifying the benefits associated with implementation was challenging due to the nature of the Regulation and the complex interactions and overlaps with other legislative instruments, and given that the E-PRTR is contributory instrument. This aspect of the evaluation relied heavily on information provided by stakeholders during the consultation and any relevant literature (e.g. national reviews of effectiveness).
<b>SubQ-5.c</b>	<b>Are the costs proportionate and are there inefficient provisions?</b>
<b>Judgement Criteria</b>	Results setting out costs and benefits were discussed with stakeholders to obtain views on whether these are proportionate. A key issue was scale – i.e. where costs to operators were much lower than other costs. The results identified specific provisions which are inefficient.
<b>Indicators</b>	Relationship between the costs and benefits resulting from the Regulation – qualitative for many criteria, but quantitative for issues such as operational costs, job creation, etc.
<b>Method</b>	Quantitative/Qualitative analysis.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Analysis resulting from 5.a and 5.b.</li> <li>- Consultation with Member State authorities and with industry.</li> </ul>
<b>Comments</b>	It was not possible to rank and prioritise objectives quantitatively (via monetisation) due to the nature of the Regulation (namely that it is a contributory instrument). Thus, the focus of this question was on the scale of costs.
<b>EQ 6</b>	<b>If there are any significant cost differences between Member States, what is causing them and do they have impacts on the benefits?</b>
<b>Judgement Criteria</b>	Identification of cost differences between Member States and the causes of these differences and how these relate to the state of implementation.
<b>Indicators</b>	Description of specific examples of cost differences, reasons and consequences, with a graphic display of quantitative results where appropriate.
<b>Method</b>	Quantitative analysis drawing on the results of Q5.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Analysis resulting from Q5.</li> <li>- Consultation with Member State Authorities and with industry.</li> <li>- The regulation implementation review (Section 3.2).</li> </ul>
<b>Comments</b>	Particular attention was paid when determining the level of implementation of both E-PRTR and the Protocol between Member States in order to compare costs. For example, costs to industry may be higher in Spain where thresholds for reporting are not used, but as this is a national choice it cannot be regarded as a difference due to implementation of the E-PRTR itself. Thus in such cases, the approach taken was to identify additional costs, where possible



	– e.g. although operators know the total cost, they may not know which to assign to EU law and which to national law.
<b>EQ 7</b>	<b>How can the costs be rated in comparison to other comparable reporting measures?</b>
<b>Judgement Criteria</b>	Quantified cost and benefit data compared with other reporting obligations.
<b>Indicators</b>	Difference in costs compared to other comparable regimes.
<b>Method</b>	Quantitative analysis based on the findings from analysis resulting from Q5 and consultations.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Consultation with Member States authorities and with industry</li> <li>- Literature review and consultations for data on other regimes e.g. reviews undertaken as part of the IPPC Review and IED implementation.</li> </ul>
<b>Comments</b>	In order to assess the comparability of costs with other comparable regimes it was important to detail precisely the nature of those regimes (scope and detail of what is required to be reported, frequency and timing, responsibilities, etc.) so that they could be directly compared to E-PRTR. All comparative analysis first tried to normalise these differences (e.g. addressing the comparability of the costs of two regimes where one has a reporting frequency that is twice as frequent as the other regime). The costs for these regimes was examined through published studies (EU/ Member State level) and questions on this was included in the project survey.
<b>EQ 8</b>	<b>What evidence for simplification and streamlining with applicable regulations in the field of industrial emissions and reporting can be detected?</b>
<b>Judgement Criteria</b>	Elements/ provisions that could be simplified in the Directives are identified or deemed not necessary.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Comparison of the specific collection and reporting obligations under E-PRTR and applicable regulations in the field of industrial emissions and reporting.</li> <li>- Identification of where dovetailing of these obligations could be brought together to reduce burdens and where barriers to this exists.</li> <li>- Identification of whether the opportunities to deliver simplification have been taken.</li> <li>- Where opportunities were not taken or barriers exist, analysis of why this is the case.</li> </ul>
<b>Method</b>	Qualitative analysis
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Comparative legal analysis.</li> <li>- Consultation with EC, EEA, Member State authorities and with industry.</li> </ul>
<b>Comments</b>	Linked with coherence and relevance assessment. The Commission and EEA are already working on options for streamlining of reporting on industrial emissions e.g. linking E-PRTR reporting with that on LCP emission inventories. Therefore, it was be important to review this work and consult with the relevant experts to ensure consistency and use of existing analysis.

### A.3 Evaluation of the coherence of the Regulation

<b>EQ 9</b>	<b>To what extent is the E-PRTR Regulation coherent internally?</b>
<b>Judgement Criteria</b>	That the objectives of the Regulation are delivered in a coherent and simple manner with no requirements unnecessary, unclear or contradictory.
<b>Indicators</b>	List of elements in the Regulation which are not internally coherent (and potential consequences).
<b>Method</b>	Review of the objectives and provisions of the Regulation.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Legislative review of the Regulation.</li> <li>- Literature review.</li> <li>- Consultation with Member State Authorities, industry, NGOs EU officials and others where relevant.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	N/A
<b>EQ 10</b>	<b>To what extent is the E-PRTR Regulation coherent with other applicable regulations in the field of industrial emissions and reporting which have similar objectives (see under chapter 1.5)? What, if any, overlaps, discrepancies, contradictions or similar issues can be identified which hamper achievement of the E-PRTR objectives?</b>
<b>Judgement Criteria</b>	The extent to which identified overlaps, gaps discrepancies, contradictions or similar issues in other instruments hampers the achievements of the objectives and processes.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Identification of any overlaps, gaps discrepancies, contradictions or similar issues on objectives and processes.</li> <li>- Commentary on the extent to which they hamper or improve achieving the objectives and processes.</li> </ul>
<b>Method</b>	Qualitative commentary on coherence for each relevant instrument.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Legislative review of international and EU legislation/ policies.</li> <li>- Literature review.</li> </ul>

	<ul style="list-style-type: none"> <li>- Consultation with Member State authorities, industry, NGOs, EU officials and others where relevant.</li> </ul>
<b>Comments</b>	The above analytical question focusses on coherence between E-PRTR and other applicable legislation "in the field on industrial emissions". In relation to REFIT this is too narrow a scope for the analysis of coherence. Rather the analysis was conducted in relation to the list of legislation set out in the TOR along with other additional relevant legislation that was identified in the course of the evaluation.

## A.4 Evaluation of the relevance of the Regulation

<b>EQ 11</b>	<b>To what extent do the objectives (still) correspond to the current needs within the EU?</b>
<b>Judgement Criteria</b>	The extent to which identified objectives relating to data requirements and to stakeholder information are addressed by the Regulation.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Identification of the current needs.</li> <li>- The extent to which these needs are met by the objectives of the Regulation.</li> </ul>
<b>Method</b>	Cross-reference against all elements of the intervention logic and commentary.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Intervention logic.</li> <li>- Consultation with Member State authorities industry, NGOs, EU officials and others where relevant.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	Note that a core tenet of the E-PRTR regulation is the public awareness and involvement in decision making for environmental issues. What Member State competent authorities do to raise the awareness of the E-PRTR, and how non-governmental bodies access and make use of the E-PRTR were both identified as relevant indicators for this question.
<b>EQ 12</b>	<b>What (if any) obsolete, unnecessary or missing provisions or gaps in the Regulation can be identified, which are affecting its performance? (explain how/why).</b>
<b>Judgement Criteria</b>	Evidence gathered allows for the identification of obsolete provisions (linked to Q10 on potential for simplification).
<b>Indicators</b>	List of any obsolete provisions and commentary.
<b>Method</b>	Legislative review and qualitative commentary.
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Results from the regulation implementation review (Section 3.2).</li> <li>- Consultation with Member State Authorities, industry, NGOs, EU officials and others where relevant.</li> <li>- Legal analysis.</li> <li>- Public consultation.</li> </ul>
<b>Comments</b>	Note that the previous triennial report highlighted that for waste transfers in particular the thresholds were potentially too high with a significant proportion of data not included within the E-PRTR. However it was judged that this has little impact on the relevance of the E-PRTR to serve other policies. Rather, it was felt that identifying obligations which are not needed, but which still require implementation with costs to business/competent authorities, was more important.
<b>EQ 13</b>	<b>To what extent does the Regulation contribute to the priority objective 5 of the 7th Environment Action Programme 'to improve the knowledge and evidence base for Union environment policy'?</b>
<b>Judgement Criteria</b>	Evidence gathered demonstrates that the Regulation has contributed to the priority objective 5 of the 7th Environment Action Programme.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Areas/ issues of EU environmental policy to which E-PRTR data have clearly contributed to the evidence base.</li> <li>- Areas/ issues of EU environmental policy to which E-PRTR data have not contributed to the evidence base (but which the data could have been relevant).</li> </ul>
<b>Method</b>	<ul style="list-style-type: none"> <li>- Interviews with European Commission policy units.</li> <li>- Literature review of policy documents.</li> </ul>
<b>Sources</b>	Interviews and literature and linked to assessments of effectiveness and coherence.
<b>Comments</b>	<p>Article 2 of the 7th Environment Action Programme (7EAP) states that it shall have a series of priority objectives, including "(e) to improve the knowledge and evidence base for Union environment policy". The scope of the knowledge base and the extent of improvement desired are specified in the Annex to the 7EAP. Several points were identified as being highly relevant to the evaluation of E-PRTR.</p> <p>The 7EAP highlights the need to maintain and strengthen the information and knowledge base on the environment in order to address future challenges (it does not suggest reducing its scale). However, it notes that data collection and quality remain variable and multiple sources make access difficult. Thus the practical synergies and coherence of E-PRTR with other data and reporting regimes and applications was assessed here, while also taking into account the 7EAP objective to simplify, streamline and modernise environment and climate change data and information collection, management, sharing and re-use. It was also recognised that other</p>

	<p>questions underlying the evaluation of E-PRTR (such as on costs, streamlining, coherence) all contributed to this 7EAP objective.</p> <p>This question was also strongly linked to the effectiveness and coherence questions. The 7EAP objective focusses on the evidence base for policy making. Therefore, examination of this question drew on the understanding of the utility of E-PRTR data by different policy fields at EU level for policy evaluation and development – as addressed by the earlier analyses.</p> <p>Interviews enabled the identification of cases where E-PRTR has usefully contributed to the evidence base, even if this has not resulted in policy change (which might be hard to identify through other sources).</p> <p>Note that this analysis focused on policy issues where E-PRTR data could potentially be relevant (e.g. not noise, etc.)</p>	
<b>EQ 14</b>	<b>How has the Regulation (and its implementation through the E-PRTR website) adapted to technical and scientific progress?</b>	
<b>SubQ-14.a</b>	<b>What technical or other progress has been made since the adoption of the Regulation?</b>	
<b>Judgement Criteria</b>	Technical and other developments have occurred which should affect the scope of reporting or means of reporting and in how data are made available to the public.	
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- New issues to report identified.</li> <li>- New technical approaches to reporting identified.</li> </ul>	
<b>Method</b>	Qualitative analysis based on consultations and reviews below.	
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Consultation with the European Commission, EEA, JRC, NGOs, Industry, Member State.</li> <li>- Data review of E-PRTR data sets as part of the regulation implementation review (Section 3.2).</li> <li>- Article 16 survey on barriers to reporting.</li> <li>- Public consultation.</li> </ul>	
<b>Comments</b>	Potential overlap identified with coherence in relation to scope of reporting.	
<b>SubQ-14.b</b>	<b>Has the Regulation been adapted to progress?</b>	
<b>Judgement Criteria</b>	The Regulation is flexible to adapt to technical and scientific progress.	The Regulation has been kept fit for purpose through adaptation to technical and scientific progress.
<b>Indicators</b>	Degree of flexibility allowed within the Regulation to adapt to technical and scientific progress (i.e. availability of suitable mechanisms to ensure adaptation).	List of elements where adaptation to progress has been made (and listing of outstanding issues).
<b>Method</b>	Legislative review and qualitative commentary.	
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Legal analysis of the Regulation and adaptations.</li> <li>- Views from EC EEA, Industry, NGOs and national authorities.</li> <li>- Public consultation.</li> </ul>	
<b>Comments</b>	To date the only amendment to the E-PRTR Regulation has been Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009, which amended the Comitology provisions regarding the regulatory procedure with scrutiny. It was noted that the ability to adapt the Regulation needs to take account of the flexibility and constraints afforded by it being the instrument implementing the UN Protocol in EU law.	
<b>EQ 15</b>	<b>Are there any new needs that could be addressed?</b>	
<b>Judgement Criteria</b>	The extent to which newly identified objectives relating to data requirements and to stakeholder information are addressed by the Regulation.	
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- Identification of the new needs.</li> <li>- The extent to which these needs are met by the objectives of the Regulation.</li> </ul>	
<b>Method</b>	Cross-reference against all elements of the intervention logic and commentary.	
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Intervention logic.</li> <li>- Consultation with Member State Authorities, Industry and other stakeholders.</li> <li>- Public consultation.</li> </ul>	
<b>Comments</b>	N/A	

## A.5 Evaluation of EU added value

<b>EQ 16</b>	<b>What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels? (e.g. comparisons at European scale, track trends at European level, compare Member State, compare facilities across Europe, harmonisation of measuring and reporting practices, improving data quality)</b>
<b>Judgement Criteria</b>	The EU added value of the Regulation can be established by comparison with what could reasonably be expected to be achieved by Member States themselves.
<b>Indicators</b>	Views on the value of the additional elements to the PRTR.
<b>Method</b>	<ul style="list-style-type: none"> <li>- Legal analysis.</li> <li>- Literature review.</li> <li>- Member State, EU and Stakeholder views.</li> <li>- Public consultation.</li> </ul>
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Consultation with Member State authorities, Industry, EU institutions and other stakeholders.</li> </ul>
<b>Comments</b>	This question clearly is embedded in the issue of the scope of the evaluation and therefore particular care was taken not to confuse the assessment of EU added value of process (e.g. the database) with the legal added value.
<b>EQ 17</b>	<b>What is the overall perception of the E-PRTR and available information on industrial pollution among stakeholders and citizens in general?</b>
<b>EQ 18</b>	<b>How have the different provisions of the Regulation been accepted by the stakeholders?</b>
<b>Judgement Criteria</b>	The extent to which stakeholders perceive the Regulation as fulfilling their information needs.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- List of issues identified by stakeholders such as indicators on improved knowledge and transparency in EQ1.</li> </ul>
<b>Method</b>	<ul style="list-style-type: none"> <li>- Qualitative analysis – a list of types of issues was developed within the questionnaires to provide a structure to both elicit and present results.</li> <li>- Public consultation.</li> </ul>
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Views and perceptions – public consultation</li> <li>- Acceptability of the E-PRTR, data quality and understanding of the information presented.</li> <li>- Consultation with Member State Authorities and industry</li> </ul>
<b>Comments</b>	This question related more to the qualitative element of the E-PRTR, i.e. how much do people value its existence and have confidence in the data presented to make use of the E-PRTR in critical decision making.
<b>EQ 19</b>	<b>Do the issues addressed by the Regulation continue to require action at EU level?</b>
<b>Judgement Criteria</b>	The identification of specific data needs at EU level for which the Regulation is the necessary mechanism.
<b>Indicators</b>	<ul style="list-style-type: none"> <li>- List of specific data needs at EU level.</li> </ul>
<b>Method</b>	<ul style="list-style-type: none"> <li>- Consultation with stakeholders, Member State and EU institutions.</li> </ul>
<b>Sources</b>	<ul style="list-style-type: none"> <li>- Consultation with stakeholders, Member State and EU institutions.</li> <li>- Literature.</li> </ul>
<b>Comments</b>	<p>Note that the issue of the need for a Regulation to respond to the EU's commitments to the UN was regarded as a separate point.</p> <p>The analysis revisited the objectives of the E-PRTR to determine whether these are still pertinent to today's environmental management needs. Where the objectives were considered to still be relevant, the analysis then considered if action at EU level was also still the most appropriate response. During this assessment the need for Parties to implement the Protocol and the fact that this has not changed was flagged.</p>

## Appendix B Data and information needs

Data and information needs were identified on the basis of the evaluation analytical framework. The data and information needs led the collection of evidence for the evaluation.

*Table 5.1 Data needs matrix*

Type of data / information	What use?	Source	Relevance (if evaluation indicate question number <sup>1</sup> )
<b>Information on PRTR regulation implementation at national level (overarching question)</b>	Assessment of the implementation of the PRTR regulation at national level Assess effectiveness and relevance of the Regulation	Previous triennial report Literature review Member States response to Art 16 report	EQ 1, EQ 11; and the regulation implementation review
<b>Information on measures at national level to ensure a fair and consistent approach to industry?</b>	Assessment of the implementation of the PRTR regulation at national level Assess effectiveness of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers	EQ 2; and the regulation implementation review
<b>Description of variation in the implementation of PRTR at national level</b>	Assessment of the implementation of the PRTR regulation at national level Assess effectiveness of the Regulation	Previous triennial report Member States response to Art 16 report	EQ 2; and the regulation implementation review
<b>List and description of processes in place at national level to allow smooth flow of data</b>	Assessment of obstacles to data flow efficiency Assess relevance of the Regulation	Previous triennial report. Member States response to Art 16 report Questionnaire for data providers / managers	EQ 13; and the regulation implementation review
<b>List and description of measures undertaken by Competent Authorities to ensure that data is received</b>	Information on what steps are undertaken to ensure receipt of data and quality of data gathered	Previous triennial report Literature review Member States response to Art 16 report EQ 2; and the regulation implementation review	
<b>List and description of measures undertaken by Competent Authorities to ensure data received is robust</b>	Information on what steps are undertaken to ensure receipt of data and quality of data gathered Assess relevance of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers	EQ 13; and the regulation implementation review
<b>List and description of measures adopted by Competent Authorities to encourage use of and access to PRTR</b>	Information on how PRTR is being promoted and ensuring access for all	Literature review Member States response to Art 16 report	EQ 1, EQ 2, EQ 4; and the regulation implementation review

Type of data / information	What use?	Source	Relevance (if evaluation indicate question number <sup>1</sup> )
	Assess effectiveness of the Regulation		
<b>Description of the E-PRTR website including accessibility for wider public and direct access</b>	Information on how the E-PRTR website is meeting its objectives under the Regulation Assess effectiveness and relevance of the Regulation	Previous triennial report Literature review  Questionnaire for data users Public consultation	EQ 4, EQ 13; and the regulation implementation review
<b>Data on users of E-PRTR, numbers and types (e.g. academics, competent authorities, industry)</b>	Information on who makes use of the E-PRTR to identify key stakeholders Assess effectiveness of the Regulation	E-PRTR website E-PRTR website statistics Pop-up survey results (if included) Previous triennial report Literature review Informal EEA report	EQ 4; and the regulation implementation review
<b>Data on uses of data from E-PRTR (e.g. research, permit setting, general information)</b>	Information on how the E-PRTR is used to identify key purpose and need	E-PRTR website E-PRTR website statistics Pop-up survey results (if included) Literature review (including previous report) Informal EEA report Questionnaire for data users Public consultation	The regulation implementation review
<b>Description of measures from the E-PRTR website to maximise its usefulness</b>	Information on how the E-PRTR website could be further improved to meet needs of key users and purposes Assess relevance of Regulation	E-PRTR website statistics Discussion with EEA Questionnaire data users Public consultation Previous triennial report Literature review	EQ 13; and the regulation implementation review
<b>Review of industrial activities covered by E-PRTR; Comparison with industrial activities at EU level; Identification of gaps, mismatches or activities not undertaken</b>	Information on the breadth of E-PRTR activities to ensure that it meets the current EU business position	E-PRTR website statistics Informal EEA report Previous triennial report Literature review Questionnaire data providers / managers Questionnaire data users	The regulation implementation review
<b>Review of completeness of E-PRTR data; Comparison of facilities number with IPPC/IED permits for similar activities</b>	Information on the completeness of the data set held by E-PRTR for viability. However note that facilities and installations may have several permits which can affect the comparability of data	Previous triennial report Literature review Other related regulation and policy information e.g. implementation of IPPC Directive European Statistics on industrial activity Questionnaire data providers / managers Questionnaire data users	The regulation implementation review
<b>Review of quality of E-PRTR data</b>	Information on the quality and the efforts made by competent	Previous triennial report Literature review Questionnaire for data providers / managers / data users	

Type of data / information	What use?	Source	Relevance (if evaluation indicate question number <sup>1</sup> )
	authorities and operators		
<b>Information on reporting thresholds; Average emissions per type of activity; Comparison of average emissions with reporting thresholds</b>	Information on the reporting thresholds in the E-PRTR for suitability towards completeness	E-PRTR data-sets. Informal EEA report Previous triennial report Literature review	The regulation implementation review
<b>Meeting the objectives of the E-PRTR Regulation</b>	Assess progress made towards the objectives of the Regulation Assess effectiveness and relevance of the Regulation	Questionnaire for data providers / managers / data users Public consultation	EQ 1 , EQ 11; and the regulation implementation review
<b>List of national initiatives that may have influenced E-PRTR</b>	Assess effectiveness of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Public consultation	EQ 2; and the regulation implementation review
<b>List of unexpected changes due to E-PRTR e.g. local empowerment due to better access to environmental information</b>	Assess effectiveness of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Public consultation	EQ 4, EQ 13
<b>Costs of implementation of Regulation for SMEs and for other industries</b>	Assess efficiency of the Regulation	Member States response to Art 16 report Questionnaire for data providers / managers	EQ 5, EQ 6
<b>Costs of implementing the Regulation for Member States</b>	Assess efficiency of the Regulation	Member States response to Art 16 report Questionnaire for data providers / managers Administrative Burden Calculator	EQ 5, EQ 6
<b>Costs of operating and maintaining the E-PRTR website</b>	Assess efficiency of the Regulation	Member States response to Art 16 report Questionnaire for data providers / managers Feedback from EEA	EQ 5
<b>Review of other reporting systems, including costs information and obligations (e.g. LCP Emission Inventory, IPPC / IED reporting); Identify consistencies between E-PRTR and other reporting systems and pollution inventories</b>	Assess efficiency and coherence of the Regulation	Previous triennial report Literature review Questionnaire for data providers / managers Feedback from EU officials Feedback from EEA	EQ 7, EQ 8, EQ 13 EQ 10



Type of data / information	What use?	Source	Relevance (if evaluation indicate question number <sup>1</sup> )
<b>List of elements that are not coherent within E-PRTR Regulation</b>	Assess coherence of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Feedback from EU officials	EQ 1, EQ 9
<b>List of elements of E-PRTR that are not coherent with wider legislation</b>	Assess coherence of the Regulation	Feedback from EU officials	EQ 1, EQ 9
<b>List of provisions missing</b>	Assess relevance of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Pop-up survey results (if included) Feedback from EU officials	EQ 12, EQ 14
<b>List of provisions obsolete</b>	Assess relevance of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Pop-up survey results (if included) Feedback from EU officials	EQ 12, EQ 14
<b>List of issues with implementation of Regulation per category: issues due to technical progress, issues due to scientific progress, other issues</b>	Assess effectiveness and relevance of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Feedback from EU officials Feedback from EEA	EQ 3, EQ 14, EQ 15
<b>List of additional value from EU level instrument</b>	Assess EU added value of the Regulation	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Public consultation	EQ 16
<b>List perception of E-PRTR and acceptance from public and stakeholders</b>	Assess data quality, comparability, credibility, harmonisation and usefulness of the information	Previous triennial report Literature review Member States response to Art 16 report Questionnaire for data providers / managers / data users Public consultation Pop-up survey results (if included)	EQ 17, EQ 18, EQ 19

Note 1: Question numbers refer to question presented in the analytical framework presented in Appendix A.

The main sources consulted for the evaluation are listed in Table 5.2.

*Table 5.2 Reference list*

<b>Title</b>	<b>Description</b>	<b>Source</b>
<b>Article 16 survey results / Questionnaire responses</b>	The Member States survey has been designed to cover the majority of the core elements as part of the regulation implementation review (Section 3.2).	Commission/Eionet Central Data Repository
<b>Supplementary documents provided along with Article 16 survey results</b>	A number of Member States have also provided additional supplementary documents along with the completed survey.	Commission/Eionet Central Data Repository
<b>Previous Triennial report</b>	Previous study for comparison in new report	Available on the web
<b>EEA annual informal report and completeness checks</b>	Provides a review of the data quality and data flow from MS to E-PRTR on annual basis.	Available on the web
<b>Google Analytics/weblog</b>	E-PRTR web statistics covering the user profiles that access the E-PRTR data. The previous triennial report covered an 18 month survey window.	European Environment Agency to provide.
<b>E-PRTR data download statistics</b>	Information on number of downloads, frequency and their main purpose (e.g. research, education etc.)	Available for download from the E-PRTR website.
<b>Stakeholder responses to the questionnaire (users and providers)</b>	Responses from stakeholders are one of key sources of evidence for the overall project and relevant to both the regulation implementation review (Section 3.2) but also to the evaluation.	Questionnaire for data users and data providers designed by the project team
<b>Follow-up consultation</b>	Targeted phone conversation with selected stakeholders to gather further evidence on specific parts of the evaluation.	Record of interviews drafted by project team
<b>CLRTAP data submissions</b>	Inventory data for a range of AQ pollutants for comparison to E-PRTR	Available online from the EEA website
<b>Informative Inventory Reports (IIRs)</b>	Further narrative detail on the AQ inventories	Available on the web
<b>European Commission study on "Contribution of industry to pollutant emissions to air and water"</b>	This was a study carried out by Amec Foster Wheeler and IEEP on behalf of the Commission to look at the level of air and water emissions already captured by the IED and other related EU environmental policy. This included a detailed review of E-PRTR and other related data sets such as WISE. The study was important to assist in the review of Annex I activities but also to the policy review in within the evaluation.	Internally available including detailed database developed for the study
<b>Eurostat – production statistics</b>	Data on production statistics provided to Eurostat. This data was important to compare against the Annex I activities and whether the activities listed still fully represent industry in the EU	Available on the web
<b>Eurostat – waste statistics</b>	Data on waste statistics provided to Eurostat for comparison to E-PRTR	Available on the web
<b>IPPC permit statistics</b>	Breakdown on the total number of permitted sites by economic activity	Available on the web

## Appendix C Literature review

Table 5.3 presents summary of relevant references.

*Table 5.3 Review of literature*

Source	Summary
<b>EEA informal analysis, 2014</b>	<p>The informal review is conducted annually and consists of different checks. The initial checks concentrate on the internal consistency of the reported E-PRTR data while the focus of the extended checks is the consistency of data with data reported under other reporting obligations.</p> <p>Both the formal and the triennial reviews of E-PRTR data have indicated that there are still data gaps in E-PRTR data in terms of missing facilities, pollutants and activities. Therefore, further work to identify these data gaps is of high priority for the EC and the EEA.</p> <p>In 2014, the ETC/ACM developed methodologies to identify incompleteness of E-PRTR data at the facility level.</p> <p>The tests performed so far cover only releases to air and include:</p> <ul style="list-style-type: none"> <li>• Cross pollutant completeness checks across the time series (large emitters) <ul style="list-style-type: none"> <li>- The facility is flagged if it does not report the expected pollutants for entire time series 2008 -2012. It has to be pointed out that the test results can only indicate potentially missing releases of certain pollutants. The test results have to be further analysed by experts who can then either confirm that releases/facilities are missing or provide an explanation why reporting is complete despite the negative test result.</li> <li>- This test checks whether two different pollutants of the same media are reported for the whole time series. The test is performed for all facilities which meet the test criteria (e.g. reporting of a certain pollutant above the given release threshold in any reporting year).</li> <li>-The tests have been designed to cover mainly large emitters of selected pollutants.</li> <li>- Overall, the test results indicate that reporting of releases to air is quite complete, especially for the main air pollutants (NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>).</li> </ul> </li> <li>a) Facility checks across the time series</li> <li>• Completeness by sector/activity <ul style="list-style-type: none"> <li>- These tests check whether a defined pollutant is reported for a facility with a defined main activity/NACE code.</li> <li>- The number of completeness tests by activity for releases to air is limited because it is hard to define that a specific pollutant should be reported for a specific activity or a specific NACE code in all cases. This is because most activities or NACE codes are broad and do not allow for a clear distinction of technologies which would be needed to assess which pollutant should be released above the E-PRTR threshold.</li> <li>- The number of European refineries was 132 in 2012 (World Oil and gas review, ENI 2013). A comparison of this number with the 109 facilities which reported SOX shows that the numbers are of a comparable magnitude, which indicates rather complete reporting of oil refineries.</li> </ul> </li> </ul>

Source	Summary
	<ul style="list-style-type: none"> <li>• Cross pollutant maximum ratio               <ul style="list-style-type: none"> <li>- This check tests whether the calculated quantity ratio of two defined pollutants exceeds a predefined threshold e.g. whether the ratio of NO<sub>x</sub> and CO<sub>2</sub> air releases exceeds a certain ratio. This test targets fuel or waste combustion plants of any size.</li> </ul> </li> <li>• Time series consistency (large emitters)               <ul style="list-style-type: none"> <li>- This check aims at detecting inconsistencies in the time series of a release/transfer of any pollutant into a defined medium, which might indicate incomplete reporting for particular year(s).</li> <li>- The test result shows that a large number of facilities which reported at least one high release in any of the years 2008-2012. This shows potential inconsistencies in reporting across the time series.</li> </ul> </li> </ul> <p>b) Cross pollutant analysis (for a particular year)</p> <p>The check runs against the E-PRTR database that countries can use to create their delivery to E-PRTR and against the database downloadable from the EEA to check all the countries.</p> <p>The cross pollutant check can identify outliers in emissions (compared to other pollutants) but it can also identify possible reporting gaps. Possible reporting gaps are identified when the reporting of a pollutant is expected (based on the reporting of other pollutants), while the facility did not report it. Therefore, the cross pollutant check is useful for checking the completeness of reporting. The check can be easily expanded and takes little time to run.</p> <p>For most pollutants, only a few percent of the facilities report releases that are not within the probable range. Most of the facilities with (one or multiple) releases out of the probable range can be found in the sector 1.c which relates to thermal combustion above 50 MW.</p> <p>It is important to point out that the findings of the tests have to be further analysed by country experts with in-depth knowledge of the facility who can then confirm whether the data is really incomplete or whether there are specific circumstances for the facility that explain the releases outside an expected range or no releases in certain years.</p>
<b>Air pollutant emission estimation methods for E-PRTR reporting by refineries (Concawe)</b>	<p>This Report provides the estimation algorithms and emission factors for uncontrolled releases of air pollutants from stationary sources at oil refineries which Concawe recommends for E-PRTR reporting purposes, where measurements have not been undertaken. The emission estimation algorithms are fully referenced and the emission factors provided in a consistent metric unit base.</p> <p>Regarding the data submissions for these Registers, Concawe identified three issues that require attention by the oil refining sector:</p> <ol style="list-style-type: none"> <li>1. The data submitted should be reliable, in the sense that they represent as accurately as possible the actual pollutant emissions. Over-estimation of emissions is clearly to be avoided. Moreover, under-estimation can give a false impression of what pollution emissions levels can be reached under realistic circumstances.</li> <li>2. Data should be consistent between comparable sources within the industry.</li> <li>3. The sharing of best practices in terms of emission factors is important in order to improve the quality of the reporting.</li> </ol> <p>It was noted that there were no emission estimation guidelines for each and every one of the pollutants to air from refineries which may possibly require reporting under the regulations. Although guidance is provided in</p>

Source	Summary
	<p>the European Environment Agency Emission Inventory Guidebook for the major air pollutants, it does not give estimation methodologies for all of the E-PRTR listed pollutants.</p> <p>The report does not consider the estimation of accidental or non-routine (e.g. due to maintenance) releases to air. Guidance in reference recommends that emissions from such releases should be estimated by sites on an ad-hoc basis using whatever data are available and the most appropriate methods considered for the circumstances. Nor does it provide guidance on estimating emissions from mobile sources.</p> <p>The emission factors provided are for uncontrolled releases. Reported emissions must take account of any abatement equipment installed e.g. wet gas scrubbers, electrostatic precipitators, etc.</p> <p>Algorithms are provided for the E-PRTR air pollutants which may exceed their emissions reporting thresholds. The level of emissions depends upon the refinery crude throughput, the process units installed, fuels consumed, type of equipment in use, procedures in place, etc. If no pollutant algorithm is provided for a source, it is because:</p> <ul style="list-style-type: none"> <li>• Emissions of the pollutant do not occur from that source;</li> <li>• Emissions are considered negligible; or</li> <li>• No published algorithm has been found or considered appropriate for sources at refineries.</li> </ul>
<p><b>Air emissions from the refining sector. Analysis of E-PRTR data 2007-2011 (Concawe)</b></p>	<p>This report provides an overview of the European Pollutant Release and Transfer Register (E-PRTR) air pollutant data for oil refineries submitted by national authorities for the years 2007 to 2011. Detailed analyses are provided of the emissions of the five pollutants reported for the majority of refineries (SO<sub>x</sub>, NO<sub>x</sub>, NMVOCs, CO<sub>2</sub> and benzene). The changes in their reported emissions over the five year period are reviewed, as well as the significance of the oil refining sector in the overall reported E-PRTR inventories of these pollutants. The impact of incorrectly coded submissions is identified.</p> <p>The total number of air pollutants reported for oil refineries on a pan-European basis in the E-PRTR between 2007 and 2011 has been 33, although the number of pollutants reported for individual refineries vary significantly. Five pollutants are reported for the majority of oil refineries. These pollutants are SO<sub>x</sub>, NO<sub>x</sub>, NMVOCs, benzene and CO<sub>2</sub>.</p> <p>Due to the degree of data handling and transfer there is a risk, for example, of transcription errors occurring. It is therefore recommended that refineries check the E-PRTR database.</p> <p>The facility classification codes are not always applied correctly. There are a number of installations that are classified as Annex I activity code 1. (a) "mineral oil and gas refineries" or as NACE code 19.20 "manufacture of refined petroleum products" that are not refineries. Furthermore, the misclassification under the NACE activity 23.20 "manufacture of refractory products" is due to the revision of the NACE codes in 2006. Before 2006 code 23.20 was the code for oil refining.</p>

Source	Summary																																																						
	<p><b>Table 16</b> Number of non-refineries for which emissions to air have been reported but coded as IA code 1.(a) or NACE code 19.20</p> <table><tr><th></th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th></tr><tr><td>Total number of installation that are not refineries but that are reported as IA 1(a): <i>Mineral oil and gas refineries</i></td><td>20</td><td>22</td><td>27</td><td>22</td><td>13</td></tr><tr><td>Total number of installation that are not refineries but that are reported as NACE 19.20: <i>Manufacture of refined petroleum products</i></td><td>10</td><td>11</td><td>9</td><td>12</td><td>9</td></tr></table> <p>Table 17 shows the contributions reported for installations which are not oil refineries but coded as Annex I, activity 1.(a) which have exceeded 5% of the total reported emissions by oil refineries in one of the 2007 to 2011 reporting years.</p> <p><b>Table 17</b> Contribution by non-refineries to Industrial Activity 1.(a) inventories</p> <table><tr><th></th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th></tr><tr><td>CO</td><td>16.2%</td><td>16.7%</td><td>25.5%</td><td>0</td><td>0</td></tr><tr><td>HCFCs</td><td>0</td><td>0</td><td>41.7%</td><td>59.6%</td><td>91.2%</td></tr><tr><td>HFCs</td><td>98.7%</td><td>65.6%</td><td>35.9%</td><td>0</td><td>0</td></tr><tr><td>Methane</td><td>54.4%</td><td>60.3%</td><td>48.8%</td><td>52.9%</td><td>51.0%</td></tr><tr><td>NMVOCs</td><td>9.4%</td><td>8.3%</td><td>7.8%</td><td>1.8</td><td>0</td></tr></table> <p>This table shows, for example, that in the 2011 E-PRTR database, under Annex I activity 1.(a) "Mineral oil and gas refineries" the contribution by refineries is only 42.1%, the balance being from other facilities coded as such.</p> <p>These incorrectly coded facilities have a significant effect on the Annex I activity 1(a) methane, HCFC and HFC emissions, and on the NACE inventory for naphthalene, e.g. contributing in 2011 91% of the HCFCs and 58% of the methane 1(a) inventories.</p> <p>The refining sector is a major contributor to the E-PRTR inventories of benzene and NMVOCs. It must be recognised that these inventories are for those industries submitting data under the E-PRTR Regulation and do not include major sources such as transport and domestic heating.</p>		2007	2008	2009	2010	2011	Total number of installation that are not refineries but that are reported as IA 1(a): <i>Mineral oil and gas refineries</i>	20	22	27	22	13	Total number of installation that are not refineries but that are reported as NACE 19.20: <i>Manufacture of refined petroleum products</i>	10	11	9	12	9		2007	2008	2009	2010	2011	CO	16.2%	16.7%	25.5%	0	0	HCFCs	0	0	41.7%	59.6%	91.2%	HFCs	98.7%	65.6%	35.9%	0	0	Methane	54.4%	60.3%	48.8%	52.9%	51.0%	NMVOCs	9.4%	8.3%	7.8%	1.8	0
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Evaluation of the E-PRTR emissions inventory: the Galician case (Dios et al)	<p>This article reviews the E-PRTR for the Galicia region in Spain. Previous investigations show that more effective and faster reductions in emissions are reached with voluntary actions rather than regulatory approach.</p> <p>The publication of the emission data is a motivation for installations to improve their productive processes, stimulating the implementation of clean technologies, and, consequently, decrease in the emissions and the associated control costs.</p> <p>A validation of the reported data is required in order to correct possible mistakes before being published in the E-PRTR. This work proposes a methodology for the evaluation of the Pollution Release and Transfer Register inventory for Galicia (E-PRTR). Also, an analysis of the obtained results for pollutants emissions from 2008 and 2010 E-PRTR was done, studying the errors done by installations in the provided data.</p>																																																						

Source	Summary
	<p>The industrial plants which must report their emissions identified at Galicia, were 139 in the year 2008 and 133 in the year 2010. Also, the reported pollutants decreased in 5.6%.</p> <p>Errors:</p> <ul style="list-style-type: none"> <li>• Non-declaration (where the operator does not report emissions that it should) (type 1);</li> <li>• No information (e.g. lack of activity parameters or documentation supporting the emissions calculations) (type 2);</li> <li>• Mis-calculations (where the mistaken identification of emission flow, or the wrong units used, wrong selection of the emission factor, among others) (type 3);</li> <li>• Lower level errors (e.g. where a single analytical method has been applied to comply with reporting rules but multiple methods would have been more appropriate) (type 4);</li> <li>• No admission of the declaration of 0kg/year emission (type 5); and</li> <li>• Uncorrected errors in the complementary information supplied (type 6).</li> </ul> <p>For year 2010, 45% of reported atmospheric emissions data were accepted without any correction, while for 2008 they were just 17%. The most common error in 2008 was type 2, however in 2010 the percentages are homogeneously distributed. This increment of valid data in 2010 was due to a greater contribution of complementary information provided by the installations, in order to justify their reported emissions.</p>
<b>PRTRVAL (PRTR validation software (Dios et al) tool)</b>	<p>This article presents the merits of the PRTRVal, an emission validation tool developed in order to improve the need of transparency and reproducibility in emission validation.</p> <p>The quality of the emissions information is very difficult to assess, since methodologies for reporting and input data, and assumptions strongly vary between the facilities and even within a same facility, methodologies can vary year by year. Although several emission estimation guidebooks focused in the submission of information to the E-PRTR are available, there has not been defined a common strategy to embrace the whole process of emission compilation and/or calculation at facility level.</p> <p>The validation of emissions reported to E-PRTR is based on the comparison of the emissions with a reference emission inventory [standardised estimated emissions of each industrial facility], developed annually with both standard and specific emission factors, and the activity parameters submitted by the facilities involved. This methodology leads to the approval, correction or rejection of the emissions submitted, before they are reported to the European Commission. This is also used as a verification procedure prior to the use of emissions data with either scientific or management purposes.</p> <p>The validation process is defined by means of a logic flow diagram, considering not only the declared emissions values, but also their uncertainty, by means of their calculation method: measured (M), calculated (C) and estimated (E), following PRTR recommendations on the calculation method.</p> <p>In order to establish whether a declared emission value can be considered as acceptable, a maximum deviation respect to the value from the reference database is required. This acceptable deviation range is selected in order to obtain either a more accurate or a more feasible emissions inventory.</p>



Source	Summary
	<p>A methodology for the validation of the E-PRTR, coded in the PRTRVal software tool, is presented and tested over Galicia region. Comparison of the results obtained with PRTRVal between 2008 and 2010 E-PRTR inventories evaluation shows a significant percentage of declared emissions which required corrections, in order to improve the quality of PRTR submitted data. However, this percentage will reduce from 79% in 2008 to 55% in 2010, showing the growing environmental conscience from the industrial sector, and the experience gained along the years with both EPER and PRTR registers. However, in 2010 this percentage was still high, with a lot of these errors repeated year by year for the same facility, regarding the same pollutant. Therefore, a trustworthy verification by the facility of the information, before being submitted, can avoid a significant percentage of these observed errors.</p>
<b>INSPIRE Mid-term evaluation</b>	<p>INSPIRE aims to create “an infrastructure to share spatial data and services in Europe supporting environmental policies and policies that have an impact on the environment.” INSPIRE was founded in order to address five limitations identified: missing or incomplete spatial data, incomplete descriptions of spatial data, difficulty to combine different spatial data sets, inaccessibility of spatial data and barriers to data sharing.</p> <p>While the mid-term review does not refer to E-PRTR, INSPIRE is relevant as its aims are to create metadata, establish network services, ensure interoperability of spatial data sets and services, facilitate data and service sharing, and establish organisational structures and coordinate implementation.</p> <p>The review identified that only two of the actions are on track: the creation of metadata and the establishment of network services. The interoperability of spatial data sets also shows progress within the deadlines set by the Implementing Rules.</p> <p>Elsewhere, it is clear that adjustments are needed. Most of the measures to ensure interoperability have yet to be implemented and the outcome of the public consultation indicates that this strand of INSPIRE is considered to be highly technically complex and requires more support.</p>
<b>Diffuse water emissions in E-PRTR (Deltares)</b>	<p>The objectives of this project were to:</p> <ol style="list-style-type: none"> <li>1 Gather available data on diffuse releases to surface water with data sets available up to 2009 of the pollutants and sources for a selected set of source-substance combinations.</li> <li>2 Propose alternative estimation methods where emission data are not available on the European scale.</li> <li>3 Develop a methodology to derive disaggregated spatial data to obtain geographical information system layers.</li> <li>4 Derive gridded emission map layers covering all EU27 Member States and the EFTA countries (Switzerland, Liechtenstein, Norway and Iceland) for the selected sectors and pollutants with the highest resolution possible. For the E-PRTR site, River Basin District (RBD) maps will be used as the reporting format.</li> </ol> <p>With the riverine load approach, in theory the total load of diffuse emissions can be calculated by subtracting the known point source loads (mainly E-PRTR data) from the riverine load calculated on the basis of the flow and the concentrations in the river system. Because of the incompleteness of the point source data, the difficulties concerning the water quality processes that are not taken into account and the lack of a</p>

Source

Summary

link with the specific diffuse sources (and thus potential measures for reduction), the riverine approach is regarded as less useful.

In the project, research has been carried out to gather available data on diffuse emissions to water. The main conclusions of this research are:

- The existing data regarding diffuse emissions is limited;
- Much data is related to specific, local projects which cannot easily be extrapolated to a European scale;
- Much research is not published and is only available in “grey literature”;
- In many countries studies about diffuse emissions are running, but not yet finished and published;
- Many studies are not transparent about the backgrounds of the quantification methods and the reliability of the underlying data; and
- Official Member State reports on diffuse sources are limited and mainly related to reporting articles in a few Directives or the activities of JRC and EEA.

Results:

Table 4.2 Relative load per key source to surface water in Europe 2010 (EU27+EFTA<sup>1</sup>). In green relative percentage of less than 10%, yellow between 10%-50% and red above 50%.

Substances	Emissions quantified in this project						Emissions already in E-PRTR		Total project + E-PRTR	Unit
	Atmospheric deposition	Agriculture	Inland navigation	un-connected households	Road transport	UWWTPs not in E-PRTR	E-PRTR industries	E-PRTR UWWTPs		
TOC			0,03%	0,1%		44%	33%	22%	1 342	kton
Nutrient-P		46%	0,01%	0,02%		24,1%	11%	19%	196	kton
Nutrient-N	2,8%	77%	0,004%	0,004%		9,6%	2%	8,3%	4 063	kton
Cadmium	5,4%			<0,1%	0,0%	69%	10%	16%	72	ton
Lead	17%			<0,1%	11%	47%	14%	10%	716	ton
Mercury	17%			<0,1%	0,0%	55%	16%	12%	15	ton
Nickel				<0,1%	4,5%	57%	16%	23%	836	ton
Anthracene			23%	<0,1%	0,7%	24%	39%	13%	0,48	ton
Fluoranthene			16%	0,1%	0,6%	54%	26%	3,8%	1,4	ton
Copper				<0,1%	8,3%	48%	27%	16%	1 326	ton
Zinc				<0,1%	1,0%	50%	25%	25%	5 082	ton

<sup>1</sup> note: not for all the sources all EU27+EFTA counties are included due to lacking parameters necessary for the estimation of the loads. More details are given in the fact sheets.

Of particular note is the high contribution of the source “UWWTPs (Urban Waste Water Treatment Directive) not in E-PRTR” when compared with “E-PRTR UWWTPs”, especially because the starting point of the E-PRTR Regulation was that about 90% of point source discharges would be covered by the definitions and thresholds included in the Regulation. Although the “UWWTPs not in E-PRTR” are obviously no real diffuse sources, it seems by far the most relevant key source selected in this project. In this project also the missing loads regarding the large UWWTPs (>100.000 p.e.) have been estimated.

For this reason, the data gathered through the project indicated that even for the well-known and relatively well measured substances like nutrients (TOC, Nutrient-P and Nutrient-N) E-PRTR seems to only cover less than half of the “real” total loads (the sum of the E-PRTR and the loads of the diffuse sources quantified in this project). For other substances, this

Source	Summary
	<p>percentage of coverage seems even lower, with a lowest value of 7% for Fluoranthene.</p> <p>The major bottleneck reported in this project is the overall lack of transparent, consistent, comparable and actual data concerning emissions of diffuse sources, emission factors and statistical data covering all Member States and EFTA countries. The actual emissions from most diffuse sources are strongly dependent on specific, local or regional differentiated geological, hydrological and climatological circumstances which are variable in time and therefore hard to estimate. Every method for the quantification of these diffuse sources will be a simplification of the real situation in the Member States. Nevertheless, a first rough quantification of the emissions of hazardous substances from key sources is necessary to make a link with possible emission reduction measures.</p> <p>The most important recommendations for improvement are improvements related to "spatial allocation" and improvements related to "specific emission sources".</p> <p>This project has to be regarded as an important step in the process to quantify diffuse sources. The project results show that E-PRTR diffuse sources have a significant and sometimes a major contribution in the total loads (the sum of E-PRTR loads and loads quantified in this project) to the surface water and therefore might be still a major barrier to meeting the water quality goals of the WFD. On the other hand, the project also shows that it is feasible to quantify the diffuse emissions of a number of key sources and problem substances. Whilst this project has been initiated by the EC to support Member States, action by Member States will be needed to improve the quantification methods and to expand the scope to other sources and substances. Finally, the Member States are responsible for the inventories of emissions.</p> <p>Sharing knowledge, data and information is necessary to avoid double work and to make steps towards harmonising quantification methods for diffuse sources.</p> <p>In this light, it is suggested that:</p> <ul style="list-style-type: none"> <li>• The EC, to keep playing a facilitating and stimulating role in the process of the quantification of diffuse water emissions;</li> <li>• The EC, to take additional initiatives under the umbrella of the CIS Working Group E on Chemical aspects, like the establishment of a Working Group on the harmonisation and quantification of emissions of diffuse sources in close cooperation with the JRC and the EEA. Other recommended actions include: <ul style="list-style-type: none"> <li>○ Organise meetings for the quantification of diffuse water emissions and the harmonisation of definitions and methods;</li> <li>○ Stimulate involvement of European / international water associates with specialist groups on diffuse water pollution;</li> <li>○ Set up a database to exchange information concerning emission factors; and</li> <li>○ Create a (internet or social media) platform for sharing information, data and knowledge of the quantification of diffuse water emissions.</li> </ul> </li> <li>• Member States, to actively share information about projects, activities, data and methods about the quantification of emissions of diffuse sources;</li> </ul>

Source	Summary
	<ul style="list-style-type: none"> <li>• Member States, to participate in international working groups, River Basin Committees and discussions about diffuse water emissions; and</li> <li>• Member States, to report on diffuse water emissions in official requests, even when the emissions have a limited reliability.</li> </ul>
<b>Using E-PRTR data to determine environmental performance of reporting facilities</b>	<p>A number of studies by researcher, Mahelet G. Fikru, have examined the potential and limitations of using E-PRTR data for determining the environmental performance of reporting facilities. The main limitations identified across the series of papers are missing reporting requirements (namely reporting on-site abatement through end-of-the-pipe techniques and use of cleaner technologies for reporting of waste management, as well as more generally mandatory reporting on production volume and firm size), and a lack of transparency when setting the reporting thresholds (e.g. to account for different pollutant properties and consider ecotoxicity as a factor for determining the thresholds in addition to gross emissions – as well as ensuring that reporting thresholds are regularly updated) (Fikru, 2011a; 2013).</p> <p>Despite the limitations recognised, the series of papers use E-PRTR data to determine the environmental performance of facilities in the manufacturing (Fikru, 2011b; 2013) and waste management sectors (Fikru, 2011a; 2012; and 2014). The indicators are based on a normalised value for each facility derived from the percentage of a pollutant reported over the reporting threshold – whereby a higher normalised value indicates a higher impact and vice versa. This is then used to determine the size of the facility, which in turn allows the environmental impact to be determined.</p> <p>Key findings from the studies concerning environmental performance are summarised as follows:</p> <ul style="list-style-type: none"> <li>• According to the normalised values derived from the above methodology, ~59% of the facilities reporting to E-PRTR have 'bad' environmental performance with EPI less or equal to 25% (Fikru, 2013);</li> <li>• According to the normalised values applied to a sample of manufacturing facilities (as derived from the above methodology), their environmental performance is considered to be well in terms of abating a higher percentage of their gross pollution (Fikru, 2011a);</li> <li>• Based on a sample of European waste-handlers, ~one-third of waste-handlers in Europe have zero recovery rate while only 16% rely exclusively on recovery and recycling of harmful wastes. Through supporting desk-based research, the study finds that the EP of operators of waste management facilities in Europe are most affected by supra-national regulations, national policies and spatial factors (Fikru, 2014); and</li> <li>• Based on a sample of 1,272 facilities reporting the export of hazardous waste to the E-PRTR (2009 data), the study finds that 96% of the export stays within Europe. It finds that the impact of environmental policy and the market for waste management and recycling on the export intensity of industrial facilities in the EU are significant drivers behind this low export intensity (Fikru, 2012).</li> </ul>

Source	Summary
	<p>References</p> <p>Fikru, M. G. (2011a) Does the European Pollutant Release and Transfer Register Enable Us to Understand the Environmental Performance of Firms? <i>Environmental Policy and Governance</i>. 21(3).</p> <p>Fikru, M. G. (2011b) Regulating the waste management industry in the EU. <i>International Journal of Energy, Environment and Economics</i>, 21(2).</p> <p>Fikru, M. G. (2012) Trans-boundary movement of hazardous waste: Evidence from new micro data in the European Union. <i>Review of European Studies</i> 4(1).</p> <p>Fikru, M. G. (2013) Improving Mandatory Environmental Data Reporting for Comparable and Reliable Environmental Performance Indicators “in” <i>Engineering Management</i> (Eds. F. P. García Márquez and B. Lev).</p> <p>Fikru, M. G. (2014) Environmental performance of waste-handlers, <i>Journal of Cleaner Production</i>, 67, pp.88-97.</p>

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## Appendix D Member States implementation

### D.1 Implementation analysis

#### D.1.1 Completeness of information reported by Member States

Table 5.4 presents an overview of the completeness of the responses provided by Member States to the questionnaire on implementation of the E-PRTR Regulation. The responses are rated according to a traffic light approach. The following coding has been used in the table below to rate the responses received:

- Green: responses which fully answer the question or sub question;
- Amber: responses which only partially meet the needs of the question;
- Red: responses have not been provided to questions; and
- White: response not required (i.e. voluntary questions).

Table 5.4 Overview of completeness of responses received from Member States

	1			2										3										4														
	1.1	1.a	1.b	2.1	2.a	2.a.i	2.a.ii	2.b	2.c	2.d	2.d.i	2.e	2.f	2.g	3.1	3.a	3.b	3.c	3.d	3.e	3.f	3.g	3.h	3.i	3.ii	3.iii	4.1	4.a	4.a.i	4.a.ii	4.b	4.b.i	4.b.ii	4.b.iii	4.b.iv	4.c	4.c.i	4.d
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	5.1	5.a	5.b	5.c	6.1	6.a	6.b	7.1	7.a	7.b	7.c	7.c.i	8.1	8.a	9.1	9.a	10.1	10.a	10.b	11.1	11.a	11.b	11.c	11.d	11.e	12.1	12.a
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	5.1	5.a	5.b	5.c	6.1	6.a	6.b	7.1	7.a	7.b	7.c	7.c.i	8.1	8.a	9.1	9.a	10.1	10.a	10.b	11.1	11.a	11.b	11.c	11.d	11.e	12.1	12.a
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### *List of gaps identified*

Overall, the reports submitted by Member States are very complete and all Member States have submitted a triannual implementation report. Mandatory questions have been particularly well responded to with very little gaps identified. The questions left unanswered were:

- In Hungary, questions 4.b.i to 4.b.iv on delays in meeting deadlines as well as question 4.b.iv in Slovakia's response (on the reason for the delays). It was assumed that in both cases this was not applicable;
- A few gaps were identified for Malta: questions 4.b.i to 4.b.iv on delays in meeting deadlines –it was assumed that the absence of response means that there has not been delays in meeting deadlines. Furthermore question 4.c.i on reporting tools available for both operators and competent authorities is left unanswered. It is unclear why there is no response to this question; and
- The following gaps were identified for Latvia:
  - Question 2.a on measures adopted to ensure that the rules on penalties are effective, proportionate and dissuasive;
  - Question 3.i on competent authority data collection concerning releases of pollutant from point sources;
  - Question 3.ii on the pathways of PRTR data collection; and
  - Question 6.b on where information is made available when information is not easily accessible by electronic means, it is assumed this is not applicable.

### **D.1.2 Overall EU-wide implementation**

Overall, the E-PRTR Regulation has been implemented in all the reporting Member States. In most (23) Member States the responsibilities for the implementation of the E-PRTR Regulation are shared between several competent authorities. The table below summarises the information reported on the existing competent authorities for each Member State.

**Table 5.5**      *Overview of Competent Authorities involved in E-PRTR implementation*

<b>Member State</b>	<b>Competent Authorities</b>
<b>Austria</b>	Federal Ministry of Agriculture, Forestry, Environment and Water Management; Ministry of Science, Research and Economy; Austrian Federal Environment Agency (Umweltbundesamt GmbH); and The Austrian provincial authorities.
<b>Belgium</b>	Coordination is ensured by the Working Group on PRTR, and the Belgium Interregional Environment Agency (CELINE-IRCEL) is in charge of submitting data. For Brussels: the Brussels Institute for Management of the Environment. For Flanders: the Department Air, Environment and Communication of the Flemish Environment Agency is responsible for air inventory. The water inventory is managed by the Department of Water Reporting of the Flemish Environment Agency. The waste data are provided by the Public Waste Agency of Flanders. For Wallonia: the Integrated Environmental Survey (REGINE) which is administered by the Operational Directorate-General for Agriculture, Natural Resources and the Environment. Data are validated and analysed by the Walloon Agency for Air and Climate.

Member State	Competent Authorities
<b>Bulgaria</b>	The Ministry of Environment and Water (MOSV), the Executive Environment Agency (IAOS), and the Regional Inspectorates of Environment and Water (RIOSVs).
<b>Cyprus</b>	The Department of Labour Inspection of the Ministry of Labour, Welfare and Social Insurance; and The Department of Environment of the Ministry of Agriculture, Natural Resources and Environment.
<b>Czech Republic</b>	The Environmental Impact Assessment and Integrated Prevention Department of the Ministry of the Environment is responsible for reporting in under the E-PRTR Regulation. Data are provided by the Ministry of the Environment through the Integrated Register of Environmental Pollution. The CENIA (Czech Environmental Information Agency) and the Czech Environmental Inspectorate conduct audit of the data.
<b>Denmark</b>	The Danish Environmental Protection Agency
<b>Estonia</b>	The Estonian Ministry of the Environment; The Estonian Environment Agency; and The Estonian Environment Board.
<b>Finland</b>	Centres for Economic Development, Transportation and the Environment Ministry of the Environment
<b>France</b>	The Ministry of Ecology, Sustainable Development and Energy. The collection and diffusion of data is conducted by the INERIS. CITEPA (Inter*professional technical centre for the study of atmospheric pollution) provides support to improve the quality of data reported.
<b>Germany</b>	In Germany, both the federal states and the Federal Environment Agency implement the E-PRTR Regulation.
<b>Greece</b>	The Ministry of the Environment Energy and Climate Change (YPEKA) is responsible for the implementation of the Regulation. EARTH is responsible for collecting and recording the data.
<b>Hungary</b>	The Environmental Conservation Department of the Ministry of Agriculture and the Environmental Protection and Nature Conservation Inspectorates are in charge of the reporting under the E-PRTR Regulation.
<b>Ireland</b>	The Environmental Protection Agency. The Department of Environment, Community and Local Government in Ireland is consulted when reporting under the PRTR Regulation.
<b>Italy</b>	The Ministry of the Environment, Land and Sea; and The National Institute for Environment Protection and Research.
<b>Latvia</b>	The Ministry of Environmental Protection and Regional Development (VARAM); The Latvian Environmental, Geological and Meteorological Centre (LVGMC); The State Office for Environmental Monitoring (VPVB);and The State Environmental Service (VVD) and its units, the State Environmental Service's Regional Environmental Offices (VVD RVP).
<b>Lithuania</b>	The Regional Environmental Protection Departments are responsible for data collection in the territories they are located in. The Environmental Protection Agency is responsible at Member State level.
<b>Luxembourg</b>	The Administration for the Environment

<b>Member State</b>	<b>Competent Authorities</b>
<b>Malta</b>	The Malta Environment and Planning Authority
<b>The Netherlands</b>	<p>The Ministry of Infrastructure and the Environment;  The National Institute for Public Health and the Environment (RIVM);and  The InfoMil Knowledge Centre.</p> <p>In addition, the Ministry of Economic Affairs is involved with regard to activity 7(a).</p>
<b>Poland</b>	<p>The Chief Inspector for Environmental Protection (GIOs).</p> <p>Data are collected and submitted by the Provincial Inspectors for Environmental Protection (WIOs).</p>
<b>Portugal</b>	<p>Azores Regional Directorate for the Environment;  Madeira Regional Directorate for the Environment;  North Regional Coordination and Development Committee ;  Central Regional Coordination and Development Committee ;  Lisbon and Tagus Valley Regional Coordination and Development Committee ;  Alentejo Regional Coordination and Development Committee ;  Algarve Regional Coordination and Development Committee ;  Decentralized services of the APA:</p> <p>River Basin District Administration for the North Region, River Basin District Administration for the Central Region, River Basin District Administration for the Tagus Region, River Basin District Administration for the Alentejo Region, River Basin District Administration for the Algarve Region.</p> <p>These are coordinated by Inspectorate-General for Agriculture, the Sea, the Environment and Regional Planning (IGAMAOT).</p>
<b>Romania</b>	The National Environmental Protection Agency (ANPM), with the support of the Ministry of the Environment and Climate Changes (MMember StatesC).
<b>Slovakia</b>	The Slovak Environment Agency. It is assisted by the Slovak Hydro meteorological Institute, the Slovak Environmental Inspectorate and the Ministry of Environment of the Slovak Republic.
<b>Slovenia</b>	The Slovenian Environment Agency (ARSO) which is a constituent body of the Ministry of the Environment and Spatial Planning of the Republic of Slovenia
<b>Spain</b>	The Industrial Environment Department is responsible for the administration of the national pollution release and transfer register.
<b>Sweden</b>	The Swedish Environmental Protection Agency
<b>United Kingdom</b>	<p>In England and Wales: the Environment Agency, Natural Resourced Wales and over three hundred local authorities. In Scotland and Northern Ireland, the Scottish Environment Protection Agency and the Department for Environment in Northern Ireland respectively.</p> <p>The Department of Energy and Climate Change is responsible for the off shore sector.</p> <p>The Department for Environment, Food and Rural Affairs (Defra) co-ordinated the reporting obligations.</p>

All Member States have reported that national legislation has been adopted in order to implement the E-PRTR Regulation.

### *Measures adopted to implement Article 20*

Article 20 of the E-PRTR Regulation requires Member States to lay down rules for the application of penalties applicable to infringements. These penalties should be effective, proportional and dissuasive.

All Member States have reported a range of administrative and/ or criminal procedures available in case of non-compliance with the requirements of the E-PRTR. Administrative notices and fines are available in all Member States, the amount of which vary between Member States. Some Member States included details on the range of the fines applicable, which is presented below. However it is important to note that in some instance it is unclear whether the fine reported is for non-reporting or for actual pollution. This uncertainty is highlighted in Table 5.6.

**Table 5.6**      *Level of fine reported for non-compliance*

	<b>Level of fine available</b>
Austria	Average - €2,000 to € 4,000 Maximum €41,200, however it is not clear whether this applies to non-reporting offenses.
Belgium	No clear information on fine for non-reporting. <u>Brussels Capital region</u> Administrative fine - €625 to €62,500 Non-compliance in Class 1B facilities: €250 to €12,500 and / or imprisonment of 8 to 12 months Non-compliance in Class 1A facilities: €625 to €62,500 and / or imprisonment of 8 to 12 months <u>Flanders region</u> *Maximum fine - €250,000 *Criminal proceedings – imprisonment from 1 month to 1 year.
Bulgaria	€1,000 to €2,500 (BGN 2,000 to 5,000)
Cyprus	No information on fine for non-reporting. Since 2013 the maximum fine is €500,000 (up from €85,430). For failure to comply with requirements of air legislation the maximum fine is €34,172. Failure to comply with air or water legislation can be a criminal offense with one (air) to three years imprisonment (water).
Czech Republic	No information on fine for non-reporting. Maximum fine of €18,350 (CZK 500,000).
Estonia	No information on fine for non-reporting. Breach of air regulation: fine up to €2,000 Breach of waste legislation: fine up to €13,000 Breach of water legislation: fine up to €2,000 Breach of integrated permit: fine up to €3,200

	Level of fine available
Greece	Fine set in accordance with the importance, frequency and repetition of the breach.
France	Lack of reporting or incomplete reporting can be fined up to €1,500
Hungary	Failure to meet water reporting: up to €3,200 (HUF 1 million) Failure to report a change in data: €640 (HUF 200,000) Failure to report waste data: €640 (HUF 200,000)
Italy	Missing reporting: €5,000 to €52,000 Inaccurate reporting: €5,000 to €26,000
Lithuania	Failure to disclose information on the state of the environment: €29 - €58 (LTL 100 to LTL 200) Failure to report accidents or incidents: €145 - €290 (LTL 500 to LTL 1,000) Publication of false information: €115- €580 (LTL 2000 to LTL 400)
Luxembourg	Non-compliance with the E-PRTR Regulation: €251 to €50,000 and eight days to six months imprisonment.
Poland	Administrative fines from €1,200 to €2,400 (PLN 5,000 to 10,000)
Slovenia	Failure to report: €12,519 for the operator and from €2,087 to €4,173 for the responsible person
Slovakia	No clear information on fine for non-reporting. Penalties from €660 to €16,500
Sweden	For late submission of environmental report: 2,000 SEK (€215) for activities covered by permit A and 1,000 SEK (€110) for activities covered by permit B.
United Kingdom	No clear information on fine for non-reporting. Maximum €7,000 (£5,000) and / or imprisonment up to 2 years.

Criminal proceedings are available in cases of non-compliance with the requirements of the E-PRTR Regulation (e.g. late or erroneous reporting) in Belgium, Cyprus, Germany, Luxembourg, the Netherlands and the UK.

During the reporting period, the following penalties were issued:

- Austria indicated that penalties were issued only in one case;
- France indicated that very few operators have had administrative sanctions applied since the adoption of the E-PRTR Regulation;
- In Belgium, the Environmental Enforcement Court of Flanders has pronounced 110 judgments in 2013, however not all related to E-PRTR;
- Polish Provincial Inspectorates for Environmental Protection issued a total of 127 decisions, 73% of which included the imposition of fines for failure to submit the E-



PRTR report within the prescribed deadline. A total of 86 appeals were received against these decisions; 52 were maintained;

- In Sweden, in 2009 a total of 211 fines were issued due to late submission or non-delivery of environmental reports;
- Ireland and the Netherlands indicated that while they have initiated non-compliance proceedings in the past, most of the non-reporting observed during the reporting period were solved by issuing reporting reminders and warnings or threats of penalties to operators; and
- Denmark, Finland, Hungary, Italy, Luxembourg, Malta, Romania and Spain indicated that no penalties were applied due to non-compliance with the requirements of the E-PRTR during the reporting period.

The Netherlands provided a detailed description of the options available in case of incomplete or inaccurate reporting. One of which is to publish the report on the public Dutch website and to forward it to the Commission using a 'name and shame' approach. The Netherlands found that the public pressure placed on the facilities provides an incentive to the operator to amend its report and be more careful in the future.

The Czech Republic is the only Member State to have provided information on the use of the revenue from fines. It indicated that 50% of the fine goes to the Czech State Environmental Fund budget and the remaining 50% to the budget of the municipality in whose cadastral district the operator's activity is performed, where this income is earmarked for environmental purposes.

### *Environmental reporting*

One of the voluntary questions required Member States to provide information on steps undertaken to avoid duplication and integrate / link the E-PRTR within national reporting mechanisms. Eight Member States have provided a response to this point. Overall, three situations can be identified:

- Member States where no integration is undertaken, which is the case in Greece;
- Member States where the E-PRTR is fully integrated to national reporting mechanisms, which is the case in Bulgaria, Czech Republic, Ireland, the Netherlands and the United Kingdom; and
- Member States where the integration has started and is being completed, which is the case in Romania and Slovakia.

The Czech Republic, France and the Netherlands have reported covering more pollutants than those included in Annex II of the E-PRTR Regulation. The Czech Republic monitors emissions to air of styrene and formaldehyde and pollutant transfers in waste. France's national PRTR covers 88 air pollutants, 150 water pollutants and 70 soil pollutants.

### *Reporting practices*

#### *Overall difficulties*

A range of difficulties were reported by Member States in relation to reporting E-PRTR data. These are summarised in Table 5.7.

*Table 5.7 Overview of difficulties reported by Member States with the reporting of data*

<b>Difficulty</b>	<b>Member State reporting it</b>
<b>Checks made by Competent Authorities are time-consuming and difficult to carry out, in particular for facilities conducting several activities</b>	AT, BE, EE, FR, IE
<b>Non-compliance with deadlines/ Unwillingness of some installations to report</b>	BE, DK
<b>IT and technical problems</b>	BE, DK, EE, EL, FR, IE, IT, LT, LV, PL, PT
<b>Methodology issues (lack of methodology for water load, lack of methodology for calculation of emissions from diffuse sources, difference between air emissions measured and those calculated, lack of knowledge on assessing emissions from exceptional events)</b>	BG, CY, CZ, ES, FR, LU, LV, PT, RO, SI
<b>Lack of knowledge of operators (e.g. reporting units, substances covered or methods to determine releases)</b>	BE, EE, FR, IE, IT, LT, LV, MT, PT, RO, SK
<b>Difficulties in establishing reporting obligation for some activities in particular due to mismatch between IED and E-PRTR, lack of guidance on facilities not covered by IED and for certain substances (details below)</b>	BG, CZ, DE, ES, FR, NL, PL
<b>Difficulties in identifying data that should remain confidential</b>	BG
<b>Lack of competent staff</b>	DK

It is important to note that activities 5(a) on installations for the recovery of hazardous waste and 5(d) for emissions from landfills were quoted several times as examples of difficulties experienced for reporting due to non-alignment between the E-PRTR and the IED in particular by Bulgaria, the Netherlands, Portugal and Slovakia.

Finland indicated that its reporting system (Hertta) to the public of environmental information does not use the same classification of activities. Finland's response also refers to its compliance monitoring system (Vahti). From information submitted by Finland it appears that the Member State does not have a national PRTR, and instead rely on the E-PRTR to fulfil its obligations under the Protocol.

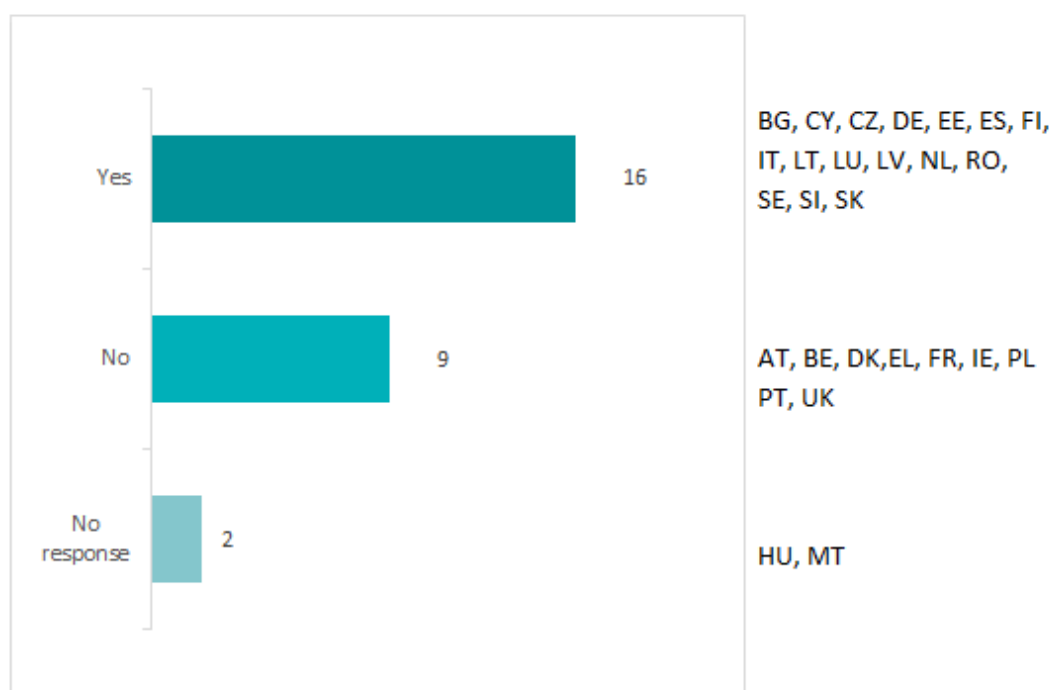
#### *Deadlines*

All Member States reporting deadlines are set for operators to report to competent authorities. These deadlines vary but are typically between March and June and aim at

making data available for competent authorities to prepare before submitting to the European Commission.

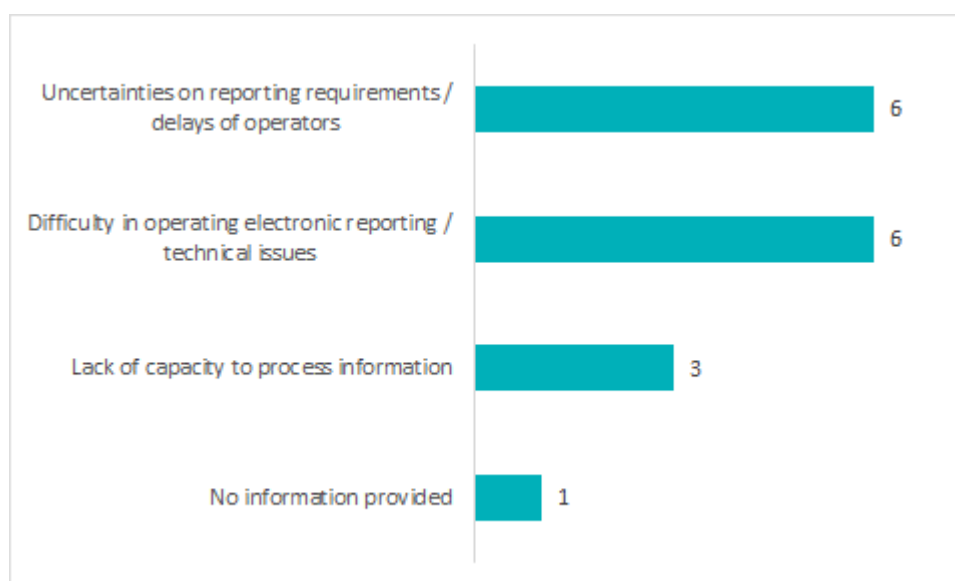
Delays in operators meeting the deadlines for reporting to competent authorities were reported by several Member States. Information reported is presented in Figure 5.2. It should be noted that several Member States indicated that these delays were mostly resolved by reminding operators and are not considered to reflect a specific issues.

*Figure 5.2 Member States responses on operators meeting deadlines for reporting*



The reports included information on source of delays in the reporting from operators to competent authorities and the most reported source of delays are presented in Figure 5.3.

Figure 5.3 Reported source of delays for submission of E-PRTR



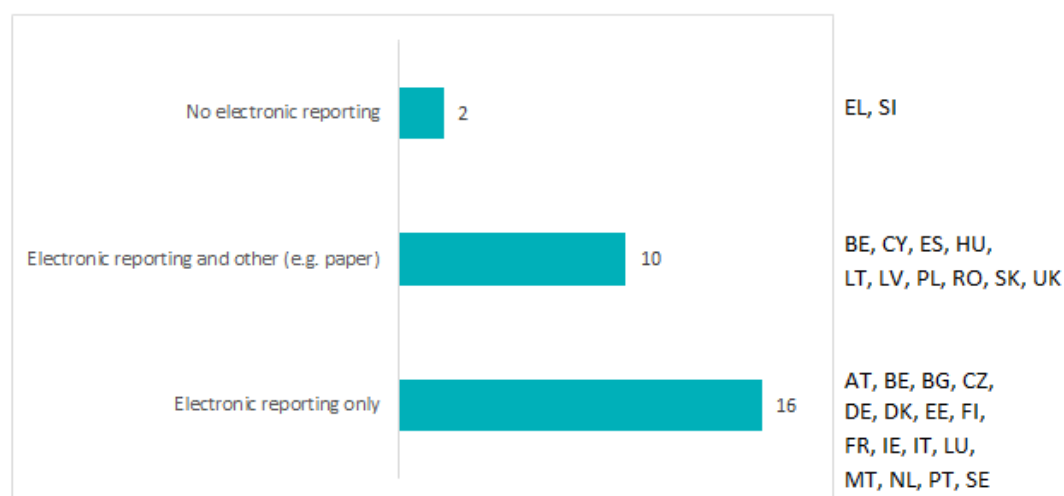
All Member States reported that the deadline for having the information publicly accessible on the national register were met in practice with the exception of Ireland, Italy, Slovakia and the UK. The UK added that the delays were due to IT issues with the reporting website. In Italy, delays were due to the on-going restructuring of the E-PRTR website. Ireland and Slovakia's responses did not include further details on this.

#### *Electronic reporting*

The majority of Member States (Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal and Sweden) reported that E-PRTR data are submitted electronically exclusively. However, in Slovenia and Greece there is no electronic reporting tool and the data are reported on paper. In the remaining Member States the information is provided both electronically and on paper.

The information reported by Member States is presented in Figure 5.4.

Figure 5.4 Ways of reported data from operators to competent authorities



In Belgium, Hungary, Lithuania, Poland, Slovakia and the UK, reports are provided both in paper and electronically. Hungary has not provided a percentage but indicated that while electronic reporting is available, operators seem to prefer paper reporting. In Lithuania, half of the reporting is made electronically. Poland reported that operators are required to submit both by paper and electronically. In Slovakia and the UK most of the reports are electronic; the UK indicated 95% of submissions were electronic.

Romania provided an unclear response indicating that 99% of data is submitted on paper and 100% of operators are reporting electronically. These two information appear to be contradictory.

In Denmark, Finland and Sweden all reporting is made electronically, and paper reporting is not allowed.

#### Data flows

Information on resubmission was required as part of the implementation Section of the targeted consultation. Several industry stakeholders indicated that data were resubmitted, this is the case for industry in Czech Republic, the Netherlands, Romania and the UK. In all cases, the respondents indicated that mistakes in the units were the reason for data to be resubmitted. Romania and the UK respondents added that mistakes on selected pollutants were also noticed during the annual national verification of PRTR data. In the Netherlands, data were also resubmitted due to issues noticed in modelled emissions and changes in monitoring of emissions.

#### Quality control

All Member States have reported that quality control systems are in place to ensure data submitted to the European Commission. However little information was included on whether these systems were operational and whether they contribute in improving the quality of data.

The checks described by Member States include the comparison of data reported to submissions of the previous years and comparison to other data reporting systems (e.g. ETS or UWWT reporting).

Several Member States (Bulgaria, Lithuania and Portugal) have indicated referring to the European Commission's guidelines on the implementation of the European Pollutant Release and Transfer Register when preparing data to be reported. Furthermore several

Member States indicated that automatic mechanisms are used to conduct preliminary validation. This includes Czech Republic, Denmark, Germany, Ireland, Lithuania, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the UK. Finland added that an automatic built in data verification will be included in 2015-2016 reporting. Information verified include that users are those who are permitted to use the system, that all the information required is included, identify potential errors or inconsistencies, such as an emission data x% above the threshold, or difference with respect to the emission reported the previous year.

In addition, reporting countries can use a data validation tool made available by the European Commission, to help in identifying errors or critical fails that would prevent the upload of data onto the EIONET platform.

Table 5.8 summarises for each Member State the information reported on their data quality system.

**Table 5.8** *Processes for verification of completeness, consistency and credibility of data reported by operators to competent authorities*

	<b>Verification process</b>	<b>Tools or guidelines</b>
Austria	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with official internal data; and</li> <li>• Inspection of facilities (exceptional).</li> </ul>	No info on tools / guidelines included in the response
Belgium	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Annual trend analysis;</li> <li>• Comparison with other emissions reporting;</li> <li>• Gap filling with specific studies; and</li> <li>• Inspection of facilities (exceptional)</li> </ul>	Use report from EEA to compare with trends and outliers in other parties to the E-PRTR.
Bulgaria	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with measurements taken by the Competent Authorities (RIOSVs); and</li> <li>• Comparison with official data (AERs and Greenhouse Gas Emissions Permits).</li> </ul>	<p>Methodology on the procedure and method for the control on integrated permits and the format of the annual report on the performance of the activities covered by the integrated permit</p> <p>List of likely pollutants to be emitted from each activity</p> <p>Operators can consult previous year reporting to assist the reporting</p>

	Verification process	Tools or guidelines
Cyprus	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	<p>Seminar to inform operators of the E-PRTR Regulation requirements</p> <p>Guidelines for submitting annual report issued for each different activity</p> <p>Automatic validation tool</p>
Czech Republic	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with previous year data.</li> </ul>	<p>Reporting tool include built-in functions for checking completeness, comparing with previous reporting, identifying extreme quantities and clear erroneous data.</p> <p>Completeness is secured using automatic input control of PDF forms into ISPOP</p>
Denmark	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with previous year data.</li> </ul>	<p>Automatic quality assurance tool</p> <p>Forward information submitted in previous years to be used as basis for reporting by operators</p>
Estonia	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with information reported for quarterly calculations for pollution charge relating to water resources and effluent.</li> </ul>	<p>Training of experts</p>
Finland	<ul style="list-style-type: none"> <li>• Comparison with information accumulated on emission into water, air and waste.</li> </ul>	<p>Sector guidelines on reporting for operators and authorities</p> <p>As of 2015, an automatic quality control tool built in the reporting system</p> <p>Joint industry and authority working group studying emissions monitoring and reporting procedures</p>
France	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with inspection data and visit reports; and</li> <li>• Comparison with trend analysis of emissions.</li> </ul>	<p>Support from CITEPA that issues reporting guides and training to operators on reporting air emissions</p> <p>Support from INERIS that issues fiche on industrial activities</p>

	Verification process	Tools or guidelines
Germany	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with previous reporting year;</li> <li>• Comparison with other available sources (specialist information, approval data, water data from monitoring by authorities);</li> <li>• Inspection of facilities (exceptional); and</li> <li>• Credibility checks based on operators' documents.</li> </ul>	Procedural handbooks to assist reporting
Greece	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	No info on tools / guidelines included in the response
Hungary	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	Open days where inspectorates provide information to operators on new monitoring techniques
Ireland	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with previous reporting year.</li> </ul>	<p>XML file conduct automatic validation with prompt when information is missing or when emission for current year is a value that is +/- 50% of the previous year emissions. Tool also limit range of free text, operator must select from a list.</p> <p>Identify errors on submission</p> <p>PRTR helpdesk within the EPA</p>
Italy	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with information used for integrated permitting.</li> </ul>	Support from IMELS and ISPRA to local level for quality assessment of activities not in the scope of the IPPC permitting system
Latvia	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Compare pollutants and information reported to information included in integrated permit; and</li> <li>• Inspections at site including verification of register and operations of the facility.</li> </ul>	No info on tools / guidelines included in the response



	Verification process	Tools or guidelines
Lithuania	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with information submitted under waste accounting reports obligation; and</li> <li>• Comparison with previous reporting year.</li> </ul>	No info on tools / guidelines included in the response
Luxembourg	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	Excel file prepared for reporting and adapted to type of facility
Malta	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with previous reporting year; and</li> <li>• Comparison with information on installation (e.g. included in integrated permit).</li> </ul>	No info on tools / guidelines included in the response
Netherlands	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	<p>Dutch PRTR guidance document (annual environmental report guide)</p> <p>InfoMil knowledge Centre support</p> <p>Electronic environmental report tool which includes several validation steps</p> <p>Separate tool for reporting for Activity 7(a)</p>
Poland	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with information on installation (e.g. inspection and integrated permit).</li> </ul>	No info on tools / guidelines included in the response
Portugal	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	Training events to discuss issues with PRTR
Romania	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with other reporting for air, water and waste.</li> </ul>	Provide examples of calculate based on characteristic release factors

	Verification process	Tools or guidelines
Slovenia	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility).</li> </ul>	No info on tools / guidelines included in the response
Slovakia	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with information on installation included in the integrated permit.</li> </ul>	No info on tools / guidelines included in the response
Spain	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility);</li> <li>• Comparison with information on installation included in integrated permits; and</li> <li>• Comparison with other reporting for air and waste.</li> </ul>	<p>Automatic checks in reporting questionnaire</p> <p>Working group coordinated by Ministry including relevant competent authorities</p>
Sweden	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Comparison with other reporting.</li> </ul>	<p>Automatic checks in reporting questionnaire</p> <p>Restricted fixed parameters list</p> <p>Previous year data provided as comparison when data input</p>
United Kingdom	<ul style="list-style-type: none"> <li>• Verification by experts (completeness, consistency and credibility); and</li> <li>• Internal reviews of national emissions data.</li> </ul>	No info on tools / guidelines included in the response

Germany, Malta, and Spain reported that the quality of the data reported under the E-PRTR improved during the reporting period. Hungary, Latvia, and Portugal indicated that the quality of information reported to the Competent Authority is “generally good”.

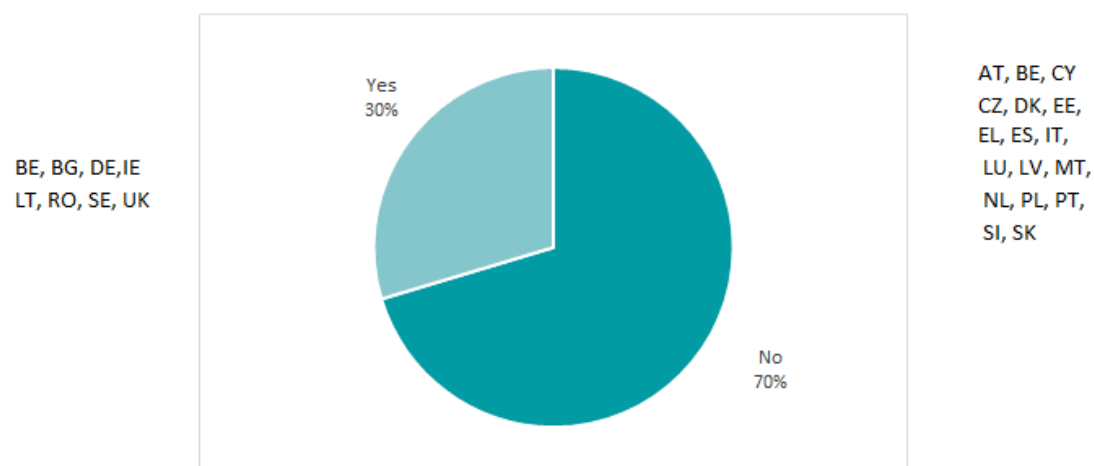
Furthermore all Member States indicated that in case of uncertainties, the Competent Authorities refer back to the operator to clarify issues and get a better understanding.

Romania is the only Member State to have indicated that different monitoring methodologies than those in the E-PRTR are used for water emissions for the national PRTR.

### *Confidentiality*

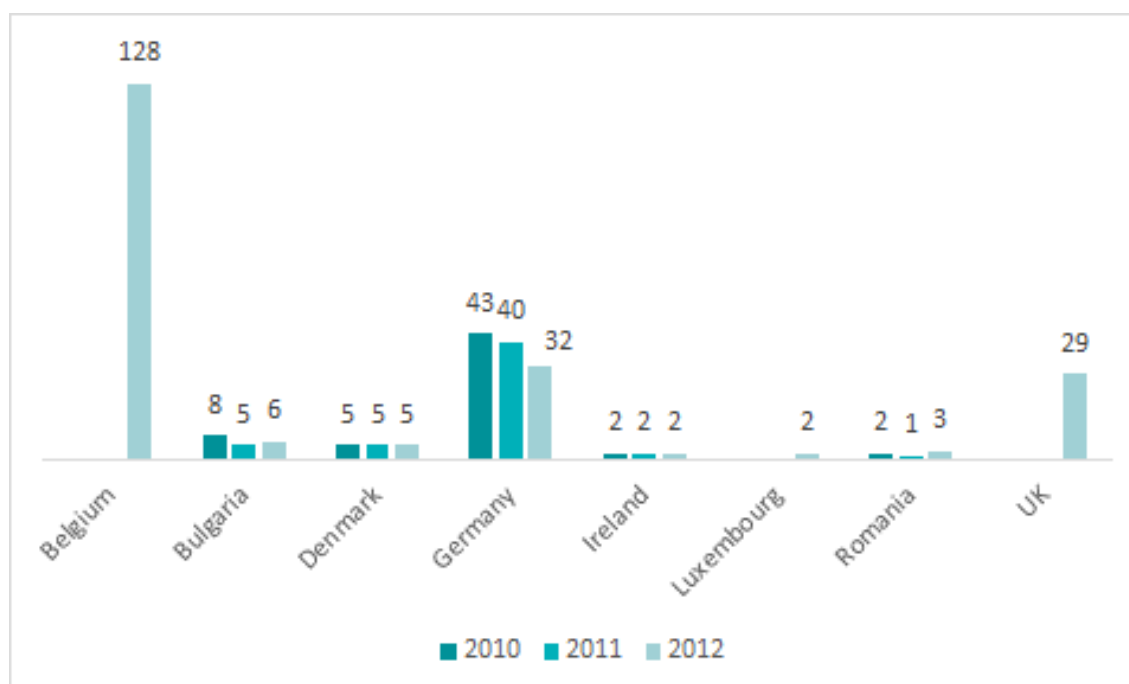
A minority of Member States (8) reported the use of the confidentiality during the reporting period. Figure 5.5 presents the share of Member States that indicated using confidentiality provision for reporting data to E-PRTR.

Figure 5.5 Share of Member States reporting confidentiality claims



For those Member States who used the confidentiality provision information was included in the report on the type of activities and data. Figure 5.6 below presents the number of confidentiality claims made in the Member States that indicated using the confidentiality provision. Data are split for 2010, 2011 and 2012 and show some variations between Member States and during the reporting years.

Figure 5.6 Number of facilities affected by confidentiality claims during reporting period



- In Belgium, a total of 128 installations claimed confidentiality in 2012 for waste transfer and 90 for air emissions;

- In Bulgaria, data kept confidential relate to quantity of pollutants released off site and offsite transfer of hazardous and non-hazardous waste. This concerned 8 facilities in 2010, 5 in 2011 and 6 in 2012;
- In Denmark, five facilities have claimed confidentiality. All were engaged in waste management activities;
- Overall in Germany in 2010, information for 43 installations remained confidential; 40 in 2011 and 32 in 2012;
- Ireland (2 facilities for 2010-2013), Luxembourg (2 facilities in 2012), Romania (2 in 2010, 1 in 2011 and 3 in 2013) and the UK (29 facilities) have kept confidential information on waste transfer from facilities, in some instances toward other countries; and
- In addition, the UK has kept confidential information on waste water transfer.

Commercial and/or industrial sensitivity were used as justifications for the confidentiality claims. More details on the number of confidentiality claims are presented in the Member State summary in Appendix D.3.

### *Public Participation and awareness*

#### *Public participation in implementation report*

The report under Article 16 has been compiled by the Competent Authorities. Some Member States indicated that the public have been consulted on its content, this is the case for Bulgaria, Ireland and the UK. The UK indicated that the consultation focused on the Kiev Protocol, however the scope is very close to the E-PRTR Regulation. Some Member States indicated that no consultation of the public was undertaken, this is the case of Denmark, the Netherlands and Slovakia. Finally, Cyprus, Greece and Romania all indicated that public can access information related to the E-PRTR from the Competent Authority websites. In addition, Romania's website includes a feature allowing the public to register questions and requests. However none have been received during the reporting period.

#### *Access to E-PRTR*

All Member States indicated that their E-PRTR data are published and accessible online. Finland added that it has a specific service entitled 'Herta' that provides facility level information to the public. In most Member States, internet access is widespread. In addition, libraries and competent authorities have free computer rooms with internet access, these can be used to access E-PRTR. Competent Authorities are also available to respond to queries from general public. Finland also indicated that the public can require emissions data by phone from inspectors.

Finally, Sweden highlighted the increase in popularity of its PRTR website for which the number of visitors has increased by 50 % in the last three years from 16,000 per year in 2011 to 24,000 per year in 2013.

#### *Public participation in E-PRTR data reporting*

Several Member States provided descriptions of the opportunities for public participation. Bulgaria, Ireland, Romania, Slovakia and the UK indicated that their E-PRTR websites includes a query feature that allows members of the public to comment or require information on the environmental performance of any installation. In Romania, the website includes a 'public opinion' page where the public are encouraged to provide feedback and questions on the E-PRTR and related activities. This can also be used to notify any mistake, or inconsistencies noticed by the general public, as it is the case in the UK.

Finally, Ireland and the Netherlands indicated that consultation with the wider public were undertaken during the process establishing the E-PRTR and following the ratification of the UNECE Kiev Protocol (Ireland).

## D.2 Key findings from triennial reports on the E-PRTR regulation

The E-PRTR now holds seven years' worth of annual data with the latest data from 2013 reported back to the European Environment Agency by Member State authorities for E-PRTR compilation in March 2015.

Each successive cycle of data helps build the time-series of information and makes the trend analysis increasingly important to understand how releases and transfers are changing in the face of the economic, policy and scientific environments.

The E-PRTR triennial review from 2007-2009 provided the first in depth review of the E-PRTR regulation, data flows and presentation of the data in the E-PRTR website since the creation of the regulation. Table 5.9 presents a summary of the key findings of the 2010-2012 triennial report compared to the key findings from the previous reporting period 2007-2009 in relation to the implementation of the Regulation.

*Table 5.9 Comparison of key findings from 2007-2009 and 2010-2013 triennial review*

Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
<b>1. Implementation (chapter B in the 2007-2009 triennial report)</b>	All EU countries plus Norway, Iceland and Lichtenstein have adopted the E-PRTR regulation.	Iceland and Switzerland have not submitted a response to Article 16 questionnaire. All Member States indicated having implemented the E-PRTR Regulation
	A range of sanctions are in place with potential fines ranging from €30 - €500,000	A range of sanctions are in place with potential fines ranging from €29 - €250,000
		Proceedings were issued due to non-compliance in several Member States: in Austria (1 case), in France (administrative sanctions), in Belgium (110 judgements) and in Poland (52 fines).
		Ireland and the Netherlands indicated that most non-reporting irregularities observed were resolved by bilateral dialogue with operators.
	Norway and Spain have no reporting thresholds, while Finland has lower thresholds than the regulation. All other countries have the same thresholds as the regulation.	Spain indicated to apply no reporting thresholds. All other countries have the same thresholds as the regulation.
	All countries have inherent data quality systems and national deadlines. 17 countries found no issue with deadlines, while 12 countries report late or delayed provision of data for a number of reasons including IT issues, reluctance to provide data, lack of understanding on the pollutants to derive estimates	All countries have inherent data quality systems and national deadlines. 16 countries found no issue with deadlines, while 9 countries report late or delayed provision of data for a number of reasons including IT issues, reluctance to provide data, and lack of understanding on the pollutants to derive estimates.

Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
	Majority of electronic reporting systems but some still working on hardcopy documents	Majority of electronic reporting systems but some still working on hardcopy documents. Greece and Slovenia do not have an electronic reporting and Belgium, Cyprus, Hungary, Lithuania, Latvia, Poland, Romania, Slovakia, Spain and the UK reported that other than electronic reporting is possible for E-PRTR reporting.
	National PRTR websites are the main means of communication. Some countries do offer provision of data as hardcopy on request.	National PRTR websites are the main means of communication with the EEA, the EC and also citizens. Some countries (e.g. Finland) do offer provision of data as hardcopy on request.
	There was a reduction in the number of data resubmissions between 2007-2009 suggesting an improvement in the data quality submitted.	From information reported by stakeholders, data are resubmitted mostly due to mistake on pollutants selected, and issues with modelling emissions. Three Member States commented on the improvement of the quality of the data.

### D.3 Member States summaries

The analysis of the implementation reports submitted by Member States is presented below. This includes for each Member State a summary of the information included in the reports as per Article 16 of the E-PRTR Regulation. Reports were submitted by all EU-27 Member States<sup>16</sup>. Norway, Iceland and Switzerland have not submitted a response to the Article 16 questionnaire<sup>17</sup>.

<sup>16</sup> Croatia was not formally under the obligation to submit a response to the questionnaire and did not elect to do so on a voluntary basis.

<sup>17</sup> Note that these are not Member States and as such not required to submit a response to the questionnaire

## Austria

A summary of the information reported by Austria is presented in Table 5.10.

*Table 5.10 Overview of main information reported by Austria on implementation of E-PRTR*

### Reporting on E-PRTR

The report was prepared by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management with participation of the Ministry of Science, Research and Economy, the Austrian Federal Environment Agency and the Austrian provincial authorities

#### Legislative and regulatory framework

**The E-PRTR Regulation applies directly in the national legislation and is supported by the E-PRTR accompanying Regulation (i.e. Begleitverordnung) describing the national reporting procedure.**

**Penalties may be issued under the E-PRTR Begleitverordnung through administrative penalty proceedings. The amount of the fines vary and is reported to average between €2,000 to €4,000, with a maximum penalty of €41,200.**

**During the reporting period, only one penalty was issued.**

#### Reporting requirements

**The E-PRTR Accompanying Regulation (Begleitverordnung, BGBl.II No380/2007) describes the national reporting procedure.**

#### Reporting practices

- 1. Operator reports emissions data to online electronic register ([www.edm.at](http://www.edm.at)) by 31 May of the year following the reporting year. All reporting is electronic;**
- 2. Local Authorities verify emissions data and core data as part of quality assessment. If necessary clarifications or more information are requested. Local authorities conduct a plausibility check on all facilities (except waste treatment facilities);**
- 3. Data transferred to regional authority which conduct plausibility check on waste treatment facilities;**
- 4. Data transferred to the provincial Governor who conduct plausibility checks and forward data to the Environment Agency (Umweltbundesamt).**
- 5. Umweltbundesamt verify the reports received from provinces are consistent with one another and other emissions inventories.**
- 6. Ministry of the Environment checks transfer of hazardous waste data**
- 7. Data forwarded to the EEA**

**Operators were delayed in some instances. In addition, operators and staff experienced difficulties in operating the electronic input system. As a results the various reporting deadlines were not met in practice.**

#### Data quality assurance and assessment

**Plausibility checks are part of the data quality assurance. Austria indicated that the way they are designed made them time-consuming and difficult to carry out, in particular for reporting units involved in several activities and parameters for which there are no emissions limits. Delays were experienced in the plausibility checks due to lack of capacity for conducting them. Consistency checks are undertaken by the Federal Environment Agency.**

**The checks are conducted by experts familiar with the PRTR facilities. The verification includes a comparison with official internal data and with national guidelines on the PRTR reporting requirement. Inspections on site can be conducted in cases of uncertainties. Delays were experienced in the checks due to lack of capacity for conducting them.**

**An annual report is published on the outcome of the checks made on data.**

#### Public access

**Data in the PRTR is accessible online at [www.prtr.at](http://www.prtr.at) which is maintained by Umweltbundesamt GmbH.**

#### Confidentiality

**No case of confidentiality has occurred during the reporting period.**

## Belgium

A summary of the information reported by Belgium is presented in Table 5.11. While some of the responses were common to the three regions, other were specific to each region.

**Table 5.11** *Overview of main information reported by Belgium on implementation of E-PRTR*

### Reporting on E-PRTR

The regional authorities are responsible for preparing the emission inventories in Belgium – the data is then collated to produce a national total.

The following authorities are responsible for the respective regions in Belgium:

**Flanders:** The Department Air, Environment and Communication of the Flemish Environment Agency (VMM) oversees the air emission inventory; the Department of Water Reporting of the Flemish Environment Agency (VMM) oversees the water emission inventory; and the Public Waste Agency of Flanders (OVAM) gathers waste data. Industrial facilities report their data to the Environment, Nature and Energy Department (LNE) which distributes the emissions data to the relevant regional authority department previously outlined. Air emissions from intensive livestock management and landfills are reported by the Flemish Land Agency (VLM) and OVAM.

**Wallonia:** The Operational Directorate-General for Agriculture, Natural resources and the Environment (DGARNE) oversees the collection of all emissions data (except for intensive livestock management) which is collected electronically via the Integrated Environmental Survey tool (REGINE). This tool was created in 2002 with electronic access in 2005. Data on emissions from intensive livestock management are validated and analysed by the Walloon Agency for Air and Climate (AWAC).

**Brussels:** The Brussels Institute for the Management of the Environment (IBGE) collects E-PRTR data which is submitted as a form.

The coordination of regional reporting is carried out by the Working Group on PRTR, an interregional authority, within the Coordination Committee for International Environmental Policy. The National Focal Point (the Flemish Environment Agency) is responsible for producing the aggregated national total (taking into account the differences between regional reporting methodologies for release and transfer emissions). The aggregated data is then submitted to the Central Data Repository by the Belgian Interregional Environment Agency (CELINE – IRCEL).

Legislative and regulatory framework

**Environmental reporting is controlled at regional level in Belgium, as follows:**

**Flanders:** The Flemish Environmental Decree was implemented in 1995 and includes the premise for emission reporting. Amendments were adopted in 2004 and 2006, designating LNE as administrator for environmental reporting and setting out reporting templates among other things. Additional amendments were made and came into force in 2012 to clarify emission reporting process (namely the methodology used to identify which facilities are required to report emissions). The regional authorities can impose fines up to €250,000 and prison sentences (between one month and one year in the case of criminal prosecution). Detailed information on the nature of the measures can be found in the activity report of the Environmental Enforcement Court of Flanders ([www.mhhc.be](http://www.mhhc.be)).

**Wallonia:** The Walloon Decree (1999) sets out environmental reporting requirements under Section 4 of the legislative text including the procedure for collection, validation and processing of data. Amendments were adopted in 2007 and 2013. Prosecution and punishment is permitted for failure to report under the regional legislation. No information is provided concerning the type of prosecution/ punishment.

**Brussels:** The Order of the Brussels Capital Regional Government (2008) sets out environmental reporting requirements including deadlines for data submission, and procedures for validation. The regional authorities can impose fines up to €25,000 and prison sentences (between 8 and 12 months in the case of criminal prosecution). An additional fine may be imposed if the public prosecutor did not initiate proceedings of up to €62,500.



#### Reporting requirements

**Flanders:** Facilities with emissions exceeding the regional threshold must report their emissions annually. The relevant industrial facilities are registered in a database (450 industrial facilities are registered for emissions to air, 840 for emissions to water, and 600 for emissions in waste production). Facilities that exceed the stated threshold are responsible for submitting their emissions data.

**Wallonia:** Facilities that are required to report emissions are identified by the regional authority according to the environmental permits they have been issued. These facilities are required to report emissions along with data on energy consumption and environmental expenditure on an annual basis. Facilities are responsible for submitting the relevant environmental reporting data using the Integrated Environmental Survey (an electronic reporting tool).

**Brussels:** Facilities that are required to report emissions are identified by the regional authority during the environmental permit application process, and during inspections. Reporting requirements are ongoing and must be submitted annually. Emissions data is submitted as a form and the person collecting the form is responsible for validating the submitted data.

#### Reporting practices

**Flanders:** Facilities are notified by the regional authorities by 31 January of each year that they must report emissions of the previous year. Data are submitted electronically or by form which is sent by email (in 2013 88.5% were submitted electronically and less than 1% submitted a hardcopy – the remaining data were not submitted). A completeness assessment is then conducted and facilities with missing data are sent reminders, typically mid-April. In 2013, 16,345 reminders were sent.

**Wallonia:** The list of facilities which are required to report emissions is checked annually by the regional authority. Once identified, a letter or email is then sent to each facility informing them that they must report emissions for the previous year. Data must be submitted by 31 March – either in electronic format or a signed paper version (although all data is now submitted electronically). Reminders may be sent between 15 and 31 March. In 2014, 198 (out of the 226 companies required to report emissions) submitted their data on time while the rest missed the deadline.

**Brussels:** Facilities are notified each year of their reporting obligations and reminded by 30 June if they have not submitted data by then. An infringement notice is sent where the facility does not respond to the reminder. In 2011 and 2012 one facility (each year) did not submit their emission data (out of a total 15 that were required to); in 2013, all 17 facilities that were required to submit emission data did. Where no data is submitted, the regional authority estimates the emissions based on available data and this estimate is included in the overall regional response. All responses are submitted as hardcopies.

#### Data quality assurance and assessment

This varies by region. In Flanders, the respective managing body is responsible for quality assurance (e.g. OVAM). In Wallonia, the data are verified and analysed by external experts after it has been submitted. The external experts have one month to review and finalise the submitted data. In Brussels the person collecting the data is responsible for assessing quality.

#### Public access

The E-PRTR register is publically available to all with internet access. As well as the national overview in the E-PRTR register, the regional registers are available via the following links:

**Flanders:** <https://www.milieuinfo.be/prtr>

**Wallonia:** <http://bilan.environnement.wallonie.be/sitE-PRTRWallon.jsp?menu=PRTRWALLON>

Brussels : <http://app.bruxellesenvironnement.be/PRTR/FR/index.htm> and  
<http://app.leefmilieubrussel.be/PRTR/NL/index.htm>

#### Confidentiality

**No information confidentiality has been requested for Brussels and Wallonia; however information confidentiality does apply for Flanders. An overview of the information which has been kept confidential is set out below:**

Reason for confidentiality	Number of facilities	Reporting year	Medium	Region	Activity
The confidentiality of personal data	90	2012	Air	Flanders	Installations for the intensive rearing of poultry or pigs
The confidentiality of commercial or industrial information	128	2012	Waste	Flanders	

#### Public participation

**No information included in the Member State response.**

#### Access to justice

**The federal state is competent for dispositions regarding access to justice.**

#### Public awareness and capacity building

**Information material on the right to environmental information as determined by the Aarhus Convention are available in libraries and local government offices.**

#### Cooperation and assistance

**Public libraries with computers and access to the E-PRTR register are available to members of the public without internet access.**

## Bulgaria

A summary of the information reported by Bulgaria is presented in Table 5.12.

**Table 5.12** *Overview of main information reported by Bulgaria on implementation of E-PRTR*

### Reporting on E-PRTR

Reporting under the E-PRTR is the responsibility of the Executive Environment Agency (IAOS). It consulted other relevant agencies including the Ministry of Environment and Water (MOSV), which is responsible for the coordination process and for the provision of methodological guidance and Regional Inspectorates of Environment and Water, which are responsible for the implementation of the State's environmental policy at regional level. The draft report was published on the Competent Authority's website and open for comments for one month.

#### Legislative and regulatory framework

**Regulation No 166/2006 is implemented in Bulgaria through the Environmental Protection Act (ZOOS). It was amended in 2012 to consolidate the requirement of the E-PRTR Regulation in one article.**

**According to article 22 of the ZOOS the same level of penalties applies for non-compliance with the E-PRTR reporting requirements and for providing false information, thus ensuring proportionality of penalties across all operators. Penalties range from BGN 2,000 to BGN 5,000**

#### Reporting requirements

**The IAOS disseminates every year instructions to the regional inspectorates on information to be reported, deadlines and methodology. For the last reporting period, the deadline for operators to provide information was 31 March.**

**Operators are responsible for the submission of the required information to the intermediate or final bodies in accordance with the types, scope and deadlines specified in the legislation. The regional inspectorates (RIOVS) are the intermediate bodies responsible for the verification and confirmation of the data reported by operators in their respective territories. The deadline for their verification is 31 May. The IAOS is the final body and is responsible for the issuance of guidance to RIOVSs on the scope and format of the information to be reported by operators, for the consolidation of the information received, for the production of the national report, and for the submission of the report to the Ministry. The deadline for the IAOS verification is 15 March, eleven months after the submission of the data by the operators. The Ministry (MOSV) is the body responsible for the coordination of the reporting process and for the submission of the national report to the Commission. The deadline is 31 March. The information is then available on national website on 1 June.**

#### Reporting practices

**Bulgaria indicated that the national E-PRTR is developed as a subsystem of an integrated reporting system which includes a further reporting system in the area of waste management. When login in the system, operators are required to specify which subsystem they wish to access as reporting under the E-PRTR is made separately.**

**All of the information is reported in electronic format.**

**Reporting deadlines were met in the three years of the reporting period and no major difficulty has been highlighted by Bulgaria.**

**Difficulties have been identified by Bulgaria, in particular:**

- **The lack of methodology for the calculation of emissions from diffuse sources;**
- **The difference between air emission values obtained by measurement and those obtained by calculation methods and the difficulty in choosing the value to report;**
- **Difficulties in identifying the reporting obligation based on the activity. With the IED, new activities have been introduced (e.g. temporary storage of hazardous waste) for which no corresponding E-PRTR category exists.**
- **Difficulty with specific annual pollutant emissions on the basis of measurements where the pollutant values captured by the available measuring methods are below the minimum or above the maximum detection thresholds of the method;**
- **Difficulty with the competent authority's assessment as to which data should be kept confidential.**

#### Data quality assurance and assessment

**Several validation of data are undertaken in the reporting process. The RIOVS is responsible for summarising and verifying the completeness of the information submitted by the operators. It also verifies that the operators comply with the deadlines for submission of the information.**

**The national competent authority (IAOS) summarise and verify the completeness of the information submitted by the RIOVSs. This includes:**

- **Verification of the completeness of the information,**

- Verification of the quality of the information (consistency), and
- Verification of the credibility of the information (comparability criteria).

Finally the ministry of the environment submit the information to the Commission and maintain a database holding the reports submitted.

Bulgaria indicated that improvements were made to the National E-PRTR Reporting Information System. These includes automatic check of the site coordinates stated by operators and rejects coordinates outside the national borders; the data completeness check is supported by indicative lists of the likely pollutants from each activity declared by the operator; the data consistency check is supported by an option which makes data from previous years available to operators, RIOSVs and IAOS and the verification of the AERs from holders of integrated permits.

Bulgaria indicated that when reporting and verifying the data, account is taken of the instructions provided in the Methodology on the procedure and method for the control on integrated permits and the format of the annual report on the performance of the activities covered by the integrated permit as well as of the Guidance document on the implementation of the E-PRTR.

#### Public access

The information in the national E-PRTR are available on the IAOS website and can be accessed by anyone.

The IAOS administers an information centre which includes a computer room providing free access to the public E-PRTR registers. Print out of information is provided upon request. The website is <http://pdbase.government.bg/forms/E-PRTR.jsp>

#### Confidentiality

Bulgaria has reported that data were kept confidential during the reporting period, in particular relating to the quantities of pollutants released off-site and to the off-site transfer of hazardous and/or non-hazardous waste.

Year	Number of confidentiality claim	Number of sites involved
2010	5	8
2011	3	5
2012	3	6

#### Public participation

The IAOS organises workshops on E-PRTR reporting, targeting key groups such as operators, professional associations and regional authorities. In addition, the national website includes a question/response feature allowing user to submit a question, comment or opinion to improve the reporting.

#### Access to justice

Bulgaria reported that environmental information is available to all citizens and organisations in accordance with the procedure for the provision of public information which is laid down in the Access to Public Information Act and in the Environmental Protection Act.

#### Public awareness and capacity building

E-PRTR information and website can be accessed from the webpage of the national PRTR. The IAOS has designated experts responsible for E-PRTR reporting.

## Cyprus

A summary of the information reported by Cyprus is presented in Table 5.13.

*Table 5.13 Overview of main information reported by Cyprus on implementation of E-PRTR*

#### Reporting on E-PRTR

The competent authorities responsible for preparation of the report are the Department of Labour Inspection of the Ministry of Labour, Welfare and Social Insurance and the Department of Environment of the Ministry of Agriculture, Natural Resources and Environment.

The two competent authorities have joint responsibility on issues regarding application of the provisions of Regulation (EC) No 166/2006 of the European Parliament and of the Council (the E-PRTR Regulation). In particular, the Department of Labour Inspection is responsible for the collection, evaluation and recording of annual data associated with releases of pollutants to air for all facilities carrying out one or more of the activities referred to in Annex I to Regulation (EC) No 166/2006. It is also responsible for the electronic submission of data. The Department of Environment is responsible for the collection, evaluation and recording of the annual data associated with releases of pollutants in water and land, and off-site

transfers of (hazardous or non-hazardous) waste, as well as off-site transfers of pollutants in wastewater for all facilities carrying out one or more of the activities referred to in Annex I to Regulation (EC) No 166/2006.

#### Legislative and regulatory framework

**National legislation has been adopted for the implementation of the E-PRTR, namely the Control of Atmospheric Pollution Laws of 2002 (no2) 2013 and the Water Pollution Control Laws of 2002 to 2013.**

**Any person who breaches or fails to comply with the provisions of the Control of Atmospheric Pollution Laws of 2002 to (No 2) 2013 is guilty of a criminal offense and is subject to imprisonment of one year and a fine of €34,172. In addition, any person who breaches or fails to comply with the provisions of the Water Pollution Control Laws of 2002 to 2013 is guilty of a criminal offense and is subject to various penalties depending on the type of the breach. The maximum penalty is imprisonment of up to three years or a fine of up to €500,000 (this ceiling has been in force since 2013), or both.**

#### Reporting requirements

**The Department of Labour Inspection of the Ministry of Labour, Welfare and Social Insurance is responsible for the identification of facilities that are subject to the E-PRTR Regulation for the collection of data on releases of pollutants to air from point sources. The Department of Environment of the Ministry of Agriculture, Natural Resources and Environment is responsible for the identification of facilities that are subject to the E-PRTR Regulation for the collection of data on releases of pollutants to water and land, and off-site transfers of (both hazardous and non-hazardous) waste, as well as off-site transfers of pollutants in wastewater destined for wastewater treatment.**

**According to Article 11 of the Control of Atmospheric Pollution Laws of 2002 to (No 2) 2013, the operators of licensed facilities, including facilities listed in Annex I to the E-PRTR Regulation, are obliged to meet all the conditions of the Air Pollutant Release Permit issued by the Minister for Labour, Welfare and Social Insurance. The terms in the license include provisions regarding the operator's obligation to report data to the competent authority (Department of Labour Inspection), also based on the provisions of the E-PRTR Regulation, particularly with regard to the annual releases of air pollutants. Similarly, according to the Water Pollution Control Laws of 2002 to 2013, any facility which may cause water or soil pollution must obtain a Wastewater Discharge Permit (Articles 6, 8 and 9). In granting the permit, the above laws have provided for imposing certain conditions concerning the discharge of wastewater (Article 10) and imposing certain sanctions for breaching any of the conditions laid down in the permit (Articles 29, 30 and 31). The conditions in the Wastewater Discharge Permit include the operator's obligation to report data to the competent authority (Department of Environment).**

#### Reporting practices

**Facilities are required to report emission data every year either electronically or as a hardcopy (by the end of March). Online submission tools are available to facilities to support them with their reporting (introduced in 2011). Data emissions are then collated and presented in environmental data reports which are produced by the Department of Labour Inspection and the Department of Environment every three years. In 2012, ~70% of the data submissions were done electronically.**

#### Data quality assurance and assessment

**The reports submitted are examined internally by the competent authorities, checking for completeness, consistency and credibility. The competent authority may request clarification or resubmission of data where necessary. The evaluation of the accuracy of the environmental data submitted is also verified on the basis of the annual production/ capacity of each facility or other parameters and data submitted to the Department of Labour Inspection, the Department of Environment and other governmental departments. Lastly, the credibility and validity of the data are verified and evaluated during data entry to the special software (validation tool) developed by the European Commission.**

#### Public access

**Information is publicly available on all issues relating to the application of Regulation (EC) No 166/2006 through the electronic Cyprus Pollutant Release and Transfer Register at <http://www.prtr.dli.mlsi.gov.cy/>.**

**The Ministry for Agriculture, Natural Resources and Environment publishes a list of facilities releasing polluting substances to land or water, and the Ministry for Labour and Social Insurance publishes a list of facilities releasing polluting substances to air – both published in the Government Gazette of the Republic every three years.**

#### Confidentiality

**There are no confidentiality requests submitted by any operator in Cyprus.**

#### Public participation

**No information included in the Member State response.**

#### Access to justice

**No information included in the Member State response.**

Public awareness and capacity building

**Seminars were organised in 2011 to inform facility operators of how to submit reports electronically through the on-line system and to inform the public of the capability of accessing environmental data using the above dedicated database and the Cyprus website (<http://www.prtr.dli.mlsi.gov.cy/>).**

Cooperation and assistance

**No information included in the Member State response.**

## Czech Republic

A summary of the information reported by the Czech Republic is presented in Table 5.14.

*Table 5.14 Overview of main information reported by Czech Republic on implementation of E-PRTR*

**Reporting on E-PRTR**

The Environmental Impact Assessment and Integrated Prevention Department (OPVIP) of the Ministry of the Environment is responsible for implementing the E-PRTR reporting requirements. The reported emissions are updated to the Integrated Register of Environmental Pollution (IRZ) which is operated by the Czech Environmental Information Agency (CENIA). CENIA is responsible for registering facilities, monitoring and producing reporting reports. The Czech Environmental Inspectorate is responsible for auditing.

Legislative and regulatory framework

**Act No 76/2002 on integrated pollution prevention and control and on an integrated register of pollution and amending certain acts (the Integrated Prevention Act), as amended, sets out the legal framework for reporting under the national Pollutant Release and Transfer Register. An Implementing Decree (No 572/2004) was introduced amending the original act to lay down the form and method for the record-keeping of documentation required for notification in the Integrated Pollution Register. An additional amendment was passed (Act No 25/2008) establishing a list of pollutants and thresholds to identify which facilities are obliged to report emissions – this list was revised in 2011 (Act No 450/2011) to reduce the number of pollutants included from 72 to 26. Further amendments were adopted in 2008 to clarify certain definitions within the legal texts (Act No 77/2008).**

**The regulatory framework for E-PRTR reporting is established under Act No 25/2008 which identifies how a breach can be made and what the penalties are. Breaches may include failure to notify of emissions, incorrect reporting, or failure to report in accordance with the legislative requirements. Fines can be up to CZK 500,000. 378 facilities were inspected in 2010. IRZ audits were conducted at 339 facilities in 2011 and at 315 facilities in 2012.**

Reporting requirements

**The list of activities and threshold values are set out in Annex I of the Integrated Prevention Act. Facilities that exceed the established thresholds are required to report their emissions. In addition to E-PRTR pollutants, facilities are required to report emissions of styrene (threshold limit 100 kg p.a.) and formaldehyde (threshold limit 50 kg p.a.) in releases to atmosphere (see Annex No 1 of Act No 145/2008, as amended) and transfers of pollutants in waste – affecting 26 selected pollutants (for the list see Annex No 2 of Government Regulation No 145/2008, as amended).**

**Operators are responsible for the quality of the information (data) they report to the IRZ. They must comply with reporting requirements set out in the annex of the E-PRTR regulation. All operators that are required to report emissions must register before they can submit their annual emissions data.**

**Where a facility has an integrated permit under the Act on Integrated Prevention and subsequent amending Acts, it may be stated that in respect of the incompatibility of the relevant IED annexes and Regulation (EC) No 166/2002 may cause certain problems in assigning affected facilities under E-PRTR based on a valid integrated permit, affecting reporting in 2013 and thereafter.**

Reporting practices

**All reports are submitted electronically by the facilities to CENIA via the online system IRZ. Reporting to IRZ is integrated at the reporting method level (PDF form) through the Integrated System for Compliance with Reporting Requirements (ISPOP), which also serves reporting of other agendas in the environmental area. Inter alia, this system eliminates duplicated registration of subjects with multiple reporting requirements. The deadline for facilities to submit their emissions data for each calendar year is 31 March.**

**The Ministry of Environment is responsible for submitting the Czech Republic response to the European Commission.**

Data quality assurance and assessment

**The Czech Environmental Inspectorate (ČIŽP) is primarily responsible for monitoring compliance with reporting obligations and keeping records of the data required for reporting to the IRZ. Procedures for data quality assurance include automatic searches for errors, completeness checks, cross referencing with Google Earth to confirm facility locations, and cross checks with previous reports to compare data from previous years.**

Public access

**The Ministry of Environment is responsible for publishing the reported data – the data is available via websites and in reports which are published annually. The following websites include publically available information for emission data:**

- <http://irz.cz/> (search engine - <http://portal.cenia.cz/irz/>);
- **The integrated prevention and pollution limitation information system – IS IPPC -** <http://www.mzp.cz/ippc/>;
- **National INSPIRE geoportal -** <http://geoportal.gov.cz> ;
- **Waste management information system – ISOH -** <http://isoh.cenia.cz/groupisoh/>; and
- **Emissions balance (REZZO – Register of Emissions and Atmospheric Pollution Sources) -** [http://portal.chmi.cz/files/portal/docs/uoco/oez/emisnibilance\\_CZ.html](http://portal.chmi.cz/files/portal/docs/uoco/oez/emisnibilance_CZ.html) .

Confidentiality

**There are no confidentiality claims submitted by any operator in the Czech Republic.**

Public participation

**No response was provided by the Member State.**

Access to justice

**No response was provided by the Member State.**

Public awareness and capacity building

**The public can refer to the Ministry of the Environment methodological guidelines, the IRZ web pages, handbooks, information leaflets and brochures as a source of information for identifying an establishment and determining reporting requirements. A helpdesk is also available for those needing direct assistance.**

Cooperation and assistance

**No response was provided by the Member State.**

## Denmark

A summary of the information reported by Denmark is presented in Table 5.15.

*Table 5.15 Overview of main information reported by Denmark on implementation of E-PRTR*

### Reporting on E-PRTR

**The Danish Environmental Protection Agency (EPA) provided the report and are the responsible authority concerning the report. No public authorities contributed and it was not subjected to a public consultation.**

Legislative and regulatory framework

**The legislative framework for E-PRTR reporting has been integrated into existing Danish regulation on pollution reporting under the Statutory Order 210 (Bekendtgørelse om visse virksomheders afgivelse af miljøoplysninger). General provisions for environmental reporting are also set out in a national scheme known as 'green accounts', for which polluting facilities must submit 3 yearly environmental reports and provide details on water, energy and resource consumption, which are publically available online. The Member State reports that criteria for reporting under the green accounts scheme are less strict than reporting to the E-PRTR and as such, E-PRTR data for Denmark combines green accounts data, data submitted by facilities who fall under the E-PRTR but not green accounts, and a number of other registers which are transferred to the PRTR by the Danish EPA. The criteria to determine which facilities are required to report to E-PRTR is set in the Permitting Order (Current Order No 669 of 18. June 2014 on the permitting of listed facilities).**

**The regulatory framework is established within the Statutory Order 210. Facilities which do not comply with the regulations can be subject to a fine, the amount of which was not specified. No cases were taken to court during the reporting period.**

#### Reporting requirements

Facilities are required to submit data for approval by the supervisory authority. Local authorities supervise most facilities, they also collect environmental data for waste water treatment plants under the national monitoring programme (NOVANA). The Danish Nature Agency (DNA) collects environmental data from municipal waste water treatment plants and the Danish Plant Directorate (DPD) collects data on livestock units as regards livestock. The decentralised units of the Environmental Protection Agency (EPA) are responsible for approving and monitoring data from large facilities.

#### Reporting practices

Operators report emissions data to an online electronic register ([www.virk.dk](http://www.virk.dk)) by 31 May of the year following the reporting year. The majority of facilities submit reports through their green accounts. Facilities reporting to PRTR but not green accounts must submit data 10 weeks after 31 December to their supervisory authority. The authority must submit a statement to the facility no later than 8 weeks after receiving the draft data. PRTR data and the opinion of the supervisory authority is then finalised in the system and published at [www.miljøoplysninger.dk](http://www.miljøoplysninger.dk), alongside additional green accounts information. Data from landfill is obtained using a model developed by the EPA in conjunction with the Technical University of Denmark. The EPA notes that there are not currently any better tools for calculating emissions from landfills in Europe, and that the data reported for this sector are very conservatively estimated.

One difficulty referred to by the Member State with respect to reporting practices is that a number of facilities fail to report E-PRTR data within the deadline due to challenges with IT and employee turnover.

#### Data quality assurance and assessment

PRTR information reported through [www.virk.dk](http://www.virk.dk) is subjected to automatic quality assurance. If the information entered is very different from previous years, the person reporting will automatically be asked about the correctness of the information. Once data is submitted, supervisory bodies receive an email notification to complete a report and assess the quality of the data. It was reported that there is a dialogue between the supervisory authority and the facility operator when completing the quality assurance which is thought to enhance the quality of the data. The Member State also reported that the EPA conducts spot checks to identify reporting errors (e.g. where mg are reported as kg, etc.). According to the response given, the EPA detects a number of such errors on an annual basis, which are corrected before the data is submitted. Manual surveys are also carried out by the Department of Environmental Science under Aarhus University to check data which constitutes a significant part of total Danish releases.

#### Public access

All PRTR data is available to the public at [www.miljøoplysninger.dk](http://www.miljøoplysninger.dk). This website also references other environmental data reported as part of the green account scheme.

#### Confidentiality

In 2011, one facility was granted permission to have their waste production indexed against a baseline year, rather than have the absolute value published (the EPA retains this information). Eight facilities were also granted permission to keep their waste data confidential. These requests were approved because publication would give insight into sensitive financial figures. Information on which Annex I activities were involved in confidential reports was provided:

Activity Code	Activity Name	Confidential / Total
2.3,iii (assumed 2cii)	Processing of ferrous metals – Application of protective fused metal coats	2/4
2f	Surface treatment of metals and plastics	1/28
5a	Disposal or recovery of hazardous waste	2/14

Denmark reported that they did not experience any problems with assessing and processing cases on confidentiality and indexing.



## Estonia

A summary of the information reported by Estonia is presented in Table 5.16.

*Table 5.16 Overview of main information reported by Estonia on implementation of E-PRTR*

### Reporting on E-PRTR

The Estonian Ministry of the Environment, the Estonian Environment Agency and the Estonian Environment Board.

#### Legislative and regulatory framework

**The legislative framework for reporting is set out under the following acts:**

- **Order No 322 of Government of the Republic of 20 April 2003;**
- **Notice (RT II 2009, 22) of Estonian Ministry of Foreign Affairs; and**
- **Decree No 490 of the Minister for the Environment of 5 April 2010;**

**The following penalties can be issued under the acts listed below:**

- **Ambient Air Protection Act, Section 139 Violation of requirements for the protection of ambient air and greenhouse gas emissions trading. Facilities can be fined up to €2,000.; Waste Act, Section 1,206 Failure to submit a waste report and failure to maintain records on waste. Facilities can be fined up to €13,000;**
- **Water Act, Section 385. Infringement of the rules on water protection and use Facilities can be fined up to €2,000; and**
- **Integrated Pollution Prevention and Control Act, Section 37 Infringement of duties imposed or requirements laid down by an integrated permit. Facilities can be fined up to €3,200.**

**Extra-judicial proceedings may be conducted by the Environment Inspectorate under Section 38 of the Integrated Pollution Prevention and Control Act for misdemeanours relating to reporting proceedings.**

#### Reporting requirements

**Facilities are required to submit their emissions data to electronic systems: transfers from waste are reported to the waste-reporting information system [jäätmearuandluse infosüsteem – hereinafter 'JATS'], data on emissions of pollutants into the air are reported to the information system concerning sources of pollution of the ambient air [välisõhu saasteallikate infosüsteem – hereinafter 'OSIS'] and data on emissions of pollutants into water are reported to the water-use information system [veekasutuse infosüsteem – hereinafter 'VEKA']. The Environment Agency administers and develops the PRTR and collates, processes and forwards to the European Commission the registry data required under the E-PRTR Regulation. Online user guidance is available to facilities to support them with their reporting.**

**The Environmental Board checks annual reports and, where necessary, requests companies for additional information. The specialists engaging in checking the reports have been trained regularly. If a report of a company causes a specialist to doubt whether the company acts pursuant to the environmental permit, information shall be submitted to the Environmental Inspectorate which, as an inspection body shall inspect the environment-related activities of the company.**

#### Reporting practices

**The Environment Board collects and assesses the quality of the data provided by the operators of PRTR facilities. The Environment Agency administers, processes and develops the register under the Kiev Protocol and collates, processes and forwards to the European Commission the registry data required under the E-PRTR Regulation. It also assists the Environment Board in checking data and in performing additional checks on data following feedback from the European Environment Agency and the E-PRTR Committee. The Environment Agency is authorised by the State to take decisions on declaring information held in the register as confidential, in accordance with Article 12 of the Kiev Protocol and Article 11 of the E-PRTR Regulation. It is also authorised to provide the European Commission with additional information in accordance with Article 16 of the E-PRTR Regulation and to reply to questions from the public, in accordance with Article 7(2) and Annex III of the E-PRTR Regulation. The reporting deadlines for the waste and air reports is 31 January and 1 February for the water reports.**

**Data quality assurance and assessment**

**The Environment Board is responsible for assessing the completeness, consistency and credibility of submitted data. The Environment Board checks the annual reviews and, where necessary, requests additional data from a company. Regular training is provided for the specialists dealing with checking the reports. If a company's reports give rise to doubts as to whether the company is actually operating in accordance with what is laid down in the environmental permit, information is passed on to the Environment Inspectorate which, as the supervisory body, monitors the company's operations from the environmental point of view. The reliability of reporting in VEKA has increased as a result of the fact that most of the data submitted by operators have already been checked by an official during the consultation process concerning the quarterly calculations for the pollution charge relating to water resources and effluent. This allows inconsistencies to be identified as and when they occur, and less mistakes find their way into the reports. The aim of all these measures is to ensure the quality of the submitted data and that companies operate in accordance with the requirements laid down in their environmental permits, which in turn will assist in sustaining a healthy living environment that can be handed on to future generations.**

**Public access**

**Information contained in the PRTR Register is accessible to the public in full by the website <http://prtr.ec.europa.eu/> and in part (in respect of pollutant emissions into the air) on the website of the environment register <http://register.keskkonnainfo.ee/>.**

**Confidentiality**

**There are no confidentiality requests submitted by any operator in the Czech Republic.**

**Public participation**

**No response was provided by the Member State.**

**Access to justice**

**No response was provided by the Member State.**

**Public awareness and capacity building**

**The electronic reporting systems (JATS, OSIS, VEKA) have thorough user manuals which support the submission of data.**

**Cooperation and assistance**

**No response was provided by the Member State.**

## Finland

A summary of the information reported by Finland is presented in Table 5.17.

*Table 5.17 Overview of main information reported by Finland on implementation of E-PRTR*

**Reporting on E-PRTR**

The Centre for Economic Development, Transportation and the Environment (hereafter the Centre) together with the Ministry of the Environment are responsible for reporting to the E-PRTR. The former is responsible for data collection, while the Ministry of the Environment is engaged with the Centre to ensure the data, and the reporting and the data systems are of sufficient quality.

**Legislative and regulatory framework**

**The general provisions for environmental reporting are set in the Environmental Protection Act, which encompasses reporting to the E-PRTR (527/2014). Although the Member State reports that there is no record of an operator failing to comply with E-PRTR reporting requirements, a regulatory framework was established in 2008 under the Environmental Protection Act (4.2.2000/86; 116.2.3 §), including provisions to allow penalties to be imposed in cases of non-compliance.**

**Reporting requirements**

**Operators are responsible for monitoring and reporting emissions from their facilities in accordance with the reporting requirements determined by the environmental permit authorities (the Centre). All environmental reporting data is collected as one and processed electronically via the "VAHTI" system. The Centre is then responsible for checking the reported data, and extracting the relevant PRTR data to report to the E-PRTR. The Member State remarked that there have been difficulties meeting the reporting requirements due to the fact that the classification of data in the reporting system used in Finland is different to the one set out in the E-PRTR Regulation, and as such the Member State does not meet the E-PRTR requirements concerning public accessibility.**

**Reporting practices**

**Operators are required to submit all environmental reporting data electronically at specified intervals depending on the size of the facility. Large facilities are required to report every**

month and small and medium sized facilities once a year. The deadline for operators reporting to the Centre is 28 February of each year.

One issue concerning reporting practices was raised by the Member State, whereby a small part of facilities still do not report all pollutants (as illustrated by the fact that national reporting is larger than E-PRTR reporting), and it is found that some of the facilities use the wrong dimensions in their report. Finland remarked that additional guidelines to the existing national sector guidance manuals will be developed during next year to address this issue.

Data quality assurance and assessment

The Centre is responsible for checking data quality and conducts inspections using electronic tools that are incorporated within the reporting system (VAHTI). Finland reports that a new data quality assurance system is being developed to incorporate a quality control at the time of data entry by the operator. This will be available in 2016. Further, the Member State reports that data quality assurance processes in relation to the reporting procedures for on-site inspection and emissions monitoring and reporting systems are being discussed by a joint industry and authority working group which is currently studying emission monitoring and reporting procedures to develop proposals to improve existing procedures.

Public access

E-PRTR data can be accessed from the Centre by telephone or email (email can be accessed at public libraries for those without internet access). Reporting data at a facility level can be accessed by the public via a service called Hertta, which is overseen by the Finnish Environmental Institute.

Confidentiality

There have been no confidentiality claims made by operators in the reporting period.

## France

A summary of the information reported by France is presented in Table 5.18.

*Table 5.18 Overview of main information reported by France on implementation of E-PRTR*

### Reporting on E-PRTR

The Ministry of Ecology, Sustainable Development and Energy (MEDDE) is responsible for E-PRTR reporting. It oversees the collection and dissemination of data (which is held centrally on an electronic portal called GEREP <https://www.declarationpollution.developpement-durable.gouv.fr/gerrep>). The Interprofessional Technical Centre for Studies of Atmospheric Pollution (CITEPA) is responsible for setting technical standards and thresholds based on available information. INERIS synthesises the submitted data to provide statistical information and reports. Local administrative bodies (Les Directions Régionales de L'Environnement, de l'Aménagement et du Logement – DREAL) are responsible for the environmental management of facilities including site inspections, and the quality of submitted data.

### Legislative and regulatory framework

The national legislation for integrated pollution prevention and control (Arrêté du 31/01/08 relatif au registre et à la déclaration annuelle des émissions et des transferts de polluants et des déchets - [http://www.ineris.fr/aida/consultation\\_document/4577](http://www.ineris.fr/aida/consultation_document/4577)) sets out the framework for E-PRTR reporting. The legislation establishes regulatory and reporting requirements for air pollutants, heavy metals, persistent organic pollutants, sulphur oxides, nitrogen oxides, volatile organic compounds, ammonia and PM<sub>2.5</sub>. The scope for reporting goes beyond that established under EU regulation. This Act is subject to the following three amendments: the amendment of 26 November 2008, to integrate the issue of declarations of perfluorooctane sulfonate; the amendment of 26 December 2012, for the lowering of the water withdrawal limit (7000 m<sup>3</sup> for sampling the natural environment), the application of hazardous waste production threshold (2 t / year) to all filers, the integration of intermediate institutions providing sorting, grouping or transit of hazardous waste, and the possibility of indicating the exit procedure of waste status; and the amendment of 11 December 2014 for the addition of selenium, changing thresholds of total dust, naphthalene and formaldehyde, the addition of energy efficiency statement for incinerators, and integration of surveys of inert waste storage facilities and quarries.

Under the regulatory framework, fines can be issued for up to €1,500 for missing or incomplete submissions. To date, very few facilities have been fined.

### Reporting requirements

All facilities with an environmental permit are required to report their pollutant emissions if they exceed the established threshold for the respective pollutant. The list of pollutants has been extended in France to include 88 pollutant emissions to air, 150 pollutant emissions to

**water, and 70 pollutant emissions to soil. It is the responsibility of the operator to report emissions.**

Reporting practices

**Operators are required to submit their reporting data electronically via GEREPE – this reporting system is the same for all operators with some variations depending on the activity of the operator. The deadline for reporting submissions of each calendar year is 31 March.**

Data quality assurance and assessment

**The local administrative bodies (DREAL) check for completeness and quality of submitted data. This check occurs between 1 April and 30 June. If an error is identified, or data is missing, the operator must resubmit their data. In 2012, approximately 10% of submissions were subject to revision following assessment.**

Public access

**Reporting data can be publically accessed online**  
<http://www.irep.ecologie.gouv.fr/IREP/index.php>.

Confidentiality

**No response was provided by the Member State.**

Public participation

**No response was provided by the Member State.**

Access to justice

**No response was provided by the Member State.**

Public awareness and capacity building

**No response was provided by the Member State.**

Cooperation and assistance

**No response was provided by the Member State.**

## Germany

A summary of the information reported by Germany is presented in Table 5.19.

*Table 5.19 Overview of main information reported by Germany on implementation of E-PRTR*

### Reporting on E-PRTR

Germany is a federal state. Responsibilities are divided between the national government and the federal states. The federal states typically have executive power for environmental matters. This means that both the competent authorities, which act on behalf of the federal states, and the Federal Environment Agency, which acts on behalf of the Federal Government, are involved with the reporting on E-PRTR. The respective competent authorities in the federal states (not included here) receive and check data from the facilities; they then forward the collective data from the federal states to the national authorities and the Federal Environment Agency. The Federal Environment Agency compiles the set of data for Germany from the reports from the federal states; it then publishes it in the German PRTR and forwards it to the EEA to be published in the European PRTR.

Legislative and regulatory framework

**The Kiev Protocol and the E-PRTR Regulation has been transposed into national law under the Law on the application of the Kiev Protocol and the implementation of the E-PRTR Regulation (Gesetz zur Ausführung des Protokolls über Schadstofffreisetzung- und -verbringungsregister vom 21. Mai 2003 sowie zur Durchführung der Verordnung (EG) Nr. 166/2006 (SchadRegProtAG)). This national legislation sets out the regulatory framework for imposing penalties when incorrect or incomplete data has been submitted.**

Reporting requirements

**Reporting requirements are set out by the federal states. Responsibilities vary according to the administrative structure of each federal state. Note that in some federal states, the competent authorities are not local authorities but regional authorities. The deadline for data submission varies between the federal states with reminders sent to facilities that do not meet the deadline. The Federal Environment Agency met its deadlines for submitting PRTR data to the European Commission in the format set by the EEA for reporting in 2010, 2011 and 2012.**

Reporting practices

**The competent authorities in the respective federal states identify which facilities are required to report emissions.**

**The identified facilities must submit emissions data via a web-based PRTR reporting tool (all data must be submitted electronically); the reporting tool has been further developed and optimised in the last few years. This specifically includes new checking procedures being implemented for operators and authorities.**

**Data quality assurance and assessment**

**The Federal Environment Agency is responsible for checking the completeness, consistency and credibility of the submitted data, as well as automatic checks which are incorporated within the online reporting tool. Data checks are carried out for all reports, i.e. covering the categories of air, water, land and waste, and the need to protect data is assessed. The lead body located in each federal state is responsible for coordinating checks for each specialist field (air, water, land and waste), carrying out one final check of the data from across the federal state, compiling all the checked data and forwarding it to the national authority, the Federal Environment Agency. As well, any irregularities are verified by the competent authorities in the form of case-specific visual inspections and additional case-specific, detailed credibility checks are conducted by inspecting facility documents.**

**Public access**

**The emissions data at a national level is publically available online [www.thru.de](http://www.thru.de).**

**Confidentiality**

**In 2012, 50 facilities requested confidentiality claims – the breakdown by activity is set out in the table below along with data for 2010 and 2011. The main reasons for the confidentiality claims are negative effects on international relations, defence or public safety, to protect a company/ tax/ statistical secret, to avoid a breach of intellectual property rights, and to avoid disclosure of personal data.**

	Confidential facility data	Multiple material loads of the same hazardous substance group marked confidential	Confidential non-hazardous waste	Confidential hazardous waste
2010	4	1	18	40
2011	3	1	14	35
2012	4	1	15	30

**The number of operators entitled to confidentiality of PRTR reporting has constantly fallen since the reporting year 2010 as compared to the reporting period 2007 to 2009.**

**Public participation**

**No response was provided by the Member State.**

**Access to justice**

**No response was provided by the Member State.**

**Public awareness and capacity building**

**No response was provided by the Member State.**

**Cooperation and assistance**

**No response was provided by the Member State.**

## Greece

A summary of the information reported by Greece is presented in Table 5.20.

*Table 5.20 Overview of main information reported by Greece on implementation of E-PRTR*

**Reporting on E-PRTR**

The Directorate of Air Pollution and Noise Control (EARTH) and the Ministry of the Environment Energy and Climate Change (YPEKA) are responsible for reporting on E-PRTR in Greece. EARTH is responsible for collecting and recording the data and YPEKA is responsible for enforcing the reporting requirements.

**Legislative and regulatory framework**

**There is a circular (ref.no 101111/17-02-2009) of the Secretary General of the Ministry for the enforcement of the E-PRTR Regulation. At the moment there is no any other legislative measures for the transposition of the E-PRTR Regulation although there are plans to ratify the Protocol by law. Currently, the legislative framework for compliance with E-PRTR Regulation is incorporated in the provisions for environmental permitting and environmental permits. The regulatory framework is established under the national environmental legislation more generally. Fines may be imposed within a specified range as set out in the legislation. The amount of the fine is determined according to the infringement - taking into account the importance, the frequency and whether or not it is a repeated infraction.**

**Reporting requirements**

**The operators collect the primary data using approved methodologies. Some of the releases are verified for other reporting mechanisms e.g. greenhouse gases releases if the facility is**

**within the Emissions Trading System. Facilities are required to submit their emission data for each calendar year by 31 March of the following year.**

#### Reporting practices

**Facilities are required to submit hard copies of their reporting – significant time is needed to populate this system and this is recognised by the Member State as a difficulty (particularly for example when collating chemical analysis data). There are plans to implement an electronic reporting PRTR system – the lack of an electronic reporting tool is regarded as a main difficulty for reporting in Greece.**

#### Data quality assurance and assessment

**A check is conducted by EARTH for completeness and quality of data submitted. In case of incompleteness, inconsistency or lack of data the competent authority ask the operators for clarifications.**

#### Public access

**National datasets are publically available by visiting the following sites:**

- <http://www.ypeka.gr/Default.aspx?tabid=467&language=el-GR>;
- <http://prtr.ec.europa.eu/>; and
- <http://cdr.eionet.europa.eu/gr/eu/E-PRTRdat>.

#### Confidentiality

**There are no confidentiality claims submitted by any operator in Greece.**

#### Public participation

**No response was submitted by the Member State.**

#### Access to justice

**The access to justice is ensured by the provisions of the National environmental legislation and especially the Joint Ministerial Decision with ref.no 11764/653/2006 (GAZ 326 B).**

#### Public awareness and capacity building

**A public consultation was carried out concerning E-PRTR reporting, the results of which are available on the ministry website**

<http://www.ypeka.gr/Default.aspx?tabid=467&language=el-GR>

#### Cooperation and assistance

**No response was submitted by the Member State.**

## Hungary

A summary of the information reported by Hungary is presented in Table 5.21.

*Table 5.21 Overview of main information reported by Hungary on implementation of E-PRTR*

#### Reporting on E-PRTR

The Ministry of Agriculture's Environmental Conservation Department and the regional Environmental Protection and Nature Conservation Inspectorates and Water Management Inspectorates are responsible for reporting on E-PRTR in Hungary.

#### Legislative and regulatory framework

**Hungary signed the PRTR (Pollution Release and Transfer Register) Protocol in Kiev in 2003 and ratified it on 8 June 2009. Many of the E-PRTR reporting requirements were already specified by the environmental data reporting rules, and so only minor amendments to the Sections of the existing environmental legislation on reporting were needed in order to establish the E-PRTR system. Amendments were made to the following government and ministerial decrees, changing the data sheets and instructions required for the relevant reporting procedures, and developing new data sheets:**

- **Government Decree No 219/2004 of 21 July 2004 on the protection of subsurface waters;**
- **Government Decree No 220/2004 of 21 July 2004 on the protection of surface waters;**
- **Government Decree No 21/2001 of 14 February 2001 laying down certain rules for the protection of air quality (as of 15 January 2011: Government Decree No 306/2011 of 15 January 2011 on the protection of air quality);**
- **Government Decree No 164/2003 of 18 October 2003 on the registration and data reporting requirements associated with waste (as of 1 January 2013: Government Decree No 440/2012 of 29 December 2012) (the Decree includes the data sheet used for reporting);**



- Decree No 27/2005 of 6 December 2005 of the Minister for Environmental Protection and Water Management laying down detailed rules for inspecting the release of used water and waste water (the Decree includes the data sheet used for reporting), and
- Decree No 18/2007 of 10 May 2007 of the Minister for Environmental Protection and Water Management on reporting in the environmental register for subsurface waters and land (the FAVI system) (the Decree includes the data sheet to be used for reporting).

Each of these amendments is set out in Government Decree No 194/2007 of 25 July 2007 amending government decrees.

The regulatory framework for reporting on E-PRTR is set out in different government decrees, as follows:

- Failure to report a change in emissions data for transfers to air can incur a fine of HUF 200,000 (Annex 9 to Government Decree No 306/2011);
- Fines imposed for infractions concerning emission transfers to surface water can be up to HUF 1 million and between HUF 50,000 and 300,000 for emission transfers to subsurface water bodies (Government Decree No 220/2004); and
- Failure to comply with reporting requirements for emission releases from waste can incur a fine of up to HUF 200,000 (Government Decree No 440/2012).

In the last three reporting years no penalty was applied in connection with data provision in E-PRTR reports.

#### Reporting requirements

Facilities are required to submit accurate data in keeping with the reporting requirements set out in the legislation outlined above. Facilities are required to submit their emission data for each calendar year by 31 March of the following year, with the exception of emission releases from waste for which the deadline is 1 March. Facilities may report their data as a hard copy or via electronic data sheets. Facilities report to their respective environmental inspectorate – representative of the regional authority (of which there are ten), who then reports to the Ministry of Agriculture's Environmental Conservation Department. The Ministry is responsible for compiling and submitting the data for the report.

Facilities typically meet their reporting deadlines, with no major problems identified for reporting of E-PRTR data - for either facilities or the competent authorities.

#### Reporting practices

The proportion of electronic reporting compared to paper-based reporting varies from year to year although there is a preference for paper-based reporting. To report their data in their environmental reports, operators can download the forms (data sheets) available on the Ministry's website. These forms contain internal checks to ensure operators complete the data sheets accurately and in full. Numerous electronic input devices are available to the competent authority in order to enter the data into the database.

No major difficulties have been identified concerning the reporting of E-PRTR data. The main difficulty relates to the fact that there is a time delay between when the data is submitted by the operator, and any follow up questions that arise from the competent authorities.

#### Data quality assurance and assessment

Provisions to assure the quality of environmental reporting data are included in national legislation (Act LIII of 1995 on environmental protection). The environmental inspectorates, at regional level, are responsible for the assessment of data quality. Seven out of the ten environmental inspectorates in Hungary have a laboratory measuring station, each of which is a laboratory continuously supervised by the National Accreditation Body. This is reflected in the inspectorates' efforts to improve the quality of data, since most of the data reported by operators is based on measurements performed by accredited laboratories. The inspectorates also organise consultation days to provide operators with information on new methods.

#### Public access

Since March 2010 Hungary has had a dedicated PRTR website easily accessible to everyone (<http://prtr.kvvm.hu>).

#### Confidentiality

None of the operators requested the confidential treatment of information on public access to environmental information.

#### Public participation

**No response was submitted by the Member State.**

#### Access to justice

**No response was submitted by the Member State.**

#### Public awareness and capacity building

**A PRTR consultation with designates representing civil and economic organisations was held in March 2013 to present the findings from E-PRTR reporting, as well as discussing related tasks to E-PRTR reporting.**

Cooperation and assistance

**No response was submitted by the Member State.**

## Ireland

A summary of the information reported by Ireland is presented in Table 5.22.

*Table 5.22 Overview of main information reported by Ireland on implementation of E-PRTR*

### Reporting on E-PRTR

The Environmental Protection Agency of Ireland is the competent authority responsible for collecting, validating and reporting E-PRTR data as well as providing the technical requirements and implementation of the legislation.

Legislative and regulatory framework

**The legislative requirements for reporting on E-PRTR are set by the European Communities (European Pollutant Release and Transfer Register) Regulations 2007 (S.I. No. 123 of 2007), and the Pollutant Release and Transfer Register Regulations 2011 (S.I. No. 649 of 2011). The legislation includes provisions for penalties (Regulation 17 of the 2011 PRTR Regulations) whereby operators that fail to comply are subject to penalties laid down in Ireland's Environmental Protection Agency Act, 1992. In addition, any PRTR reporters that also have operating licences issued by the EPA can be issued with a 'non-compliance' notice for failure to comply. As the operating licence is a legal document, such facilities could be prosecuted for not reporting and can be subject to charges payable to the EPA. Although the EPA has previously issued non-compliance notices for non-reporting, the issuing of reporting reminders and warnings will typically result in the completion of reporting tasks.**

Reporting requirements

**The PRTR Regulations (2011) set out reporting obligations for both operators (Regulation 7) and the EPA (Regulation 9). Accordingly, EPA-licensed facilities and operators in certain other industrial sectors that carry out PRTR activities above relevant applicable capacity thresholds (specified in Schedule 1), to make PRTR returns. These returns are in the form and content specified by the EPA and cover annual releases (emissions) and off-site waste transfers for each calendar year which must be reported by 31 March of the following year. The reporting requirements apply to the activities and pollutants as stipulated in the EU regulation with no mandatory extended list of pollutants adopted.**

**PRTR returns are now submitted as part of the Annual Environmental Reporting (AER) requirements. The incorporation of PRTR reporting within the AER system has reduced duplicate reporting, although there are still developments to remove duplicate reporting requirements in relation to waste data.**

Reporting practices

**Facilities must submit reporting data to the EPA by 31 March for the previous year (or 28 February in the case of urban waste water treatment plants). All data must be submitted electronically. The EPA is the Competent Authority for collecting information on releases of pollutants from point sources. This information is collected electronically each year from the PRTR Reporters. Facilities must ensure that the data is of an appropriate quality and that it is complete, consistent and credible. Records of the data from which the reported information was derived including their PRTR Emissions Reporting Workbook and any copies of Calculation Tools that were used must be kept. The operator may have to make corrections or validate the data in their PRTR Emissions Reporting Workbook at the request of the EPA. A number of online tools are available to operators to facilitate reporting, including guidance, emission calculation tools, and sector-specific reporting templates.**

**Note that there have been some difficulties for facilities to meet their reporting deadline. The reasons for delays in reporting data by the relevant facilities provided to the EPA (informally) include burden of reporting commitments for reporters and lack of resources.**

Data quality assurance and assessment

**The 2011 PRTR Regulations include provisions for the quality assurance of data and assessment (Regulation 10). The EPA uses an electronic automatic monitoring system to check for completeness as well as more generally managing, analysing and reporting the PRTR data collected since 2007. Reports are extracted from this PRTR application and used to validate facilities by their activity sector in order to check the reported data for completeness,**



**consistency and credibility. The EPA also checks data submissions manually. Through this manual process the EPA conducts comparison reports between different data sets that are used to improve the quality of data reported by operators (includes comparisons between different years and between other Member State data sets). The EC also carries out automatic validation checks when the national data is uploaded and provides feedback in the format of a country-specific report on the uploaded data. Further, the EPA works with operators regarding their obligations through written correspondence, training seminars and the publication of guidance documents.**

#### Public access

**Information about E-PRTR monitoring in Ireland, and reporting data is available at <http://www.epa.ie/enforcement/prtr/>. The website includes a search and mapping function, data sets for 2007-2011 reporting data with accompanying press releases, and a full report for 2012 data. Also available on this website are copies of PRTR returns for each facility as included in their annual environmental report.**

#### Confidentiality

**Under Regulation 12 of the 2011 PRTR Regulations, an operator may request that specific information concerning releases or off-site transfers be kept confidential. To apply, operators must complete a Confidentiality Questionnaire which is available online. The information in the questionnaire is then assessed by the EPA and a decision on the confidential nature of the information is returned to the operators. To date, two reporting facilities have been granted confidentiality for waste destination addresses due to their commercially sensitive nature, and no confidentiality has been requested on releases or emissions data.**

#### Public participation

**Regulation 13 of the PRTR Regulations 2011 provides for public participation in the further development of the register. The main opportunity for public participation is via the PRTR website which requests feedback from users.**

#### Access to justice

**Provisions pertaining to access to information are set out in Regulations 11 and 14 of the PRTR Regulations (2011) which refer to articles of the Access to Information on the Environment Regulations 2007 to 2011 that establish the statutory obligations on public authorities (including the EPA) with respect to access to justice relating to a request for environmental information relating to the Irish PRTR (Articles 11, 12 and 13).**

#### Public awareness and capacity building

**Regulation 16 of the PRTR Regulations 2011 sets out provisions for awareness raising. Accordingly, the EPA issue press releases to raise awareness and links to the PRTR website appear on other government websites (including for example the Citizen's Information website). In addition, the EPA has established an Environmental Queries Unit which the public can contact with any query of an environmental nature via email, telephone or in person.**

#### Cooperation and assistance

**The EPA attends the E-PRTR working group/ Article 19 Committee meetings in Brussels, and information on the Irish PRTR and systems is shared with countries developing technology for their national register as required.**

## Italy

A summary of the information reported by Italy is presented in Table 5.23.

*Table 5.23 Overview of main information reported by Italy on implementation of E-PRTR*

#### Reporting on E-PRTR

The Italian Ministry of Environment, land and Sea (IMELS) is responsible for the communication of reporting on E-PRTR while the Italian national institute for environment protection and research (ISPRA) manages the collection of the national facility reports and performs additional assessment of the quality on the whole national datasets.

#### Legislative and regulatory framework

**The Decree No. 157/2011 sets out the legislative framework for E-PRTR reporting in Italy. The regulatory framework is established by the Decree No 46/1014, which stipulates that fines may imposed where facilities fail to comply with the reporting requirements (including, late**

data submission or inaccurate reporting). Fines vary between €5,000 and 52,000.<sup>18</sup> To date, no operators in Italy have been fined.

#### Reporting requirements

**These are set out in an annex to the national legislation, along with guidance for reporting. The Italian list of substances includes one additional parameter for operators to report concerning emissions to air (Selenium, Se) - no threshold values have been set for the reporting of this substance. The deadline for reporting is 30 April for the previous year.**

#### Reporting practices

**Operators must submit their data electronically via a secure website. Competent authorities at national and local level use the same website to send communicate with operators about facility reports in terms of approval or request to provide additional information or to improve the completeness, transparency or the quality of the information already provided. Some technical issues associated with the reporting system have been raised, namely to do with the electronic signature devices at facility level, which have affected reporting timeliness and official data availability to competent authorities.**

#### Data quality assurance and assessment

**The IMELS is the national competent authority for the quality assessment of data reported by operators in its competence (comprising ~10% of the total reporting operators), and Regions/Provinces have been appointed for assessing the quality of the reports and for completeness checks of the reporting facilities at local level (comprising ~90% of operators). IMELS and ISPRA find that checks on completeness for the number of reporting facilities would be better conducted at national level on the dataset as a whole in order to make sure that operators of the various E-PRTR activities have correctly understood the reporting requirements under the national PRTR legislation and the E-PRTR Regulation.**

#### Public access

**The information of the national PRTR is not accessible to the public on a national PRTR website yet due to working in progress to redesign the website to accommodate Italian EPER data as well as the Italian PRTR data. In the meantime, the public can request access to the data.**

#### Confidentiality

**To date, there have been no claims for confidentiality in Italy.**

#### Public participation

**No response was submitted by the Member State.**

#### Access to justice

**No response was submitted by the Member State.**

#### Public awareness and capacity building

**No response was submitted by the Member State.**

#### Cooperation and assistance

**No response was submitted by the Member State.**

<sup>18</sup> The Italian Parliament passed a new law on crimes against the environment on 22 May 2015 that entered into force on 29 May 2015. The legislation outlines new penalties that can be imposed for environmental pollution which include between 2 and 6 years of imprisonment, or a fine between €10,000 and €100,000. Further clarification is required to better understand how this new legislation interacts with the regulatory framework already established (Legge 22 maggio 2015, n.68. Disposizioni in materia di delitti contro l'ambiente. (15G00082) – see also Ends Europe, “Italy adopts law on environmental crime”, 26 May 2015).

## Latvia

A summary of the information reported by Latvia is presented in Table 5.24.

*Table 5.24 Overview of main information reported by Latvia on implementation of E-PRTR*

### Reporting on E-PRTR

The competent authorities for reporting on E-PRTR include: the state limited-liability company 'Latvian Environmental, Geological and Meteorological Centre' (LVGMC), the state environmental service (VVD) and its units, the state environmental service's regional environmental offices (VVD RVP), and the Ministry of Environmental Protection and Regional Development (VARAM).

#### Legislative and regulatory framework

**Article 46 of the law on pollution outlines E-PRTR requirements (Regulation No.158, 2009). Additional provisions were established later concerning procedures for registering polluting activities and issuing permits (Regulation No. 1082, 2010).**

**The Latvian Code of Administrative Infringements (1985) establishes the regulatory framework and stipulates that penalties can be imposed where environmental information has been misreported (Articles 65, 84 and 886). Additional regulatory provisions concerning the provision of data for statistics are established under the Law on State Statistics (1997) and the concealment of environmental reporting data are set out under Article 106 of the Latvian Criminal Law (1999).**

#### Reporting requirements

**These are set out in paragraph 4 of the Cabinet Regulation No 1075 which requires operators to submit report forms to the LVGMC. The deadline for submissions is 1 March for data from the previous year. The national database is closed to submissions on 1 June, after which the information from the report forms is exported into the PRTR database.**

#### Reporting practices

**Information on emissions into the air, into water and on waste is gathered and compiled regularly each year, using electronic forms for the collection of statistical data (includes data on water, air and waste) for which the operators are responsible for submitting within the deadline. The statistical reports are submitted electronically to the databases via secure websites.**

**Data for the register are obtained on an annual basis from the most significant polluters (from the statistical reports they submit), as a result of which the register contains a broader range of information on polluters than that required by the PRTR Regulation.**

**To support operators with their submissions, user manuals have been developed to facilitate the process of entering data, an e-mail address is available for sending questions, and assistance is also provided by telephone.**

#### Data quality assurance and assessment

**Experts or inspectors reporting to the regional authorities (VVD RVP) are responsible for monitoring the quality and completeness of the data submitted, and ensuring that deadlines are met. Data are checked for consistency (in terms of the number of facilities, emission sources, water abstraction points, etc. and submissions are cross checked between each other) and for feasibility (i.e. that the data is logical). When carrying out checks at undertakings, VVD RVP inspectors ask to see log books and check actual data while the facility is operating, comparing it with the data recorded in the log books.**

**Where an error occurs in the information, the person who submitted the report form is notified and is required to make the necessary corrections within a specified deadline. The LVGMC is also informed where amendments are necessary.**

#### Public access

**The LVGMC has developed a Latvian Pollutant Release and Transfer Register, available in Latvian: <http://arcims.lvgma.gov.lv:8082/prtr/viz.jsp>, and in English: <http://arcims.lvgma.gov.lv:8082/prtr/viz.jsp?lang=en>. The register contains information on emissions into the air and water and the quantities of waste produced. All the major polluters are indicated on a map of Latvia. More recently, the database of statistical reports is publicly accessible at the following web address: [http://parissrv.lvgmc.lv/#viewType=home\\_view](http://parissrv.lvgmc.lv/#viewType=home_view); however, a password and user name are required.**

#### Confidentiality

**To date, there have been no claims for confidentiality in Latvia.**

#### Public participation

**No response was submitted by the Member State.**

#### Access to justice

**No response was submitted by the Member State.**

Public awareness and capacity building

**No response was submitted by the Member State.**

Cooperation and assistance

**No response was submitted by the Member State.**

## Lithuania

A summary of the information reported by Lithuania is presented in Table 5.25.

*Table 5.25 Overview of main information reported by Lithuania on implementation of E-PRTR*

### Reporting on E-PRTR

Operators send reports to the relevant regional environmental protection departments (RAADs) of the Ministry of the Environment within whose territory they are located. The RAADs send the reports to the Environmental Protection Agency (AAA), which forwards them to the European Commission.

Legislative and regulatory framework

**The legislative framework is set by the Order No D1-631 of the Minister for the Environment of the Republic of Lithuania of 29 December 2006 on the provision of data and information pursuant to the establishment of the E-PRTR.**

**The Lithuanian Administrative Infringements Code of 17 February 2000 established the regulatory framework for reporting on E-PRTR in Lithuania. It includes provisions concerning the concealment, non-disclosure or distortion of environmental information (Article 51), and stipulates that fines between LTL 100 and LTL 1,000 can be imposed. Amendments to the Code were passed in 2011 which specify that fines of up to LTL 2,000 can be imposed to developers and authors of environmental impact assessment documents that have provided false information.**

Reporting requirements

**Operators are required to submit data if they release pollutants listed in Annex II of the E-PRTR regulation and exceed the specified limit. Separate reporting requirements are stipulated in respective legislation for:**

- **the granting, renewal and withdrawal of integrated pollution prevention and control permits (Order No 80);**
- **the accounting and reporting of emissions of pollutants into the atmosphere (Order No 408);**
- **the accounting of water use and wastewater management (Order D1-1120);**
- **waste management rules (Order 217); and**
- **on waste generation and management accounting and reporting (D1-367).**

**The deadline for all reporting submissions is set according to the Order D1-631 and is the 30 September after each reporting year.**

**Data on transfers of waste are submitted electronically. Data on releases of pollutants into the natural environment and the sewers and emissions of pollutants into the atmosphere are provided by operators in paper form. The competent authorities input these data into the EIS database. Data and information for 2011-2012 were submitted by means of the integrated computerised system for the management of environmental information (AIVIKS), one of the aims of which is to create an information system for the electronic submission of data.**

Reporting practices

**In Lithuania, companies are subject to much stricter requirements for reporting on pollutant emissions/releases and treated waste than those laid down in the Regulation, so almost all the data stored in the national Pollutant Release and Transfer Register (PRTR) on pollutant emissions/releases into the environment are given primarily in the pollution and waste generation and management accounting reports, which are submitted in accordance with the data submission procedures approved by Orders Nos 408, 2017, D1-1120 and D1-367 of the Minister for the Environment. Under Order No D1-631 of the Minister for the Environment, which relates directly to the national Pollutant Release and Transfer Register, operators are to submit only data that have not already been submitted under the above-mentioned orders. All reports are submitted to the RAADs, which carry out an initial check on the quality of the data before forwarding the reports to the Environmental Protection Agency for further checks. The Environmental Protection Agency carries out a final check on the quality of the data and submits the data to national and European PRTRs.**

Data quality assurance and assessment

**An automatic 5-stage check is run using 'E-PRTR Validation tools' to check data quality and completeness. As well, the State Analytical Control Divisions of the RAADs periodically carry out laboratory analyses on pollutants emitted/released by facilities and use the results to**

**assess the reliability of the data provided by businesses. Further, under the plans drawn up yearly by the RAADs for the routine inspection of business activity, waste producers and managers are periodically inspected. Waste management companies are inspected once a year, and may be re-inspected to clear up any uncertainties.**

Public access

**PRTR data are published on the website of the Environmental Protection Agency (<http://gamta.lt.>).**

Confidentiality

**To date, there have been no claims for confidentiality in Lithuania.**

Public participation

**No response was submitted by the Member State.**

Access to justice

**No response was submitted by the Member State.**

Public awareness and capacity building

**No response was submitted by the Member State.**

Cooperation and assistance

**No response was submitted by the Member State.**

## Luxembourg

A summary of the information reported by Luxembourg is presented in Table 5.26.

*Table 5.26 Overview of main information reported by Luxembourg on implementation of E-PRTR*

### Reporting on E-PRTR

The Administration for the Environment oversees reporting on E-PRTR in Luxembourg.

Legislative and regulatory framework

**The requirements to establish the integrated pollutant release and transfer register are stipulated in national law of 13 March 2009. Provisions concerning the design and structure of the national pollutant release and transfer register are set under the Grand Ducal Regulation of 13 March 2009, which also outlines the conditions for reporting and quality assurance of data as well as arrangements for public participation in the drawing up and development of the register.**

**The regulatory framework for reporting on E-PRTR is set out by the national law of 13 March 2009. Failure to comply with the requirements can result in imprisonment (for up to 6 months) and/ or the imposition of a fine (between €251 and €50,000). No new infringement proceedings were opened during the period 2010 to 2013.**

Reporting requirements

**The Administration for the Environment is responsible for the administrative requirements of reporting, with the exception of reporting releases to water which is overseen by the Administration for Water Management. All submissions must be made electronically and the deadline for submissions is 1 July for the following reporting year.**

Reporting practices

**The operator of each facility that undertakes one or more of the relevant activities with pollutant releases above the applicable capacity thresholds specified must report annually pollutant release data to the Administration for the Environment, and also to the Administration for Water Management where releases to water are concerned, specifying the measurement, calculation or estimation methods used. Where an operator is already required to submit the relevant data (e.g. in the case of classified facilities), there is no need to submit the data again. However, the operator is required to provide data on off-site waste transfers which have not yet been reported to the Administration for the Environment.**

**The Administration for the Environment provides operators with a tool for the electronic reporting of the required information.**

Data quality assurance and assessment

**The operator of each facility must be responsible for the quality of the data submitted. The Administration for the Environment, and the Administration for Water Management where releases to water are concerned, assess the quality of data provided by the operator, in particular as regards the completeness, consistency and credibility of the data. Data on releases to air are verified using measurement reports and annual declarations submitted to the Administration for the Environment as part of periodic compliance checks on operating permits. Data on releases to water are verified by the Administration for Water Management.**

**Data on waste are verified using information provided to the Administration for the Environment as part of periodic reports on facility waste management. The first check is for the format and completeness of the data provided. If there is a problem, the operator is contacted with an indication of the points to correct or supplement. As a second step, the emission values are checked. Similarly, if a problem is found, the operator is asked to correct the data. Generally, the quality of information submitted has improved year-on-year and can currently be considered good.**

#### Public access

**The information is currently made available to the public on the EU's E-PRTR site. A summary of the information contained in the PRTR is published in the Ministry for Sustainable Development and Infrastructure's activity report. Also, the Administration for the Environment can be contacted by the public for any information regarding the PRTR.**

#### Confidentiality

**Information which has been kept confidential relates to transfers of hazardous waste to other countries in the case of 2 facilities. This information is not disclosed for reasons of commercial or industrial confidentiality. Confidentiality was complied with from 2010 to 2013. One of the two facilities in question requires application of the confidentiality provision as it does not know the final destination of its waste, since it is collected by third parties who may carry out some processing procedures before recycling or disposal abroad.**

#### Public participation

**No response was submitted by the Member State.**

#### Access to justice

**No response was submitted by the Member State.**

#### Public awareness and capacity building

**No response was submitted by the Member State.**

#### Cooperation and assistance

**No response was submitted by the Member State.**

## Malta

A summary of the information reported by Malta is presented in Table 5.27.

*Table 5.27 Overview of main information reported by Malta on implementation of E-PRTR*

#### Reporting on E-PRTR

The Malta Environment and Planning Authority (MEPA) is the responsible authority for the implementation of the E-PRTR. The Authority is responsible for the collection of data from operators, for the quality assurance and assessment of the data, and for reporting of E-PRTR data to the Commission.

#### Legislative and regulatory framework

**The European Pollutant Release and Transfer Register Reporting Obligations Regulations (LN152/07; as amended) specifies timeframes for reporting by operators in Malta (in accordance with Article 5 of Regulation EC 166/2006), offences and penalties for non-compliance (in accordance with Article 20 of Regulation EC 166/2006). Provisions regarding timeframes for reporting are stipulated in Regulation 2 of the same Regulations, while provisions regarding offences and penalties are stipulated in Regulations 4 to 7 of the same Regulations. Offences and penalties for non compliance. During the current reporting period (2010 to 2012), with the exception of some delays in reporting, operators demonstrated a high level of compliance; therefore no application of any penalties was considered necessary. The reporting template is published in the Government Gazette of 13 July 2007, Government Notice number 660 of 2007 and is publicly available at the following link. (<http://www.mepa.org.mt/LpDocumentDetails?syskey=681>).**

#### Reporting requirements

**All submissions must be made electronically using the above mentioned reporting template. The deadline for operators to submit their data reports is the 31 March of the following year. An extension of up to 3 months can be granted if well justified.**

#### Reporting practices

**MEPA is responsible for the identification of E-PRTR facilities. Operators are required submit an E-PRTR report annually to MEPA. The Ministry for Sustainable Development the Environment and Climate Change (Member StatesDEC) is then responsible for the approval of the report submitted to the Commission.**

**Data quality assurance and assessment**

**MEPA is responsible for the entire quality assurance process. All the quality assessment of the data submitted by the different facilities is carried out manually, and all the final data is inputted manually into the E-PRTR Conversion Tool. The quality assessment checks for completeness, cross-checks data from previous years for consistency, and checks the plausibility of the submitted data against other available information. The quality assurance and quality assessment processes indicate that overall the data is of suitable quality; in a few instances where errors were noticed, these were corrected as a result of this process. According to MEPA, there are no processes in place to check data quality where the submission is based on estimates (instead of measured or calculated), or when extrapolating a number of measurements (discontinuous) to a load and as such it is found that any errors in the measurement methodology are magnified.**

**Public access**

**MEPA maintains a website with updated information regarding E-PRTR (<http://www.mepa.org.mt/E-PRTR>). The European Pollutant Release and Transfer Register Reporting Obligations Regulations (LN152/07; as amended) are publicly available at <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11558&l=1>. To improve public access various local councils offer free computer and internet access to members of the public, and the Government has recently embarked on an initiative to provide free wireless internet in a number of public spaces.**

**Confidentiality**

**There have been no claims for confidentiality in the previous reporting period (between 2010 and 2012) in Malta.**

**Public participation**

**No response was submitted by the Member State.**

**Access to justice**

**No response was submitted by the Member State.**

**Public awareness and capacity building**

**No response was submitted by the Member State.**

**Cooperation and assistance**

**No response was submitted by the Member State.**

## Netherlands

A summary of the information reported by the Netherlands is presented in Table 5.28.

*Table 5.28 Overview of main information reported by Netherlands on implementation of E-PRTR*

**Reporting on E-PRTR**

The Ministry for Infrastructure and the Environment oversees reporting on E-PRTR in the Netherlands, as carried out by the following responsible authorities:

- Emissions to air and soil and on waste (including waste water and discharge into sewer systems) are reported at municipal or provincial level.
- Emissions to surface water are reported by the relevant water quality management body – the district water board or the Rijkswaterstaat (Waterways and Public Works) Directorate of the Ministry of Infrastructure and the Environment.
- Emissions from installations for the intensive rearing of poultry or pigs are reported by the Ministry of Economic Affairs, Agriculture and Innovation.

**Legislative and regulatory framework**

**The legislative framework for reporting on E-PRTR is set out in the Environmental Management Act. As well, an Annual Environmental Report Guide has been developed to support the relevant authorities and industry representatives with their reporting (this guide applies to reporting for all PRTR activities except for 'installations for the intensive rearing of poultry or pigs' (activity 7a).**

**Reporting on E-PRTR is regulated by the Environmental Management Act (Chapter 18), the General Administrative Law Act (Article 5:32), and the Economic Offences Act (Article 1a(2)), which stipulate that facilities in breach of E-PRTR requirements may be subject to a penalty or face public prosecution through consultation. The Environment Management Act and the General Administrative Law Act are intended to prompt facilities to submit a correct report by either requesting clarification or further information, or by imposing penalties; however, where an incorrect report has been intentionally submitted, legal action may be taken and the facility in question may be prosecuted via consultation with the public under the Economic Offences Act (whereby the facility report is published online for the public to view with the**



intention that by naming and shaming, the facility will submit a complete report). In the few cases where further action was necessary, the announcement of the intention to impose a penalty order usually had the desired effect. The provisions of criminal law have not yet had to be invoked.

#### Reporting requirements

The capacity thresholds as stipulated by the EU Regulation are applied in the Netherlands and there is no difference as regards the activities under E-PRTR Annex I and those under the national PRTR system. For emissions to air, a few substances have been added in order to gather insight into their emissions for the purposes of the national priority substances policy and the policy on substances hazardous to humans and the environment<sup>19</sup>. All reports must be submitted electronically using an electronic reporting tool, the annual electronic environmental report. A separate electronic reporting tool has been developed for facilities covered by E-PRTR Activity 7a (Article 12.20 of the Environmental Management Act).

#### Reporting practices

Where a facility exceeds a threshold, it must use the electronic reporting tool to report to the relevant authorities by 31 March of the calendar year following the reporting year. The relevant authority validates the report and checks whether a facility has correctly submitted the report. Validation is based on the assessment of the measuring and registration system and the verification of practical implementation. Each authority assesses the part of the report for which it is responsible. Due to the structure of E-PRTR reporting, a facility can have several authorities responsible for its E-PRTR reporting and as such the E-PRTR report has a modular structure.

Once submitted by the facility, the competent authority must assess the reports by 30 June or, with valid reasons, by 30 September (Articles 12.22 and 12.23 of that Act). The assessed report modules are then forwarded to the Ministry for Infrastructure and the Environment (the national E-PRTR authority) for submission to the European Commission.

#### Data quality assurance and assessment

The relevant authority responsible for reporting must assess the quality of the report in terms of completeness, consistency and credibility.

The procedure for assessing the PRTR report is laid down step-by-step in the Dutch PRTR guidance document (Annual Environmental Report Guide, <http://www.e-mjv.nl/documenten/leidraad/>). The Guide also offers access to a number of resources such as step-by-step plans, checklists, manuals, validation tools and examples. The authority must assess the facility's measuring and registration system and how it is implemented in practice. A facility must have an E-PRTR-adapted measuring and registration system showing how the facility calculates the annual emissions and transfers of waste so as to provide the relevant authority with information with which to assess the quality of the report or to verify whether a facility has correctly submitted no report.

Support is also available to the relevant authorities to help with data quality assurance from the InfoMil Knowledge Centre (the Ministry of Infrastructure and the Environment's environmental information centre for the implementation of (environmental) legislation). For the E-PRTR, the knowledge centre supports the relevant authorities in matters of technical content and administrative law, offering resources and information products such as: checklists, manuals and validation tools accessible via the Guide; a help desk for legal and substantive questions - training and information; editing and advice on the content of the Dutch PRTR guidance document (Annual Environmental Report Guide). Further support is also available in the form of an electronic environmental report tool. The application allows both reporting facilities and validating authorities to carry out a historical check by accessing reports from previous years. Any major changes from previous years' reports are flagged up (change in colour).

Each year, before the end of the relevant authorities' assessment period, the national emission register (RIVM, Deltares, etc.) carries out consistency checks on a number of important

<sup>19</sup> It includes phenols (as total C), toluene, total matter, acrolein (acrylaldehyde), acrylonitrile (2-propenenitrile), ethylene, formaldehyde (methanal) and styrene. In addition, the thresholds for emissions to air for 16 pollutants have been lowered, as follows: carbon monoxide (CO) 10 000 kg/year, carbon dioxide (CO<sub>2</sub>) 100 000 kg/year, hydrofluorocarbons (HFCs) 1 kg/year, non-methane volatile organic compounds (NMVOCs) 10 000 kg/year, nitrogen oxides (NO<sub>x</sub>/NO<sub>2</sub>) 10 000 kg/year, perfluorocarbons (PFCs) 1 kg/year, sulphur hexafluoride (SF<sub>6</sub>) 10 kg/year, sulphur oxides (SO<sub>x</sub>/SO<sub>2</sub>) 20 000 kg/year, cadmium and compounds (as Cd) 1 kg/year, mercury and compounds (as Hg) 1 kg/year, lead and compounds (as Pb) 50 kg/year, PCDD + PCDF (dioxins + furans) (as Teq) 0.00001 kg/year, benzene 500 kg/year, phenols (as total C) 100 kg/year, polycyclic aromatic hydrocarbons (PAHs) 1 kg/year, toluene 10 000 kg/year, particulate matter (PM<sub>10</sub>) 5 000 kg/year, total matter (total matter must be reported where the threshold for particulate matter (PM<sub>10</sub>) is exceeded). Acrolein (acrylaldehyde) 1 kg/year, acrylonitrile (2-propenenitrile) 100 kg/year, ethylene 1 000 kg/year, formaldehyde (methanal) 100 kg/year, styrene 500 kg/year.



substances and facilities. Any discrepancies found are noted in an opinion sent to the relevant authority and the facility via the electronic environmental report (the reporting application). For E-PRTR Activity 7a the procedure is different. Those facilities calculate their emissions using the reporting tool developed for that category. They enter the number of animals that they reared in the reporting year and their housing type(s). The calculated emissions are reported. The relevant authority verifies the data entered.

#### Public access

Data concerning the national PRTR is available at [www.prtr.nl](http://www.prtr.nl). The website includes data on emissions from all diffuse sources and integrated maps are also published in addition to the reports. The website outlines how the site can be used and how data can be searched and displayed. The data can be published in a table, diagram or geographical map. The site also contains a link to the European PRTR site (register).

#### Confidentiality

There have been no claims for confidentiality between 2010 and 2012 in the Netherlands.

#### Public participation

When the national PRTR system was set up relevant NGOs were consulted and input was collected by way of questions asked over the counter at the national emission register.

#### Access to justice

No response was provided by the Member State.

#### Public awareness and capacity building

Efforts to raise public awareness and improve capacity building have been taken via the internet (the website of the Ministry of Infrastructure and the Environment) and by post. Reporting facilities and relevant authorities have held meetings on the implementation of the E-PRTR and information material has been drawn up and distributed, and videos are available to explain how reports are to be completed.

#### Cooperation and assistance

No response was provided by the Member State.

## Poland

A summary of the information reported by Poland is presented in Table 5.29.

*Table 5.29 Overview of main information reported by Poland on implementation of E-PRTR*

#### Reporting on E-PRTR

The Chief Inspector for Environmental Protection (GIOŚ) is the authority responsible for issues relating to the National Pollutant Release and Transfer Register in Poland. Data is collated and submitted regionally by the Provincial Inspectors for Environmental Protection (WIOŚ).

#### Legislative and regulatory framework

Provisions concerning the National Pollutant Release and Transfer Register are set out in Title IVa of the Environmental Protection Law Act of 27 April 2001 (Journal of Laws 2001, Item 1232, as amended). Reporting requirements are stipulated within Regulation of the Minister for the Environment of 14 August 2009 concerning the report for the establishment of a National Pollutant Release and Transfer Register (Journal of Laws No 141, Item 1154). The Act of 3 October 2008 on access to information on the environment and environmental protection, public participation in environmental protection and environmental impact assessments (Journal of Laws of 2008, Item 1232, as amended) states that the National Pollutant Release and Transfer Register is to be made available in electronic format on the Public Information Bulletin website.

Provisions establishing the regulatory framework for reporting are set out in the Environmental Protection Law Act. The authority may impose an administrative fine of PLN 10,000 for failure to submit a report by the deadline, and/ or a fine of PLN 5,000 for failure to ensure the quality of data submitted in terms of completeness, consistency or credibility. The fines are issued by the Provincial Inspectorates for Environmental Protection which imposed 93 fines on facility operators for failure to submit their reports by the deadline, of which 86 appeals were made. Many of the appeals were rejected (60%), of the remaining decisions, 20% were reversed and 8% were sent for review. In seven cases, appeals were submitted after the deadline had passed, representing 8% of all appeals. In the remaining cases, other solutions were found. Two decisions by the Chief Inspector for Environmental Protection were reversed following complaints to provincial administrative courts.

#### Reporting requirements

Facilities are required to register with their respective Provincial Inspectorate before reporting. Once registered, the facility operator is required to submit emissions data by the

**reporting deadline (31 March of the year following the end of the reference year). The submitted data must be in the correct format in keeping with the template provided in the national legislation, as referred to above (Journal of Laws No 141, Item 1154), and can be submitted in either electronic or hard copy format.**

#### Reporting practices

**The facility operator is responsible for reporting emissions to the regional authority (the Provincial Inspectorate for Environmental Protection - of which there are 16). The Provincial Inspectorate then verifies the data, checking first that the facility falls within the scope of the E-PRTR Regulation, and then that the report was submitted within the deadline. The emissions data is then verified on the basis of inspections at the facility or of documents held by the Provincial Inspectorate (data forwarded for other reporting purposes) to check for completeness, consistency and credibility.**

**In addition to this, the national authority, the Chief Inspector for Environmental Protection conducts a general analysis concerning the number of facilities required to submit reports. Quality control of data, i.e. detecting and locating errors in reports, duplicate reports, etc. is performed through the use of the Validation Tool. In the event that any errors are identified, the Chief Inspector for Environmental Protection forwards the details to the Provincial Inspectorate for Environmental Protection in order to have the errors removed or, if necessary, to have the accuracy of the data assessed. Moreover, the Chief Inspector for Environmental Protection is responsible for issuing identification numbers to facilities. The Chief Inspector for Environmental Protection, in his capacity as the appellate body, also assesses appeals lodged by facility operators against decisions imposing fines taken by the Provincial Inspectorates for Environmental Protection; he also drafts responses to complaints against his decisions submitted to provincial administrative courts. The Chief Inspector for Environmental Protection drafts and submits the report for Poland to the European Commission after it has been approved by the Minister for the Environment.**

#### Data quality assurance and assessment

**Assessment of the quality of data is carried out by Provincial Inspectorates for Environmental Protection on the basis of: the results of inspections of facilities on the ground, and based on documentary analysis; documents containing data submitted under various reporting systems (e.g. payment system); and project documentation, implementation documentation and decisions granting integrated permits to facilities. A two-stage process is performed for the verification of data submitted by facility operators (by the Provincial Inspectorates and the Chief Inspector for Environmental Protection) so as to ensure the quality of the data submitted.**

#### Public access

**The data contained in the National Pollutant Release and Transfer Register are available on the following website: [www.prtr-portal.gios.gov.pl](http://www.prtr-portal.gios.gov.pl). This website allows searches to be carried out by facility, pollutant, industrial activity and location.**

#### Confidentiality

**There have been no claims for confidentiality in Poland for the reporting period.**

#### Public participation

**No response was provided by the Member State.**

#### Access to justice

**No response was provided by the Member State.**

#### Public awareness and capacity building

**No response was provided by the Member State.**

#### Cooperation and assistance

**No response was provided by the Member State.**

## Portugal

A summary of the information reported by Portugal is presented in Table 5.30.

*Table 5.30 Overview of main information reported by Portugal on implementation of E-PRTR*

#### Reporting on E-PRTR

**The Portuguese Environment Agency (Agência Portuguesa do Ambiente, APA) oversees national PRTR emissions reporting. The competent authorities responsible for identifying E-PRTR facilities and for collecting information on pollutants from point sources are as follows:**

- Azores Regional Directorate for the Environment;
- Madeira Regional Directorate for the Environment;

- North Regional Coordination and Development Committee;
- Central Regional Coordination and Development Committee;
- Lisbon and Tagus Valley Regional Coordination and Development Committee;
- Alentejo Regional Coordination and Development Committee;
- Algarve Regional Coordination and Development Committee; and
- Decentralized services of the APA:
  - River Basin District Administration for the North Region;
  - River Basin District Administration for the Central Region;
  - River Basin District Administration for the Tagus Valley Region;
  - River Basin District Administration for the Alentejo Region; and
  - River Basin District Administration for the Algarve Region.

#### Legislative and regulatory framework

**The European Pollutant Release and Transfer Register (E-PRTR) is established by the following national law:**

- **Decree-Law No 127/2008, of 21st of July lays down the content of the national E-PRTR (Article 4), the national authority competent for E-PRTR (article 2), the regional competent authorities (article 3), the workflow and deadlines for the communication of data (articles 3 and 5), the responsibility for the data (article 6) as well as infringements (article 8);**
- **Decree-Law No 6/2011, of 10th January amended Decree-Law No 127/2008 of 21 July regarding the timetable for the communication of annual data; and**
- **Regional Decree-Law No 30/2010/A, of 15th of November, of the Azores Autonomous Region, establishes the regional PRTR. Chapter V of the Regional Decree-Law includes content (article 102), operator's obligations (article 103), responsibility for the data (article 104) and infringements (article 123(f) and (j)).**

With regard to the penalties planned and applied in compliance with Article 20 of the E-PRTR Regulation, Article 8 of Decree-Law No 127/2008 of 21 July 2008 stipulate serious infringements (Article 8(1)) and minor infringements (Article 8(2)) (under the terms of Law No 50/2006 relating to the framework law for environmental infringements). The Portuguese Environmental Agency (APA), in its capacity as the national authority responsible for E-PRTR, checks irregularities and communicates them to the Inspectorate-General (IGAMAOT) in its capacity as the competent body for the application of penalties for infringements.

#### Reporting requirements

**All data must be submitted electronically. Facilities operating in all regions in Portugal except the Azores are required to submit their reporting data to the regional competent authorities by 31 May of the following year. A different deadline applies to facilities operating in the Azores (30 April). The regional authorities are required to submit their collated reporting data to the national authority by 30 November.**

#### Reporting practices

**Operators are requested to login and fill in the national E-PRTR questionnaire for each reporting year. Each facility registration is then approved by the regional competent authority (of which there are 12), and thereafter communication with the facility operator is conducted via this electronic system.**

**Reporting practices vary slightly for operators in the Azores where a pre-filled PRTR electronic questionnaire with identification and pollutants data is set to operators requiring operators to only fill in the information regarding the current reporting cycle (in terms of quantities and the determination method).**

#### Data quality assurance and assessment

**A new database was created to harmonise PRTR reporting with IPPC reporting requirements as well as those for the collection of waste data from facilities to avoid duplications in reporting requirements. This website includes a basic validation tool that compares the current data to the previous data and has proven to be very useful to the validation process. In addition, the regional competent authorities are responsible for checking consistency between the PRTR quantities and the information communicated in the Annual Environmental Reports (including reporting data for the IPPC and IED), as well as checking with the CO<sub>2</sub> emissions reported as part of the emission trading scheme and the integrated map for the registration of waste. Whenever irregularities are detected, the operator is questioned by the respective regional competent authority which in turn updates the APA of discussions had.**

#### Public access

**National and European PRTR data can be accessed via the APA website - <http://www.apambiente.pt/index.php?ref=17&subref=156&sub2ref=369>. This includes links to the relevant European and regional websites, as well as downloadable Excel and PDF versions of relevant data. Requirements to make PRTR data publically available are stipulated by Law No 19/2006 which obliges the national authorities to disseminate public environmental information and to make it publically available.**

#### Confidentiality

**There have been no claims for confidentiality in Portugal for the reporting period.**

Public participation  
**No response was provided by the Member State.**

Access to justice  
**No response was provided by the Member State.**

Public awareness and capacity building  
**No response was provided by the Member State.**

Cooperation and assistance  
**No response was provided by the Member State.**

## Romania

A summary of the information reported by Romania is presented in Table 5.31.

*Table 5.31 Overview of main information reported by Romania on implementation of E-PRTR*

### Reporting on E-PRTR

The National Environmental Protection Agency (ANPM) is the environmental authority in charge of implementing the national legislation on E-PRTR. This role includes establishing and overseeing the databases and additional information, as well as to draw up preliminary reports at national level in order to develop the National PRTR and managing the webpage dedicated to this register. The Ministry of the Environment and Climate Change (MMember StatesC) is responsible for collating the data into a consolidated report and for sending it off to the European Commission and the European Environment Agency.

#### Legislative and regulatory framework

**E-PRTR requirements are transposed into national legislation by the Government Decision No 140/2008 establishing the institutional framework for direct implementation of the E-PRTR Regulation which includes provisions to issue penalties in the case of non-compliance. In the current reporting period (2010-2013), no penalties were issued as all operators met the reporting requirements.**

#### Reporting requirements

**All IPPC facilities were required to submit an Annual Environmental Report to ANPM which contains information on the release of pollutants and waste management. This reporting obligation was specified also in the environmental permit. For non-IPPC facilities, the permits set out reporting obligations according to the directive governing the activities of that particular facility including reporting obligations with respect to pollutant release. The capacity threshold for reporting is the same as the E-PRTR Regulation. It is the responsibility of the operator to provide the annual reports, to ensure the quality of the data reported, and keep records of the data from which the reported information derived. The reporting requirements for operators comply with the E-PRTR Regulation and are based on the reporting methodology set out in the 'Guidance Document for the implementation of the European PRTR'.**

**As of 29 October 2012 (following GD No 1000/2012) the county environmental protection agencies (APMs) are the competent authorities in charge with issuing integrated environmental permits (for facilities falling under Directive 2010/75/EU on industrial emissions (IED) - Annex I) / environmental permits (for non-IPPC/non-IED facilities/activities), and with coordinating the reporting activity, including under the E-PRTR Regulation. All facilities covered by Directive IED - Annex I are required to submit annually to county environmental protection authorities a document called Annual Environmental Report containing information on the release of pollutants and waste management.**

#### Reporting practices

**The National Environmental Protection Agency (ANPM) sends to all county environmental protection agencies (APMs) in the territory a notification along with the working methodology for the opening of the annual collection/reporting of data from economic operators. Then, based on the inventories of the sites falling under the E-PRTR Regulation, APMs inform all economic operators in those counties of the launching of the online data collection and reporting campaign. Each year, the opening of the online reporting campaign for E-PRTR is posted also on the homepage of ANPM webpage (<http://www.anpm.ro>). Economic operators send APMs, both on paper and in electronic format, the individual report approved by the management of the industrial facility or the parent company, where applicable, by the specified deadline. In the previous reporting period all operators submitted paper reports and ~99% also submitted electronic versions.**

Since 2013 the National PRTR has been integrated in the Integrated Environmental System, accessible by operators at the following address: <https://raportare.anpm.ro>. Operators of industrial facilities governed by Directive 2010/75/EU on industrial emissions (IED) first report in the IPPC Register, created within the Integrated Environmental System and, if threshold values set under E-PRTR Regulation are exceeded, the reporting system automatically enters in E-PRTR the quantities of pollutants released and transferred, as well as the quantities of waste transferred off-site. For the other non-IED industrial facilities, the information contained in individual reports are entered online directly into the database of the national PRTR, part of the Integrated Environmental System, by economic operators. Multiple user guides to help operators use the reporting platform are available online <https://raportare.anpm.ro>.

The Ministry of the Environment and Climate Changes (MMember StatesC) approves the content of the data collected and takes the decision to report the information at EU level.

#### Data quality assurance and assessment

Operators are required to monitor and report the quality of the reporting data as part of the Annual Environmental Reports they submit. To verify this self-monitoring process, checks are conducted by the representatives of the National Environmental Guard (the Romanian inspection and control authority that checks the implementation of the national legislation harmonised with the European Union legislation in the field of environmental protection). The individual PRTR reports submitted by operators are compared at the level of county environmental protection agencies with annual environmental reports. Thus assessment on data quality is conducted at three stages - local, regional and national. Where discrepancies are found, operators are informed and asked to re-analyse the submitted data with a view to improving their quality, completeness and accuracy.

#### Public access

The Internet address where the national PRTR can be accessed is <http://prtr.anpm.ro/>. For members of the public that do not have access to the Internet, electronic information points are available which offer the public the possibility to access environmental information, including the National Register and the European PRTR.

#### Confidentiality

The data for which confidentiality was claimed and were withheld for reporting years 2010, 2011 and 2012 were those concerning the quantities of hazardous and non-hazardous waste transferred off-site within the country. The main reason cited by operators and supported with documents was the policies of parent companies regarding the protection of legitimate economic (commercial or industrial) interests.

The number of claims by year are as follows:

- 2010: 2;
- 2011: 1; and
- 2012: 4.

#### Public participation

The national PRTR is available to the public on ANPM's webpage (<http://prtr.anpm.ro/>) and includes a special Section dedicated to the public, called "Public opinion". In this Section, the public can send questions about the national PRTR, express their views, and send suggestions regarding the development or amendment of the national or European PRTR.

#### Access to justice

Directive 2003/4/EC on public access to environmental information was transposed in the national legislation by Government Decision No 878/2005 on public access to environmental information, published in the Official Gazette, Part I No 760 of 22 August 2005.

#### Public awareness and capacity building

The response provided by the Member State is included under "public access" and "public participation".

#### Cooperation and assistance

No response provided by the Member State (not applicable).

## Slovakia

A summary of the information reported by Slovakia is presented in Table 5.32.

**Table 5.32** *Overview of main information reported by Slovakia on implementation of E-PRTR*

### Reporting on E-PRTR

A number of public authorities are involved in reporting on E-PRTR in Slovakia, as follows:

- Ministry of Environment of the Slovak Republic (MoE SR) is the central body of state administration for formation and protection of environment. It oversees reporting on E-PRTR in Slovakia;
- Slovak Hydrometeorological Institute (SHMI) is the competent authority concerning the management and administration of the integrated register of the information system and the national pollution register;
- Slovak Environmental Inspectorate (SEI) is responsible for regulating environmental reporting, consisting of a national head office which oversees four regional bodies; and
- Slovak Environment Agency (SEA) is responsible for environmental reporting in terms of collating data, checking data availability, drafting reports and submitting them.

### Legislative and regulatory framework

**The legal and regulatory framework for environmental reporting is set out in the Act of the Slovak National Government No. 205/2004 Coll. on gathering, holding and dissemination of information on environment, as amended by later legislation (and the ensuing amendments: Regulation of the Ministry of Environment of the Slovak Republic No. 411/2007 Coll. executing the Act No. 205/2004 Coll., as amended by later legislation, and since 1st December 2010 replaced by the Regulation No. 448/2010 Coll.).**

**The SEI is responsible for enforcing the regulatory provisions and can impose fines of between €660 and €16,500 in the case of defined administrative torts, penalties for infringement of obligations like for instance non-introduction of evidence, non-gathering of information, and non-reporting of information.**

### Reporting requirements

**Operators are required to report data on emissions of selected pollutants into the National Pollution Register regardless of the amount and even in the case of lower threshold value. The operator is responsible for identifying whether or not it is subject to E-PRTR reporting requirements – in the case of any uncertainty, the MoE SR will intervene and decide.**

### Reporting practices

**The operator submits reporting data to the national authority (SHMI) which liaises with the operator to verify the submitted data. The operator must submit data either in electronic or written format by 31 March of the following year. Most of the reports are submitted electronically, and the SHMI provides operators with an electronic template to facilitate with reporting.**

**There is an effort among the authorities to minimise the amount of data reported by operators, where data or similar data were reported pursuant to fulfilment of other duties in the area of environment. For instance in case of data reported into the National Pollution Register an operator does not have to report some selected data if these data were already reported into the National Emission Inventory System or into the Complex Evidence on Waters. In this way, the national PRTR is connected with 2 information systems which are also operated by the SHMI. These are the National Emission Inventory System, and the Complex Evidence on Waters. These 2 information systems gather data on pollution sources, air emissions, discharge of waste waters and contamination in the discharging waters and are intended to harmonise reporting requirements and simplify the process of validation and harmonisation of reported data for air and waters. The systems serve for reciprocal exchange of data on same level and reporting unit and for data verification and validation.**

### Data quality assurance and assessment

**Data validation is provided through data comparison in the relevant information systems: National Emission Inventory System (air emissions) and Complex Evidence on Waters (release of pollutants into the waters). The SHMI is the authorised organisation for data gathering, processing and reporting from the listed systems. The SHMI and the SEA perform cross control in national PRTR system with data in other relevant information systems which can overlap with data relating to the E-PRTR facilities.**

### Public access

**The SHMI oversees the National PRTR system; it provides obtaining and collecting of data, its electronic processing, validation and archiving of data reported - <http://ipkz.shmu.sk/index.php>. Information portal within the competence of the MoE SR - Enviroportal: <http://www.enviroportal.sk/environmentalne-temy/starostlivost-o-zp/ipkz-integrovana-prevencia-a-kontrola-znecistovania/informacny-system-ipkz-1/uda>. Along with the SEA website: <http://www.sazp.sk/public/index/go.php?id=1000>.**



**Confidentiality**

**There have been no claims for confidentiality in Slovakia for the reporting period.**

**Public participation**

**The National Pollution Register is open to the public, although no public participation has been recorded to date.**

**Access to justice**

**Relevant procedures are stated in the Act No. 211/2000 Coll. on free access to information as amended by later legislation. In relation to the National Pollution Register, there have been no incidences of individuals considering that their request for information has been ignored, wrongfully refuse or otherwise not dealt with it.**

**Public awareness and capacity building**

**Information on the National Pollution Register is regularly presented at conferences, seminars, workshops and training activities at the national, as well as international levels, as well as being published in professional journals - mainly within Slovakia. Further, the SEA has established the IPPC National Training Centre which provides consultancy and tutorials for state administration bodies, operators, as well as for public on IPPC and related issues, including E-PRTR.**

**Cooperation and assistance**

**The SEA regularly provides support in the area of technical help and support to other countries of the Southern and South-eastern Europe, in relation to the possible accession of these countries mainly. In 2011 and 2012, for instance the SEA was involved with a European Commission project for capacity building in Croatia which involved the sharing of best practice, knowledge and experience of the SEA have in relation to administration and operation of information systems on IPPC and National Pollution Register.**

## Slovenia

A summary of the information reported by Slovenia is presented in Table 5.33.

*Table 5.33 Overview of main information reported by Slovenia on implementation of E-PRTR*

**Reporting on E-PRTR**

The Slovenian Environment Agency (ARSO) is a constituent body of the Ministry of the Environment and Spatial Planning of the Republic of Slovenia and is responsible for collecting E-PRTR reports submitted by operators of installations, ensuring their quality and drawing up an annual E-PRTR report for the European Commission.

**Legislative and regulatory framework**

**The legislative framework for reporting E-PRTR is set out under the Decree on the implementation of Regulation (EC) No 166/2006 of the European Parliament and of the Council concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC (Uradni list RS (UL RS; Official Gazette of the Republic of Slovenia) No 77/2006). In addition, the E-PRTR reporting obligation is included in the reporting obligations of the IPPC environmental permits issued, and other environmental permits issued in accordance with the Environmental Protection Act (UL RS Nos 39/06-UPB1).**

**The body responsible for monitoring reporting on E-PRTR is the Inspectorate for Agriculture and the Environment.**

**The penalties for failure to report range from €4,173 to €12,519 for a legal person that is the operator of an installation, and from €2,087 to €4,173 for the responsible person of an operator.**

**Reporting requirements**

**Operators have to carry out regular measurements of the parameters for their releases of substances into the atmosphere and their discharges of industrial waste water; these parameters comprise both those imposed by national legislation for these installations and additional parameters known as 'PRTR parameters' if, during operation, these parameters reach levels that could exceed the thresholds for reporting to the PRTR register. The monitoring of PRTR data may be carried out by institutions authorised by ARSO in accordance with the standard methods or with other methods, provided that the person authorised to carry out the measurements has obtained accreditation for these methods.**

**Reporting practices**

**Reporting to the E-PRTR takes place in regular annual cycles, by 31 March of the current year for data on the previous calendar year. All E-PRTR reports are submitted to ARSO in writing.**

**ARSO is the competent body for specifying the facilities that have to report and for drawing up the overall E-PRTR report for the Republic of Slovenia. ARSO is also the body responsible for collecting the reports on emissions of substances into the atmosphere and into waters, the reports on waste generated and on their management and the reports on the treatment of waste; it keeps a register of emissions allowances (trading in greenhouse gas emission allowances) and collects other environmental data.**

Data quality assurance and assessment

**All data are assessed to determine whether the data reported are correct; from the name of the parent enterprise and the coordinates of the location, to the data on the quantity of substances emitted and off-site transfers of waste. ARSO is responsible for conducting data quality assurance and assessment.**

Public access

**The information in the register can be accessed by the public through the Web E-PRTR application managed by the European Commission (<http://prtr.ec.europa.eu>).**

Confidentiality

**There have been no claims for confidentiality in Slovenia for the reporting period.**

Public participation

**No response was provided by the Member State.**

Access to justice

**No response was provided by the Member State.**

Public awareness and capacity building

**No response was provided by the Member State.**

Cooperation and assistance

**No response was provided by the Member State.**

## Spain

A summary of the information reported by Spain is presented in Table 5.34.

*Table 5.34 Overview of main information reported by Spain on implementation of E-PRTR*

### Reporting on E-PRTR

The Ministry of Agriculture, Food and the Environment (MAGRAMA) oversees the National Pollution Release and Transfer Register (PRTR). The regional governments of the Autonomous Communities

Legislative and regulatory framework

**The legal framework for reporting E-PRTR is set out under Law No 5/2013, amending Law No 16/2002, and of Royal Decree 815/2013 of 18 October approving the Regulation on industrial emissions and development of Law No 16/2012 of 1 July on integrated pollution prevention and control. The fourth provision of this new Royal Decree amends Annex 1 to Royal Decree 508/2007 by updating the list of industrial activities which must be notified to the National Pollution Release and Transfer Register (Spanish PRTR). (Official State Gazette (BOE) 251 of 19 October 2013, [http://www.prtr-es.es/Data/images/BOE\\_A\\_2013\\_10949.pdf](http://www.prtr-es.es/Data/images/BOE_A_2013_10949.pdf)). Under these new rules, all IED/IPPC activities in Spain are activities which must be reported to the Spanish PRTR register.**

**To date there have been no experience with penalties applied for non-compliance with the requirement to submit information to the Spanish PRTR register or to the E-PRTR register. The competent authorities of the regional governments (Autonomous Communities) are responsible for enforcing the penalty system where necessary.**

Reporting requirements

**The regional governments of the Autonomous Communities are responsible for designating the authorities which must identify the operators required to submit reports and for collecting information on emissions and waste transfers and verifying its quality. The Autonomous Communities are then required to submit the regional reporting data to the Ministry of Agriculture, Food and the Environment (MAGRAMA) for collation at a national level. MAGRAMA is the administrator of the National Pollution Release and Transfer Register (Spanish PRTR), responsible for revision, management and publication of the information, as well as inter-administration and inter-departmental coordination. Also note that where PRTR reporting relates to emission transfers to water bodies that are situated between regions, the national authorities are responsible for collecting the data rather than the Autonomous Communities.**

Reporting practices

**The process of notification, validation, uploading/transcription of data and management of the information in the Spanish PRTR is electronic and uses one single platform ([www.prtr-es.es](http://www.prtr-es.es)).**



Guidelines for both the operators and the environmental authorities on how to operate and fulfil their obligations in the process are also available online (<http://www.prtr-es.es/documentos/manuales-usuario-prtr>). However, in some industrial sectors it is still possible to notify the competent authority in paper form (e.g. for the intensive rearing of poultry or pigs) where technology is not available to submit their notifications electronically (~40 to 50 % of these installations continue to meet these requirements in paper form, but the numbers are falling).

The deadline for submissions by the operator is determined by the Autonomous Community, and is typically 31 March. The Autonomous Communities have until 30 June to submit the reports for their respective regions to MAGRAMA, which in turn has until 15 November to submit to the European Commission.

#### Data quality assurance and assessment

The Autonomous Communities conduct checks to assess data quality submitted before it is collated at a national level. At a national level, the online Spanish PRTR system includes a number of internal checking systems which signal if, for example, a % is above the threshold for a given substance, or where the % difference is significantly different between reporting years. Further, the system consists mostly of closed tables which limit the responses that operators can submit – this reduces the scope for error and inconsistencies. A working group is also in place, coordinated by MAGRAMA and comprising the competent authorities (Autonomous Communities and river basin authorities), which analyses the information for each cycle (report, revision and publication) and, if necessary, approves criteria for validating substances or sectors of activity, where this is possible.

#### Public access

All the information published in the Spanish PRTR register is accessible to the public on [www.prtr-es.es](http://www.prtr-es.es). The Spanish PRTR includes a complete inventory of the industrial complexes with reporting obligations (<http://www.prtr-es.es/Informes/InventarioInstalacionesIPPC.aspx>). The regional PRTR registers are available on <http://www.prtr-es.es/conozca/Enlaces-interes-html#comunidadautonoma>. Since 2007, ~5% of the information requests recorded by the Spanish PRTR were made to the Citizen Information Office of the Ministry of Agriculture, Food and the Environment; while the remaining 95% were made electronically.

#### Confidentiality

The only data not provided to the general public relates to the owners' names, and the e-mail addresses and telephone numbers connected to specific individuals. With regards to confidentiality claims, none were made in the reporting period.

#### Public participation

An information portal is available for public participation - see <http://www.magrama.gob.es/es/ministerio/servicios/participacion-publica/default.aspx>, and <http://www.magrama.gob.es/es/ministerio/servicios/informacion/default.aspx>. In addition to this, public participation was factored into the reporting process for this reporting period through consultation with the public when drafting the report.

#### Access to justice

Provisions concerning access are stipulated in Law No 27/2006 of 18 July 2006 on access to information, public participation in decision-making and access to justice in environmental matters (transposing Directive 2003/4/EC and Directive 2003/35/EC). In general, any request for information from the administration (both at national and regional level) can be sent and processed by any existing means of communication: paper, fax, telephone, etc., and submitted in any general register of any public institution.

#### Public awareness and capacity building

A number of dissemination activities have been organised to publicise the existence of the national PRTR – including, presentations at events at the Ministry, regional/ national conferences, universities, and industry association conferences, among others. In addition, a social networking presence has been established on Twitter and Facebook.

#### Cooperation and assistance

Spain has carried out a number of important dissemination and capacity-building activities at international level, particularly in Latin America and Europe.

## Sweden

A summary of the information reported by Sweden is presented in Table 5.35.

*Table 5.35 Overview of main information reported by Sweden on implementation of E-PRTR*

### Reporting on E-PRTR

The Swedish Environmental Protection Agency (EPA) is responsible for reporting to E-PRTR.

#### Legislative and regulatory framework

**The general provisions for environmental reporting are set in the Environmental Code (SFS 1998:808). Rules on the operator's responsibility for self-monitoring and environmental reports are given in chapter 26 of the Code. Additional reporting requirements were introduced under the Regulation on Environmental Reports (NFS 2006:9) to reflect otherwise missing elements of the E-PRTR regulation (namely requirements to report administrative information, a description of the facility activity and an emission declaration).**

**More detailed provisions regarding reporting requirements are set in ordinances issued by the government in relation to environmental permits (which can overrule the general provisions set in the Code). The relevant ordinances include the Ordinance on Consideration of [environmental] cases and matters (Miljöprövningsförfordningen SFS 2013:251), which regulates environmental permitting of economic activities in Sweden, in combination with the Ordinance on Environmentally Hazardous Activities and the Protection of Public Health (SFS 1998:899), which regulates how the information is presented in the annual environmental reports. More information concerning the implementation of the E-PRTR reporting requirements is available in Chapter 5 of Naturvårdsverket (2013, p.24) (SMED Report No 115 2013).**

**The regulatory framework for environmental reporting in Sweden is established in Chapter 30 of the Environmental Code (SFS 1998:808) pertaining to the imposition of sanctions. More specific provisions are detailed in the Ordinance on Environmental Sanction Charges (SFS 2012:259) which sets rules on environmental sanction charges for non-compliance and late submissions of environmental reports. It also lists the infringements for which supervisory authorities can impose environmental penalty charges. The charges applied vary according to the seriousness of the offence and are determined by the Swedish EPA. For example, fines imposed for the late submission of reporting data concerning hazardous activities can be either 1,000 SEK (€110) or 2,000 SEK (€215) depending on the facility's permit. The number of environmental sanction charges associated with late submission or non-delivery of environmental reports for reporting year 2009 was 211. No further information for the current reporting period was provided by the Member State.**

#### Reporting requirements

**The operator is responsible for submitting an annual environmental report, being compliant with reporting requirements, and for keeping informed about the environmental impact caused by its' activities (by conducting relevant studies and measurements). The operator is also responsible for the E-PRTR classification of its' facility/facilities.**

**Sweden reports that a number of reporting requirements are more stringent in national conditions compared to the E-PRTR Regulation, as follows:**

- **Operators are required to report emissions and transfers for five additional parameters compared to those listed in the E-PRTR Regulation;**
- **The Swedish regulation requires separate reporting of the fossil fraction and the biogenic fraction of carbon dioxide emissions as well as the total emissions;**
- **The requirement of separate reporting is a result of the Swedish greenhouse gas inventory and reporting to the UNFCCC and the EU Monitoring Mechanism Decision; and**
- **Lower thresholds are set for approximately half the number of the pollutants.**

**Sweden also indicates that a number of reporting requirements have not been transposed to national conditions on the basis that the causes of emissions are not applicable, including:**

- **Reporting is not required for 26 of the parameters set out in Annex I of the E-PRTR Regulation. Reporting is only required in the case of unintentional formation; and**
- **Reporting releases to land by land treatment or deep injection.**

#### Reporting practices

**The environmental report must be submitted by 31 March of each year (the option to extend this deadline by a month exists in exceptional circumstances – to be decided by the Swedish EPA). Since 2011 all environmental reports shall be submitted through the Swedish Portal for Environmental Reporting (SMP). SMP is a web application which is owned by the Swedish EPA and the County Administrative Boards. The system means that the operators are responsible for entering their own information into the system, making the data handling easier and more secure. More information is set out in Chapter 6 of Naturvårdsverket (2013, p. 29, SMED Report No 115).**

Several difficulties have been identified by operators in relation to reporting practices and the SMP – particularly when the system was first introduced. Examples of such difficulties associated with reporting practices include: designating the correct method for calculations and being consistent with the method used; confusion between reporting off-site transfer destined for waste water versus as a release to water; site identification where hazardous waste has been exported to third countries; and using kg as a reporting unit.

#### Data quality assurance and assessment

The consistency of reported data is partly checked by SMP. There are several built-in control functions in SMP in order to prevent that incorrect data is reported into the system. For instance there is a fixed parameter list and only these parameters can be reported. This prevents the same pollutant from being reported into the system in different forms. Also, during data input, data from the previous year is displayed at the same time to act as a reference point for operators. Furthermore, there are functions to prevent the operators from submitting their data if any all required reporting fields are blank. Also, if a value is less than 50 % or greater than 200 % compared to previous reporting year this is highlighted. The credibility of the data quality is checked further by a manual data review conducted by SMED (the Swedish Environmental Emissions Data). If data not is considered credible during the manual review, the Swedish EPA is informed and will contact the operator by e-mail and request additional measures and monitoring.

The Member State reports that during the first 3 years of reporting there were significant data gaps in reporting but that in large part this issue has been addressed since the introduction of the SMP.

#### Public access

The Swedish PRTR can be accessed by the public here

<http://utslappisiffror.naturvardsverket.se/en/>. There are public computers in all Swedish libraries with internet access.

#### Confidentiality

There were no confidentiality claims approved in the reporting period. The Member State reports that one confidentiality claim was made; however, the operators withdrew the claim before it could be processed.

## United Kingdom

A summary of the information reported by the United Kingdom is presented in Table 5.36.

*Table 5.36 Overview of main information reported by the United Kingdom on implementation of E-PRTR*

#### Reporting on E-PRTR

Responsibility for implementing PRTR in the UK lies with various competent authorities. In England and Wales, this is with the Environment Agency, Natural Resources Wales and over three hundred local authorities. In Scotland and Northern Ireland, the Scottish Environment Protection Agency and the Department for Environment in Northern Ireland respectively. The Department of Energy and Climate Change is responsible for the off shore sector. The Department for Environment, Food and Rural Affairs (Defra, hereinafter) co-ordinated the overall UK report using information from these organisations.

#### Legislative and regulatory framework

**In England and Wales, Regulation 60 of the Environmental Permitting (England and Wales) Regulations 2010 establishes the main basis for collecting information from industrial sources more generally but it is used to give effect to PRTR in particular. In Scotland, PRTR data is collected using an Information Notice under the Pollution Prevention and Control (Scotland) Regulations 2000, the Waste Management Licensing Regulations 1994 and the Waste Management Licensing (Scotland) Regulations 2011 and the Water Environment (Controlled Activities) Regulations (Scotland) 2005 and 2011. In Northern Ireland, PRTR relies on Regulations 32(2) and 32(3) of the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 to obtain the information required. These regulations provide a power to issue a notice requiring information for the purpose of compiling an inventory of emissions. Failure to comply with such a notice 'without reasonable excuse' is a criminal offence punishable by a fine, or on indictment, imprisonment. In England and Wales, Regulations 38 and 39 of the Environmental Permitting Regulations (EPR) 2010 set out the offences and penalties. A person guilty of an offence under this regulation could be liable (i) on summary conviction, to a fine not exceeding the statutory maximum (currently £5000); or (ii) on conviction to a fine or imprisonment for a term not exceeding two years or both. In Northern Ireland Regulation 36 of the Pollution Prevention and Control (Industrial Emissions)**

**Regulations (Northern Ireland) 2013** sets out the offences and penalties. A person guilty of an offence under this Regulation could be liable (i) on summary conviction, to a fine not exceeding the statutory maximum or (ii) on conviction to a fine or imprisonment for a term not exceeding two years, or both.

Relevant information pertaining to eligible offshore oil and gas (O&G) installations is also provided for PRTR purposes - details on the offshore legislative regime can be accessed at: <https://www.gov.uk/oil-and-gas-offshore-environmental-legislation>.

#### Reporting requirements

The reporting obligation lies with operator exceeding the established European capacity threshold. Operators are required to submit reporting data to the relevant competent authority – requirements are stipulated in the legislation referred to previously. The relevant competent authorities are as follows: The Environment Agency collects information from the larger sites in England and on behalf of the regulator in Wales (NRW); while the local authorities, under Defra's and the Welsh Government's guidance, collect information from a relatively smaller number of sites. The Scottish Environment Protection Agency (SEPA) collects information from all sites located in Scotland; while the Department for Environment in Northern Ireland collects the data for all sites located in Northern Ireland. For the off-shore sector, the Department of Energy and Climate Change collects the information.

#### Reporting practices

The deadline for reporting to the Environment Agency is 28 February, and 31 January to the Northern Ireland Environment Agency. Reporting is mostly submitted electronically (in ~95% of all cases), particularly as reporting tools are mostly based on the internet (web-based forms) or rely on other electronic means, for example Member States Excel.

#### Data quality assurance and assessment

Each competent authority is expected to carry out exhaustive checks and assurance on data submitted by operators as well as follow up on any missing data. Competent authorities are also expected to use information and analysis from the UK's internal reviews to inform needed changes before a final submission is made. Competent authorities also share information. In some cases, authorities may follow up with individual operators on issues relating to data quality if there is a clear need to do so. The following procedures are in place for quality assurance and assessment purposes:

- Online data entry system allows for initial validation of submitted data to ensure mandatory data is complete with given rules, e.g. releases are above reporting threshold;
- Non release data is reviewed for changes from previous year, e.g. company name change, new reporting facility etc.;
- Release data: outlier check - all values greater than +/- 50% of last years values (in regional PRTR database) and sent to operator and competent authority to review for accuracy;
- Pollutant and sector level checks are made for consistency, e.g. use of indicative lists. Also PRTR compared to other reporting requirements, e.g. EU-ETS, LCPD, UWWTD;
- Data is published on regional PRTR system at least four months before E-PRTR deadline to allow for public validation/verification; and
- Quality checks are in place to monitor annual reporting in terms of data quality and completeness – such checks find that there have been year on year improvements.

#### Public access

All data is available online (no request for data in alternative format has been made to date). The UK PRTR website (<https://www.gov.uk/uk-pollutant-release-and-transfer-register-prtr-data-sets>) allows various options for searches including by facility, pollutant, activity, and location (via Google map). All searches identified are possible both in aggregate and non-aggregate forms. Data split by devolved administration is available following websites:

- England and Wales: <http://www.environment-agency.gov.uk/homeandleisure/37793.aspx>
- Scotland: [http://sepa.org.uk/air/process\\_industry\\_regulation/pollutant\\_release\\_inventory.aspx](http://sepa.org.uk/air/process_industry_regulation/pollutant_release_inventory.aspx)
- Northern Ireland: [http://www.doeni.gov.uk/niea/general\\_public.htm](http://www.doeni.gov.uk/niea/general_public.htm)

Additional information of relevance to the PRTR is available on the National Atmospheric Emissions Inventory (NAEI) website which holds information on diffuse sources and emissions factors, and the UK Air resource website. These are <http://naei.defra.gov.uk/> and <http://uk-air.defra.gov.uk/>.

#### Confidentiality

29 sites have claimed confidentiality on commercial grounds in respect of waste transfers and transfer of pollutants in waste water.

#### Public participation

**This includes stakeholder consultation on implementation of the PRTR requirements, and the public is invited to contact Defra with any issues observed, including on how the PRTR inventory is managed.**

Access to justice

**Review of decisions on access to information are within the scope of EU legislation (Directive 2003/4/EC on access to environmental information) and domestic implementing legislation, including the Environmental Information Regulations 2004 and the Environmental Information (Scotland) Regulations 2004. Following the exercise of a right to request an internal review by the public authority responsible for deciding whether or not to release the information, the Information Commissioner's Office examines complaints from members of the public who feel that their request for information has not been dealt with properly by the public authority. The First-tier Tribunal (Information Rights), Upper Tribunal and, ultimately, the Supreme Court give further and higher levels of appeal. The ICO, Tribunals and the Supreme Court have powers to order public authorities to release information. The Scottish Information Commissioner has broadly similar powers, although the appeal procedure operates without a tribunal.**

Public awareness and capacity building

**Information relating to PRTR is published on Defra's website.**

Cooperation and assistance

**The UK shares its experience in implementing PRTR widely - particularly through participation in E-PRTR Article 19 meetings and the Kiev Protocol's Working Group sessions. As well, information on the UK PRTR is globally available through <https://www.gov.uk/uk-pollutant-release-and-transfer-register-prtr-data-sets>**

## Appendix E Overview of the use of PRTR data

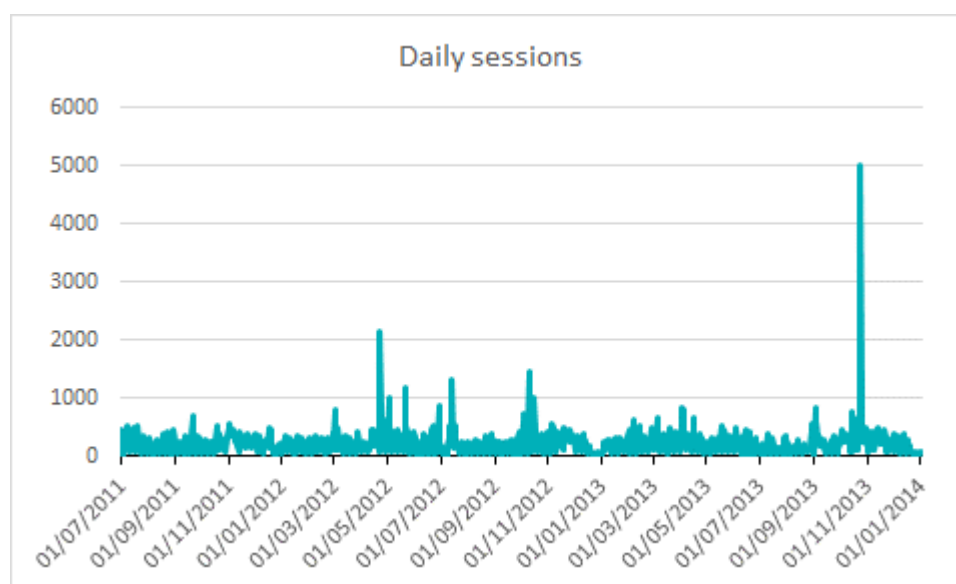
A review of the E-PRTR website was conducted to understand how it performs against the criteria of the regulation and also how the data is accessed and used. The review was supported by stakeholder engagement with key user groups, particularly on the access and use points.

### *Total sessions*

Number of sessions is a key parameter to measure the activity of the webpage. Google defines a session as “a period time a user is actively engaged with the website” and as “the container for the actions a user takes on the site”. In practical terms a session is equivalent to a user navigating the webpage until s/he leaves or becomes inactive.

During the 1<sup>st</sup> of July 2011 and 1<sup>st</sup> of January 2014 (2.5 years) a total of 221,712 sessions were recorded. This corresponds to an average of 242 sessions per day. Figure 5.7 illustrates the number of sessions per day over the study period. The average has declined significantly since the previous reporting period for which the average number of sessions per day was 589. The total number of sessions cannot be compared as the period of time is not the same (the first review considered a time period of 1.5 years between March 2010 and June 2011). Although the daily average from the previous reporting period is recognised as being an overestimate (due to peak activity in the last 4 months driving up this average), similar peak activity was observed in the current reporting period and so the daily averages are relatively comparable (EAA, 2010)<sup>20</sup>.

*Figure 5.7 Number of sessions per day*



As illustrated in the figure above there is no clear pattern in the temporal distribution of sessions nor any identifiable period of time while number of sessions is particularly high (e.g. peak-week or month). This is different to the previous reporting period, where there was greater website activity following the publication of new E-PRTR data (e.g.

<sup>20</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)

the highest number of visitors was 15,497 on 27 May 2011, with updates to the website uploaded in May of each year) (EAA, 2010)<sup>21</sup>. Whereas in the current reporting period there are a number of peak days that stand over the rest, there is no discernible pattern.

In order to understand the origin of this traffic, peak days with over 1,000 sessions per day were investigated further, offering the results in Table 5.37.

*Table 5.37 Number of sessions and referral source for peak days within the study period*

Date	Daily sessions	Main source of traffic	% of traffic from main source
<b>24/10/2013</b>	5011	tuttogreen.it referral	68.91%
<b>22/04/2012</b>	2166	tuttogreen.it referral	70.96%
<b>09/10/2012</b>	1450	tuttogreen.it referral	55.45%
<b>13/07/2012</b>	1309	tuttogreen.it referral	61.80%
<b>21/05/2012</b>	1174	tuttogreen.it referral	50.77%
<b>15/10/2012</b>	1027	tuttogreen.it referral	49.76%
<b>02/05/2012</b>	1005	tuttogreen.it referral	35.02%

It was revealed that the majority of traffic on those peak days was due to a link posted in an Italian environmental blog<sup>22</sup>. Surprisingly, this post was published on 20<sup>th</sup> June 2011, but even more than 2 years after, it was still referring a substantial amount of traffic towards the E-PRTR website. This is possibly due to a revival of the post due to sharing in social media. Similar trends were identified in the previous reporting period whereby much of the website traffic was directed from online news or TV sites (EAA, 2010)<sup>23</sup>.

#### *Acquisition channels and proportion of new users*

Between 1<sup>st</sup> July 2011 and 1<sup>st</sup> January 2014, the vast majority of sessions did not have a specific customer acquisition channel<sup>[1]</sup> assigned, as google analytics only recorded channel data since 25 July 2013. Thus channel data is only available for 80.7% of the total sessions between 1 July 2011 and 1 January 2014 (178,981).

Direct acquisition was the second main channel, representing 13.5% of sessions (29,876). This includes sessions that accessed the website by typing the URL or from a previously saved bookmark.

<sup>21</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)

<sup>22</sup> TuttoGreen - <http://www.tuttogreen.it/la-mappa-dell'inquinamento-in-europa-online-grazie-all'agenzia-europea-per-l%E2%80%99ambiente/>

<sup>23</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)

[1] An acquisition channel designate the path by which users have accessed the website



Referral from other websites (e.g. a link) represents 4.4% of all sessions (9,707). Organic search (e.g. search on google) accounts for 1.18% of sessions (2,610). Finally, sessions reaching the website from social media represent only 0.24% of the total (538), including Facebook (433), Blogger (59), FriendFeed (27), reddit (10), Twitter (4), among others which have led to just one or two sessions.

Table 5.38 lists the top ten sources of traffic during the study period, detailing also the proportion and total number of new users coming from those sources. The percentage of new sessions indicates that out of every 4 access to the website, one is by a new user. Compared to the previous reporting period, there appears to be a decline in the amount of traffic being directed from online news and TV sites (EAA, 2010)<sup>24</sup>. It is unclear if this is due to reduced usage and reference by the media, or reduced interest among the public to follow up cited data. A useful exercise beyond the scope of this project would be to examine how often the E-PRTR is referred to by the media across the two time periods.

*Table 5.38 Number of sessions and referral source for peak days within the study period*

Source/Medium	Sessions	% New Sessions	New Users
<b>(direct) / (none)</b>	163,195	20.80%	33,938
<b>tuttogreen.it / referral</b>	12,367	76.93%	9,514
<b>eea.europa.eu / referral</b>	10,609	29.47%	3,126
<b>google / organic</b>	7,634	23.53%	1,796
<b>apambiente.pt / referral</b>	2,470	11.38%	281
<b>facebook.com / referral</b>	1,556	43.83%	682
<b>stirileprotv.ro / referral</b>	1,452	54.13%	786
<b>translate.googleusercontent.com / referral</b>	1,354	2.88%	39
<b>ec.europa.eu / referral</b>	1,052	61.69%	649
<b>ghidulescu.ro / referral</b>	804	54.23%	436
<b>Total</b>	221,712	26.76%	59,337

### *Frequency*















As noted in Figure 5.8 59,337 sessions are from new users, representing more than a quarter of all sessions within the study period. Existing users visit the site with different frequencies. For example 8.7% of sessions (23,693) corresponded to a second visit while only 2.4% of sessions (5,441) corresponded to users visiting the site more than 200 times. Figure 10 below details the distribution of total sessions according to the session count. As a proportion of total users, the share of returning users is 73% which

<sup>24</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)



suggests that the website has a relatively well established following of users that are relatively familiar with the website and data.

*Figure 5.8 Distribution of total sessions among different frequency intervals*

Count of Sessions	Sessions
1	59,337 
2	23,693 
3	14,595 
4	11,145 
5	8,609 
6	7,099 
7	6,097 
8	5,193 
9-14	21,158 
15-25	19,530 
26-50	18,290 
51-100	13,824 
101-200	7,701 
201+	5,441 

From the figure above we can infer that a relatively large proportion of sessions correspond to second or further visits.

### *Countries*

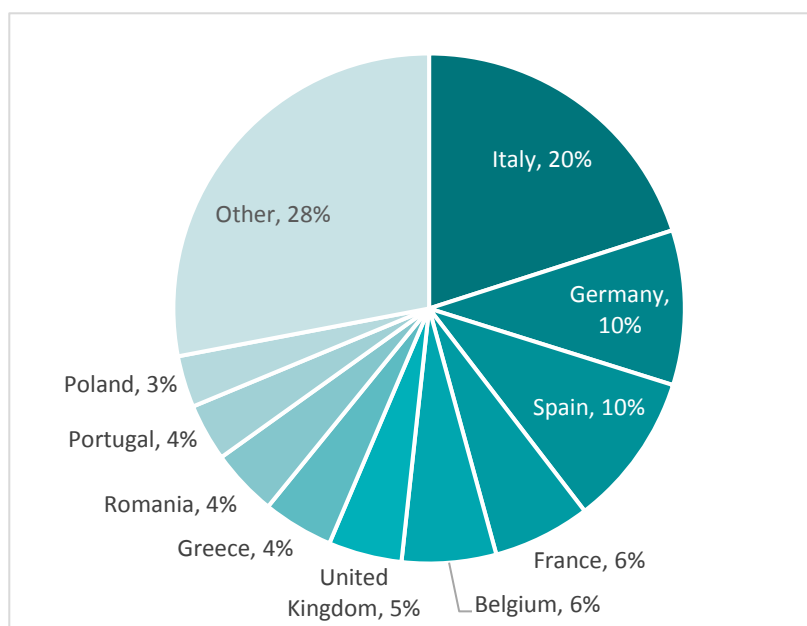
Thanks to the user IPs, Google Analytics is able to provide information on the country of origin of the sessions within the study period. Figure 5.9 illustrates the most active countries (Top 10) and their proportion of sessions on the E-PRTR website. To provide some context we compare the total number of sessions (221,712) to the total EU-28 population aged between 15 and 65, finding that 0.07% of this segment of the EU population are accessing the E-PRTR website (or 0.04% of the EU-28 population as a whole).

### *Conclusions*

The daily average number of website sessions has declined from 589 to 242 since the previous reporting period. Although the website usage indicates that the E-PRTR has a well-established following (with 73% of visitors returning visitors), there is no discernible pattern as to when users access the website. Previously it was reported that peak activity on the E-PRTR website was linked to the publication of data (i.e. in May). This can in part be explained by information obtained during the targeted stakeholder consultation (see Appendix G), which indicates that among the stakeholders questioned, the E-PRTR website is mostly used for air and water emissions data with respect to industrial activities at national or facility level. This would explain in part why there is no evidence of peak activity at the time the aggregated data is published.

According to the website analysis, an important source of website traffic is online media, whereby an online news article references E-PRTR data and readers follow through to the E-PRTR website as the original source of data. This was found to be the case in both the current and previous reporting periods – although more traffic was previously redirected from a wider variety of online media sources compared to in the current reporting period. It could be that the decline in website traffic since the previous reporting period is directly linked to a decline in the use of E-PRTR data by the media; however, this would require additional research to examine how much the online media refer to the E-PRTR data versus lack of interest among the public to follow through to the original source of data. This was beyond the scope of this project and is not covered further; although it could prove a useful recommendation to further understand the issue.

*Figure 5.9 Most active countries and their proportion of sessions*



As previously discussed, the most active referral site was an Italian blog, deriving a substantial amount of traffic to the E-PRTR site. It is therefore not a surprise that the most active country is Italy, followed by Germany, Spain and France. All the top 10 countries are EU member states. This contrasts with a previous assessment covering 1 March 2010 – 30 June 2011, which found United States to be one of the most active countries. Further, during the previous reporting period the most active countries included Romania, Portugal, Hungary and Austria – at the time of the E-PRTR data publication (EAA, 2010)<sup>25</sup>.

<sup>25</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)

## Appendix F Analysis of the E-PRTR scope

The aim of this Section is to provide a response to two key questions:

- Are the activities in Annex I covering all the potentially important sources of the 91 pollutants?
- Are the reporting thresholds for the 91 pollutants and waste transfers across all vectors still suitable?

The final part of this Section will also provide a review based on the Article 17 reporting completed by Member States on a three yearly basis for any issues with completeness of data and scope encountered.

### F.1 Assessment of Economic activities

A review of the activities listed within Annex I was conducted against the activities reported in the E-PRTR database in order to assess whether key activities are missing. Several Member States commented in their reports on difficulties arising from differences between the IPPC Directive/IED activities and the E-PRTR reporting activities. The first step undertaken was to map the categories reported in the E-PRTR and compare them with the activities listed in Annex I of the IED.

For the majority of economic activities there is a good alignment between IED and the E-PRTR. However there are some differences between the scopes of the two instruments which are presented in the table below. These broadly relate to the fact that the E-PRTR has in addition to the IED emission/release/transfer thresholds for the named pollutants in Annex II of the E-PRTR. There are also some discrete differences in the way that economic activities are detailed under IED and E-PRTR which are further explained in Table 5.39.

Table 5.39 Comparison E-PRTR and IED activities and thresholds

E-PRTR code	E-PRTR Name	Threshold	IED code	IED name	IED threshold	Match
<b>1(b)</b>	Installations for gasification and liquefaction		1.4.a	Gasification or liquefaction of coal		Two activities in IED, only one in E-PRTR
			1.4.b	Gasification or liquefaction of other fuels in installations with a total rated thermal input of 20 MW or more	>20 MWth	Two activities in IED, only one in E-PRTR. Note that under E-PRTR the definition is "Installations for gasification and liquefaction", while under IED a threshold is applied thus: "other fuels in installations with a total rated thermal input of 20 MW or more."
<b>1(d)</b>	Coke ovens		1.3	Production of coke		The definition under IED states 'production of coke', while under E-PRTR the definition states 'coke ovens', meaning potentially that the definition under IED is broader than E-PRTR
<b>1(e)</b>	Coal rolling mills	>1 tonne/hour				Not an activity regulated by the IED
<b>1(f)</b>	Installations for the manufacture of coal products and solid smokeless fuels					Not an activity regulated by the IED
<b>3(a)</b>	Underground mining and related operations					Not an activity regulated by the IED

E-PRTR code	E-PRTR Name	Threshold	IED code	IED name	IED threshold	Match
<b>3(b)</b>	Opencast mining and quarrying	Where the surface of the area effectively under extractive operation equals 25 hectares				Not an activity regulated by the IED
			3.1.c	Production of magnesium oxide in kilns	>50 tonnes/day	Not reported in E-PRTR
			5.3.b	(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, and excluding activities covered by Directive 91/271/EEC:	>75 tonnes/day or when waste treatment activity is anaerobic digestion, the capacity threshold is 100 tonnes/day	Not reported in E-PRTR
<b>5.f</b>	Urban waste-water treatment plants	With a capacity of 100,000 population equivalents				Not an activity regulated by the IED

E-PRTR code	E-PRTR Name	Threshold	IED code	IED name	IED threshold	Match
			5.5.	Temporary storage of hazardous waste not covered under point 5.4 pending any of the activities listed in points 5.1, 5.2, 5.4 and 5.6 with a total capacity exceeding 50 tonnes, excluding temporary storage, pending collection, on the site where the waste is generated	>50 tonnes	Not reported in E-PRTR
			5.6	Underground storage of hazardous waste with a total capacity exceeding 50 tonnes	>50 tonnes	Not reported in E-PRTR
			6(c)	(c) Production in industrial installations of one or more of the following wood-based panels: oriented strand board, particleboard or fibreboard with a production capacity exceeding 600 m3 per day.	>600 m3 per day	Not reported in E-PRTR
<b>6(c)</b>	Industrial plants for the preservation of wood and wood products with chemicals	>50 m3 per day	6.10	Preservation of wood and wood products with chemicals with a production capacity exceeding 75 m3 per day	>75m3 per day	Reported in E-PRTR but with a lower activity threshold

E-PRTR code	E-PRTR Name	Threshold	IED code	IED name	IED threshold	Match
				other than exclusively treating against sapstain		
<b>7(b)</b>	Intensive aquaculture	>1,000 tonnes of fish or shellfish per year				Not an activity regulated by the IED
			6.4.b.iii	(iii) Operating facilities processing animal and vegetable raw materials, both in combined and separate products, with a finished product production capacity in tonnes per day greater than:	> 75 if A is equal to 10 or more; or [300-(22.5xA0)] in any other case, with A the portion of animal material of the finished product production capacity	Not reported in E-PRTR
<b>9(e)</b>	Installations for the building of, and painting or removal of paint from ships	For ships 100m long				Not an activity regulated by the IED
			6.9	Capture of CO <sub>2</sub> streams from installations covered		Not reported in E-PRTR

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E-PRTR code	E-PRTR Name	Threshold	IED code	IED name	IED threshold	Match
				by this Directive for the purposes of geological storage pursuant to Directive 2009/31/EC		



While most of the IED activities are reported in the E-PRTR, the following IED activities are not reported in the E-PRTR:

- 3.1.c – production of magnesium oxide;
- 5.3.b – recovery and disposal of non-hazardous waste;
- 5.5 - Temporary storage of hazardous waste;
- 5.6 – Underground storage of waste;
- 6.1.c- Production of wood-based panels: oriented strand board, particleboard or fibreboard with a production capacity exceeding 600 m<sup>3</sup> per day;
- 6.4.b.iii - animal and vegetable raw materials;
- 6.9 – carbon capture and storage; and
- 6.11 – independent treatment of waste water.

In addition, the following activities are included in the E-PRTR but do not correspond to an IED activity:

- 1(e) – coal rolling mills;
- 1(f) manufacture of coal products and solid smokeless fuels;
- 3(a) – underground mining;
- 3(b) – Opencast mining and quarrying;
- 5(f) – Urban waste water treatment plants (with a capacity of >100,000 population equivalent);
- 7(b) - Intensive aquaculture; and
- 7(e) - Installations for the building of, and painting or removal of paint from ships.

Responses from stakeholders to the targeted consultation included information on the suitability of activities covered by the E-PRTR. Out of 29 responses from data users, 21 have agreed to some extent that there was no gaps between the E-PRTR and the IED. However, out of the remaining respondents 6 highlighted some differences between the activities covered and their descriptions which cause some confusion when reporting. As an example the reporting under the large combustion plants chapter of the IED could be streamlined with the E-PRTR. There is no stack information required in the E-PRTR, and emissions of SO<sub>x</sub> are required vs emissions of SO<sub>2</sub> under the LCP reporting.

The absence of some pollutants from the E-PRTR such as thallium, antimony, manganese and vanadium was also highlighted as a possible gap. One respondent indicated that not enough information was available on POPs and that more should be done to gather data on those substances in particular flame retardants and perfluorinated substances. Out of the 23 responses from data providers, 17 agreed to some extent that there was no gaps between the E-PRTR and the IED. However, comments were made on the fact that there is not an exact alignment between IED and E-PRTR activities and threshold. Furthermore, one respondent indicated that the change from IPPC to IED activities created some additional confusion on reporting emissions. Three respondents also highlighted the discrepancies with the LCP Directive reporting that requires reporting at stack level, and not as total facilities' emissions.

## **F.2 Assessment of the E-PRTR dataset completeness and coherence**

### **F.2.1 Overall completeness of activities reported**

This Section focuses on two key aspects:

- Firstly, is the data held within the E-PRTR complete in terms of the data provided to the E-PRTR above the reporting thresholds?

- Secondly, in broader terms and based on what level the reporting threshold is set, is the data within the E-PRTR complete in terms of total emissions (i.e. do the current reporting thresholds have a significant impact on completeness?).

To answer these questions a number of different approaches have been undertaken to probe the data held within the E-PRTR. These approaches (detailed within this Section) have also been carried out alongside a review of the European Environment Agency's (EEA) informal report<sup>26</sup>, which looks at the issue of data completeness and data quality based on additional quantitative tests on the data held within the E-PRTR data-set. The previous synthesis report has also been taken into account when assessing the data analysed within the current review.

The results of these two elements are detailed below to provide an assessment of the 'completeness' for the E-PRTR data-set and highlight potential areas where further examination is needed to fully assess whether the reporting thresholds in use are appropriate.

The first approach was to assess the trends within the number and type of facility that are reporting into the E-PRTR annually in the past few years. This test helps define whether there had been any major changes that might indicate any issues with data provision.

Table 5.40 presents the number of facilities reporting to E-PRTR and its evolution since 2009.

*Table 5.40 Total number of facilities reporting to E-PRTR*

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Number of facilities providing data to the E-PRTR	29,580	30,523	30,489	31,405	31,677
Percentage change against previous year	N/A	+3.2%	-0.1%	+3.0%	+0.9%

The EEA conducts an informal review of the E-PRTR data every year<sup>27</sup>. The latest review in 2015 focused on 2013 data. It found that out of the 31,677 facilities reporting in 2013, 15,500 reported for all five reporting years. The EEA expected this figure to increase after the resubmission of March 2015, as data for one Member State (Hungary) was not yet included for the latest year. The review found some significant inconsistencies in the reporting of E-PRTR data by facilities across the years.

A high level comparison between the number of facilities reporting to E-PRTR and the number of installations permitted under the IED has been completed; based on the latest available data for IPPC which is 2012. The comparison is provided Table 5.41. Even recognising the reporting thresholds set within E-PRTR, it was intended that this assessment would help provide a useful first review of how well the data in E-PRTR correlates with IED. The purpose of this comparison was to act as a first indication alongside additional tests to see whether specific industry sectors looked to be poorly represented within the E-PRTR (based on comparison to IED).

<sup>26</sup> European Environment Agency, 2015, 'Summary on 2013 E-PRTR Data', ETC/ACM working document – version 1.1 March 2015.

<sup>27</sup> ETC ACM Task-No.: 1.2.1.1, November 2014, E-PRTR Methodology report on incompleteness

*Table 5.41 High level comparison of number of permitted installation as reported in last IPPC reporting in 2012 and reporting E-PRTR facilities in 2012 for EU Member States*

Number of installations covered by IPPC Directive in EU			Number of facilities reporting to E-PRTR			Percentage of installations (E-PRTR / IPPC)
1	Energy	3,124	1	Energy sector	1,971	63%
2	Metals	5,647	2	Production and processing of metals	4,349	77%
3	Minerals	2,737	3	Mineral industry	2,044	75%
4	Chemicals	5,074	4	Chemical industry and chemical installations	2,759	54%
5	Waste industry	7,929	5	Waste and wastewater management <sup>28</sup>	9,143	115% (adjusted percentage minus 5(f) UWWT plants = -0.1%)
6	Other	25,733	Other categories			

Table 5.42 compares the total number of IPPC permits reported by Member States in 2012 to the total number of facilities reporting to the E-PRTR in the same year. Note that while it does compare total number of facilities, it does not track individual facilities reporting. It is important to note also that the IPPC dataset is not complete, as Belgium's total installation is incomplete and Lithuania's data are not included. However this exclusion is not expected to have a significant impact on the totals.

<sup>28</sup> Category 5 of E-PRTR includes a category not covered by IED (urban waste water plants). This sub-category makes up 1224 facilities of the 9143 quoted.

**Table 5.42** Detailed comparison of number of permitted installation as reported in last IPPC reporting in 2012 and reporting E-PRTR facilities in 2012 for EU Member States

Number of installations -IPPC Directive			Number of facilities reporting to E-PRTR			Percentage of installations (E-PRTR / IPPC)
<b>1.1</b>	Combustion	2,800	1(c)	Combustion in installations above 50 MW	1,733	62%
<b>1.2</b>	Mineral oil and gas refining	269	1(a)	Mineral oil and gas refineries	168	62%
<b>1.3</b>	Coke ovens	35	1(d)	Coke ovens	19	54%
<b>1.4</b>	Coal gasification and liquefaction	20	1(b)	Installations for gasification and liquefaction	28	140% <sup>29</sup>
<b>2.1</b>	Metal ore roasting/sintering	34	2(a)	metal ore roasting or sintering installations	16	47%
<b>2.2</b>	Producing pig iron or steel	266	2(b)	installations for the production of pig iron or steel including continuous casting	232	87%
<b>2.3 (a)</b>	Hot-rolling mills	216	2(c)(i)	Hot rolling mills	94	44%
<b>2.3 (b)</b>	Smitheries	34	2(c)(ii)	Smitheries with hammers	10	29%
<b>2.3 (c)</b>	Applying fused metal coats	375	2(c)(iii)	Protective fused metal coating	272	73%
<b>2.4</b>	Foundries	607	2(d)	Ferrous metal foundries	469	77%
<b>2.5 (a)</b>	Producing non-ferrous crude metals	194	2(e)(i)	For the production of non-ferrous crude metals from ore, concentrates or secondary raw materials	108	56%
<b>2.5 (b)</b>	Smelting non-ferrous metals	929	2(e)(ii)	For the smelting, including the alloying of non-ferrous metals	466	50%

<sup>29</sup> Difference in wording may explain that more facilities report to E-PRTR than licensed under the IPPC Directive

Number of installations -IPPC Directive			Number of facilities reporting to E-PRTR			Percentage of installations (E-PRTR / IPPC)
<b>2.6</b>	Surface treatment of metals and plastic	2,992	2(f)	Installations for surface treatment of metals and plastic materials	2,302	77%
<b>3.1</b>	Producing cement or lime	540	3(c)	Production of cement or lime	368	68%
<b>3.2</b>	Producing asbestos <sup>30</sup>	1	3(d)	Installations for the production of asbestos or asbestos-based products	0	0%
<b>3.3</b>	Manufacture of glass	409	3(e)	installations for the production of glass including glass fibre	353	86%
<b>3.4</b>	Melting minerals	72	3(f)	installations for the melting of mineral substances including production of mineral fibres	51	71%
<b>3.5</b>	Manufacture of ceramics	1,715	3(g)	installations for the manufacturing of ceramic products by firing	582	34%
<b>4.1</b>	Producing organic chemicals	3672	4(a)	Chemical installations for the production on an industrial scale of basic organic chemicals	1,645	45%
<b>4.2</b>	Producing inorganic chemicals	687	4(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals	463	67%
<b>4.3</b>	Producing fertilisers	134	4(c)	Chemical installations for the production on an industrial scale of phosphorus, nitrogen or potassium based fertilisers	77	57%

<sup>30</sup> The manufacture and production of asbestos was banned in the EU under Directive 1999/77/EC on restrictions for asbestos. However the directive did allow a transitional phase to 2008 for one use: electrolysis in plants using asbestos containing diaphragms. In 2009 this exemption was extended. General manufacture and use of asbestos in articles can be assumed to be largely phased out.

Number of installations -IPPC Directive			Number of facilities reporting to E-PRTR			Percentage of installations (E-PRTR / IPPC)
<b>4.4</b>	Producing plant health products/biocides	88	4(d)	Chemical installations for the production on an industrial scale of basic plant health products and of biocides	91	103% <sup>31</sup>
<b>4.5</b>	Producing pharmaceuticals	430	4(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products	416	97%
<b>4.6</b>	Producing explosives	63	4(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products	67	106% <sup>32</sup>
<b>5.1</b>	Disposal or recovery of hazardous waste	2,955	5(a)	Installations for the disposal or recovery of hazardous waste	2,214	75%
<b>5.2</b>	Incineration of municipal waste	485	5(b)	Installations for the incineration of non-hazardous waste	397	82%
<b>5.3</b>	Disposal of non-hazardous waste	883	5(c)	Installations for the disposal of non-hazardous waste	3,691	418% <sup>33</sup>
<b>5.4</b>	Landfills	3,606	5(d)	Landfills excluding landfills of inert waste	1,444	40%
<b>6.1 (a)</b>	Producing pulp	212	6(a)	Industrial plants for the production of pulp from timber or similar fibrous materials	118	56%
<b>6.1 (b)</b>	Producing paper and board	686	6(b)	Industrial plants for the production of paper and board and other primary wood products (such as	638	93%

<sup>31</sup> More facilities reporting in E-PRTR than installations licensed under IPPC Directive, this may be due to individual permits covering several facilities

<sup>32</sup> More facilities reporting in E-PRTR than installations licensed under IPPC Directive, this may be due to individual permits covering several facilities

<sup>33</sup> Comparison of IED and E-PRTR highlights a significant difference. This difference may be due to technical aspects of how E-PRTR and IED are applied (e.g. 1 IED permit covering several facilities as recognised by E-PRTR; threshold differences; or definitions for plant)

Number of installations -IPPC Directive			Number of facilities reporting to E-PRTR			Percentage of installations (E-PRTR / IPPC)
				chipboard, fibreboard and plywood)		
<b>6.2</b>	Pre-treatment or dyeing of fibres or textiles	394	9(a)	Plants for the pre-treatment or dyeing of fibres or textiles	165	42%
<b>6.3</b>	Tanning hides and skins	40	9(b)	Plants for tanning of hides and skins	16	40%
<b>6.4 (a)</b>	Slaughterhouses	930	8(a)	Slaughterhouses	527	57%
<b>6.4 (b)</b>	Treatment and processing of food products	2,085	8(b)	Treatment and processing intended for the production of food beverage products	1,074	52%
<b>6.4 (c)</b>	Treatment and processing of milk	685	8(c)	Treatment and processing of milk	489	71%
<b>6.5</b>	Disposal or recycling of animal carcasses	445	Not covered by E-PRTR			
<b>6.6 (a)</b>	Intensive rearing of poultry	9,967	7(a)(i)	Installations for the intensive rearing of poultry	1,712	17%
<b>6.6 (b)</b>	Intensive rearing of production pigs	7,340	7(a)(ii)	Installations for the intensive rearing of pigs	2,563	35%
<b>6.6 (c)</b>	Intensive rearing of sows	1,761	7(a)(iii)	Installations for the intensive rearing of pigs (sows)	650	37%
<b>6.7</b>	Surface treatment using organic solvents	1,144	9(c)	Installations for surface treatment or products using organic solvents	994	87%
<b>6.8</b>	Producing carbon or electrographite	43	9(d)	Installations for the production of carbon (hard-burnt coal) or graphite	26	60%
<b>6.9</b>	Capture of CO <sub>2</sub> streams (Directive 2009/31/EC of the European Parliament and of the Council)	1	Not covered in E-PRTR			

Differences can be observed for all activities between the number of facilities reporting in E-PRTR and the number of installations covered by an IPPC permit. This difference is expected to some extent, as the E-PRTR reporting is required for activities emitting pollutants above a determined reporting threshold. Moreover, in the E-PRTR, some facilities may select an activity category which differs from the one covered by their permit, so this comparison is to be considered as indicative only and a way to identify trends.

Overall, the following comments can be made:

- For the energy sector, 63% of the number of IPPC permitted installations are reporting to the E-PRTR. It is however important to recognise that for IED permitting of energy facilities relates to stack height (defined as being of a height to protect human health). This need for stacks helps define and include facilities under IED and permitting, which could increase the number of facilities captured within the IED facility numbers. For E-PRTR the terminology is broader, although it is less clear why facilities reporting under IED would not also be included in E-PRTR;
- Facilities reporting in E-PRTR on production and processing of metals and mineral industries include more than 75% of total permitted installations. However there are variations for specific activities and it can be observed that for some activities the match is low (e.g. smitheries 29% and manufacture of ceramics 34%), this should also be taken into account the potential differences in aggregation between E-PRTR and IPPC;
- 54% of the IPPC-permitted facilities in the chemicals industry are represented into the E-PRTR. While for some specific activities the level of representation falls below the 50% mark (based on comparison to IPPC), for example for the production of organic chemicals (45%), for some other sub-categories there seems to be almost the same amount of facilities reporting in E-PRTR than those permitted under IPPC (e.g. production of pharmaceuticals 97%) and even, in some instances, more (e.g. production of plant health products and biocides (103%) and production of explosives (106%);
- For the waste management industry there are significantly more E-PRTR facilities reporting for disposal of non-hazardous waste than permitted under IPPC (418% difference), however the difference may be due to E-PRTR facilities reporting transfer of waste which is not covered by IPPC Directive. Additionally the E-PRTR activity 5(f) for urban waste water treatment plants, is a sub-category not included within IED. There 1224 UWWT plants listed within the E-PRTR. If this total is subtracted from the total number of facilities covered under activity 5 (waste), the number of facilities for E-PRTR are in close agreement with the total number included under IED; and
- The representation of intensive rearing of poultry and pigs in E-PRTR ranges from 17% to 37% of the total number of installations permitted under the IPPC Directive. The exact reasons for this lower level of completeness are undetermined however factors include the ammonia threshold which has been highlighted by several stakeholders as being set too high to capture the majority of intensive rearing installations and the difficulties for farmers to identify and report their emissions. France Competent Authority indicated that a specific tool has been produced and part of the E-PRTR reporting in order to help farmers estimate emissions from their activities.

## F.2.2 Assessment of overall completeness by other studies

### *Previous synthesis report*

The previous triennial review found that reporting improved throughout the 2009-2011 period. E-PRTR countries were found to have reported data sets of satisfactory completeness and quality, in particular for air emissions. However, the analysis of the data sets found differences between pollutants, for example the reporting for a group of 36 standard pollutants reached 90% of the total mass but for other pollutants the reporting



showed significant variability. The quality of the data on releases to water was considered acceptable, but 27 pollutants were reported by less than ten facilities. Reporting of transfers to water was considered incomplete. Regarding waste, E-PRTR covers only waste transfers (hazardous and non-hazardous) from major individual facilities. The statistical analysis showed that the waste thresholds allowed reporting of only about 39% of hazardous waste and 17% of non-hazardous waste. Reporting of releases to land was considered unsatisfactory.

This Section presents the initial results of the assessment of the completeness and coherence of the E-PRTR datasets. These have been first assessed in comparison with other existing datasets for air and water emissions. As a second phase, the completeness and coherence of emissions was assessed internally, with reference to the E-PRTR guidance for air, water and soil emissions.

#### *EEA review of E-PRTR*

The EEA conducts a periodical review of the data submitted in the E-PRTR<sup>34</sup>. The review of the 2013 data included presentation of statistics and key findings on completeness of data with respect to missing pollutants, activities and outliers.

The EEA indicated that 31/32 countries submitted data in 2013, data from Hungary was missing. Out of the facilities reporting, 13% of total facilities reported for the first time in 2013, which is an increase in comparison to 2012 where 8% of the facilities were reporting for the first time reporting. The EEA notes that the number of facilities reporting for activity 5 (waste and waste water management) increased by 5.4% from 2012. However the number of reporting facilities for all other activities (with the exception of a slight increase for animal and vegetable products from food industry) decreased.

Out of the 91 pollutants covered by the E-PRTR, the most common are NH<sub>3</sub> (5,948 reports), NO<sub>x</sub> (2,444 reports) and CO<sub>2</sub> (2,125 reports). With the exception of Lithuania, all reporting countries reported releases to air. In 2013, releases from 55 pollutants reported in comparison to 57 in 2012. The EEA indicates that the difference is due to substances being banned (e.g. Heptachlor, Lindane, Mirex, Toxaphene and Hexabromobiphenyl).

Again, with the exception of Lithuania, all reporting countries reported releases to water. In 2013, releases from 67 pollutants were reported in comparison to 66 in 2012.

A total of 24 countries reported transfers in waste water of 54 pollutants. Finally, 14 pollutants with thresholds in Annex II were reported released to land, compared to 13 in 2012. The completeness of the Land emissions data-set is generally assumed to be incomplete. However this may be due to how 'land emissions' are interpreted in different Member States.

Finally, the EEA highlighted that the decrease in tonnes of waste reported in 2013 (from 537.5Mt vs 677Mt) is due to a high outlier from Finland in 2012, which may have been an erroneous value or reporting error.

On confidential and accidental releases: a total of 61 facilities claimed confidential data on facility reports and 170 on waste transfer reports. 150 of these waste facilities were in Belgium. In addition 19 countries reported accidental releases (626), compared to 20 in 2012, more than half are to air.

#### *EEA informal review of E-PRTR*

Since 2009, the EEA has conducted an informal review of the completeness of the reporting at facility level. The latest of this assessment was made available to the project team and

<sup>34</sup> ETC/ACM working document, March 2015, Summary on 2013 E-PRTR data

covers data reported in 2012<sup>35</sup>. The EEA conducted several tests and checks which are described below.

Overall, in 2012, out of the 31,405 E-PRTR facilities reporting, approximately 17,000 have reported since 2007.

The first test described is a **cross-pollutant test**; designed to verify whether two different pollutants of the same media (air, land, water) are reported for the whole time series. The EEA has performed this test for all facilities which meet a specific test criteria, which is reporting of the pollutant above the release threshold in any reporting year. The facilities meeting the criteria are described as 'flagged'. It added that the results are only indicative of potentially missing releases of certain pollutants or missing facilities. The tests are designed as a way to identify areas for further investigation.

Cross pollutants tests were carried out for air emissions only, and for major pollutants. For example, one of the test for NO<sub>x</sub> emissions, uses CO<sub>2</sub> emissions as an indicator as it is expected that facilities with large releases of CO<sub>2</sub> (i.e. 20 times higher than the threshold) should report NO<sub>x</sub> emissions as well. Emissions of SO<sub>x</sub> are also used as indicator for comparing releases of pollutants. The results of the completeness tests of the EEA are presented in Table 5.43.

*Table 5.43 Cross-pollutants completeness review by the EEA*

Pollutant tested	Test	Number of facilities tested	Number of facilities flagged	Percentage
Nitrogen oxides (NO <sub>x</sub> )	CO <sub>2</sub> as indicator pollutant	297	51	17%
Sulphur oxides (SO <sub>x</sub> )	CO <sub>2</sub> as indicator pollutant	87	14	16%
Mercury (Hg)	SO <sub>x</sub> as indicator pollutant	292	188	64%
Nitrogen oxides (NO <sub>x</sub> )	SO <sub>x</sub> as indicator pollutant	292	58	20%
Particulate (PM <sub>10</sub> )	SO <sub>x</sub> as indicator pollutant	292	127	43%
Dioxin and Furans	SO <sub>x</sub> as indicator pollutant	292	127	43%

The EEA indicated that a facility is flagged in one of the following conditions: the test pollutant is not reported in any year, a potential non-reporting of the test pollutant has

<sup>35</sup> ETC/ACM technical paper 2014/2, December 2014, E-PRTR assessment report on incompleteness

been identified or the test pollutant is reported for each year for which the indicator pollutant is reported but the reporting of the indicator pollutant is not complete.

The analysis of the results by the EEA found that for most common air pollutants such as NO<sub>x</sub> and SO<sub>2</sub>, the reporting of large emitters is complete. The EEA indicated that this may be due to the existing LCP Directive reporting obligation, which ensures a good quality of data. This conclusion seems to support more integration of the E-PRTR with the IED reporting, which has also been highlighted by several respondents to the stakeholder consultation.

Emissions of PM<sub>10</sub> were also considered to be relatively complete and consistent. A comment was added highlighting that the 50 tonnes reporting threshold appears low when compared with the quantities reported in the E-PRTR.

The tests for emissions of dioxins and furans and mercury found that the reporting is rather incomplete. Two reasons were provided in the report, firstly the fact that it is expected that releases are mostly below detection limits and secondly that there is a high uncertainty in the estimation methods for these pollutants.

The analysis conducted by the EEA noted the following:

- Emissions of NO<sub>x</sub>, only two facilities have been identified as not reporting CO<sub>2</sub> emissions but reporting more than 2Mt CO<sub>2</sub> in at least one year. In addition, the test using SO<sub>2</sub> as indicator found 4 facilities for which the results indicated incomplete reporting of NO<sub>x</sub> emissions;
- Emissions of SO<sub>x</sub>, 9 facilities appeared to have reported incomplete time series and 5 facilities did not report emissions of SO<sub>x</sub>, most of which were operating waste and wastewater management activities;
- Emissions of mercury, for 126 facilities no emissions were reporting in any year, 90 are operating in the energy sectors, 17 for production and processing of metals, 7 facilities operating in the mineral industry group and 7 from chemical industry. For 49 facilities, the review of emissions indicated incomplete reporting of mercury;
- Emissions of PM<sub>10</sub>, for 64 facilities no PM 10 emissions were reported and for 35 facilities the test indicated incomplete reporting; and
- 17 out of the top 20 SO<sub>x</sub> emitters did not report emissions of Dioxin and Furans, which to the EEA suggest incomplete reporting as most of these facilities are large coal power plants (located in Bulgaria, Greece, Romania, Serbia, Poland and Estonia).

The EEA also conducted verifications of other pollutants including F-gases, heavy metals and POPs which presented data gaps across the whole 2008-2012 time series considered and for which reporting should be improved.

The EEA also conducted a **full cross-pollutant relation check** in 2014 on the 2012 data. A total of 2,447 facilities' emissions to air were checked, which represents 17.8% of all facilities and 13.8% of all release reports. The results of the checks highlighted the releases to air which are out of the expected range of emissions (i.e. higher or lower than expected emissions) are reproduced in Table 5.44. The EEA added that this does not necessarily mean that the release is incorrect but that there should be further review of the data to establish whether it is under-reporting, over-reporting or correct.

*Table 5.44 Percentage of facilities with out of range pollutants from cross pollutant checks for 2012 air releases*

<b>Pollutant tested</b>	<b>Percentage of releases out of expected range</b>
Non-methane volatile organic compounds (NMVOC)	0.0%
Arsenic and compounds (as As)	0.2%
Copper and compounds (as Cu)	0.6%
Zinc and compounds (as Zn)	0.7%
Lead and compounds (as Pb)	0.8%
Mercury and compounds (as Hg)	1.0%
Cadmium and compounds (as Cd)	1.1%
Particulate matter (PM <sub>10</sub> )	1.4%
Chromium and compounds (as Cr)	1.6%
Nickel and compounds (as Ni)	1.6%
Carbon monoxide (CO)	1.7%
Fluorine and inorganic compounds (as HF)	3.8%
PCDD + PCDF (dioxins + furans) (as Teq)	4.0%
Sulphur oxides (SO <sub>x</sub> /SO <sub>2</sub> )	4.3%
Nitrogen oxides (NO <sub>x</sub> /NO <sub>2</sub> )	6.3%
Carbon dioxide (CO <sub>2</sub> )	7.2%
Perfluorocarbons (PFCs)	26.9%

The analysis from the EEA considered that most of the releases were within the probable range of emissions. For PFCs, 26.9% of the reported releases are not within the range (lower than expected). This could be due either to the fact that the range of expected release is not appropriate or that the reporting is incomplete.

It added that overall, the sector with most of the facilities with one or multiple releases out of the range are is 1.c. However, this represents only 16% of the facilities in this sector which present one or multiple release out of range. Other sectors (e.g. 1.d and 1.f) present higher percentage of facilities presenting one or multiple release out of range.<sup>36</sup>

In addition, **sector completeness checks** were undertaken. The tests check whether a defined pollutant is reported for specific facilities taking into account the main activity code or the NACE code. This test was also limited to releases to air, as the EEA highlights the difficulty to define specific pollutant that should be reported for a specific activity for water emissions for example. The tests looked at NO<sub>x</sub> and SO<sub>x</sub> from specific activities and concluded:

<sup>36</sup> EEA, December 2014, E-PRTR assessment report on incompleteness, results of the assessment of incomplete reporting at E-PRTR facility level, ETC/ACM Technical Paper 2014/2

- NO<sub>x</sub> emissions from cement manufacturing facilities. Out of 306 facilities, 29 did not report NO<sub>x</sub> emissions and a further 61 reported emissions that are deemed to be incomplete. Facilities located in Spain and the UK were highlighted as about 30% of the facilities did not report NO<sub>x</sub> release. The EEA noted that this could be due to the use of technologies other than rotary kilns; and
- SO<sub>x</sub> emissions from refineries. Out of the 141 facilities, 32 did not report SO<sub>x</sub> emissions and a further 20 reported emissions that are deemed to be incomplete. The EEA indicated that these gaps are likely to be due to facilities reporting other activity than crude oil refining under this code. In addition, a number of facilities name suggest that the NACE code used is not correct, in particular in the UK. This seems to correlate some information reported by stakeholder on some non-refineries using the wrong reporting code.

A **cross pollutant ratio test** was conducted, which aimed to identify whether the ratio of pollutants exceeded a certain level set by the EEA. The test was conducted for air emissions releases and looked at the ratio of NO<sub>x</sub> emissions over CO<sub>2</sub> emissions and for cases where NO<sub>x</sub> release were higher than 0.5% of the CO<sub>2</sub> releases. The results found 181 facilities flagged out of which 88 were conducting activity 3 (mineral industry) followed by 1(c) activity (66 facilities).

The final check was a **time series consistency check** design to detect inconsistencies in the time series of a release or transfer. The check was conducted for air pollutants and identified the following inconsistencies in reporting across the time series:

- 607 facilities which reported HCFCs;
- 107 facilities which reported Dioxin & Furans;
- 171 facilities which reported heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb or Zn);
- 59 facilities which report CO<sub>2</sub>;
- 99 facilities which report NO<sub>x</sub>;
- 65 facilities which report SO<sub>x</sub>; and
- 27 facilities which report PM<sub>10</sub>.

#### *Limitations identified with using E-PRTR data in previous studies*

A number of past studies have aimed to assess the issue of data completeness within the E-PRTR, and viability of applying the E-PRTR data-set for other research purposes. The discussions below provides an overview of these studies and findings to date.

Amec Foster Wheeler (2014) conducted research on behalf of the European Commission to assess the contribution of industry to pollutant emissions from air and water. In particular the study made use of E-PRTR data (along with other data-sets) to determine the share and extent of emissions in the EU that are regulated by current EU legislation. In order to do this, the total amount of emissions for a selection of pollutants was first determined – from which the reported emissions were then be categorised by activity and the respective regulating instrument.

In total 17 air pollutants were examined and 22 pollutants to water. Pollutants were categorised into four groups: (i) activities that regulated under the IED; (ii) activities where pollutant emissions are regulated under other EU legislation (e.g. EU-ETS, the Nitrates Directive and the Urban Waste Water Treatment Directive); (iii) activities currently not subject to EU legislation affecting pollutant emissions; and (iv) all other anthropogenic sources of pollution, e.g. transport, domestic, commercial.

The study found that the relevant data needed to conduct the review could not be extracted from one source alone, rather it was necessary to combine E-PRTR data along with data from the UNECE Convention on Long Range Transboundary Air Pollution (CLRTAP) and other sectoral studies for emissions to air. Data was also combined between

E-PRTR and Waterbase data for emissions to water. While it was possible to create a unified dataset for emissions to air, this was not possible in the case emissions to water as the geographic coverage and scope of pollutants between the two datasets was too varied and as such, data from both datasets are reported as separate. The study found that E-PRTR data for emissions to water was generally more precise than the Waterbase data but limited to specific activities.

The main limitation of using E-PRTR data for this study was that use of reporting thresholds means the dataset is an underestimation of actual emissions. A second limitation identified was that there is insufficient data collected in the E-PRTR to allow estimates to be accurately calculated where data gaps exist (i.e. the level of available production and capacity information is needed). Further it found that pollutants had to be analysed in mass terms due to availability of data. While this meant that there was comparability between pollutants, this approach did not allow for the relative environmental or human health impacts of the pollutants to be taken into consideration. Although this latter point is not a data gap, it is worth flagging in terms of the relevance of E-PRTR data and its capacity to inform the public about environmental concerns.

The study also found significant limitations in reporting to the E-PRTR for ammonia emissions to air.

A second study assessed made use of the data in E-PRTR to help develop the methodology for calculating the potential emission reductions delivered by BAT conclusions, as adopted under the Industrial Emissions Directive (2010/75/EU). In this instance, the data held within EPER and E-PRTR was used to establish a baseline of industrial emissions from which trends could be determined. These trends were then used to test a methodology developed for estimating potential reductions of emissions to air and water from the implementation of BAT conclusions under the IED.

Again, it was found that the relevant data needed to conduct the review could not be extracted from one source alone, but rather it was necessary to supplement E-PRTR data with other sources (e.g. data from 'Greenhouse Gas and Air Pollution Interactions and Synergies' (GAINS)). The limitations specific to E-PRTR data are summarised here as follows:

- Data by the processes and sub-processes within an activity are not reported. For the study in question, this information would have enabled the analysis of emissions data in the context of technological progress, e.g. where emission reductions are expected in relation to one aspect of an economic activity;
- No indications of BAT uptake, or whether or not the facility is new or existing are provided with the reported emissions; equally, no indication of installation performance is reported/ data to determine installation performance is not available. Such caveats meant that the reported emissions data could not be interpreted in sufficient context for the study; and
- Limited water emission data is reported to the E-PRTR.

Lastly, the study identifies a number of issues with E-PRTR data, which although not quantifiable, should be taken into account when using the data. First, that E-PRTR reporting may not be consistent between facilities and Member States as there is scope for variations in the application of its reporting rules. Second, where a facility carries out multiple activities that fall within the remit of the E-PRTR Regulation, it is only required to report emissions resulting from the main activity (as defined in the Regulation). The study highlighted that this runs the risk of facilities reporting both over and underestimations of emissions. In addition, where multiple activities are carried out in one facility, it may be difficult to distinguish the source of emissions and thus there may be inaccuracies in the reporting arising from source attribution.

### F.2.3 Comparison of E-PRTR data with other datasets

#### *Emissions to air*

A comparison of emissions of key air emissions presented in the E-PRTR with other data sources was conducted.

Emissions of CO<sub>2</sub>, methane and nitrous oxide reported in the E-PRTR were compared to emissions reported in the national inventories under the UNFCCC. It is important to indicate that the UNFCCC's scope is much wider than the E-PRTR, for this reason only a range of industrial activities were selected for this comparison<sup>37</sup>. In addition, the UNFCCC does not apply any reporting threshold for activity or for pollutants. As such it is fully expected that the quantity of emissions reported in UNFCCC are greater than in the E-PRTR.

Two comparisons were made: the first one compared, for similar industrial activities, the total quantity of emissions reported in UNFCCC and E-PRTR in 2010, 2011 and 2012. The second comparison focused on the evolution of the first comparison between 2010 and 2012. The aim was to identify whether the share of the emissions reported in E-PRTR was increasing, that is to say whether the completeness of the emissions reported in the E-PRTR in comparison to the emissions reported in the UNFCCC increased. A high level review of the comparison found:

- On average in 2012, there are 49% less emissions of **CO<sub>2</sub>** in the E-PRTR than those reported for selected industrial sectors in the UNFCCC inventories. For the overwhelming majority of Member States, the quantity of CO<sub>2</sub> reported in UNFCCC are higher than those reported in E-PRTR. The notable exceptions are Iceland (2010), Germany (2010 and 2011) and Sweden (2010-2013).

The review of emissions over the 2010-2013 period showed that for the majority of EU countries, the share of emissions reported in E-PRTR compared to those reported in UNFCCC increased. This is the case for Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Iceland, Italy, Lithuania, Luxembourg, Norway, Romania, Slovenia, Sweden and Switzerland. This suggests that for all these EU countries, the completeness of CO<sub>2</sub> reporting in E-PRTR has increased through the reporting period. For those countries where the share of emissions reported in E-PRTR compared to those reported in the UNFCCC decreased, Hungary, Ireland, Netherlands, Slovakia and the UK, this decrease is less than 5%;

- Concerning emissions of **methane**, there seems to be a much more limited coverage of emissions in the E-PRTR, with the E-PRTR including on average 11% of the emissions reported in UNFCCC for the selected industrial activities in 2012. This difference is expected and considered to be mostly due to reporting thresholds and to activity thresholds that do not apply in UNFCCC.

The comparison of the evolution of the share of emissions reported during the 2010-2013 period found for most of the European countries no change or very little increase in reporting (e.g. <2%). This is the case for Austria, Belgium, Cyprus, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Sweden and Switzerland. Lithuania and Ireland (3%), Bulgaria (15%), Iceland (26%) and Malta (90%) reported more important increase in the reporting of methane. This means that completeness of reporting increased for these EU countries. Finally only five countries reported less emissions in 2010 than in 2012: Slovenia (-12%), Estonia (-7%), UK (-3%), Spain (-2%) and Denmark (-1%); and

- The results observed for **nitrous oxide** emissions are very similar to those highlighted for methane. On average, 2012, the E-PRTR reports represent 6% of to

<sup>37</sup> Reporting codes selected were 1 energy, 2.A Mineral products, 2.B Chemical Industry, 2.C, Metal Production, 2.G Other, 3. Solvent and Other Product Use, 4. Agriculture, and 6.Waste.



the total UNFCCC emissions. For the majority of the countries reporting, there has been very little change between 2010 and 2012 reporting, with up to 2% increase. This is the case of Austria, Bulgaria, Cyprus, Denmark, Estonia, Finland, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Poland, Romania, Slovenia and Switzerland. For a few countries the increase in the share of emissions reported in E-PRTR was quite noticeable, this is the case of Belgium (12%), France (8%), Iceland (12%), Sweden (4%) and the UK (3%). For these EU countries, the completeness of emissions of nitrous oxide reported in the E-PRTR has increased during the reporting period. For a few EU countries, the share of emissions reported decreased, it is the case of Czech Republic and Spain (-1%), Netherlands and Norway (-4%), and Slovakia (-7%).

Emissions of ammonia, SO<sub>x</sub>, NO<sub>x</sub> and PM reported in the E-PRTR were compared to the emissions reported by Member States as part of the National Emissions Ceilings (NEC) Directive.

- On average, in 2012, the E-PRTR included 23% of the total industrial activity emissions of **ammonia** included in the NEC inventories. This result masks some differences between Member States. For all Member States, the E-PRTR are less than 50% of the NEC inventories emissions, with the exception of Bulgaria (55%), Cyprus (62%), Hungary (54%), Portugal (52%). For these Member States, the reporting in E-PRTR is more complete than other Member States. For Austria, Denmark, Germany, Greece, Luxembourg and the Netherlands, the NEC includes 90% more emissions of ammonia than reported in the E-PRTR. This findings was confirmed during stakeholder consultations, several highlighted issues on reporting from agricultural activities linked to the ammonia threshold; and
- Initial comparison of emissions of **SO<sub>x</sub>**, **NO<sub>x</sub>** and **PM** found close results, in particular for SO<sub>x</sub> and NO<sub>x</sub>, suggesting a more complete reporting in the E-PRTR.

#### *Emissions to soil*

No emissions to soil database was identified to be able to compare with emissions reported in the E-PRTR. In 2013 no facilities reported emissions to soil within the E-PRTR, while in 2012, 15 facilities have reported emissions to soil, these facilities were located in France (8), Germany (2), Poland (2) and Slovakia (2). It is a noticeable reduction from the 151 facilities that reported emissions to soil in 2011 and the 116 facilities reporting in 2010. It is unclear what has caused this decrease in reporting of emissions to soil.

#### *Emissions to water and transfer of waste water*

The main alternative water release database for comparison against the E-PRTR is Water-base. However this database only includes information for two of the PRTR pollutants: Total phosphorus and Total Nitrogen. To provide a more full and complete assessment of the water vector, particularly where the EEA informal report suggests that the water vector may have a less complete dataset than air emissions, a comparison of water emission releases against estimates from a derived emission inventory approach (as defined by EMEP) is provided for one activity source: Urban waste water treatment plants. To keep continuity with the other vectors within this sub-chapter, the discussions on the inventory approach are discussed under the following sub-chapter (see cf 0).

As stated Water-base provides information for total phosphorus and total nitrogen. For both of these pollutants emissions are only reported for 15 of the 31 Member States.

There are no clear trends or correlations in terms of the reporting numbers at Member State level between Water-base and E-PRTR. Comparison of the reporting method for both pollutants indicates that the water-base over reports the numbers in nine member states, when compared to the values reported within E-PRTR. In a smaller number of cases the water-base under estimates compared to E-PRTR.

A high level summary of the total emissions recorded for Water-base and E-PRTR is given in Table 5.45. This table reflects the result for only those Member States (15 in total) where values were reported.



*Table 5.45 Total reported phosphorus and nitrogen emissions for E-PRTR and Water-base*

<b>Approach</b>	<b>Total Phosphorus emissions reported (kg/yr)</b>	<b>Total nitrogen emissions reported (kg/yr)</b>
<b>E-PRTR</b>	11,715,340	148,845,900
<b>Water-base</b>	84,786,376	856,160,741

*Waste transfers (including transboundary hazardous waste transfers)*

The E-PRTR forms part of the EU's reporting requirements related to the transfer of waste from the economic activities listed under Annex I. This includes both hazardous and non-hazardous waste, as well as transboundary hazardous waste transfers. As part of the assessment of the data held by the E-PRTR, a comparison of the data from PRTR to other waste reporting requirements was carried out.

The results of this comparison exercise are summarised within Table 5.46. The key difference highlighted by Table 5.46 relates to the form of data gathered. Where other reporting requirements such as Eurostat waste statistics and (2015/2002 EC) and Integrated Pollution Prevention and Control (IPPC – now integrated into the industrial emissions directive) gather data on waste generated rather than transferred. This was an issue raised during the E-PRTR workshop held in November 2015, with delegates noting that waste transfer data has the potential for double-counting where waste moves between transfer stations before final management.

The greatest compatibility to E-PRTR was seen in the waste shipments statistics (1013/2006/EC), where data on transboundary hazardous waste is gathered. This has similar data to E-PRTR but operates without a reporting threshold, so again would reflect the data held in the E-PRTR being less complete.

Table 5.46 Comparison of E-PRTR to other EU waste reporting legislation

Reporting system / dataset		Data reported				Reporting requirements			Comparability with E-PRTR
Title	Underlying regulation	Waste/pollutant types	Geographical level	Causing activities	Units	Thresholds	Frequency, years available	Quality, collection methods	
<b>E-PRTR: Waste transfer</b>	E-PRTR Regulation	Non-hazardous waste / hazardous waste / transboundary hazardous waste	NUTS 2	NACE 2	t	Capacity thresholds depending on activity, transfer thresholds depending on pollutant (=release thresholds to water)	yearly, currently available for 2007-2013	Data are reported by individual facilities to the relevant competent authorities. The respective authorities in the countries compile and check the quality of the reported data.	N/A
<b>Eurostat waste statistics: generation</b>	Regulation (EC) No 2150/2002 on waste statistics	waste categories according to the European Waste Classification for statistical purposes (EWC-Stat); partially divided into hazardous/non-hazardous	EU Member State	NACE 1 (Sections) and underneath some groups of 2-digit-level codes, Services and households one group each; e.g. waste	t, kg per capita	enterprises $\geq 10$ employees	every 2 years, currently available for 2004-2012	Member States are free to decide their data collection methods. The main options are: surveys, administrative sources, statistical estimations or a combination of methods	Some redundancy with PRTR waste transfer. Focuses on what waste is generated, not what is done with it. Hazardous/non-hazardous classification in both statistics but not on the

				sector not conclusively displayed					<p>same basis (congruency would have to be assessed in more detail). Much more detail about types of waste in waste statistics. Less frequent, less geographic and economic detail, less rigor in data collection across countries in waste statistics. Different thresholds and definitions (degree of congruency would have to be assessed in more detail) lead to varying sums in both statistics.</p> <p>Note that Eurostat is also not regulation specific. Thus comparison can only be made at high level.</p>
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<b>Eurostat waste statistics: management</b>	as above	Recovery, Incineration, Disposal (incl. some sub-categories each); waste categories according to the European Waste Classification for statistical purposes (EWC-Stat); divided into hazardous/non-hazardous	as above	N/A	as above	as above	as above	as above	Some redundancy with PRTR waste transfer. Hazardous/non-hazardous classification in both statistics but not on the same basis (congruency would have to be assessed in more detail). Recovery, Incineration, Disposal in more detail in waste statistics, but can be fitted to PRTR classification of Recovery and Disposal. Less frequent, less geographic and economic detail, less rigor in data collection across countries in waste statistics. Different thresholds and definitions (degree of congruency would have to be assessed in more detail) lead to varying
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									sums in both statistics.
<b>Eurostat waste shipment statistics</b>	Regulation 1013/2006 on shipments of waste	16 disposal and 15 recovery operations (according to EU Waste Framework Directive)	EU Member States (from which country to which country)	N/A	t	None	yearly, currently available for 1999-2012	All hazardous waste must be notified to the authorities before it is allowed to be transboundary shipped	Very comparable to PRTR waste transfer, but only hazardous waste and only transboundary, much less geographic and economic detail and no threshold.
<b>Annual reporting on PIC exports and imports</b>	Prior Informed Consent Regulation (EU) 649/2012	Imports and exports of hazardous chemicals (long list according to Annex I to Regulation (EC) No 689/2008)	EU	not reported	t	not exceeding ten kilograms from each exporter to each importing country per calendar year	yearly, currently available for 2004-2013	Authorities must be notified	Some thematic redundancies with E-PRTR pollutant transfer, but only in and out of EU and different classifications of substances. No geographical or economic detail, different thresholds.

### *Assessment of E-PRTR releases from Urban Waste Water Treatment Plants using a classic emission inventory approach*

As stated in Section F.2.3 the comparison of E-PRTR against other data-sets for water has largely focussed on Water-base, which contains only two of the E-PRTR pollutants (Total Nitrogen and Total Phosphorus). Additionally the scope analysis highlights that the E-PRTR includes a sub-category under waste which is not included under IED. This is namely urban waste water treatment plants. The informal EEA report has highlighted that data held within the E-PRTR is likely more complete for air emissions than it is for water releases. Therefore as an additional stage in the comparison of E-PRTR against other approaches an approach has been developed to assess the data held by E-PRTR for economic activity 5(f) using an emission inventory approach defined by the best practice guidelines detailed under EMEP.

The inventory approach implemented has identified and made use of viable 'activity' data at national level in combination with emission factors from a range of literature sources and scientific journal papers. This has helped develop estimates of total national emissions for a given set of pollutants. While it has been necessary to make a range of assumptions in utilising this methodology (detailed further below under the method), which raises the uncertainty in the estimates derived, the results do however provide a useful scoping tool to assess completeness of data reported to the E-PRTR for urban waste-water treatment works (Economic activity 5f). By inference the results have also been used to understand what effect the reporting thresholds might have on the flow of data. This, when used in combination of the reported estimates from water-base, provides a powerful analysis to draw conclusions on the current state of data for this vector.

#### *Method for inventory approach*

The emission inventory approach adopted for assessment of the data held within E-PRTR, follows standard inventory practice as outlined within the EMEP emission inventory guidebook, where an emission is calculated based on the combination of an 'activity' multiplied by an 'emission factor'.

In selecting emission factors, due consideration has been given to the robustness of the study, however it has not been possible to delve more deeply into specific technologies or processes at given works where studies have been conducted. Equally, the breadth of technologies in use across the EU do have an impact on the resulting emissions. To overcome this issue we have made use of multiple emission factors for each pollutant to provide a range in the results as a 'maximum' and 'minimum' emission. This is intended to aid the scoping tool and build flexibility into how the results are assessed.

#### *Datasets Used*

In order to carry out the inventory phase of development, it has been necessary to identify a number of different datasets needed as part of the inventory process. E-PRTR data from the 2013 data set has been used for this assessment. The other sources of information used are described below:

- National population statistics - Available 2013 population data<sup>38</sup> was obtained for all countries considered in the assessment. This information was used to identify an indicative waste water usage per year for each individual country;

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<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00001&plugin=1>

- Waste water generation – Studies conducted on behalf of the UK government for waste water generation quoted an average value of 160lt/per Person/d<sup>39</sup>. This value has been adopted to convert total quantities of waste water generated per nation using the population statistics alluded to above;
- Emission factor data - A literature search was undertaken to understand the raw emissions of specific pollutants from WWTWs to rivers. Where possible the estimates are taken from studies of European countries as these are deemed to be most representative in terms of comparison to the E-PRTR data.;
- Identification is made of both a maximum and minimum emissions estimate to provide a range within which concentrations from individual WwTW discharges are likely to fall. Where a maximum and/or minimum value has not been identified the same value has been used for both the maximum and minimum; and
- Waterbase data - The European Environment Agency holds a number of databases containing information on the status and quality of rivers, lakes, groundwaters and coastal waters and the quantity of Europe's water resources<sup>40</sup>. This information provides a secondary source of information for comparison with the emissions estimates. Information from this data source is available for phosphorus and Nitrogen only.

#### *Selection of Pollutants of interest*

Selection of pollutants was made on the basis of ensuring a representative sample from each pollutant group of those listed within the E-PRTR website drop-down lists. In selecting pollutants consideration was also given for those substances that would be expected to be widely reported e.g. Total nitrogen, total phosphorus and total organic carbon; as well as those less likely to be reported such as metals and POPs. In terms of the 'pesticide' group, many of the listed substances are now banned for many years with potential emissions being less likely above reporting thresholds, Diuron was selected as a substance which had been in more recent use and therefore more likely to be present in releases. Table 5.47 provides the full list of substances reviewed.

**Table 5.47**    *List of pollutant selected*

<b>Pollutant</b>	<b>Pollutant Group based on E-PRTR website</b>
<b>Polychlorinated Biphenyls (PCBs)</b>	Chlorinated Organic Substances
<b>Dioxins and Furans (PCDD/F)</b>	Chlorinated Organic Substances
<b>Cadmium and compounds</b>	Heavy Metals
<b>Mercury and compounds</b>	Heavy Metals
<b>Lead and compounds</b>	Heavy Metals
<b>Total Phosphorus</b>	Inorganic Substances
<b>Total Nitrogen</b>	Inorganic Substances
<b>Chlorides</b>	Inorganic Substances

<sup>39</sup> Gardener MJ, 2008, 'Sources and emission of persistent chlorinated pollutants to the water environment', study completed by WRc on behalf of the UK Department for Environment, Food and Rural Affairs (Defra)

<sup>40</sup> <http://www.eea.europa.eu/data-and-maps/data/waterbase-rivers-6>

<b>Pollutant</b>	<b>Pollutant Group based on E-PRTR website</b>
<b>Fluorides</b>	Inorganic Substances
<b>NonylPhenol Ethoxalate/Nonyl Phenol</b>	Other Organic Substances
<b>Polyaromatic hydrocarbons (PAHs)</b>	Other Organic Substances
<b>Benzo(g,h,i)perylene</b>	Other Organic Substances
<b>Total Organic Carbon</b>	Other Organic Substances
<b>Di-(2-ethyl hexyl) phthalate (DEHP)</b>	Other Organic Substances
<b>Diuron</b>	Pesticides

### *Assumptions*

In developing such a tool it is of paramount importance that the inherent assumptions used within the estimates are understood and made clear as they will increase the uncertainty in the results derived. In the current case the emission estimates produced for urban waste water treatment works (economic activity 5f) are not intended to act as indicative national totals of emissions, but more the case that they give an indication of the magnitude and scale of emissions for that pollutant and nation.

Based on the approach adopted for inventory compilation the following assumptions have been made:

- The estimates for waste water generation (160 lt/person/day) are based on averaged data for the UK. In practice the quantity of waste water generated across the EU will vary and may even have regional variations depending on climatic conditions;
- The inventory approach assumes that all waste water generated will be received by an urban waste water treatment works. The levels of connection to mains sewer will also vary on a national and regional basis, with parts of the EU having fewer proportions of the population served by urban waste water treatment works than others;
- The inventory approach assumes that the quantity of waste water received by an urban waste water treatment works matches the quantity released back to the environment. Where most waste water treatment works have at least some thermal components, a proportion of the waste water received may be lost as evaporation;
- The 2013 population statistics are assumed to be accurate and correct. No estimates are made for the effects of travel or tourism which may affect the total population of a given nation at different times of the year; and
- In selecting emission factor data the studies identified have been considered for how robust the data is; however no further review or in-depth consideration is given specifically to technology in use at a given site. This is expected to vary across the European Union. To help counter this assumption multiple factors have been reviewed and selected to provide a best and worst case scenario or what has been termed a 'maximum' and 'minimum' emission level for national estimates per pollutant.

Despite these assumptions the emission inventory approach tool is still valid in helping understand the 'completeness' of the E-PRTR data when considered as a scoping tool. To help further mitigate the effects that stated assumptions will have on the uncertainty



of the inventory estimates a sensitivity range has been adopted for comparison against the total reported by the E-PRTR. This sensitivity range defines four categories of results as detailed within Table 1.2. Firstly based on the maximum/minimum inventory estimate total the value closest to the E-PRTR national total is selected. Then based on the difference between the two values the nation in question can be placed in category 1 – 4 accordingly.

For the first two categories (inventory totals  $\pm 25\%$  of E-PRTR national total, and inventory total  $\pm >25\% <75\%$  of PRTR national total) it is assumed that there is a good or reasonable fit between the scoping tool and the reported data. This does not go into greater scrutiny on the specific level of completeness for the nation but helps indicate that there is at least a reasonable match. For the third category (inventory total  $\pm >75\%$  of the PRTR national total) highlights that there is an issue with completeness in this particular nation.

The final category presented in Table 5.48 relates to the reporting threshold itself. In order to provide a worked example of what is assessed in the final category such an example is provided below:

- For a given pollutant the inventory estimate approach assumes a national emission of between 25kg – 50kg per annum;
- The reported E-PRTR data shows no data has been provided;
- Reporting threshold for the given pollutant is 5kg; and
- Assuming e.g. a population of 10 million with a works size of between 500K and 1 million, would equate to between 10 – 20 urban waste water treatment works nationally. Assuming an average release rate per works would equate to 2.5kg if 10 works were in place or 1.25kg if 20 works were in place. All urban waste water treatment works are under the reporting threshold.

In order to remove the necessary assumptions of population size and number of urban waste water treatment works per nation a scale factor (inventory minimum is  $<10$  times reporting threshold) has been utilised.

*Table 5.48 Classification of results into categories*

Category	Assumed level of completeness	Classification	Explanation
<b>1</b>	Good	Total inventory emission value is $\pm <25\%$ of E-PRTR value	Shows a good correlation between reported values and the given thresholds for a specific pollutant.
<b>2</b>	Fair	Total inventory emission value is $\pm$ between 25% and 75% of E-PRTR value	Shows a reasonable correlation between reported values and the given thresholds for a specific pollutant.
<b>3</b>	Poor	Total inventory emission value is $\pm >75\%$ of E-PRTR value	Shows a poor correlation between the reported values and the given thresholds for a specific pollutant.
<b>4</b>	Potential threshold issue (threshold too high)	Total inventory emission minimum value is $<10$ times the E-PRTR Reporting threshold	Where there is no data reported within the E-PRTR a comparison is made of the minimum reported value to the reporting threshold. In these cases the reporting threshold used is potentially too high, resulting in countries not reporting values.

### Results

This Section draws conclusions from the emission inventory approach used to assess the data held within E-PRTR, using the methodology described above. A review is undertaken of the 'completeness' of the available data, before a secondary review assesses the suitability of the current thresholds in providing informative information within the E-PRTR.

It is important to note that this assessment represents a scoping investigation of the available data and is not a technical assessment with definitive conclusions drawn for specific member states or industries.

Percentage calculations of the number of member states that are within a specific category are collated for each pollutant, and summarised in Table 5.49.

*Table 5.49 Proportion of Member States reporting pollutant emissions within assessment categories*

Pollutant Group	Pollutant	Category			
		1	2	3	4
Assumed level of completeness		Good	Fair	Poor	Threshold Issue
Chlorinated Organic Substances	Polychlorinated biphenyls (PCBs)	0%	6%	19%	74%
	PCDD + PCDF (dioxins + furans)	3%	3%	3%	90%
Inorganic substances	Total phosphorus	23%	45%	29%	3%
	Total nitrogen	35%	52%	13%	0%
	Chlorides	13%	35%	13%	39%
	Fluorides	10%	32%	23%	35%
Pesticides	Diuron	10%	16%	13%	61%
Other organic substances	Nonylphenol ethoxalate/Nonyl Phenol	10%	10%	68%	13%
	PAHs	6%	6%	13%	74%
	Total organic carbon	23%	55%	13%	10%
	DEHP	10%	16%	74%	0%
	Benzo (g,h,i) perylene	3%	3%	0%	94%
Heavy Metals	Cadmium and compounds (as Cd)	16%	29%	19%	35%
	Mercury and compounds	3%	13%	74%	10%
	Lead and compounds (as Pb)	13%	23%	42%	23%

Key conclusions are:

- **Chlorinated Organic substances, Pesticides and Heavy Metals are predominantly in Categories 3 and 4.** There is a clear trend in the results for specific groups of pollutants, where based on the classic inventory approach compared to PRTR, the majority of Member States are in category 3 (incomplete reporting) or 4 (threshold issues). In the case of POPs, pesticides and heavy metals these are all substances subject to emission reduction programs under international convention. The reporting thresholds created at the time of E-PRTRs inception (c.2006) may therefore no longer be appropriate given the emission reduction over the last ten years. Another issue posed here however is the benefit of gathering such data and difficulty in obtaining such data. For example in the case of dioxins and furans where emissions reductions have been significant, the current rates of emissions start to conflict with limits of detection for monitoring and the need for other approaches in producing estimates. This potentially increases the uncertainty in the estimates derived and provided;
- **A number of individual pollutants are predominantly in categories 1 and 2.** For Total Nitrogen, Total Phosphorus and Total organic carbon more than 60% of the member states show a good correlation between the E-PRTR data and emissions estimates (categories 1&2). In the case of Nitrogen in particular the correlation is 87% of Member States, including all of the larger (>20 million population) Member States. In this case this correlation likely reflects the greater understanding of these pollutants, including more sophisticated monitoring programmes. The correlation does also suggest that the reporting thresholds are appropriate. One additional point worthy of note is that of the three pollutants phosphorus showed the lowest correlation for category 1 and 2 (c.67%). While still very high this may suggest it is the weakest of the three pollutants for complete reporting;
- **Other pollutants with high proportion of category 3 (DEHP, Nonyl Phenol and Mercury)** Alongside the pollutants with a high number of Member States in category 3 and 4, and the number of pollutants with a high number of category 1 and 2, a third grouping sees a number of pollutants within category 3. This set of pollutants, primarily DEHP, nonyl phenol and mercury are substances which based on the classic inventory approach should be sufficiently above the reporting thresholds to appear within the E-PRTR but are still significantly lower (>75% of the classic inventory estimate) than the classic inventory estimate suggesting the possibility of under reporting;
- **Both Chlorinated Organic substances considered (PCBs and PCDD + PCDF) and Benzo (g,h,i) perylene all have more than 90% of the member states being placed within categories 3&4.** Again as stated previously, these are all substances deemed 'persistent organic pollutants', with dedicated programmes of emissions reduction which have proved highly successful in most European States. The high level of category 4 Member States in this case suggests that the reporting thresholds may be too high;
- **For pollutants where there is a high correlation to category 3 or 4, this includes all Member States with a population less than 5,000,000.** Following on from the review of those substances which appear within category 3 or 4 most often, it is also the case that all of the small EU Member States (<5 million) fall into these categories. Where the methodology is based on population, smaller population countries will have lower emissions totals. In practice this logic would also follow that for these countries that the urban waste water treatment works would also be servicing smaller populations and ergo again another smaller releases taking them below the reporting threshold. The perverse effect of this

issue around the reporting threshold means that in terms of the geographic data presented within the E-PRTR it may skew the results to reflect no emissions in a number of countries, with the reported emissions dominated by only a handful of EU Member States; and

- **For some pollutants the E-PRTR data greatly exceeds the classic inventory totals.** In a number of isolated cases there incidents where the Member States total emission for a given pollutant exceeded the classic inventory approach total by an order of magnitude. While these high emissions may be possible, the discrepancy would highlight the need for further investigation to confirm that the emissions reported are not being misled by a reporting error at a single site or small handful of sites within that Member State.

As highlighted in the bullet points above, the fifteen pollutants analysed typically fell into three categories. Firstly those where the majority of Member States have a good or fair continuity between the PRTR and classic inventory approach (category 1 and 2). Suggesting that there is a reasonable completeness and ergo appropriate reporting threshold. Secondly, there were many Member States with pollutants in category 3 (poor correlation), which suggest that the reporting threshold is not an issue but that under reporting may be happening. Finally there are a group of pollutants dominated by POPs, pesticides and some metals that are split between category 3 and 4. This final grouping suggests that the reporting threshold is causing an issue for completeness.

In the case of substances like POPs, as has been highlighted, active programs of emission control and reduction are in place. The fact that the reporting thresholds are now close to having been set a decade ago may suggest that the trend in emissions reductions means that the reporting thresholds are no longer appropriate. This does however highlight two additional issues:

- For pollutants with ongoing emissions reductions, the issue for monitoring (limits of detection) is important. Where specific pollutants fall to low or very low emission rates, the difficulty in deriving estimates becomes problematic. This may mean greater uncertainty in estimates the balance between complete reporting and data quality; and
- The need to review reporting thresholds on a periodic basis against the changing environmental and policy situation to ensure that the thresholds in use are still appropriate.

Additional to these issues was a point raised during the workshop held in November 2015 with stakeholders who provide, manage and use data from the E-PRTR. This being the issue of new or emerging pollutants that should be added to the PRTR, and also obsolete pollutants which may no longer be relevant and which pose a burden to industry to assess and rule out.

#### *Comparison of E-PRTR, Waterbase and classic inventory approach*

As a final step the results of the inventory approach have also been compared against the E-PRTR totals and Water-base totals discussed within Section F.2.3.

There are no clear trends or correlations in terms of the reporting numbers used under the three approaches considered. As previously stated in F.2.3 the values in Waterbase tend to be greater than both the E-PRTR and the inventory approach adopted. In some cases there is a good match between the inventory approach and the E-PRTR values reported, and for other member states the inventory approach reflect a better match to the water-base numbers. In most cases where a specific approach over or under estimates compared to the other approaches, this is a pattern repeated for both total phosphorus and total nitrogen for that particular member state.

The high level summary of the total emissions from Section F.2.3 is repeated, now including the inventory approach values as displayed in Table 5.50. This table reflects the result for only those Member States (15 in total) where values were reported for all three approaches.

It is clear that there are inconsistencies between the results for the three reporting processes considered, and the data that has been used. Consideration of a Europe wide approach to emissions reporting, and more clarity and detail provided to the member states on what should be reported and how would reduce this uncertainty.

While a number of pollutants are being reported with detailed information, and showing a degree of consistency between the E-PRTR and the inventory approach, it is clear that for a number of substances the reporting thresholds are higher than current reported values, resulting in limited information being available within the E-PRTR.

*Table 5.50 Total reported phosphorus and nitrogen emissions for three approached*

Approach	Total Phosphorus emissions reported (kg/yr)	Total nitrogen emissions reported (kg/yr)
<b>E-PRTR</b>	11,715,340	148,845,900
<b>Classic Inventory approach (max)</b>	17,161,132	171,611,320
<b>Classic inventory Approach (min)</b>	8,580,566	84,937,836
<b>Water-base</b>	84,786,376	856,160,741

#### **F.2.4 Internal coherence of E-PRTR emissions**

As a secondary phase analysis and means of triangulation, internal checks on the coherence of the E-PRTR 2012 data were completed. The E-PRTR reference library provides detailed information per pollutant on which activities can be assumed to generate emissions and releases to air and water respectively, in particular appendix 4 and 5 of the E-PRTR guidance document. Taking the E-PRTR 2012 data-set, it is possible to compare where data has been reported by facilities under different activity categories and sub-categories against where expected emissions might occur. This analysis generated four types of results:

- 0 – sub-activities where an emission was not expected and on comparison to the E-PRTR was not seen;
- 1 – Sub-activities where an emission was expected within the E-PRTR but on comparison to the 2012 data was not reported;
- 2 – Sub-activities where an emission was not expected within the E-PRTR but on comparison to the 2012 data was reported; and
- 3 – Sub-activities where an emission was expected and on comparison to the E-PRTR data was reported.

This means of comparison can be used to look at the overall completeness of the E-PRTR data-set per pollutant and activity against the reference library of where data should be expected to be present. In carrying out this assessment, and in combination

with the other analysis detailed within this report, it has been possible to look for specific trends and identify within pollutant groups and activities that might affect the general completeness of the data-set.

However in carrying out this assessment there is one note of caution that should be considered is that the review of expected reporting against sub-activities have not been weighted for their potential contribution to overall emissions. This was offset in part by the review of emissions to air within the EEA informal report, and for water emissions by correlating against the 'classic inventory approach' for releases from urban waste water treatment works (activity 5f) already detailed.

#### *Emissions to air*

The commentary provided here has reviewed the pollutants covered by the E-PRTR based on the pollutant groupings detailed on the E-PRTR website, namely:

- *Chlorinated Organic substances;*
- *Greenhouse Gases;*
- *Heavy Metals;*
- *Inorganic Substances;*
- *Other Gases;*
- *Other Organic Substances; and*
- *Pesticides.*

Initially based on a general review of all pollutants for emissions to air the general completeness looks greatest for the greenhouse gases and air quality pollutants covered under 'other gases'. This largely mirrors the findings of the EEA's informal review of the E-PRTR and cross-pollutant checks, which suggested that emissions of NO<sub>x</sub>, SO<sub>x</sub> and CO<sub>2</sub> looked largely complete. The completeness looks weakest for heavy metals and persistent organic pollutants covered under 'chlorinated organic substances', again mirroring the findings by the EEA informal review. By industry sector, the levels of reporting by sub-activity look most complete for metals sector and least complete for the chemicals sector, based on numbers of reporting facilities (not necessarily contribution of individual facility to total emissions).

#### *Chlorinated organic substances*

This group of pollutants covers the majority of the persistent organic pollutants such as dioxins and furans, and Polychlorinated Biphenyls (PCBs) as well as organic solvents like 1,1,2,2-tetrachloroethane. The general completeness of this group of pollutants based on expected reporting against sub-activities is less complete than the mainstream greenhouse gases or air quality pollutants. This potentially reflects a weaker understanding of the pollutants themselves and the need to report. It is also possible that these emissions are not measured because the pollutants are not covered by the facilities' permit.

Other possible reasons for under-reporting highlighted previously in the EEA informal report reflect the fact that for most POPs where an active programme of emission reduction is in place the emissions are now very low. This means that in terms of monitoring it becomes a competing issue between analytical limits of detection, where analytical chemistry is constantly improving and on the other hand the continued emissions reduction witnesses.

Activities including 4(c) chemical installations for the production of phosphorous-, nitrogen- or potassium-based fertilizers and 5 (g) independently operated industrial waste-water treatment plants which serve one or more activities of this annex have no

emissions reported for 2012 despite being identified within the PRTR library. Based on a comparison with the PRTR library, the dioxins and furans look the most complete (19 sub-activities out of 27) with 70% of the expected sub-activities covered. Pentachlorobenzene was the least complete (2 sub-activities out of 19) with only 10% coverage.

#### *Greenhouse gases*

This group of pollutants covers not only carbon dioxide, but also the basket of greenhouse gases identified by the UNFCCC which will also include hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). The pollutants covered within this group showed a good level of coverage across the expected sub-activities with only a smaller handful not covered. Additionally a number of sub-activities, particularly within the mineral manufacture sector (3), reported emissions of fluorinated gases (HFCs, PFCs) where not expected in the PRTR library. Carbon dioxide was the most complete pollutant (34 of 40 sub-activities) with 85% coverage. However as stated those activities missing such as 1(e) Coal rolling mills and 9(b) Plants for the tanning of hides and skins, may contribute less to carbon dioxide emissions than sources such as thermal power generation (1(c)).

#### *Heavy metals*

This group covers emissions of metal compounds to air. As with the chlorinated organic substances, the level of completeness for metals was lower than greenhouse gases and the main air quality pollutants. This is particularly the case for the energy and chemical sectors. Activity codes where data was expected but not reported include 1(e), 1(f), 3(b), 3(f), 4(d), 4(e), 4(f), 9(d) and 9(e). Zinc was the most complete pollutant (25 of 32 activities) with 78% coverage, while chromium was the least complete (18 of 32 activities) with 56%. As comparison to the EEA informal report which highlights that mercury is potentially a pollutant which has incomplete data within the E-PRTR as the coherence test found that coverage was at 65% (22 of 34 activities) corroborating the data within the EEA informal report.

#### *Inorganic substances*

This pollutant group covers a number of substances, which typically have greater relevance for water emissions. For air, the two key pollutants covered are particulate matter, an air quality pollutant and asbestos. Coverage of these two pollutants is good with a high level of expected activities reporting emissions. Asbestos is also reported to the E-PRTR for 2012 under 5(a) installations for the recovery of hazardous waste, which is not included within the E-PRTR library. Given the legacy issues of asbestos waste emissions from this activity don't seem unreasonable. The completeness of particulate matter is around 80% (33 of 41 activities), which while high is lower than the other air quality pollutants, suggesting further review is needed.

#### *Other gases*

This pollutant group covers the main air quality pollutants, in particular nitrogen oxides (NO<sub>x</sub>) and sulphur oxides (SO<sub>x</sub>). It also covers CFCs, ammonia and non-methane volatile organic compounds (NMVOCs). As with greenhouse gases there are a number of activities which reported the emission of CFCs and HCFCs where it was not expected in the PRTR library, this is particularly the case for waste (5), paper and pulp (6), intensive livestock (7), animal and food production (8) and other (9). Emissions linked to the sub-activities 1(e) coal rolling mills and 1(f) installations for the manufacture of coal products and solid smokeless fuel, are omitted for almost all pollutants in this group. Further review of the E-PRTR 2012 data illustrates only 1 facility in Europe reporting data under sub-activity 1(e). The potential issue here may represent how operators classify their business. Where rolling metals relate to iron and steel it is possible that the live operations in place have been included within the metal sector of E-PRTR rather than sub-activity 1(e). NO<sub>x</sub> and SO<sub>x</sub> have the highest levels of completeness with 90% (37

of 41 activities) and 92% (36 of 39 activities) respectively. Ammonia looked to be the least complete with 70% (27 of 39 activities).

#### *Other organic substances*

This group of pollutants covers the non-chlorinated organics, in particular benzene, anthracene, naphthalene and the other poly aromatic hydrocarbons. In reporting there is a relationship between PAHs and benzene in particular, this be the case where both pollutants are linked to fossil fuels and processing of such materials as oils. Anthracene and naphthalene are reported from the metals sector which were not expected based on the PRTR library. However where PAHs do occur from these activities, again there may be some correlation between these pollutants. PAHs had the highest level of coverage with 88% (23 of 26 activities).

#### *Pesticides*

This group of substances spans those pesticides identified as being persistent organic pollutants such as Aldrin. This group in particular are different from those previously discussed in that many of them have been banned for several years and because of this, many of the pesticides covered and documented within the E-PRTR library are not expected to have many if any sources reporting into the PRTR. The reported data corroborates this position with very few activity data included although there is the instance of reporting where not expected e.g. chlordane reported from activity 9(c) installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing.

#### *Emissions to water*

The review of release data for water were grouped in the same way as the air pollutants review against coherence. As the pollutants vary and differ between what can be expected for emissions to air and water, the relevant groupings for this vector included:

- *Chlorinated Organics;*
- *Heavy Metals;*
- *Inorganic Substances;*
- *Other Organic Substances; and*
- *Pesticides.*

#### *Chlorinated organics*

The reporting of chlorinated organics to water is less complete than the same group for emissions to air; however in a number of places emissions are reported from activities were not expected within the PRTR library. Notably halogenated organic compounds (AOX) and dioxins and furans are reported from 2(b) Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting and 4(b) Chemical installations for the production on an industrial scale of basic inorganic chemicals. AOX compounds have the most complete coverage for this group with 57% (17 of 30 activities) while dioxins and furans are the least complete with 42% coverage (10 of 24 activities).

During the 'classic inventory approach' assessment for one economic activity in particular, urban waste water treatment works (5f), the main issue identified for the POPs that sit under the chlorinated organics related to the reporting threshold. As has been identified for the same group under air emissions, active emission reduction programmes mean the releases to water have declined since the reporting thresholds were put in place with emissions for many facilities now potentially falling below reporting thresholds. However as with the air emissions the trade-off between falling emissions and limits of detection for monitoring pose important questions.



### *Heavy metals*

The heavy metal releases for water show a reasonable level of completeness against expected activities. However a number what could be more minor sources do not have reported data where expected including mineral fibre manufacture (3(f)), manufacture of brick, tile and ceramic (3(g)) and tanneries (9(b)). Again on comparison to the same group of pollutants for air, chromium is also the least complete for water releases with around 72% coverage (29 of 40 activities). As a counter-position, the 'classic inventory' approach (which assessed lead, cadmium and mercury), found mercury to be the least complete based on expected emissions levels.

### *Inorganic substances*

This group of pollutants covers a number of substances; while particulate matter will be of key relevance to air emissions, it is of less importance for water releases. The pollutants with key relevance for this group to water include total nitrogen, total phosphorus, chlorides and fluorides all of which can have significant impacts for water quality. The general coverage for this group of pollutants is reasonable mirroring the findings of the EEA informal report. The pollutant with the highest coverage was phosphorus with around 82% (34 of 41 activities), with the least coverage being fluorides at around 65% (21 of 32 activities). Total nitrogen and chlorides had 75% (31 of 41 activities) and 70% (24 of 34 activities) respectively.

### *Other organic substances*

This group covers the same set of pollutants discussed for air emissions with the addition of nonyl phenols and total organic carbon (TOC) which are relevant for water releases but not air emissions. The coverage within this group is also reasonable although a number of pollutants are reported from activity not expected within the PRTR library. Notably anthracene and naphthalene from the energy (1) and metals (2) sectors, and nonyl phenols from metals (2). Coverage for TOC was 82% (35 of 42 activities) while nonyl phenols had a coverage of around 80% (26 of 33 activities). The classic inventory approach for this group found potential under-reporting issues for DEHP and Nonyl phenols, although it was less clear why this might be the case.

### *Pesticides*

As with the same group of pollutants discussed for air, the pesticides covered by this group are largely persistent organic pollutants that have been banned for many years. The E-PRTR library reflects this with very few if any expected source activities for reporting. The E-PRTR reflects this position with the data that has been reported, although in a number of cases reported emissions were provided by sectors that were not expected based on the reference library. The key activity in particular being 5(f) urban waste-water treatment plants, which had reported emissions in 2012 of alachlor, Aldrin, chlorpyrifos, DDT, dieldrin, endosulphan, endrin, heptachlor, HCH, toxaphene, and isodrin. Again the classic inventory approach concurred with this position, based on a pesticide that had been in recent use, Diuron, the results suggested that reporting threshold issues meant that data was largely incomplete. However, as with POPs, where a ban is in place and emissions are expected to fall over time it poses the question of needing to review the reporting thresholds on a periodic basis for certain pollutants. Pollutants with less than 10 reporting facilities.

As part of the same coherence checks and review against the expected data and reported data, information was also gathered on those pollutants that were reported by 10 or less facilities between 2010 and 2012. In some cases where specific pollutants are linked to a limited number of large scale operations (such as manufacture of ethylene oxide) this might be reasonable; for other pollutants that have been banned for several years (such as Aldrin) very few (if any) facilities would be expected to report above threshold for these substances. Equally for some pollutants such as those highlighted in the pesticides groups, a very small (if any) number of facilities might be expected to

report such data. This information is again provided to help add context to the checks carried out and opinion whether reporting thresholds are suitable. Table 5.51 and

Table 5.52 provide data on which pollutants were reported by 10 or less facilities for air and water vectors respectively.

*Table 5.51 Pollutants emitted to air where 10 or less facilities reported emissions\**

<b>Air pollutants</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Perfluorocarbons (PFCs)</b>	>10 (20)	>10 (43)	8
<b>Halons</b>	4	7	2
<b>Aldrin</b>	>10 (13)	1	5
<b>Chlordane</b>	0	0	0
<b>Chlordecone</b>	0	2	0
<b>DDT</b>	0	1	0
<b>Dieldrin</b>	>10 (14)	0	5
<b>Endrin</b>	>10 (13)	1	0
<b>Heptachlor</b>	0	1	0
<b>Hexachlorobenzene (HCB)</b>	4	3	2
<b>1,2,3,4,5,6-hexachlorocyclohexane (HCH)</b>	2	5	0
<b>Lindane</b>	3	2	0
<b>Mirex</b>	0	0	0
<b>Pentachlorobenzene</b>	8	2	4
<b>1,1,1-trichloroethane</b>	6	>10 (21)	1
<b>1,1,2,2-tetrachloroethane</b>	2	3	3
<b>Toxaphene</b>	2	1	0
<b>Ethylene oxide</b>	7	8	7
<b>Hexabromobiphenyl</b>	2	3	1

\*Data provided covers the period 2010 – 2012 for all incidences of 10 or less facilities, for completeness all data is provided.

*Table 5.52 Pollutants emitted to water where 10 or less facilities reported emissions\**

<b>Water pollutants</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Lead and compounds (as Pb)</b>	6	10	>10 (25)
<b>Chlordane</b>	>10 (12)	0	8
<b>Diuron</b>	4	3	9
<b>Endosulphan</b>	0	0	0
<b>Endrin</b>	0	1	2
<b>Halogenated organic compounds (as AOX)</b>	4	1	2
<b>Hexachlorobutadiene (HCBD)</b>	6	4	8
<b>1,2,3,4,5,6-hexachlorocyclohexane (HCH)</b>	3	0	10
<b>Lindane</b>	3	1	0
<b>Mirex</b>	3	4	2
<b>PCDD + PCDF (dioxins + furans) (as Teq)</b>	1	2	7
<b>Pentachlorobenzene</b>	0	8	4
<b>Pentachlorophenol (PCP)</b>	0	1	0
<b>Simazine</b>	3	1	8
<b>Tetrachloroethylene (PER)</b>	8	>10 (20)	>10 (14)
<b>Trichloromethane</b>	9	>10 (13)	>10 (19)
<b>Vinyl chloride</b>	0	3	6
<b>Brominated diphenylethers (PBDE)</b>	0	1	1
<b>Isoproturon</b>	1	0	2
<b>Polycyclic aromatic hydrocarbons (PAHs)</b>	>10 (18)	2	>10 (21)
<b>Total organic carbon (TOC) (as total C or COD/3)</b>	0	1	2
<b>Trifluralin</b>	0	0	0
<b>Xylenes</b>	0	0	0
<b>Chlorides (as total Cl)</b>	0	0	0

\*Data provided covers the period 2010 – 2012 for all incidences of 10 or less facilities, for completeness all data is provided.

### **F.2.5 Conclusions on completeness and coherence and pollutants to analyse further**

The current review has been carried out as a combination of assessing previous studies, such as the work completed in the previous synthesis report and the work completed annually by the EEA as part of the informal review. It has also compared the E-PRTR against other viable emission inventory data-sets, such as CLRTAP and Waterbase and then additionally a number of additional tests have been completed to probe the completeness of the E-PRTR data-set. As stated this would aim to answer two important questions, firstly for the above reporting threshold component of the data is it complete based on what would be expected to be reported. Then secondly based on the reporting thresholds a wider question regarding overall completeness and the impact of the reporting threshold itself on that completeness.

The review of these aspects has identified a number of key points which appear in good correlation between the EEA studies and assessment in the current document, so in summary the following general points can be made:

- The air emission data-set within E-PRTR appears to be more complete than the water emission data-set. This may be because the emission estimates for air have been in place longer and so are more mature; also possibly because the other air inventories such as CLRTAP have greater correlation with E-PRTR than the equivalent water inventories such as water-base;
- In terms of individual pollutants or groups of pollutants, the review against other data-sets alongside the cross-pollutant checks carried out by the EEA suggest that the major air quality pollutants (NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>) and greenhouse gases (CO<sub>2</sub>) look reasonably complete, with the exception of ammonia which has a lower level of completeness. Heavy metals and POPs look far less complete;
- For water emissions a similar position is repeated with the major water quality pollutants (Total Nitrogen, Total Phosphorus and Total Organic Carbon) looking reasonably complete, while heavy metals, POPs and pesticides look far less complete;
- One issue highlighted for heavy metals, POPs and pesticides in particular is the issue of falling emissions against a static reporting threshold. For water in particular the 'classic inventory' approach suggested that for a number of pollutants the reporting threshold was the key barrier to completeness for data from urban waste water treatment works, and that the reporting threshold may even create geographic misrepresentation with smaller conurbations appearing not to emit any of these pollutants;
- However in addressing the threshold issue two bigger aspects need consideration. Firstly for POPs in particular, but also indirectly for banned pesticides emissions would be expected to fall, and in a number cases the emission rates are close to the limits of detection making emission estimates increasingly difficult. This difficulty in deriving estimates would also make the estimate itself more uncertain. In order to maintain a good level of completeness the logical step would be to lower the reporting threshold. However the increased burden upon operators, combined with quality and uncertainty of reported data, may make the benefits less tangible; and
- Review of waste proved problematic due to fluctuating trends in the waste data provided year-on-year and the fact that under the EU waste statistics the focus is on waste generation not transfer. This poses the possibility of double

counting; where the same waste moves between waste transfer stations before final resolution. The previous synthesis report made estimates that based on the data reported into the E-PRTR, the hazardous component was 39% complete and the non-hazardous component was 17% complete.

#### *Recommendations for amending reporting thresholds*

As stated within the summary above for certain pollutants the level of completeness within the E-PRTR looks reasonable and would suggest that no amendment of the reporting threshold is needed. For other pollutants, particularly those where the emission rates may have fallen significantly since the E-PRTR came into being in 2006, there may be a need to set in place a periodic assessment and update to ensure that the thresholds keep pace with real world emissions. However this does pose a bigger question around burden to report, quality of data and uncertainty in estimates reported, particularly if they are close to the limits of detection.

In other cases the lack of completeness looks to be more related to under-reporting than any specific reporting threshold issue. This is the case for water pollutants such as DEHP and nonyl phenols, where possibly the solution is to work more closely with operators to ensure that above reporting threshold data is gathered.

As part of the same review process it may also be necessary to consider the pollutant sets in place and benefit of retaining, removing or adding new substances. During the review carried out, a number of obsolete pesticides were assessed with no reported emissions present within the E-PRTR. Given that pesticides such as Aldrin have been banned for more than three decades, this is entirely to be expected. While new potential threats such as the issue of active pharmaceutical compounds in water which could benefit from reporting requirements into the E-PRTR to help build an evidence base which does not currently exist.

In the short to medium term the key recommendations for review of reporting thresholds relate specifically to POPs and heavy metals, where the current review and comparison to other studies do suggest that there may be an issue for both air and water vectors.

In the medium to longer term the key recommendation are to set a periodic review of selected pollutants and reporting thresholds based on the EEA informal review and current evidence for emission rates. This will ensure that the reporting threshold keeps pace with real world emission rates. As an additional possibility raised during the E-PRTR workshop held in November 2015, where IED permits for certain pollutants have lower emission rates than the reporting threshold, this could be used as part of the review of what would be an acceptable limit to set

### **F.3 Conclusions on Article 17 reporting**

#### **F.3.1 Key findings from triennial reports on the E-PRTR regulation**

The E-PRTR now holds seven years' worth of annual data with the latest data from 2013 reported back to the European Environment Agency by Member State authorities for E-PRTR compilation in March 2015.

Each successive cycle of data helps build the time-series of information and makes the trend analysis increasingly important to understand how releases and transfers are changing in the face of the economic, policy and scientific environments.

The E-PRTR triennial review from 2007-2009 provided the first in depth review of the E-PRTR regulation, data flows and presentation of the data in the E-PRTR website since the creation of the regulation. The key findings from this review is compared in the table below to the key findings of the 2010-2013 reporting period.

Table 5.53 below presents a summary of the key findings of the 2010-2013 triennial report compared to the key findings from the previous reporting period 2007-2009.

*Table 5.53 Comparison of key findings from 2007-2009 and 2010-2013 triennial review*

Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
<b>2. Analysis of use</b>	The E-PRTR website was generally well received and covered all the required criteria in the regulation. Based on the web-user statistics and stakeholder survey some specific recommendations were made for improvement.	The E-PRTR website was generally well received and covered all the required criteria in the regulation. Based on the web-user statistics and stakeholder survey some specific recommendations were made for improvement.
	The daily average for the number of website sessions is 589.	The daily average for the number of website sessions is 242, a decline since the previous reporting period. However, the website usage indicates that the E-PRTR has a well-established following (with 73% of visitors returning visitors).
	The previous triennial study looking at web-stats over 1.5 years found one week in particularly with very high viewing rates (especially in Romania, Portugal, Hungary and Austria), originating from online news articles announcing the publication of new data with links to the E-PRTR website.	There is no discernible pattern as to when users access the website. However, online media continues to be an important source of website traffic, although more traffic was previously redirected from a wider variety of online media sources compared to in the current reporting period.
	Other comments from user groups was that the E-PRTR provides highly complex data which requires a high level of knowledge to understand.	The website continues to be used by a select group with a background understanding of the data. Use of the website library is generally quite low and it was felt by some stakeholders that the design of the E-PRTR data could be updated to be more engaging and user-friendly.
	Data are mostly used for benchmarking, national reporting, information on local environmental impacts, planning/ future action and to a lesser extent for other purposes.	Data is predominantly used for general knowledge purposes and for reporting requirements. It was observed that few stakeholders use E-PRTR data for academic purposes. Out of the academics consulted, one provided useful insight in its use of the E-PRTR data and suggestions to increase its use (e.g. list of reference using the data, more information on quality control measures, and more contextual information).
	Some parts of the E-PRTR are slow to load with large size legends	E-PRTR data are mostly considered as being easy to find and access. No specific comments regarding the download time were recorded.

Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
	Questions over misplaced facilities and industries and comparability of the E-PRTR to other datasets	Concerns were raised concerning the reliability of E-PRTR data affecting its comparability with other datasets. Users reported that differences in the pollutants reported for the same activity can give rise to misunderstanding of data. Further, the reliability of data from certain facilities was questioned where certain pollutants were not reported although they are unlikely to fall below the thresholds set. Comparability of E-PRTR data across time is largely well regarded; the summary tables provided by the EEA are mostly considered to moderately suitable, although several indicated that these do not allow for the visualisation of evolution of emissions data.
<b>3. Scope analysis</b>	During the completeness check a small number of outliers were identified and excluded. While this comprised only a very small quantity of all reported releases the effects on pollutants total release could be significant.	This was also the case for the current study with a small number of facilities grossly affecting national emission totals where outliers were found to exist.
	28,510 facilities from across 32 countries reported releases. For 2009 there were 40,198 releases and pollutant transfers and a total of 27,401 waste transfers	A more general review of the EEA informal review found the quantity of reporting facilities had increased by 6% since 2010, with only 17% reporting for all five years (2007-2012)
	10% increase in the number of facilities reporting from 2007 – 2009 indicating an improvement in completeness	
	<u>Air:</u> Small set (11) pollutants with no data, all banned substances. A good proportion (36) had 90% or greater completeness. Dioxins and Furans and metals very variably year to year with high uncertainty.	<u>Air:</u> the major air quality pollutants (NO <sub>x</sub> , SO <sub>x</sub> , PM <sub>10</sub> ) and greenhouse gases (CO <sub>2</sub> ) appeared to have a reasonable level of completeness based on cross-pollutant checks and comparison to other inventories. Comparison to permitted facilities also corroborated this aspect.
	<u>Air:</u> The Greenhouse gas and main air quality pollutants look complete. NMVOC, CO, PM <sub>10</sub> , F-gases and N <sub>2</sub> O all look like under reporting	<u>Air:</u> For heavy metals and POPs the levels of completeness were far lower. The issue of falling emissions and analytical testing at limits of detection has been suggested as one possible reason for the issues with completeness
	<u>Air:</u> Suggestion that the threshold for PFCs, HFCs and SF <sub>6</sub> may be too high.	



Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
	<u>Water:</u> All 71 pollutants have at least 1 release in the E-PRTR although 27 pollutants have less than 10 releases in total.	<u>Water:</u> Comparison of E-PRTR with water-base proved inconclusive, with no clear patterns or correlation. For water inventories the lack of viable good benchmarks within other inventories is a weakness that makes it more difficult to scrutinise the quality of the E-PRTR water data.
	<u>Water:</u> 44 pollutants are linked to one major source activity which dominates >80% of all releases	<u>Water:</u> Based on a classic inventory approach used to benchmark urban waste water treatment works, it was suggested that the completeness of Total Nitrogen, Total Phosphorus and Total Organic Carbon look reasonable.
	<u>Water:</u> EEA informal report looked at aquaculture and found very low reporting in some Member States where aquaculture is a key industry. Suggests incomplete data.	<u>Water:</u> for POPs and heavy metals the results suggest that the reporting thresholds may be too high. But this does pose a bigger question about completeness versus the burden and difficulty in making estimates for very low concentrations with the uncertainty in estimates also rising.
	<u>Water:</u> PCBs, asbestos and hexachlorobutadiene are only reported in one Member State.	<u>Water:</u> Aside from the main water quality pollutants and POPs/Metals, there were other pollutants that looked to suffer from under-reporting where the reporting threshold didn't pose an issue. In particular DEHP and Nonyl Phenol appeared to have less complete data-sets within the E-PRTR.
	<u>Land:</u> Issue surrounding terminology with very few data reported. Needs greater clarification on what a land emission is.	<u>Land:</u> There is still an issue around terminology, the number of reporting facilities has fallen dramatically in the last three years, with no clear rationale for why this should be. The completeness of reporting for emissions to land generally is very poor.
	<u>Pollutant Transfers:</u> While many of the substances are banned. Seven are in current and high use, while reported data is low. Suggests under reporting.	
	<u>Waste:</u> On comparison to Eurostat waste data E-PRTR captures 36% of hazardous waste and only 17% of non-hazardous waste.	<u>Waste:</u> critical assessment of waste against other references is difficult due to differences in terminology and approach within the E-PRTR. In particular where other data-bases focus on waste generation rather than waste transfer this creates a mis-match to E-PRTR

Topic Area	Findings from 2007 -2009 Triennial Report	Findings from 2010-2013 Triennial Report
	<u>Waste:</u> For hazardous waste within agriculture, hunting and forestry the quantities look particularly low compared to Eurostat	<u>Waste:</u> For transboundary hazardous waste, again there are mismatches with the waste shipment regulation working to considerably lower reporting thresholds and providing additional contextual information on the nature of the hazard and substances contained within the waste.
	<u>Waste:</u> For non-hazardous waste, textiles, leather, wood and wood products, and other non-metal mineral manufacture look particularly low compared to Eurostat.	<u>Waste:</u> based on the previous synthesis report it was suggested that hazardous waste was only 39% complete and non-hazardous waste only 17% complete within the E-PRTR.

## Appendix G Targeted consultation

### G.1 Questionnaires

#### G.1.1 Questionnaire for data providers

#### I. Information concerning the organisation you are representing

##### a) Name of your company or organisation:

☐ If you wish to remain anonymous, please tick this box

##### b) Please indicate the type of the organisation you are representing:

- ☐ Industry Operator
- ☐ Industry Association
- ☐ Competent Authority for E-PRTR
- ☐ National level environment agencies
- ☐ European Environment Agency
- ☐ International organisation
- ☐ Research organisation / university
- ☐ Other interest group organisation / association
- ☐ Other

If Other please include details on the type of organisation you represent:

\_\_\_\_\_

For industry and trade association the following questions apply:

##### i. What is the size of your business?

- ☐ Micro firm (0-9 employees)
- ☐ Small firm (10-49 employees)
- ☐ Medium firm (50-249 employees)
- ☐ Large firm (over 250 employees)

##### ii. Are you registered in the Commission's transparency register?

- ☐ Yes
- ☐ No

If yes, please provide your registration number: \_\_\_\_\_

##### c) Please select in the list below the Member State(s) in which you reside and is covered by this questionnaire.

☐ Austria

☐ Belgium

☐ Bulgaria

☐ Croatia

☐ Cyprus

☐ Lithuania

☐ Luxembourg

☐ Latvia

☐ Malta

☐ Netherlands

<input type="checkbox"/> Czech Republic	<input type="checkbox"/> Poland
<input type="checkbox"/> Denmark	<input type="checkbox"/> Portugal
<input type="checkbox"/> Estonia	<input type="checkbox"/> Romania
<input type="checkbox"/> Finland	<input type="checkbox"/> Spain
<input type="checkbox"/> France	<input type="checkbox"/> Sweden
<input type="checkbox"/> Germany	<input type="checkbox"/> Slovenia
<input type="checkbox"/> Greece	<input type="checkbox"/> Slovakia
<input type="checkbox"/> Hungary	<input type="checkbox"/> United Kingdom
<input type="checkbox"/> Ireland	<input type="checkbox"/> EU level organisation
<input type="checkbox"/> Italy	<input type="checkbox"/> Other (including non-EU countries):

If other please include details on the country you represent: \_\_\_\_\_

**d) Please indicate (if applicable) your key duties in relation to the E-PRTR Regulation:**

- ☐ Monitoring emissions data
- ☐ Reporting emissions data
- ☐ Administering data reported at national level
- ☐ Administering data reported at EU level
- ☐ Verifying quality of data
- ☐ Other: \_\_\_\_\_

## II. Level of understanding/expertise regarding the Regulation

Please indicate the level of understanding/expertise regarding the following:

	High	Medium	Basic	None
E-PRTR Regulation				
Related legislation that affects data in the E-PRTR (e.g., the Industrial Emissions Directive or Water Framework Directive)				

### Part I – Implementation of the E-PRTR Regulation

#### 1. Implementation of the Regulation

1. To what extent do you agree with the following statements?

Aspect	To a very large extent	To a significant extent	To some extent	To no extent	Not applicable/ Don't know	Comments
Understanding the scope of the E-PRTR Regulation is complicated						
Resources required for the implementation of the Regulation are important						

The data formats between national level PRTR and E-PRTR are well aligned and require only minimal data harmonising

## 2. Feedback on data flows

2. *[Industry operators only]* Have you resubmitted data to improve the quality of the information reported?

- ☐ Yes  
☐ No

If yes, please can you select for which reasons:

- ☐ Wrong units used or typos in data entry  
☐ Misaligned pollutant / wrong pollutant selected  
☐ Updated monitoring data which significantly altered original estimates  
☐ Issues with modelled data estimates which required re-evaluation  
☐ Incomplete submissions / missing data

Other – please indicate: \_\_\_\_\_

3. *[Industry operators only]* How do you report data to the Competent Authorities?

- ☐ Online  
☐ Other (e.g. provided as hardcopy with environmental permitting data): \_\_\_\_\_

4. *[Industry operators only]* When developing data to be submitted to the Competent Authority do you have a system at company level to organise information or is it done on a facility by facility basis?

- ☐ A companywide system is adopted for generating data to submit under PRTR  
☐ Development of data for the PRTR is managed at a facility level basis  
☐ Other: \_\_\_\_\_

5. The previous review of the data submitted found that some air emissions (e.g. NMVOC, CO, PM10, F-gases, N<sub>2</sub>O) seem under-reported. Are you aware of any reasons why this would be the case (e.g. issues with monitoring, issues with reporting, emissions below reporting thresholds)?

- ☐ Issues with monitoring of these emissions  
☐ Issues with reporting from operators  
☐ Emissions at operation level below reporting thresholds  
☐ Do not know  
☐ Other: \_\_\_\_\_

## 3. Feedback on quality control

6. *[Competent Authorities only]* What is the trend observed in the quality of the data reported?

- ☐ The quality of data reported has strongly improved  
☐ The quality of data reported may be improved  
☐ No change in the quality of data reported  
☐ The quality of data reported has deteriorated  
☐ Do not know

- 
7. Do you feel enough guidance is provided / available on the reporting of data?
- ☐ Yes
  - ☐ No
  - ☐ Do not know
8. What steps are taken to improve the awareness of operators of the use made of the reported data? [if the respondent is an operator, please indicate whether you are aware of steps taken to improve the understanding of the use of the data reported]
- ☐ Training sessions
  - ☐ Handbook and leaflets
  - ☐ Feedback from Competent Authorities
  - ☐ Do not know
  - ☐ Other: \_\_\_\_\_
9. How do operators / Competent Authorities judge the use made of the data? Do you think the use made could be improved?
- ☐ The use made of data is sufficient
  - ☐ The use made of data is not sufficient
  - ☐ Do not know whether the use made of data is sufficient or not
  - ☐ The use made of data could be improved
  - ☐ The use made of data could not be improved
  - ☐ Do not know whether the use of data could be improved or not
10. [Operator only] What steps are taken at facility level to improve the quality of data reported? (e.g. audit trail, training)
- ☐ Audit trail
  - ☐ Training of staff involved with reporting
  - ☐ Other: \_\_\_\_\_
11. Does your trade association / Competent Authorities/ organisation provide any guidance, workshops, open days to assist with developing data management systems, quality audits, or benchmarking of data?
- ☐ Yes
  - ☐ No
  - ☐ Do not know

Additional comment:

## Part II – Evaluation of the E-PRTR Regulation

### 4. Evaluation of the effectiveness<sup>41</sup> of the E-PRTR Regulation

12. To what extent do you think the Regulation has contributed to the following objectives?

Objectives	To a very large extent	To a significant extent	To some extent	To no extent	Not applicable/ Don't know	Comment
More public participation in environmental affairs						
Better knowledge of pollution and exposure to pollutants						
More transparency and accountability in environment management						
Improved environmental performance of (industrial) activities causing pollution						
Engagement of citizens in environmental decision making						

13. To what extent can the progress made towards the objectives listed in question 12 be reasonably linked to measures of the E-PRTR Regulation?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Additional comment:

14. To what extent does the reported data and possibilities for searching the data serve the objectives listed in question 12 of the E-PRTR Regulation?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Additional comment:

15. *[Competent Authorities only]* To what extent does the annual obligation to report help to maximise the achievement of the objectives listed in question 12?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

<sup>41</sup> To what extent did the Regulation lead to the observed changes/effects? To what extent can these changes/effects be credited to the E-PRTR Regulation? To what extent do the observed effects correspond to the objectives?

16. What unexpected/unintended positive or negative changes can be identified as a result of the implementation of the E-PRTR Regulation?

	To a large extent	To some extent	To no extent	Provide commentary
<b>Potential unexpected/unintended positive changes</b>				
Increased awareness of workers/ citizens regarding the importance of controlling emissions				
Emergence /development of related policies that would not necessarily have arisen in the absence of the Regulation				
Other, please specify:				
<b>Potential unexpected/unintended negative changes</b>				
Increased administrative burden				
Overlaps of reporting mechanisms with other obligations				
Data incompatibility with other reporting systems or other legislative requirements				
Other, please specify:				

17. What other influencing factors (e.g. implementation by Member States, action by stakeholders, interaction between industry and authorities) can be identified, that contributed to the changes?

- ☐ Implementation by Member States  
☐ Action taken by stakeholders  
☐ Interaction between industry and authorities  
☐ Other: \_\_\_\_\_

Additional comment:

Use the box below to provide any comments or information you have concerning the above questions on **effectiveness**<sup>42</sup>:

<sup>42</sup> To what extent did the Regulation lead to the observed changes/effects? To what extent can these changes/effects be credited to the E-PRTR Regulation? To what extent do the observed effects correspond to the objectives?



## 5. Evaluation of the efficiency<sup>43</sup> of the E-PRTR Regulation

18. Please assess the degree of importance of the following potential costs for implementation of the E-PRTR Regulation and where possible provide data on actual costs (i.e. in currency or man-days) for the table below:

Potential costs associated with implementation with the Regulation	Degree of Importance	Please quantify where possible (approximate range)	If cost data included please indicate year
Costs of familiarising your organisation with the Regulation (i.e. training/ informing staff)	<input type="checkbox"/> High <input type="checkbox"/> Moderate/low <input type="checkbox"/> NA/Unknown	_____ (man-days)	
Costs of equipment purchase (e.g. monitoring)	<input type="checkbox"/> High <input type="checkbox"/> Moderate/low <input type="checkbox"/> NA/Unknown	_____ (Currency)	
Costs of reporting of performance/ compliance (to Member State authorities)	<input type="checkbox"/> High <input type="checkbox"/> Moderate/low <input type="checkbox"/> NA/Unknown	_____ (man-days)	
Cannot isolate costs of implementing E-PRTR due to inter-links with other instruments implementation	<input type="checkbox"/> High <input type="checkbox"/> Moderate/low <input type="checkbox"/> NA/Unknown	_____ (man-days) _____ (name of instruments that are implemented together)	
Other (e.g. costs to provide data, to check data quality and clarify issues, costs for final checks of data, costs for reporting via reportnet for national authorities, costs for follow up after quality checks made by the EEA):	<input type="checkbox"/> High <input type="checkbox"/> Moderate/low <input type="checkbox"/> NA/Unknown	_____ (Currency)	

Note for recurrent costs, please provide these on an annual basis.

19. Please list and assess the benefits of the Regulation in the following terms:

Benefits	Very large	Significant	Some significance	Not relevant	Not applicable/ Don't know
Public participation in environmental affairs					
Better understanding of pollution and exposure to pollutants					
Transparency and accountability in environment management					
Improved environmental performance of (industrial) activities causing pollution					
Engagement of citizens in environmental decision making					
Advancement in process science driven by better understanding of the inputs and outputs					
Improvement of industry's environmental performance due to comparison with performance of industry at EU level					
Other: please specify					

<sup>43</sup> Were the costs involved justified, given the changes/effects which have been achieved? What factors influenced the achievements observed?

**20.** Please assess the benefits of the Regulation relative to the costs of implementing it:

Benefits are less than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits and costs are similar	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits greater than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits much greater than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Not applicable/Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No

**21.** Do you think that the benefits of the Regulation have increased over time:

- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know

**22.** Have micro sized enterprises and/or SMEs been disproportionately impacted by the Regulation?

- ☐ Yes
- ☐ No
- ☐ Do not know

If you answered yes to the above question, please provide details on how micro sized enterprises and/or SMEs have been disproportionately impacted and the extent.

**23.** Are you aware of significant costs differences for the implementation of the E-PRTR Regulation between countries?

- ☐ Yes
- ☐ No
- ☐ Do not know

If you answered yes to the above question, please describe the differences (in % or factor) and explain the main reasons for the costs difference observed:

**24.** How do you rate the costs of implementing the E-PRTR Regulation compared to other similar reporting measure?

- ☐ Similar costs for implementing the E-PRTR Regulation and other similar reporting requirements
- ☐ Higher costs for the E-PRTR than for other similar reporting requirements
- ☐ Lower costs for the E-PRTR than for other similar reporting requirements
- ☐ Do not know

Please, indicate which reporting measure you are using to compare the E-PRTR with:

25. Please describe any suggestions you may have for the simplification or reduced regulatory burden for businesses regarding the provisions of the E-PRTR Regulation.

Use the box below to provide any comments or information you have concerning the above questions on **efficiency**<sup>44</sup>.

## 6. Evaluation of the coherence<sup>45</sup> of the E-PRTR Regulation

26. To what extent is the E-PRTR Regulation coherent internally?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Indicate which elements in the Regulation you believe are not internally coherent and add a short explanation:

27. To what extent do you agree with the following statements?

	Strongly agree	Agree	Disagree	Not applicable/ Don't know	Please provide commentary to illustrate your views. In case you disagree, to what extent has this affected the achievement of the objectives of the Regulation?
There are no gaps in the areas the Regulation seek to cover					
<b>The Regulation is satisfactorily integrated, complementary and coherent with other pieces of EU legislation (no overlaps, discrepancies, contradictions), including:</b>					
- Directive 2009/29/EC establishing the Emissions Trading Scheme					
- Directive 2010/75/EC on Industrial Emissions					
- WISE <sup>46</sup>					
- Waste Management Statistics <sup>47</sup>					
- EMEP reporting under Directive 2001/81/EC on					

<sup>44</sup> Were the costs involved justified, given the changes/effects which have been achieved? What factors influenced the achievements observed?

<sup>45</sup> To what extent is the Regulation coherent with other interventions which have similar objectives? To what extent is the E-PRTR Regulation coherent internally?

<sup>46</sup> WISE is available on the following link: <http://water.europa.eu/>

<sup>47</sup> Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics

	Strongly agree	Agree	Disagree	Not applicable/ Don't know	Please provide commentary to illustrate your views. In case you disagree, to what extent has this affected the achievement of the objectives of the Regulation?
National Emission Ceilings for certain pollutants (NECD)					
- Directive 2007/2/EC establishing INSPIRE					
- Directive 96/82/EC on major accident hazards					
The Regulation is satisfactorily integrated and coherent with international obligations in this field relevant to your Member State (e.g. Gothenburg Protocol)					
The Regulation is satisfactorily integrated and coherent with other reporting obligations (please precise which)					

**28.** Please suggest how the Regulation and other policy and legislation could work better together:

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Use the box below to provide any comments or information you have concerning the above questions on **coherence**<sup>48</sup>.

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<sup>48</sup> To what extent is the Regulation coherent with other interventions which have similar objectives? To what extent is the E-PRTR Regulation coherent internally?

## 7. Evaluation of the relevance<sup>49</sup> of the E-PRTR Regulation

29. The objectives of E-PRTR are: to foster public participation in environmental affairs; provide better knowledge of pollution/exposure to pollutants; promote transparency and accountability in the sphere of environment management; improve environmental performance of activities causing pollution; effectively engage citizens in environmental decision making. To what extent do these objectives still correspond to current needs?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Additional comment: \_\_\_\_\_

30. Are you aware of any obsolete, unnecessary or missing provisions or gaps in the Regulation that is affecting its performance?

	Category	Ways in which the performance of the Regulation is affected
Annual reporting of data to competent authority	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Annual reporting from Member States under article 16	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of off-site transfers of waste	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of pollutants in waste water emissions	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Geo-referencing data such as 'long' and latitude' co-ordinates or NUTs polygon regions	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of diffuse sources of pollution	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Quality assurance requirements	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting guidance document	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Confidentiality provisions	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Penalty system	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Other (please specify e.g. activities covered by E-PRTR Regulation, reporting thresholds)	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	

<sup>49</sup> To what extent do the (original) objectives (still) correspond to the needs within the EU?

31. To what extent does the Regulation contribute to the objective of the 7<sup>th</sup> Environment Action Programme 'to improve the knowledge and evidence base for Union environment policy'?

- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know

Additional comment:

32. Has the adaptation of the Regulation to scientific and technical progress been appropriate and involved stakeholders?

- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know

Additional comment:

33. Has there been any technological advancements or changes to industrial processes which means that the activities included under Annex I of the Regulation are no longer suitably matched to modern industrial activities? (E.g. how does hydraulic fracturing fit within the definition for 'mining' or 'oil and gas refineries' in the Annex I activities.)

Is there any new needs that should be reflected in the E-PRTR Regulation?

Please use the box below to provide any comments or information you have concerning the above questions on **relevance**<sup>50</sup>.

## 8. Evaluation of the EU added value<sup>51</sup> of the E-PRTR Regulation

34. What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?

- ☐ Harmonisation of reporting
- ☐ Harmonisation of monitoring practices
- ☐ Development of a common approach and understanding in data collection and reporting
- ☐ Enhanced comparability across reporting countries
- ☐ Higher quality of data due to QA efforts deployed within the Reportnet environment
- ☐ Stimulation to participate for non EU countries
- ☐ Other: \_\_\_\_\_

<sup>50</sup> To what extent do the (original) objectives (still) correspond to the needs within the EU?

<sup>51</sup> What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels?

35. What is your (or your organisation's) overall view of the E-PRTR?

- ☐ Positive
- ☐ Moderate
- ☐ Low
- ☐ No opinion

36. How much, do you think, the existence of the E-PRTR is valued by users?

- ☐ Very much
- ☐ Little
- ☐ Not at all

Additional comment:

37. How much do you think data users trust the data presented on the E-PRTR website?

- ☐ Very much
- ☐ Little
- ☐ Not at all

Additional comment:

38. Do we still need to address the issues tackled by the Regulation at the EU level or is it sufficiently addressed at the Member State level and/or through standards?

- ☐ There is still need to address the issues tackled by the Regulation at the EU level
- ☐ PRTR is sufficiently addressed at the Member State level
- ☐ Do not know

Use the box below to provide any comments or information you have concerning the above questions on **EU added-value**<sup>52</sup>:

**Thank you very much for taking the time to participate in this research.**

Would you be open to further discussion regarding your feedback on the evaluation of the E-PRTR Regulation?

- ☐ Yes ☐ No

Please enter your email address below if you would like to be sent the outputs from this research:

#### [G.1.2 Questionnaire for data users](#)

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<sup>52</sup> What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels?

## I. Information concerning the organisation you are representing

a) Name of your company / organisation: \_\_\_\_\_

☐ Tick this box if you wish to remain anonymous

b) Please indicate the type of the organisation you are representing:

- ☐ Industry Operator
- ☐ Trade Association
- ☐ Competent Authority
- ☐ National level Environment Agencies
- ☐ European Environment Agency
- ☐ Civil society organisation
- ☐ Environmental NGO
- ☐ International organisation
- ☐ Research/academic institution
- ☐ EU institution
- ☐ Consumer group
- ☐ Citizen
- ☐ Other

If Other please include details on the type of organisation you represent: \_\_\_\_\_

c) Are you registered in the Commission's transparency register?

- ☐ Yes
- ☐ No

If yes, please provide your registration number: \_\_\_\_\_

d) Please select below the Member State(s) in which you reside and is covered by this questionnaire

☐ Austria  
☐ Belgium  
☐ Bulgaria  
☐ Croatia  
☐ Cyprus  
☐ Czech Republic  
☐ Denmark  
☐ Estonia  
☒ Finland  
☐ France  
☐ Germany  
☐ Greece

☐ Lithuania  
☐ Luxembourg  
☐ Latvia  
☐ Malta  
☐ Netherlands  
☐ Poland  
☐ Portugal  
☐ Romania  
☐ Spain  
☐ Sweden  
☐ Slovenia  
☐ Slovakia



☐ Hungary☐ Ireland☐ Italy☐ United Kingdom☐ EU level organisation☐ Other (including non-EU countries)

Please use the box below to provide any additional comments or information:

## II. Level of understanding/expertise regarding the Regulation

a) Please indicate the level of understanding/expertise regarding the E-PRTR:

	High	Medium	Basic	None
E-PRTR Regulation				
Related legislation that affects data in the E-PRTR (i.e. IED or Water Framework Directive)				

### Part I – Implementation of the E-PRTR

#### 1. Your use of the E-PRTR

1. What is your main point of access for PRTR data?

- ☐ E-PRTR website  
☐ National level PRTR website  
☐ EEA website for further information  
☐ Other: \_\_\_\_\_

2. How often do you access the E-PRTR website?

- ☐ Once a month  
☐ 7-11 times per year  
☐ 2-6 times per year  
☐ Less than once a year  
☐ Never

3. What data do you access on the E-PRTR website?

- ☐ Emissions data to water  
☐ Emissions data to air  
☐ Emissions data to soil  
☐ Transfer of emissions  
☐ Information on specific industrial activities  
☐ Information on specific pollutants  
☐ Other: \_\_\_\_\_

---

4. What level of aggregation of data do you use?

- ☐ National level
- ☐ River-basin level
- ☐ EU level
- ☐ All reporting countries (i.e. EU and EEA countries)
- ☐ Facility level
- ☐ Area overview
- ☐ Other: \_\_\_\_\_

5. For what purpose do you access E-PRTR datasets?

- ☐ Academic research
- ☐ Policy development
- ☐ Other reporting requirements
- ☐ Information on local emissions
- ☐ General knowledge
- ☐ Other: \_\_\_\_\_

6. Do you make use of the E-PRTR reference library to gain further understanding of the pollutants and policy used in the E-PRTR<sup>53</sup>?

- ☐ Yes
- ☐ No
- ☐ I was not aware of the E-PRTR reference library

7. If the answer to the previous question was 'yes', do you find the information within the E-PRTR reference library useful?

- ☐ Yes
- ☐ No

Additional comment:

8. Do you use of the E-PRTR as a learning tool for education (i.e. schools, colleges or university)?

- ☐ Yes
- ☐ No

Additional comment:

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<sup>53</sup> The E-PRTR reference library is available at the following link: <http://prtr.ec.europa.eu/>

## 2. Your experience with the E-PRTR

9. To which extent do you agree with the following statements

	Agrees fully	Agrees moderately	Somewhat disagree	Totally disagree	Comment
Data on emissions, pollutants and operators are easily accessible					
It is easy to find the data that I am looking for					
The summary table which can be downloaded from the EEA website provides the right level of aggregation <sup>54</sup>					
The data presented are complete and a true reflection of the pollutant releases and transfers of industrial activities					
The E-PRTR website is attractive and engaging					
The quality of the data is suitable for the use that I require					
The quantity of data available is suitable for the use that I require					
The option to engage with the custodians of the E-PRTR and provide feedback on my experience is clearly marked out and easy to do.					

## 3. What's next?

10. To which extent do you agree with the following statements

	Agrees fully	Agrees moderately	Neutral opinion	Somewhat disagree	Totally disagree	Comment
Access to information held in PRTR has greatly improved in the last 10 years						
The quality of the information included in PRTR has greatly improved in the last 10 years						
Training/information is required to make a better use of the information available						
Better data quality is required						

<sup>54</sup> The summary tables can be downloaded from the following link: <http://prtr.ec.europa.eu/>

More comprehensive / complete datasets are needed						
Better reporting is required to get a full understanding emissions from industrial activities						
The scope of the E-PRTR Regulation should be extended to more pollutants. If yes, please indicate which.						
The reporting thresholds presented in Annex II should be lowered for some pollutants. If yes, please indicate which.						

11. Please indicate ways in which the access to PRTR data could be improved.
12. Have you encountered any technical issues and/or interpretation problems? If so, please elaborate. E.g. understanding the use of various codes within the E-PRTR, such as methodology, and where to find the explanations for this information when reviewing data
13. Do you think the E-PRTR website should have more material to understand data presented and how to make use of it (e.g. infographics, tutorials)?
- ☐ Yes
- ☐ No
- ☐ Do not know

Additional comment:

## Part II – Evaluation of the E-PRTR Regulation

### 4. Evaluation of the effectiveness<sup>55</sup> of the E-PRTR Regulation

14. To what extent do you think the Regulation have contributed to the following objectives?

Objectives	To a very large extent	To a significant extent	To some extent	To no extent	Not applicable/ Don't know	Comment
More public participation in environmental affairs						
Better knowledge of pollution and exposure to pollutants						

<sup>55</sup> To what extent did the Regulation lead to the observed changes/effects? To what extent can these changes/effects be credited to the E-PRTR Regulation? To what extent do the observed effects correspond to the objectives?

More transparency and accountability in environment management						
Improved environmental performance of activities causing pollution						
Engagement of citizens in environmental decision making						

15. To what extent can the progress made towards the objectives (listed in question 14) reasonably be linked to measures of the E-PRTR Regulation?
- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know
16. To what extent does the reported data and possibilities for searching the data serve the objectives (listed in question 14) of the E-PRTR Regulation?
- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know
17. For what purposes are the PRTR data used for?
18. Are you aware of a feature of your national PRTR that should be integrated to the EU PRTR? If yes, please describe the feature and its benefits.
19. What unexpected/unintended positive or negative changes can be identified as a result of the implementation of the E-PRTR Regulation?

	To a large extent	To some extent	To no extent	Provide comments
<b>Potential unexpected/unintended positive changes</b>				
Increased awareness of workers/ citizens regarding the importance of controlling emissions				
Emergence /development of related policies that would not necessarily have arisen in the absence of the Regulation				
<b>Other, please specify</b>				
<b>Potential unexpected/unintended negative changes</b>				
Data presented in E-PRTR contradicting other reporting systems				
Increased uncertainty on environmental performance of industrial installations				
Other, please specify:				

20. What other influencing factors (e.g. implementation by Member States, action by stakeholders, interaction between industry and authorities) can be identified, that contributed to the changes?
- ☐ Implementation by Member States
- ☐ Action taken by stakeholders
- ☐ Interaction between industry and authorities
- ☐ Other: \_\_\_\_\_

Additional comment:

Use the box below to provide any comments or information you have concerning the above questions on **effectiveness**<sup>56</sup>:

## 5. Evaluation of the efficiency<sup>57</sup> of the E-PRTR Regulation

21. Please list and assess the benefits of the Regulation in the following terms:

Benefits	Very large	Significant	Some significance	Not relevant	Not applicable/Don't know
Public participation in environmental affairs					
Better understanding of pollution and exposure to pollutants					
Transparency and accountability in environment management					
Improved environmental performance of (industrial) activities causing pollution					
Engagement of citizens in environmental decision making					
Advancement in process science driven by better understanding of the inputs and outputs					
Improvement of industry's environmental performance due to comparison with performance of industry at EU level					
Other, please specify:					

22. Please assess the benefits of the Regulation relative to the costs of implementing the Regulation:

Benefits are less than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits and costs are similar	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits greater than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Benefits much greater than costs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Not applicable/Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No

<sup>56</sup> To what extent did the Regulation lead to the observed changes/effects? To what extent can these changes/effects be credited to the E-PRTR Regulation? To what extent do the observed effects correspond to the objectives?

<sup>57</sup> Were the costs involved justified, given the changes/effects which have been achieved? What factors influenced the achievements observed?

23. Do you think that the benefits of the Regulation have increased over time:

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Please use the box below to provide any comments or information you have concerning the above questions on **efficiency**<sup>58</sup>.

## 6. Evaluation of the coherence<sup>59</sup> of the E-PRTR Regulation

24. To what extent is the E-PRTR Regulation coherent internally?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Indicate which elements in the Regulation you believe are not internally coherent and add a short explanation.

25. To what extent do you agree with the following statements?

	Strongly agree	Agree	Disagree	Not applicable/ Don't know	Please provide comment to illustrate your views. In case you disagree, to what extent has this affected the achievement of the objectives of the Regulation?
There are no gaps in the areas the Regulation seek to cover					
The Regulation and website are satisfactorily integrated, complementary and coherent with other pieces of EU legislation (no overlaps, discrepancies, contradictions), including:					
- Directive 2009/29/EC establishing the Emissions Trading Scheme					
- Directive 2010/75/EC on Industrial Emissions					
- WISE <sup>60</sup>					

<sup>58</sup> Were the costs involved justified, given the changes/effects which have been achieved? What factors influenced the achievements observed?

<sup>59</sup> To what extent is the Regulation coherent with other interventions which have similar objectives? To what extent is the E-PRTR Regulation coherent internally?

<sup>60</sup> WISE is available on the following link: <http://water.europa.eu/>

	Strongly agree	Agree	Disagree	Not applicable/ Don't know	Please provide comment to illustrate your views. In case you disagree, to what extent has this affected the achievement of the objectives of the Regulation?
- Waste Management Statistics <sup>61</sup>					
- EMEP reporting under Directive 2001/81/EC on National Emission Ceilings for certain pollutants (NECD)					
- Directive 2007/2/EC establishing INSPIRE					
- Directive 96/82/EC on major accident hazards					
The Regulation is satisfactorily integrated and coherent with international obligations in this field relevant to your Member State (e.g. Gothenburg Protocol)					
The Regulation is satisfactorily integrated and coherent with other reporting obligations (please precise which)					

**26.** Please suggest how the Regulation and other policy and legislation could work better together.

Use the box below to provide any comments or information you have concerning the above questions on **coherence**<sup>62</sup>.

<sup>61</sup> Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics

<sup>62</sup> To what extent is the Regulation coherent with other interventions which have similar objectives? To what extent is the E-PRTR Regulation coherent internally?



## 7. Evaluation of the relevance<sup>63</sup> of the E-PRTR Regulation

27. The objectives of E-PRTR are to: foster public participation in environmental affairs; provide better knowledge of pollution/exposure to pollutants; promote transparency and accountability in the sphere of environment management; improve environmental performance of activities causing pollution; effectively engage citizens in environmental decision making. To what extent do these objectives still correspond to current needs?

- ☐ To a large extent  
☐ To some extent  
☐ To no extent  
☐ Do not know

Additional comment:

28. Are you aware of any obsolete, unnecessary or missing provisions or gaps in the Regulation that is affecting its performance?

	Category	Ways in which the performance of the Regulation is affected
Annual reporting of data	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Annual reporting from Member States under article 16	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of off-site transfers of waste	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of pollutants in waste water emissions	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of information including facility parent company, activity, pollutant or waste, environmental medium, diffuse sources and facility owner	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting of diffuse sources of pollution	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Quality assurance requirements	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Reporting guidance document	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Confidentiality provisions	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Penalty system	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	
Other (please specify)	<input type="checkbox"/> Obsolete <input type="checkbox"/> Unnecessary <input type="checkbox"/> Missing	

<sup>63</sup> To what extent do the (original) objectives (still) correspond to the needs within the EU?

**29.** To what extent does the Regulation contribute to the objective of the 7<sup>th</sup> Environment Action Programme ‘to improve the knowledge and evidence base for Union environment policy’?

- ☐ To a large extent
- ☐ To some extent
- ☐ To no extent
- ☐ Do not know

Additional comment:

**30.** What technical or other progress has been made since the adoption of the Regulation?

**31.** Is there any new needs that could be addressed by the E-PRTR?

Please use the box below to provide any comments or information you have concerning the above questions on **relevance**<sup>64</sup>.

## **8. Evaluation of the EU added value<sup>65</sup> of the E-PRTR Regulation**

**32.** What is your (or your organisation’s) overall view of the E-PRTR?

- ☐ Very positive
- ☐ Positive
- ☐ Neutral
- ☐ Low
- ☐ No opinion

**33.** How much do you value the existence of the E-PRTR?

- ☐ Very much
- ☐ Little
- ☐ Not at all
- ☐ No opinion

Additional comment:

---

<sup>64</sup> To what extent do the (original) objectives (still) correspond to the needs within the EU?

<sup>65</sup> What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels?

34. How much do you trust the data presented on the E-PRTR website?

- ☐ Very much  
☐ Little  
☐ Not at all  
☐ No opinion

Additional comment:

35. Do we still need to address the issues tackled by the Regulation at the EU level or is it sufficiently addressed at the Member State level and/or through standards?

- ☐ There is still need to address the issues tackled by the Regulation at the EU level  
☐ PRTR is sufficiently addressed at the Member State level  
☐ Do not know

36. What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?

Use the box below to provide any comments or information you have concerning the above questions on **EU added-value**<sup>66</sup>.

**Thank you very much for taking the time to participate in this study.**

Would you be open to further discussion regarding your feedback on the evaluation of the E-PRTR Regulation?

- ☐ Yes ☐ No

Please enter your email address below if you would like to be sent the outputs from this research:

## **G.2 Summary of the information collected**

### *Introduction*

This appendix provides a breakdown of the results of the targeted stakeholder consultation. It is structured around results on the following subjects:

- Review of the use of E-PRTR website as reported by stakeholders;
- Usefulness of the E-PRTR data;
- Improving the E-PRTR;

<sup>66</sup> What is the additional value resulting from the E-PRTR Regulation, compared to what could be achieved by Member States at national and/or regional levels?

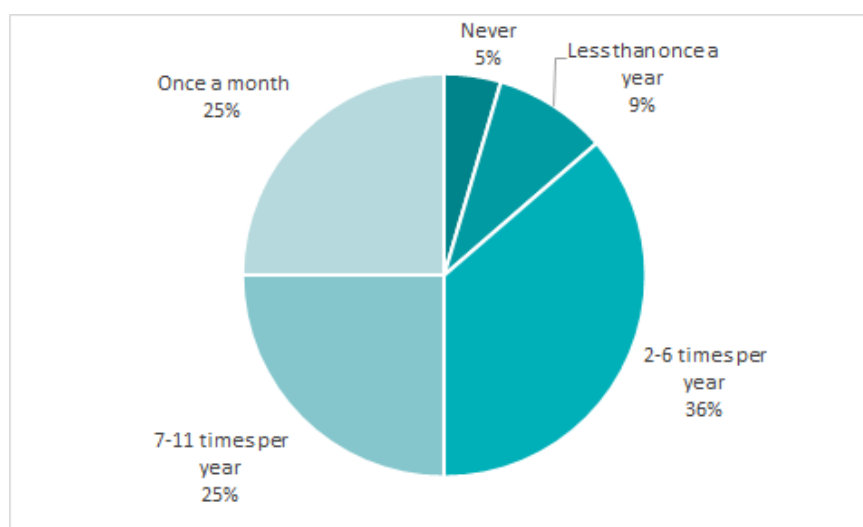
- Evaluation of effectiveness;
- Evaluation of efficiency;
- Evaluation of coherence;
- Evaluation of relevance; and
- Evaluation of EU added-value.

#### *Review of the use of E-PRTR website as reported by stakeholders*

The targeted consultation included questions on the use of the E-PRTR website. Responses were received from 41 stakeholders identifying themselves as data users. The majority of them (25) indicated that their main point of access to the E-PRTR database is through the E-PRTR website, followed by national level PRTR websites (13 respondents) and other (3 respondents). Four respondents indicated that reference is made to the EEA website when further information are required.

The frequency of the use of the website reported by stakeholders is varied and is presented in Figure 5.10. This is consistent with the high proportion of returning visitors to the E-PRTR website as identified in the previous Section.

*Figure 5.10 Frequency reported for accessing E-PRTR website*

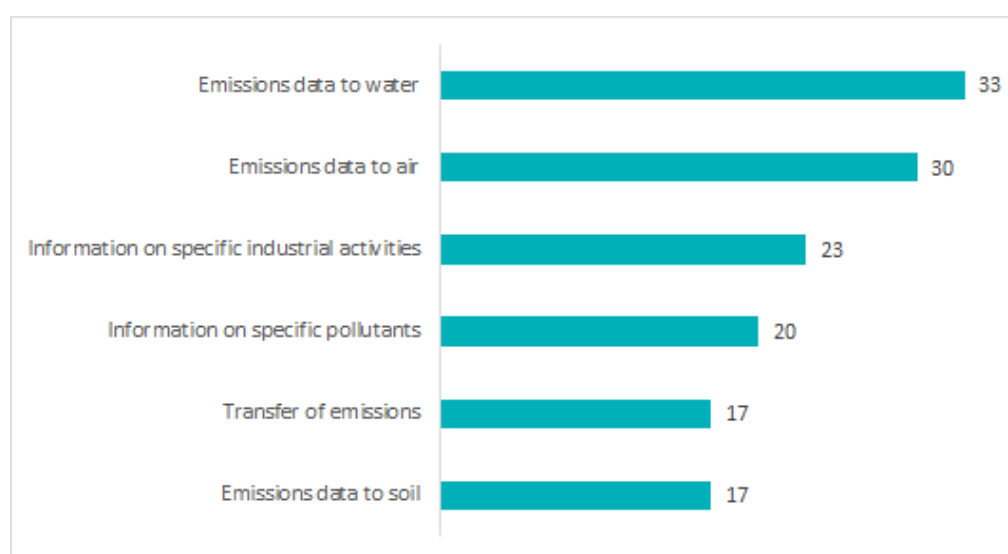


The majority of users (38 out of 44) access the E-PRTR website at least twice a year. There is also a small number of monthly users (11 respondents). This is consistent with the previous reporting period (EAA, 2010)<sup>67</sup>.

The data reported as being accessed by the data users are presented in Figure 5.11.

<sup>67</sup> Environment Agency Austria (EAA) (2010) Final report: Three years of implementation of the E-PRTR. Supporting study for the European Commission. [http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report\\_20120605.pdf](http://ec.europa.eu/environment/industry/stationary/eper/pdf/Final%20report_20120605.pdf)

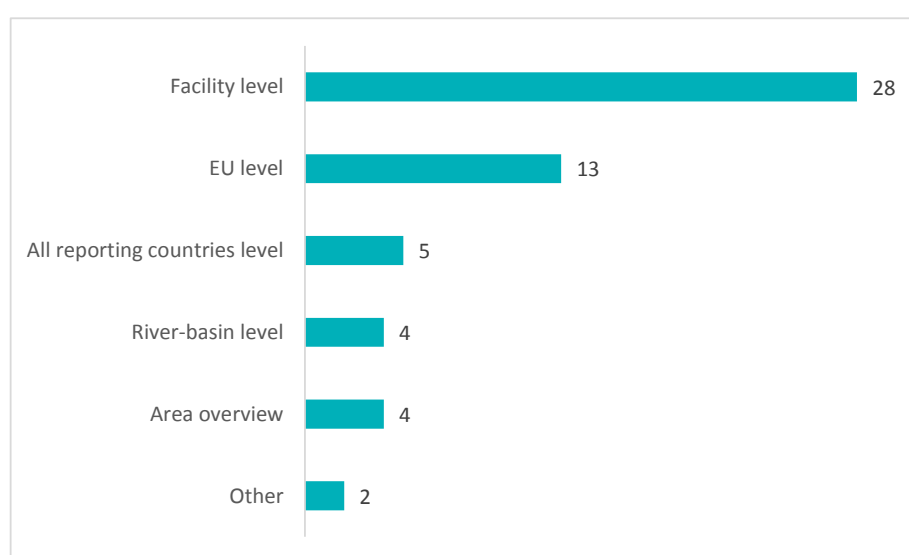
*Figure 5.11 Data reported as accessed by users stakeholders*



Emissions data to air and water are the most popular information requested. Further, a large number of users reported that they rely on the E-PRTR website to gain information on industrial activities, and information on activities and pollutants. This matches the feedback received by stakeholders during the targeted consultation and follow-up that the E-PRTR data are used as a benchmarking tool and a way to understand specific environmental sectors' performance. In comparison to air and water emissions, transfer of emissions and emissions to soil are less often consulted (almost 50% less).

Information was requested on the level of aggregation of data consulted, the responses are presented in Figure 5.12.

*Figure 5.12 Overview of level of aggregation of data consulted*

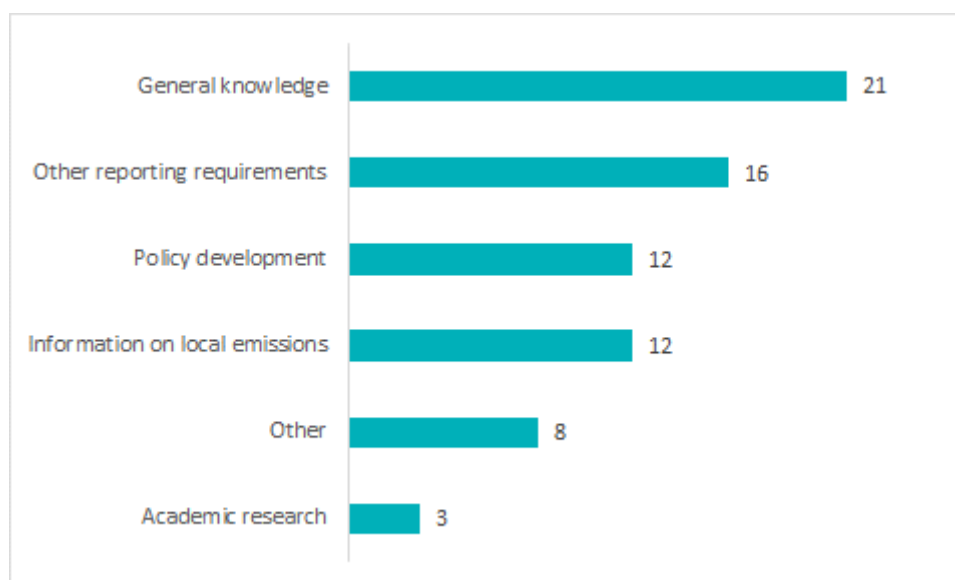


Most of the data are consulted at national and facility level. The third highest category reported is EU-level. The majority of respondents have indicated consulting several levels of aggregation of data.

Furthermore, out of 40 responses, 21 have indicated not making use of the E-PRTR reference library. In comparison, only 13 respondents indicated that they are making use of this library. Out of those making use of the library, almost all (12) have indicated that they found it useful. Finally, 6 stakeholders have responded not being aware of the existence of this reference library. This may be due to the terminology 'reference library' that may have been unclear for the respondents.

The questionnaire required information on the use made of the E-PRTR data. Figure 5.13 presents the responses received. The majority of respondents indicated that the information is used for general knowledge and to support other reporting requirements. For 12 out of 40 responding to this question, E-PRTR data are used to inform policy development.

*Figure 5.13 Reported uses of the E-PRTR data*



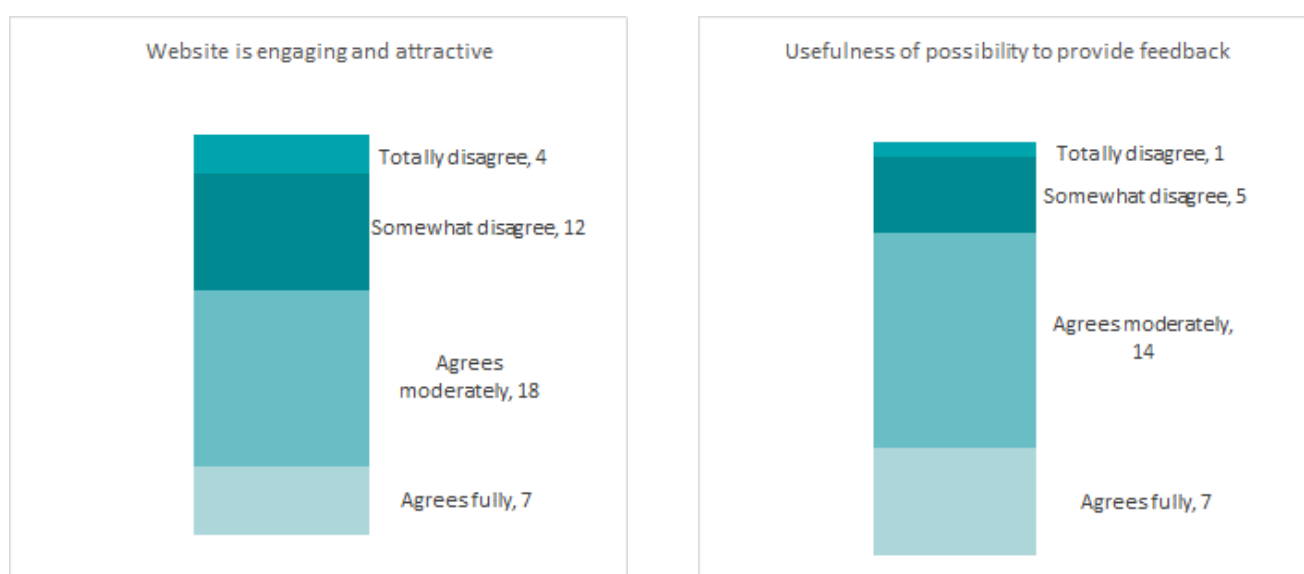
In relation to the use made of the E-PRTR data, it is noticeable that only 6 respondents indicated making an educational use of the library. Details were provided by one industry stakeholder in Spain that indicated that E-PRTR data are used to inform workers of the environmental performances of their industries.

Respondents were required to provide their opinion on the following aspects related to the website:

- Attractiveness of the E-PRTR website;
- Usefulness of engaging with custodians for feedback; and

The information provided by stakeholders has been summarised in Figure 5.14.

Figure 5.14 Respondents views on website attractiveness and function



While a large number of respondents find the website attractive and engaging, 16 out of 41 respondents have disagreed to some extent with this statement. The feedback provided included comments on the lack of multi query search functionality, the design of the website is quite dated and the fact the website is not very user friendly. In addition, Spanish respondents indicated that their national PRTR was more engaging.

On the possibility to leave feedback, the majority of respondents agreed that this option was useful. Three respondents have indicated not being aware of this function, while another three stated that it was easy to identify the feedback procedure, which was 'clearly marked'.

#### *Usefulness of the E-PRTR data*

Respondents were required to express their opinion on the following aspects:

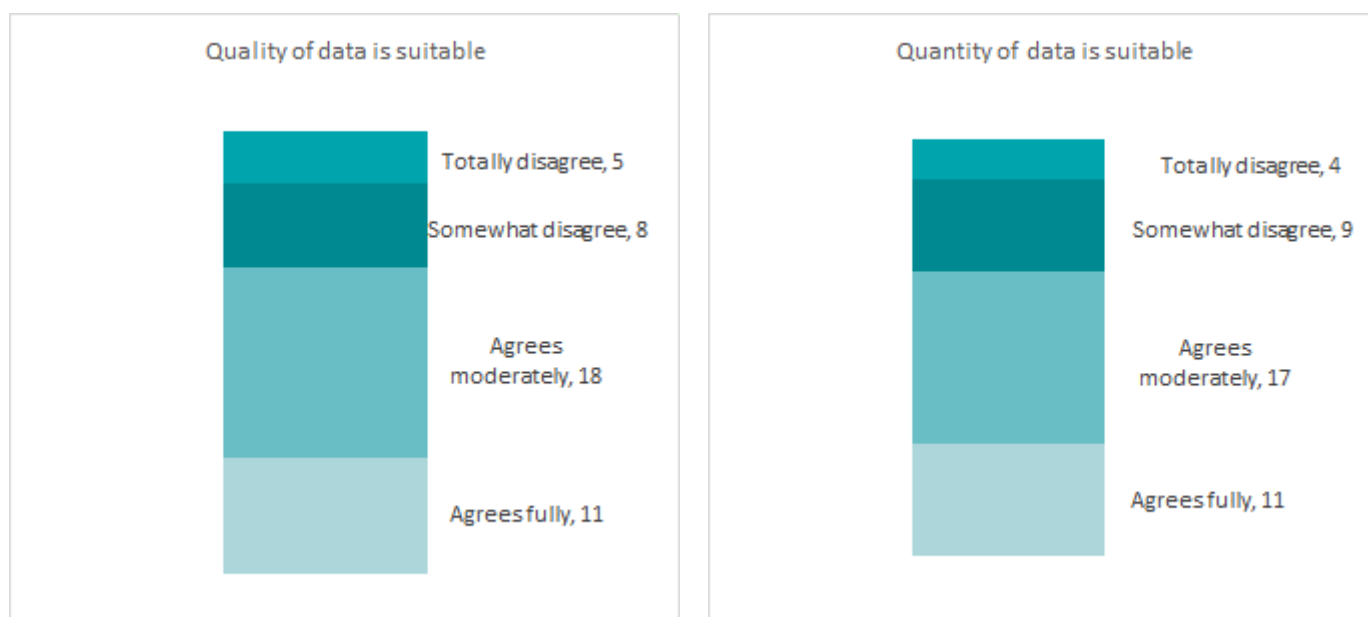
- Ease of access to and finding of relevant data;
- Appropriateness of the summary tables that can be downloaded from the EEA website;
- Completeness of the data presented;
- Suitability of the quality of data;
- Suitability of the quantity of data;
- Attractiveness of the E-PRTR website; and
- Usefulness of engaging with custodians for feedback.

The information provided by stakeholders has been summarised in Figure 5.15.

Figure 5.15 Respondents feedback on usefulness of E-PRTR







- On ease of accessing and finding the data in the E-PRTR, the majority of respondents mostly agreed moderately or fully. However 7 respondents disagreed in both cases. The comments highlighted the differences between the types of pollutants reported in similar industrial activities between countries. Doubt was expressed on some facilities that do not report certain pollutants that are unlikely to fall below the thresholds set. However no pollutants or activities were explicitly named. In addition, one respondent indicated that the dataset presents 'huge' data gaps. The inconsistency of ID numbers for installation and the absence of methodological information on how the emission data was derived were also identified as one issue for finding relevant data;
- Respondents were more critical on the appropriateness of the summary tables of data and the completeness of the data. For the former aspect, 10 respondents moderately disagreed and 2 totally disagreed with the majority 'agreeing moderately'. Respondents indicated that the summary tables do not allow them to visualise the evolution of emissions year by year. On the completeness of the data included in the E-PRTR, nearly half of the respondents (19) either moderately or totally disagreed with the statement that the E-PRTR data are complete. The comments made highlight the inconsistencies of emissions reported for similar activities in different countries, the mistakes in emissions reported, for example one respondent indicated being aware that non-refinery facilities are reporting as refineries. Follow up discussions identified that it is believed that change in NACE codes has led some facilities in reporting their emissions wrongly. The differences in reporting methods were also highlighted. Finally, two respondents highlighted the lack of information needed to compare environmental performance within the same activity (e.g. no information on production level). Data gaps were also highlighted by two respondents; and
- On the quantity and quality of data presented in the E-PRTR, opinions are more favourable with 29 and 28 respondents respectively judging them moderately to fully suitable. From those disagreeing, comments were made on the fact that the method used and explanations for the data are not always in English which makes the quality of data complicated to assess in some situations.

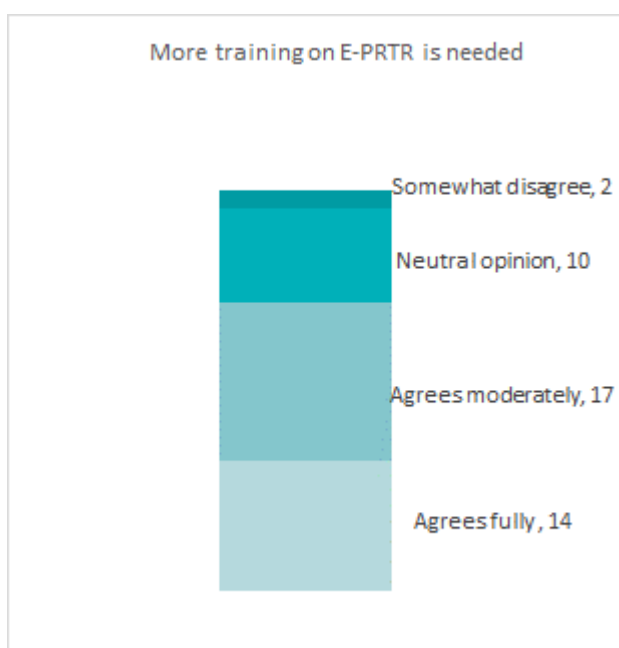
### *Improving the E-PRTR*

The targeted consultation included options for respondents to provide feedback on improving the E-PRTR and the E-PRTR website. Feedback was requested on whether the scope of the regulation should be modified and whether the reporting thresholds should be lowered. The comments provided have been summarised below.

#### *Need for more training*

The respondents were asked to indicate whether more training was required in order to make a better use of the E-PRTR data. The responses received are presented in Figure 5.16.

*Figure 5.16 Overview of responses on needs for more training*



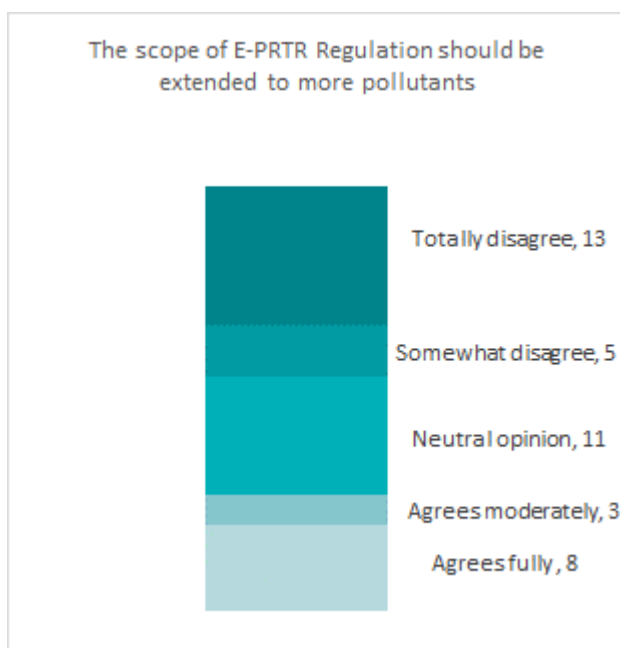
The majority of the respondents agree on the need for further training (31 out of 43 respondents).

Several respondents (6) emphasised the need for further training on the interpretation of data, as facility data cannot directly being compared to other facility. Suggestions were included such as training videos on how to use the website and guidance on how to interpret the data.

#### *Change of scope of the E-PRTR*

Respondents were required to provide feedback on the extension of the scope of the E-PRTR to include more pollutants and on lowering the reporting thresholds. The responses received are presented in Figure 5.17.

Figure 5.17 Overview of responses on extension of scope of E-PRTR



The respondents mostly disagreed on the need to extend the scope of the Regulation to cover more pollutants. Out of 40 responses, 18 disagreed to some extent.

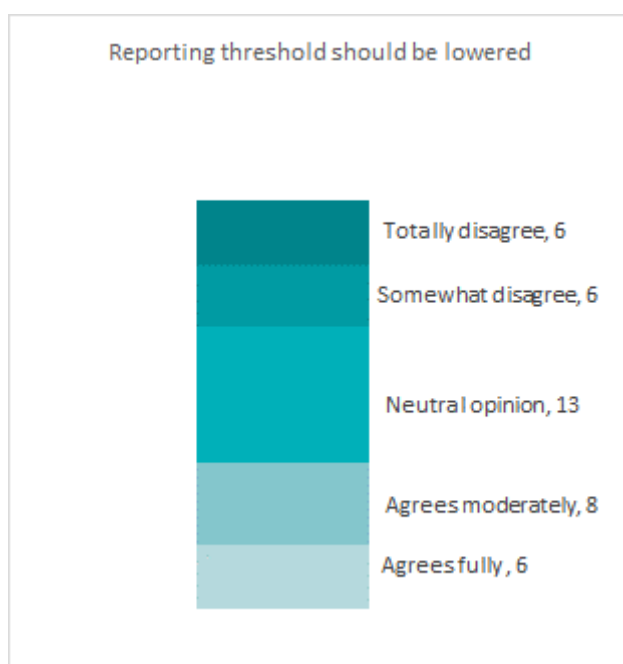
For air pollutants, benzo (a) pyrene, bisphenol A, perfluorohydrocabons, oentafluoroethane, 1,1,1,2, tetrafuloroethane, 1,1,1, trifluoroethane, 1,1, difluotoetane, difluoromethane, tirfluoromethane, PM2.5, and more generally POPs substances were suggested as pollutants to include in the E-PRTR.

On water pollutants, two respondents highlighted the need to update the list of pollutants to include Annex I substances of the 2013/39/EU Directive (i.e. the priority substances Directive). Another respondent highlighted that the E-PRTR list should be amended to include the newly selected priority substances. In addition, considering that the priority substance list will be regularly amended, a mechanism for updating water substances to report should be considered.

Three respondents added that while the pollutants covered by the Regulation are appropriate, more information is necessary to identify which pollutants are relevant for each sector.

The views of respondents were split on whether the thresholds of the E-PRTR should be lowered with a slight majority in favour of lowering the thresholds as illustrated in Figure 5.18.

Figure 5.18 Overview of responses on lowering reporting thresholds



Comments were provided by several respondents. From those in favour of lowering the reporting threshold for pollutants, CO, SO<sub>2</sub>, NO<sub>x</sub> and dust were singled out. Two respondents indicated that all thresholds should be lowered, as even small amount can be important.

Finally, a comment called for the alignment of the E-PRTR with IPPC/IED thresholds.

#### *Suggestions on improving the E-PRTR*

Finally suggestions were included in the feedback from respondents which have been listed below. The suggestions have been split in two categories, those concerning the E-PRTR website features and other.

On the E-PRTR website features, most of the suggestions concern the addition of features to provide a better understanding and context of the data presented. The following suggestions have been made

- Search functions should be improved to allow search by industrial facility number, as the company or site name can change over time;
- Improve presentation of levels of emissions so that they can be compared over time (time-series presentation);
- In addition to the installation's emissions, the country total emission for each pollutant should be included. That would include all declared emissions, notwithstanding any threshold. This would allow readers to understand the real contribution of a particular installation to the total emissions of a country;
- In addition to the emissions produced, facility information should include productivity information so that context is provided to interpret the emissions;
- Add more background information including information on BAT contained in BREFs;
- The overall website attractiveness should be improved, the website of the US EPA has been provided as an example that could be looked to in respect of any re-design of the E-PRTR. The lack of capability to conduct a multi-query search was

highlighted as an important gap as it prevents the verification of compliance and the assessment of the true environmental performance of the industry. For multiple query data, cross-reference to continuous emissions monitoring (CEMs) data or other emissions data would be beneficial if available;

- Several respondents highlighted the benefits that could arise from coordinating and linking all reporting of environmental information. There were suggestions that E-PRTR could be linked to chemical policy and accidents, waste prevention reporting, and other water and air quality reporting. It was noted that there is currently very little coherence between the large combustion plant reporting and E-PRTR;
- For facilities that are also covered by the Seveso III Directive, the E-PRTR could include all the information referred to under Article 14 and Annex V of the Directive;
- The information on facility could be improved and increased to include control types for common pollutants, using a pre-defined list of options, fuel type specifications, quantities of fuel used, status of operation (e.g. date of last retrofit), allowing several choice as IED activity, the size of the facility (e.g. total rated thermal input). Other information could include whether any of the derogations permitted under the IED have been requested by the operator (e.g. Art 15(4), peak load derogation, Transitional national plan, limited life derogation, district heating plant derogation, small isolated systems derogation and Art 31 derogation);
- The use, production or release of any Substance of Very High Concern (SVHC) under the candidate list of SVHC of the REACH Regulation or any substance identified as priority substance in the Water Framework Directive (including the candidate list substances) should be reported separately, with an indication of name and identification numbers and exact tonnage volumes;
- The information reported for a facility should be explicitly made at installation level, in accordance with the IED rules on aggregation;
- The emissions data that are monitored should explicitly be referred to as being monitored; and
- The E-PRTR website should include links to national PRTRs where more information is available but also to other EU websites where further information is presented, for example the EIONET platform with annual or periodic reporting on implementation of EU instruments.

More general suggestions were also included. These mostly are to refine and improve the precision of the information to be reported in the E-PRTR and include:

- Extension of the scope to cover PM2.5 and black carbon emissions to air;
- The E-PRTR reporting codes are very wide, and emissions can be difficult to differentiate per type of installation. An example was provided with code 2(b) which is production of pig iron or steel including continuous casting. Under this code both integrated steel plant and electric arc furnace emissions can be reported, which is confusing for comparability of data. The comment also noted that there would be benefit in reporting emissions from hot rolling, cold rolling and coating separately to make clear the real contributions of each processes in this activity;
- Pollutants which are relevant for each activity should be defined, and reporting should be limited to those pollutants that are identified as relevant. This would avoid irregularities in emissions reported with some pollutants reported from some installation but not others;

- Emissions of pollutants included in Annex II of the Regulation should be reported regardless of the threshold values; and
- Instead of transfer of waste, facilities should be required to provide information on amount of waste generated.

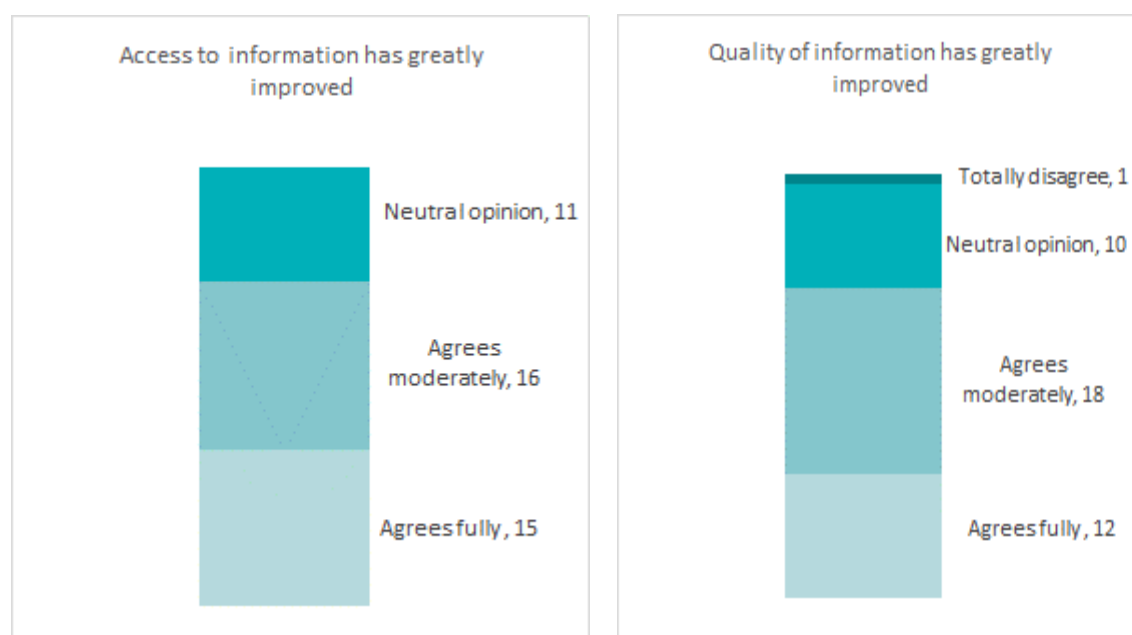
Finally, four respondents indicated being satisfied with the E-PRTR website, and more generally the Regulation and not seeing the need for further improvements.

#### *What is next*

The targeted stakeholder consultation looked at supplementing the information reported by Member States in relation to overall progress achieved thanks to the E-PRTR Regulation and future next steps.

Feedback was requested on the evolution of the quality of information and access to information. The responses provided are presented in Figure 5.19.

*Figure 5.19 Overview of benefits from E-PRTR with regards to quality and access to information*



Overall, respondents are positive about the role of E-PRTR in improving access to information.

Respondents also mostly agreed on the fact that the quality of information presented in the E-PRTR has improved. However one respondents highlighted the existence of gaps in data presented in the E-PRTR, and the limitations in comparisons due to the absence of links to other database such as the Seveso database (e.g. eMars) or chemical databases (e.g. PIC).

#### *Effectiveness*

In the targeted stakeholder questionnaire consultation, respondents were asked to indicate **to what extent the Regulation has contributed to reaching its objectives**. Respondents were asked to rate the contribution made by the Regulation to a series of objectives for which it was adopted. The responses received from Member States competent authorities, industry and others are displayed in Table 5.54 below.

*Table 5.54 Overview of responses received during the targeted consultation on the extent to which progress were made towards the objective of the E-PRTR Regulation*

Objectives	To a very large extent			To a significant extent			To some extent			To no extent		
	C A	Industr y	Other s	C A	Industr y	Other s	C A	Industr y	Other s	C A	Industr y	Other s
More public participation in environmental affairs		7	-	10	9	-	16	5	6	3	-	-
Better knowledge of pollution and exposure to pollutants	4	5	-	10	15	2	18	3	2	-	-	1
More transparency and accountability in environment management	4	8	-	15	9	6	12	12	-	-	-	1
Improved environmental performance of (industrial) activities causing pollution	1	4	-	9	10	3	17	7	2	1	2	
Engagement of citizens in environmental decision making	1	2	-	6	7	4	16	12	2	5	5	1

The feedback received varies according to the different objectives of the Regulation:

- With regard to the **objective of more public participation in environmental affairs** the analysis of the evidence collected indicates that the E-PRTR Regulation has been only partially successful in ensuring more public participation in environmental affairs. The responses received during the targeted consultation showed that while some (3) competent authority respondents considered that the Regulation had provided no impact on this aspect, more respondents (7) had considered that the Regulation had contributed to a significant extent to the increase of public participation in environmental affairs. Most competent authorities' respondents (13) considered that this objective was achieved to some extent. Interestingly, industry was more emphatic in its view of delivery of this objective, with 16 respondents stated that it had been delivered to a very large to significant extent;
- With regard to the objective of **better knowledge of pollution and exposure to pollutants** it is apparent that the E-PRTR is considered to have been successful in reaching this objective. The responses received to the targeted consultation were mostly positive with regard to the achievement of this objective and only one

respondent (others category) stated that the PRTR had failed to deliver on improved knowledge. One participant to the feedback also indicated that the most visited webpage on its national PRTR website is the documents library, particularly the webpage with links to BREFs and environmental permits under the IED;

- With regard to the objective of **more transparency and accountability in environment management** there is no clear conclusion on whether the E-PRTR has contributed to the achievement of this objective. A range of responses was observed through the different consultation exercises, with competent authorities and others viewing the delivering of the objective as more significant overall than industry respondents;
- With regard to the objective of **improved environmental performance of (industrial) activities causing pollution**, there was again a wide range of responses from all categories, in particular in the responses to the targeted consultation. Some competent authorities and industry did not consider any contribution to this objective from the E-PRTR Regulation, while in contrast the 'others' category stated that it had been achieved to a large extent. However, the bulk of the responses was between these extremes; and
- The objective of **engagement of citizens in environmental decision making**, it was found that the E-PRTR Regulation has only partially increased the engagement of citizens in environmental decision making. While there were some differences between responses from competent authority and industry, these differences are not that marked and may reflect the different geographic distribution of the respondents. The variability of views also probably reflects genuine experience on the ground – some industry groups have reacted to the consequences of providing the required information, while others have not (so resulting in different views on the effect of the Regulation); similarly different prior conditions for transparency and public participation will affect views on the additional effect that the Regulation has had.

Feedback was also gathered on **potential unexpected and unintended negative changes such as increased administrative burden**, overlaps of reporting mechanisms with other obligations, data incompatibility with other reporting systems, contradiction in data presented in E-PRTR and increased uncertainty on environmental performance. The responses received are presented in Table 5.55.

*Table 5.55 Overview of responses received to targeted consultation on potential unintended /unexpected negative changes*

Potential changes	unexpected/unintended negative	To a large extent	To some extent	To no extent
<b>Competent authorities</b>				
Increased administrative burden		8	16	3
Overlaps of reporting mechanisms with other obligations		8	15	3
Data incompatibility with other reporting systems or other legislative requirements		5	16	6
Data presented in E-PRTR contradicting other reporting systems			2	3
Increased uncertainty on environmental performance of industrial installations			2	5



Potential changes	unexpected/unintended negative	To a large extent	To some extent	To no extent
<b>Industry</b>				
Increased administrative burden			2	
Overlaps of reporting mechanisms with other obligations			2	
Data incompatibility with other reporting systems or other legislative requirements			1	
Data presented in E-PRTR contradicting other reporting systems	2		13	8
Increased uncertainty on environmental performance of industrial installations	3		8	22
<b>Others</b>				
Increased administrative burden				
Overlaps of reporting mechanisms with other obligations				
Data incompatibility with other reporting systems or other legislative requirements				
Data presented in E-PRTR contradicting other reporting systems			4	2
Increased uncertainty on environmental performance of industrial installations			4	2

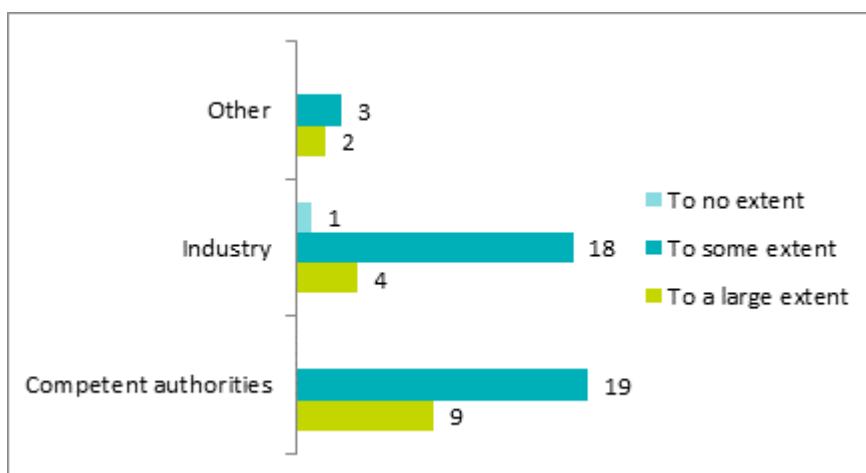
- On the increased **uncertainty on environmental performance of industrial installations** it is quite noticeable that the overwhelming majority of industry responses (22 out of 33) indicated that the E-PRTR had to 'no extent' led to this effect. This suggests that the E-PRTR has contributed to providing more information on environmental performance of industrial installations;
- The majority of industry respondents and to a lesser extent competent authorities have indicated that data in E-PRTR are in contradiction to other reporting systems. This was echoed by comments made by participants to the workshop. Due to the fact that E-PRTR presents only emissions above a set threshold, there is a limited comparability with data presented in other database. The review of the coherence of air and water emissions presented in Section F.2 includes further details on this point. In addition, it was highlighted that there are some incoherence in the pollutants reported for same activity in different Member States. One industry association has identified some facilities reporting under the wrong activity in some Member States which lead to an erroneous picture of the environmental impact of the sector;
- Competent authorities have indicated in majority **that the data presented in the E-PRTR are to some extent incompatible with other reporting requirements**. This related to three main incompatibilities: the fact that other reporting requirements for atmospheric emissions (e.g. NEC, CLRTAP or LCD emissions) require total emissions to be reported, not emissions above a specific threshold. The second incompatibilities relate to the fact that permits for the facilities reporting in E-PRTR are mostly expressing emissions limits as concentrations. As a result, tonnes of emissions is not directly comparable. Finally, the fact that E-PRTR does not use codes for the European Waste Catalogue means

that the data are difficult to compare with those reported under the waste framework Directive;

- Competent Authorities indicated that **E-PRTR reporting requirements overlap to some extent with other obligations** whereas the majority of industry responses indicate that the overlap is to a large extent. Examples were discussed during the stakeholder workshop, which included the overlaps existing between the data required under Annex II questionnaire under the IED; and
- On the **administrative burden**, the majority of the Competent Authorities indicated that the E-PRTR had increased administrative burden to some extent, while industry has indicated it has increased administrative burden to a large extent. Additional feedback gathered during the public consultation indicated that the data collation in itself is not a major burden. The increased administrative burden for the CA principally relates to the time it takes to prepare E-PRTR datasets for each eligible installation and send them to operators for verification purposes; and to complete an PRTR template (ensuring all data is 'rounded' to 3 significant figures) for the formal submission of the datasets.

Stakeholders were asked about **the extent to which the reported data and possibilities for searching the data serve the objectives of the E-PRTR Regulation**. This sought to identify the role of data searching in delivering the objectives of E-PRTR which is a critical feature of the Regulation. Figure 5.20 summarises the results received on this specific point during the public consultation. Only one respondent stated that the possibility to search data had had no effect. The majority of responses from all respondents' categories are similar and state that the Regulation has contributed to some extent.

*Figure 5.20 To what extent do the reported data and possibilities for searching the data serve the objectives of the Regulation?*



On the use of the data, the following comments were made by stakeholders:

- Improving environmental performance should not be an objective of E-PRTR. The information available is not representative/comparable and could be misleading. To this aim there is already profuse legislation (IED, NEC, WFD) (ES, industry);
- It is impossible to use the data to compare environmental performance because:

- The information available is not representative/comparable and could be misleading;
  - The fact that PRTR data relate to total emissions can be misleading when interpreting the numbers analysed by not taking into account production levels;
  - There are great disagreement from one country to another for the same type of facilities (pollutants declared); and
  - The E-PRTR codes are very wide. The information of emissions should be differentiated per kind of installation, this will avoid comparisons between absolutely non-comparable activities. (ES, industry).
- The PRTR allows users to know more about emissions data and about which sectors are the most contributing to general pollution. (ES, industry);
  - It is useful for comparing industrial sectors and evaluating environmental impacts, but on a case-to case basis. (DK, CA);
  - As a journalist I am interested in mercury emissions from coal power stations. So, I am able to use the emissions – but it is difficult to relate that emission data to the capacity. (DE, other);
  - The PRTR data are used for informing the public and to compare the emissions from same activities that take place in different countries. (CY, CA);
  - It is used mainly for scientific policy related research, analysis of environmental quality and trends – Main types of organisations involved: Universities, Consultancies, NGO's, (NL, CA);
  - Data are used for fulfilling the reporting obligations towards EC, UN, and OECD. Data are verified with other data collected in other information systems on the national level. (SK, CA); and
  - The register is useful for a wide variety of users: academics, research, policy, local and national pressure groups, NGOs, operators/companies, trade associations, other governments and governmental bodies (UK, CA).

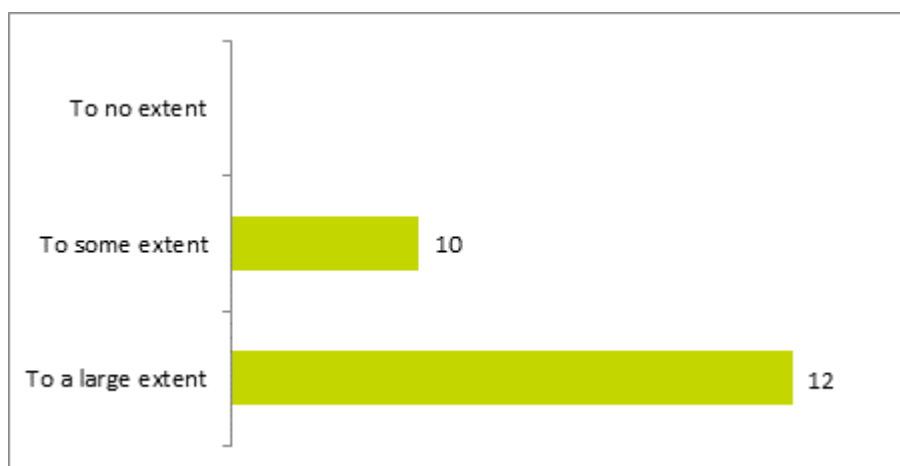
Stakeholders were also asked if there were features of national registers that should be in EU PRTR. Responses included:

- The opportunity to download the full dataset in a database, so that the data could be flexibly used in research etc. (DE, CA);
- Include radioactive substance releases from industrial sources, also a burden on the environment and a potential health risk. More accessibility to aggregated data, UK uses an interactive data visualisation tool and it also allows better search facilities – PRTR website is annoying when you want to switch pollutants or activities. (UK, CA);
- Spanish regulation on PRTR requires the provision of information on emissions of all pollutants in Annex II regardless of threshold values. (ES, industry);
- A link to the permit of the installation. (ES, industry);
- Include year evolution in the tables in order to see environmental performance improvements. Other improvements could be:
  - Include environmental permits. (DEI) to have more information about the emission limit values imposed;
  - To give the possibility of exporting data to a spreadsheet;
  - Include activity levels to understand the real environmental performance of an installation;

- Differentiate data by type of installation; and
  - Include popups and contextualize data clarifications to avoid misinterpretations. This means a clear statement in the website what E-PRTR is exactly and how and when the data are reported. (ES, industry).
- There are some significant data in the Spanish PRTR which do not appear in the European register. This includes the volume of activity output or the hours of operation of an installation. These characteristics, if they were obligatory for all installations, would allow for an immediately more direct comparison of environmental behaviour to be made between installations of the same kind across each industrial sector. (ES, other); and
  - An ES (other) also provided the following extract from “Revealing the cost of air pollution”, pgs. 38-39 on changes to the E-PRTR in order to facilitate assessments, the following being important: “Providing information on the fuel consumption or productive output of individual facilities. This would enable to calculate the efficiency of facilities in terms of estimated damage costs per unit of production or fuel consumption. At present, such information is not reported to the E-PRTR so this type of analysis cannot be done. This reduces the value of the analysis since regulators, for example, cannot assess the merits of controlling a few large facilities over a larger number of smaller facilities. It also limits the usefulness of the register for members of the public, as a lack of information on facility capacity or production limits the potential for fair comparisons.

The evaluation also attempted to identify **the impact of the annual reporting obligation in the achievement of the objectives of the Regulation**. Feedback received mostly supports that the annual obligation to report helps to maximise the achievement of the objectives listed above. Competent authorities were asked to share their views on the specific function of annual reporting under the Regulation. More respondents stated that this contributed to a large extent rather than to some extent. However, it is not clear if the response is due to the fact that reporting per se has to deliver the objectives or if it is a response on the fact that the reporting is annual as opposed to any other time interval. The responses are presented in Figure 5.21.

*Figure 5.21 Impact of the annual reporting obligation on maximising the achievements of the E-PRTR's objectives*



Additional comments received on the role of the annual reporting included:

- Some NGOs are active in using data to support existing positions. The UK journal, *ENDs Report*, often highlights reporting errors. (UK, industry); and
- Ongoing interaction between Competent Authority and industry provides improvements to data reporting. Harmonisation and streamlining of reporting requirements is necessary at EU and Member State level in order to avoid duplication of reporting. (IE, CA).

In conclusion, an NGO also made the following two points on the reporting process and the use to which data are made, both affect the effectiveness of the Regulation:

- A proper reporting portal could considerably facilitate the reporting obligations by Member States. Often it is only at the national level that reporting to E-PRTR is done, whilst the data are available at the local level. Operators could directly report to the upgraded E-PRTR system and thus avoid admin burden to local authorities / facilitate access of data to the national authorities in charge of reporting to the EU level; and
- The E-PRTR does not support any compliance promotion at installation level nor environmental standard setting because crucial parameters are not available to assess environmental performance (e.g. the review of the BREFs would benefit if some basic information would be made available at the installation level). More information about progress towards meeting other EU policy objectives should be included in the reporting system.

### *Efficiency*

In the targeted stakeholder questionnaire consultation, competent authorities were asked **to provide a qualitative assessment of the costs of implementing the Regulation and also quantitative figures**. The results are summarised in the table below. It can be seen that some authorities have difficulties isolating the costs of the Regulation (and state this is the case). More report that start-up costs are moderate/low, but there is an even split on the extent of costs for recurrent reporting.

- The Czech Republic reported that three staff people deal with issues of IRZ (E-PRTR in the Czech Republic) – split evenly between the Ministry and the Czech

Environmental Information Agency (CENIA). The respondent stated that the costs of information systems (IRZ, ISPOP) are reasonable, but their value cannot be precisely quantified;

- The costs of developing the E-PRTR national system in Portugal was €130,000, but this system integrated reporting from E-PRTR, ETS and IPPC, so that all of the costs cannot be attributed to E-PRTR;
- Costs of equipment in the UK were £30,000 for servers for public map based system (plus licence fees etc. (not included). Costs include new staff/changes to procedures and systems (admin, verifying etc.) (UK, CA);
- The annual budget in Spain for PRTR, including all concepts and reporting requirements (at national level only) is €150,000-€170,000 per year; and
- In the Netherlands, the total annual costs for the E-PRTR (excluding the actual monitoring) are:
  - National System: €970,000;
  - Competent authorities: €1,200,000; and
  - Operators: €12,000,000.

The start-up costs are not viewed as large (and have now passed). However, the reference to costs of database development in some countries highlights the issue that the costs reported are most likely to be those of implementing PRTR, rather than any additional cost of the Regulation compared to the Protocol. The recurrent costs do vary. The French figures equate to about 7 full time staff, compared to the reported three in the Czech Republic. The recurrent costs in the Netherlands seem large, but while there are obviously larger than the reported figures from Spain, the latter do not include any costs in the regions. Again, these are costs for PRTR as a whole and not any additional costs of the Regulation. Indeed, the integration of reporting obligations (explicitly stated by Portugal and the Netherlands, but probably the case in many countries) would indicate that separation of PRTR costs themselves is problematic. The issue was highlighted by France which reported that the reporting has the same scope as IED. It has found that most of the outlier data that the EEA questions turn out to be reports below the PRTR thresholds (but within IED). As a result, costs occur in then excluding these cases that would not otherwise occur.

The only respondent to comment on the marginal costs of E-PRTR compared to PRTR was a UK industry response, which stated that these are “relatively small” (obviously reflecting a data provider perspective).

*Table 5.56 To what extent are the efforts/ costs justified compared to the benefits and usability of the reported information associated with compliance with the Regulation?*

Potential costs associated with implementation with the Regulation	Degree of importance	Quantify where possible (approximate range)
<b>Costs of familiarising your organisation with the Regulation (i.e. training/ informing staff)</b>	High: 3 Moderate/low: 12 Unknown: 1	45 person days (FR) 40 person days (MT) 10 per year (UK)
<b>Costs of equipment purchase (e.g. monitoring)</b>	High: 2 Moderate/low: 6 Unknown: 4	3 million SEK (SE) 260,000 € (HR) (2008-15 development of database) £30,000 (UK)

Potential costs associated with implementation with the Regulation	Degree of importance	Quantify where possible (approximate range)
Costs of reporting of performance/ compliance (to Member State authorities)	High: 7 Moderate/low: 7 Unknown: 3	1,500 person days (FR) 10 per year (UK)
Cannot isolate costs of implementing E-PRTR due to inter-links with other instruments implementation	Yes: 5 No: 1	
Other (e.g. costs to provide data, to check data quality and clarify issues, costs for final checks of data, costs for reporting via reportnet for national authorities, costs for follow up after quality checks made by the EEA)	High: 7 Moderate/low: 6 Unknown: 1	~5 million SEK (SE) 200 person days (FR) £500,000 (UK)

Stakeholders were asked **to rate possible listed benefits of the Regulation**. The responses from the different categories of respondent are provided in Table 5.57, Table 5.58 and Table 5.59.

*Table 5.57 Ratings of possible benefits due to the E-PRTR Regulation (responses from competent authorities)*

Benefits	Very large	Significant	Some significance	Not relevant
Public participation in environmental affairs	1	13	114	5
Better understanding of pollution and exposure to pollutants	7	8	28	
Transparency and accountability in environment management	7	14	10	3
Improved environmental performance of (industrial) activities causing pollution	3	11	12	7
Engagement of citizens in environmental decision making	1	8	16	7
Advancement in process science driven by better understanding of the inputs and outputs	1	7	11	8
Improvement of industry's environmental performance due to comparison with performance of industry at EU level	1	9	15	5

*Table 5.58 Ratings of possible benefits due to the E-PRTR Regulation (responses from industry)*

Benefits	Very large	Significant	Some significance	Not relevant
Public participation in environmental affairs	5	15	5	3
Better understanding of pollution and exposure to pollutants	2	20	5	

Benefits	Very large	Significant	Some significance	Not relevant
Transparency and accountability in environment management	8	15	4	
Improved environmental performance of (industrial) activities causing pollution	5	10	10	
Engagement of citizens in environmental decision making		10	14	4
Advancement in process science driven by better understanding of the inputs and outputs	1	9	12	3
Improvement of industry's environmental performance due to comparison with performance of industry at EU level	2	14	10	1

*Table 5.59 Ratings of possible benefits due to the E-PRTR Regulation (responses from others)*

Benefits	Very large	Significant	Some significance	Not relevant
Public participation in environmental affairs		2	2	
Better understanding of pollution and exposure to pollutants		2	2	
Transparency and accountability in environment management		2	1	1
Improved environmental performance of (industrial) activities causing pollution			2	2
Engagement of citizens in environmental decision making		2	1	1
Advancement in process science driven by better understanding of the inputs and outputs		2	1	1
Improvement of industry's environmental performance due to comparison with performance of industry at EU level			2	2

With regard to the potential benefit of public participation in environmental affairs, the majority of industry respondents stated that this benefit was very significant, and most competent authority respondents considered it to be of some extent.



With regard to the potential benefit of better understanding of pollution and exposure to pollutants, the majority of industry respondents stated that this benefit was very significant, and most competent authority respondents considered it to be of some extent.

With regard to the potential benefit of transparency and accountability in environment management, most industry respondents and competent authorities considered that the benefit was significant.

With regard to the potential benefit of improved environmental performance of (industrial) activities causing pollution, the responses were more diverse. Several competent authorities did not see this as a benefit, while the industry identifies this as a benefit.

With regard to the potential benefit of engagement of citizens in environmental decision making, the majority sees the benefit as being of some extent and a sizeable number of competent authority respondents (and some industry) do not see this as a benefit.

With regard to the potential benefit of advancement in process science driven by better understanding of the inputs and outputs, most see this as a benefit to some extent. A few see it as a benefit, but a proportion of both competent authority and industry respondents do not see the benefit.

With regard to the potential benefit of improvement of industry's environmental performance due to comparison with performance of industry at EU level, most respondents are positive. More specifically, the industry respondents find the benefit of greater significance than the competent authorities.

Respondents were asked to rate the costs and benefits in different ways, which together provide a picture of relative value of benefits against costs. These responses are summarised in Table 5.60. It is important to note that some respondents completed all rows, while some responded to one of the options only. Overall, there is clearly a division of views on whether the benefits outweigh the costs and that there are differences of view within both competent authority and industry categories. Overall, competent authorities view the benefits as greater than the costs, while industry is even split on this (including a similar number that view the costs and benefits as similar).

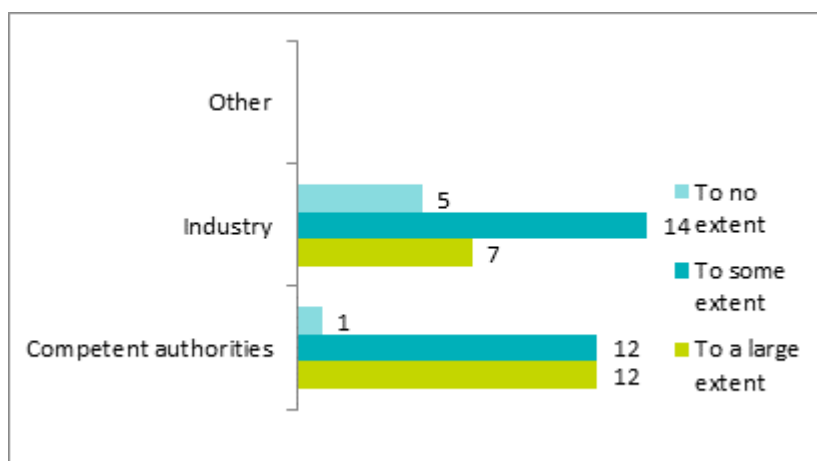
*Table 5.60 Feedback from respondents on costs/benefits relationship of the Regulation*

	Competent authorities		Industry		Others	
	Yes	No	Yes	No	Yes	No
<b>Benefits are less than costs</b>	5	7	4	2		2
<b>Benefits and costs are similar</b>		6	6	1		2
<b>Benefits greater than costs</b>	14	1	4	1	1	1
<b>Benefits much greater than costs</b>	3	5	2	2	2	1

Targeted stakeholder questionnaire respondents were asked **if the benefits of the Regulation had increased over time**. The responses are summarised in Figure 5.22

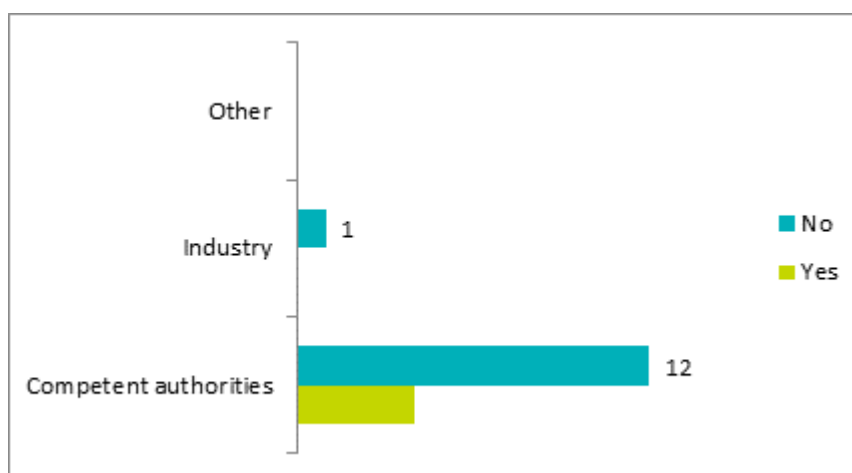
and show that most respondents consider that there has been an increase in benefits over time to some extent.

*Figure 5.22 Implementation of the Regulation has led to increased benefits*



One important part of this assessment is to understand **whether micro sized enterprises and/or SMEs had been disproportionately impacted by the Regulation**. This question was largely responded to by competent authorities and the responses are summarised in the Figure below. The large majority of competent authorities clearly consider these businesses have not been disproportionately impacted.

*Figure 5.23 Are the costs proportionate of the E-PRTR, is there inefficient provisions?*



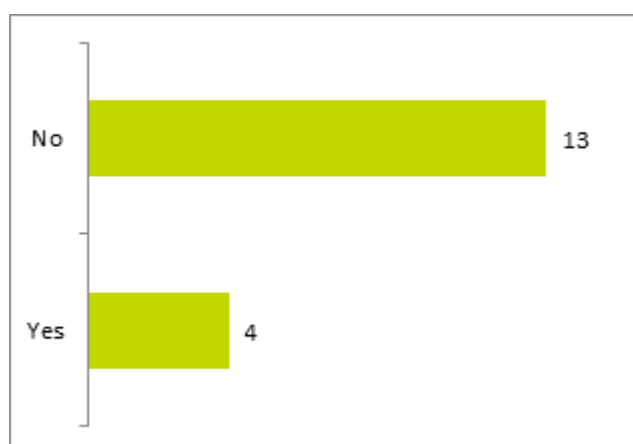
Comments on the impact on SMEs included:

- Micro sized enterprises have fewer resources and environmental awareness. In order to meet they obligations of the E-PRTR Regulation they usually need external technical and financial support (ES, CA);

- Member StatesE and SME are basically not within the scope of the E-PRTR Regulation and some PRTR source categories in the EU Members States could be better pictured if they were included. The assessment of Member StatesE and SME contributions to pollution depends on the national circumstances of each Member State and on the availability of specific information which these enterprises may not even be expected/requested to collect. (IT, CA); and
- For some small installation sectors like textiles and farming, reporting can be a burden (UK, CA).

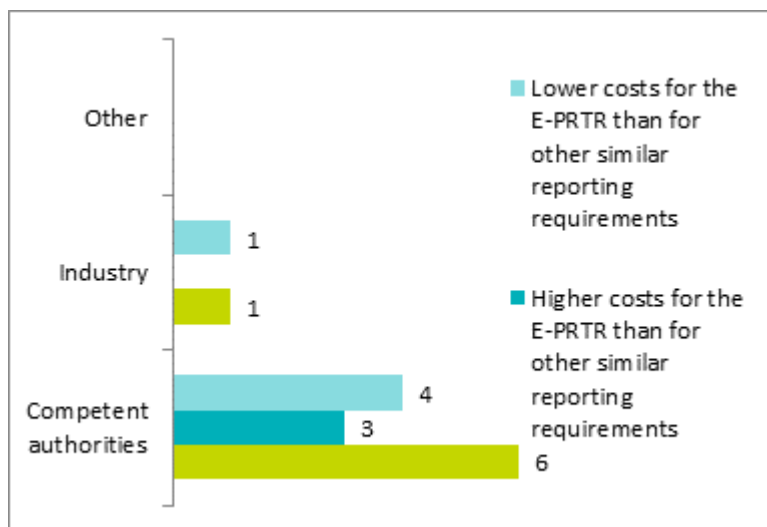
In the targeted stakeholder questionnaire consultation, competent authorities were asked if they were aware of **significant costs differences for the implementation of the E-PRTR Regulation between countries**. The responses are summarised in Figure 5.23. Most competent authorities stated that there were not aware of significant differences on costs of implementation between Member States. The DE CA noted that the more decentralised a country is administered (especially federal countries), the higher the costs for implementing any regulation, not only E-PRTR.

*Figure 5.24 Are you aware of significant costs differences for the implementation of the E-PRTR Regulation between countries? (Competent Authorities)*



A particular measure of **the costs of E-PRTR is how it compares to other reporting obligations** and respondents were asked to comment on this. The responses (summarised in Figure 5.24) in the stakeholder consultation from competent authorities were rather spread – while most view the costs as similar, there are divergent views on whether costs are higher or lower. Comparisons were made with a range of other reporting obligations, including IED, UWWTD, Bathing Water Directive, etc. This might reflect the specific competencies of each competent authority and, therefore, the costs of reporting obligations that they are aware of.

*Figure 5.25 How do you rate the costs of implementing the E-PRTR Regulation compared to other similar reporting measure?*



Comments included:

- Usually, strict regulations of measurement methods are set in other policy areas. Moreover, the values obtained primarily for the other policy areas can be used for the E-PRTR. (CZ, CA);
- For E-PRTR there were higher costs for the design and the management of the specific site (RO, CA); and
- The availability of an electronic reporting tool is a way to reduce costs of implementation and ensure overall completeness of the data flow. (IT, CA).

The targeted stakeholder questionnaire respondents were asked **to provide any suggestions they might have for the simplification or reduced regulatory burden for businesses regarding the provisions of the E-PRTR Regulation.**

Comments included:

- An examination of reporting requirements across similar EU legislative reporting areas is recommended to inform harmonised and streamlined reporting where key objectives include the avoidance of duplication of reporting and the maximum use of data that addresses several legislative and information needs (IE CA);
- Develop an online reporting tool common to all EU Member States so that facilities may report in the desired format. Direct reporting of facilities onto the online reporting tool is also to be considered (MT, CA);
- Reduce and align national PRTR reporting requirements with those of E-PRTR (UK, industry);
- A multi query search function with additional reporting parameters / access to other key information would facilitate considerably the efficiency of the E-PRTR. (NGO); and
- E-PRTR is a fully electronically organized reporting obligation, from facilities to competent authorities and other relevant levels of national administration all the

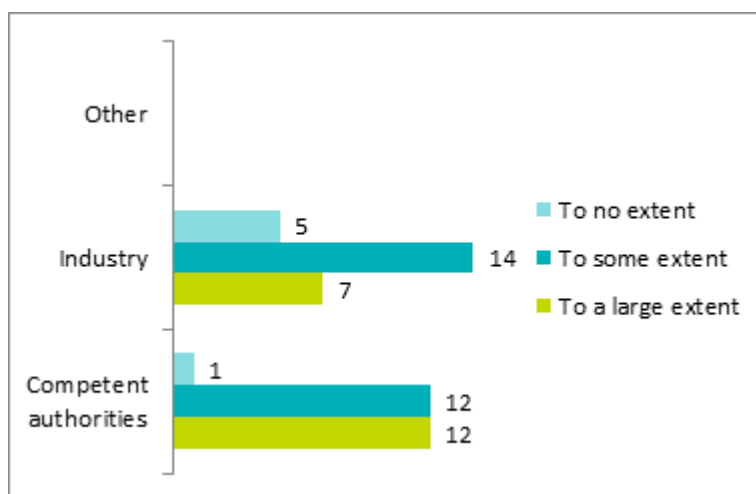
way to the EU level. This works very well and creates much less administrative burden on all levels than with other reporting obligations. The question, therefore, is not how to simplify or reduce the reporting concerning E-PRTR, but how – by adding a few more boxes to tick or a few more questions to answer – to cover information also relevant for other reporting obligations (LCP, IED).

- From the German experience E-PRTR clearly triggered positive effects in making reporting processes less burdensome both for industry and authorities. These macro-economic benefits are however difficult to account for on the short run or in a limited perspective; and
  - One important message from the experiences with E-PRTR is to always have the whole setup in mind. It is not only a data package exchange between a national focal point and a European institution, it is a multi-player process which needs more than one year to complete the task. (DE, CA).
- Further harmonization among E-PRTR and IED scope/definitions could foster a better streamlining of the data flow management, thus reducing the administrative burden for the reporting facilities but also mistakes in providing almost the same dataset many times through different reporting formats. (IT, CA);
  - As the requirements of the E-PRTR Regulation apply to Member State Competent Authorities (i.e. to collate and submit data on pollutants from industrial activities that are reported by operators in accordance with environmental legislation), it could be argued that the E-PRTR Regulation does not directly result in any increased regulatory burdens for businesses. (UK, CA); and
  - Standardise mass emission reporting and put in fewer/one obligation(s). Better separation of process control reporting (ELV etc.) from mass emission reporting. Streamlining of all emission related reporting. (UK, CA).

## Coherence

Figure 5.26 provides the response on the question of **internal coherence**; with the majority of competent authority and industry respondents stating that the Regulation is coherent to some extent, and a number stating that it is internally coherent to a large extent. Some respondents suggested that the PRTR is to no extent internally coherent, suggesting that additional work was required to improve the way PRTR is implemented.

Figure 5.26 To what extent is the E-PRTR Regulation coherent internally?



Targeted stakeholder questionnaire respondents were asked to indicate which elements in the Regulation they believed are not internally coherent and explain this. Comments included:

- E-PRTR has different data reporting requirements and there is a need for improvement and harmonisation of reporting requirements. For example waste elements under E-PRTR are not fully coherent with other waste reporting requirements. Also E-PRTR is not coherent with IED in some areas, particularly as some activities cannot be directly mapped between E-PRTR and IED (Member States CA);
- Cross checking and comparison is carried out with other national datasets however there are limitations as they are not directly comparable (e.g. ETS, E-PRTR, National Inventories cover different sectors and activities.) (Member States CA); and
- Under the current E-PRTR reporting requirements, data on pollutants emitted to air / discharged to water (i.e. where specified thresholds are met / exceeded) has to be provided in kgs - whereas waste data has to be expressed in tonnes. Whilst this scenario does not present any acute difficulties to DECC in terms of supplying data for eligible offshore installations, it might make the E-PRTR reporting process easier for regulators more generally if all future E-PRTR data was provided using a consistent unit of measurement. In this context, it might be apposite if all reporting was in kgs. However, this would probably necessitate the Commission having to revise the 'waste data reporting' provisions of the E-PRTR Regulation and much would depend on the Commission's appetite for making such a change. (Member States CA).

Evidence regarding the coherence of the Regulation with other policies was also gathered through the stakeholder questionnaires. Respondents were asked whether they agreed with statements in, which also summarises the responses.

*Table 5.61 To what extent is the E-PRTR Regulation coherent with other applicable legislation*

Statement	Respondent	Strongly agree	Agree	Disagree
<b>There are no gaps in the areas the Regulation seeks to cover</b>	Competent authorities		11	8
	Industry	2	6	4
	Others			2
<b>The Regulation is satisfactorily integrated, complementary and coherent with other pieces of EU legislation (no overlaps, discrepancies, contradictions), including:</b>				
<b>- Directive 2009/29/EC establishing the Emissions Trading Scheme</b>	Competent authorities	2	15	6
	Industry	1	10	2
	Others			
<b>- Directive 2010/75/EC on Industrial Emissions</b>	Competent authorities	3	15	8
	Industry	6	11	6
	Others		1	1
<b>- WISE</b>	Competent authorities	2	5	5
	Industry	1	11	3
	Others			
<b>- Waste Statistics Regulation</b>	Competent authorities	3	7	8
	Industry	1	12	6
	Others			1
<b>- EMEP reporting under Directive 2001/81/EC on National Emission Ceilings for certain pollutants (NECD)</b>	Competent authorities		12	6
	Industry	1	9	3
	Others		1	1
<b>- Directive 2007/2/EC establishing INSPIRE</b>	Competent authorities	1	6	2
	Industry		6	2
	Others			1

Statement	Respondent	Strongly agree	Agree	Disagree
<b>- Directive 96/82/EC on major accident hazards</b>	Competent authorities		6	5
	Industry	1	7	5
	Others		1	
<b>The Regulation is satisfactorily integrated and coherent with international obligations in this field relevant to your Member State (e.g. Gothenburg Protocol)</b>	Competent authorities	1	5	4
	Industry	1	7	6
	Others	1	3	
<b>The Regulation is satisfactorily integrated and coherent with other reporting obligations (please precise which)</b>	Competent authorities	1	2	4
	Industry	1	8	3
	Others	1	2	

The question concerning whether there are gaps in the areas the Regulation seeks to cover, the majority of respondents (both competent authority and industry) agreed that there are no gaps. However, a high proportion of competent authorities and industry disagreed. Comments received on the gaps include:

- The first triennial E-PRTR review has shown that some thresholds in the Regulation are too high to cover all areas that the Regulation seeks to cover. (AT, CA);
- The pollutant list is out-of-date, particularly for water. The activity list also needs to be harmonized with IED. Animal production needs clarification (40,000 hens are very different from 40,000 quails – E-PRTR activity 7ai). Further, there is a lack of methodology regarding calculation of pollutants and this leads to different approaches and hence different results. (PT, CA);
- There are gaps with comparison to Directive 2010/75/EU (IED) and 2013/39/EU (priority substances in the field of water policy). Therefore the E-PRTR Regulations should be updated accordingly. A systematic review of environmental data reporting could also help to determine further gaps. (MT, CA); and
- The data are only a subset of the overall emissions 'footprint' for industrial activities due to the thresholds applied and it can be difficult to interpret the significance of year to year variations as facilities can move above and below the thresholds from year to year. From the Water Framework Directive (WFD) perspective, thresholds for some chemicals in E-PRTR are quite high and to an extent have limited value in terms of inputting to WFD Emission Inventory compilation. (IE, CA).

Regarding coherence with Directive 2009/29/EC (establishing the Emissions Trading Scheme EU ETS), the majority of respondents agreed that it is coherent. However, a high proportion of respondents from both the competent authority and industry categories felt that the PRTR was not coherent with the EU ETS. Comments received on the differences between EU ETS and the E-PRTR included:

- Though there are indeed overlaps between the E-PRTR Regulation and the EU ETS Directive, particularly with regards to coverage of activities and gases, these are



not contradictory. In terms of reporting, EU ETS obligations require reliable reporting of the relevant gases and this, therefore, can also serve to enhance the reliability of reporting by installation operators under the E-PRTR, thus enhancing the quality of data available at, and reported by, Member States;

- Activities and thresholds are not the same as in E-PRTR. Fossil and biogen parts of CO<sub>2</sub> are reported separately in ETS. Aviation is not a separate activity in E-PRTR (SE, CA);
- CO<sub>2</sub> emissions are hard to compare because of different definitions of installations in EU ETS and facilities in E-PRTR. (AT, CA);
- Several differences in scope that should be harmonised, for example: ETS emissions are based on fuel consumption, E-PRTR data does not identify fuel consumption. The clarification of "facility", "unit", etc. would be very important to understand these emissions since an E-PRTR facility could be 2 ETS facilities. (PT, CA);
- The regulation is probably as integrated as it can be given the differences in reporting requirements on emissions in the two pieces of legislation and the additional requirement in ETS that emissions data to be reported must be verified by an accredited verifier. The greenhouse gas emissions reported under the ETS are governed by the requirements of the directive and have exclusions such as transport emissions and emissions from installations for the incineration of hazardous or municipal waste. So for some sites the emissions trading GHG reported will be different to the E-PRTR emissions reported for the site. The ETS do not use E-PRTR data for reporting purposes. However all ETS Operators are required to confirm if emissions are reported under E-PRTR Regulation, giving details of the reference number and the E-PRTR Annex 1 activities. (IE, CA); and
- Hydraulic fracturing activities can be covered by the Annex I categories which DECC and the other Competent Authorities (e.g. the Environment Agency / SEPA) are using for the purposes of reporting data from conventional oil / gas operations (falling within their respective regulatory remits) to the E-PRTR. (UK, CA).

Regarding coherence with Directive 2010/75/EC (on Industrial Emissions (IED)), the majority of respondents agreed that it is coherent (with a good number of industry respondents considering the coherence as strong). However, again a sizeable proportion of both competent authorities and industry disagreed. Several commented that IED has included new activities and some thresholds in Annex I that are not the same as E-PRTR activities (SL CA, SE CA, CZ industry, IE CA, NL CA, PT CA). The Irish CA suggested that guidance is needed on linkages between IED classes of activity and E-PRTR classes of activity. Installation/activity descriptions should be more clearly aligned. The system of collection of data from installations/activities that are regulated under the IED and E-PRTR is not integrated, complementary or coherent. Monitoring requirements should reflect pollutants and timeframe to give good quality E-PRTR data. The EIPPCB BREF process should specifically address the pollutants that are covered by E-PRTR in terms of the emissions & monitoring requirements so as to provide more accurate release data.

There are practical opportunities to make IED-directive reporting more efficient using the PRTR-reporting process and tool-chain which are not used currently (DE, CA)

Regarding coherence with WISE, fewer responses were received. However, there was a similar distribution of responses, with the majority viewing the Regulation as coherent with WISE, but a minority viewing it as not fully coherent. The Irish CA noted that WISE data relies on use to PRTR and information provided by Member States on concentrations of organic parameters in surface water, however many of these substances either do not feature as a component of PRTR or are not reported as

thresholds are quite high. The German CA noted that PRTR data are used in reports made for wise.

Regarding coherence with the Waste Statistics Regulation, the majority of respondents agreed that it is coherent (with a few considering the coherence as strong). However, again a proportion of both the competent authority and industry respondents disagreed with this position. Comments on this included:

- Treatment of waste under the Waste Statistics Regulation is not complementary to the requirement to report on the transfer of waste under the E-PRTR Regulation. Where facilities treat the waste that they generate on-site this is not captured through reporting on transfers of waste under E-PRTR. The differing reporting needs means that facilities have to be surveyed more than once (depending on monitoring and reporting systems within countries). Reporting on economic sector (NACE) of the facility is required for both the Waste Statistics Regulation (waste generated dataset) and E-PRTR so there is some overlap in that requirement. (IE, CA);
- The reporting is not consistent. The E-PRTR should also list the relevant EU Waste codes for the waste transfers (see example of the French iREP system<sup>68</sup>). Certain waste code types identified through the French reporting system make up high volumes (e.g. code 100207, 100308, 160601). A tracking system for these waste types should be established (destination to be reported) (NGO); and
- The Belgium Competent Authority is doing comparisons between the information from Eurostat and those from PRTR reporting. The sectors and waste streams do not completely coincide. There is agreement, but it is not clear whether the integration of various legislations is totally coherent. All PRTR is captured by the Eurostat report. There is no association between the PRTR activities and NACE-classification used for Eurostat. (BE, CA). A similar point was raised by the German CA.

Regarding coherence with EMEP reporting under Directive 2001/81/EC (on National Emission Ceilings for certain pollutants (NECD)), the majority of respondents agreed that it is coherent. However, again a proportion of both categories disagreed. The Austrian CA noted that the informal review of the European Topic Centre for Air Pollution and Climate Change (ETC/ACM) has shown that there are discrepancies between data reported under EMEP and E-PRTR. The Netherlands CA commented that no stack information is required in E-PRTR, but is needed for large combustion plant reporting under the LCP Directive. Similarly, emissions of SO<sub>x</sub> are required instead of SO<sub>2</sub> emissions.

Regarding coherence with Directive 2007/2/EC (establishing INSPIRE), there were fewer responses. Most competent authorities and industry view the Regulation as coherent with INSPIRE, with only a few stating that it is not. The German CA noted that INSPIRE only defines formats. The geo-coded results of PRTR are available as an INSPIRE compliant service.

Regarding coherence with Directive 96/82/EC (on major accident hazards (SEVESO)), there was a more even split on views – both competent authorities and industry had roughly equal numbers of responses stating that the Regulation and Seveso were coherent or not coherent with each other. However, the only substantive comment on this issue was from the Portuguese CA stating that harmonization and clarification of “facility”, and “unit” were needed.

<sup>68</sup> <http://www.irep.ecologie.gouv.fr/IREP/menu.php?id=3&ssItem=2#>

Regarding whether the Regulation is satisfactorily integrated and coherent with international obligations in this field relevant to the Member State, there is a split response – slightly more of both competent authorities and industry stating that it is coherent, but this is not a marked difference. However, no comments were provided to explain this response.

Regarding whether the Regulation is satisfactorily integrated and coherent with other reporting obligations, there is quite a divergent view. This probably reflects experience with specific obligations which are either coherent or not. Again, aside from a small number of references to large combustion plant reporting, there was only one comment was from the Netherlands CA. which stated that although improved with the third phase, there are still many differences in definitions (plant, installation, facility, activities included).

However, the CA of Malta also raised points in relation to the Environmental Quality Standards directive (EQS): The substances in the E-PRTR regulations (Annex II) do not cover all the revised EQS substances. These include several substances such as Dicofol, PFOs, Quinoxifen, Aclonifen, Dioxin-like compounds etc. Also due to the fact that the E-PRTR establishes thresholds for reporting purposes, this creates data gap issues when dealing with the creation of an inventory of emissions, discharges and losses under the EQS Directive (Article 5).

Targeted stakeholder questionnaire respondents were finally asked to suggest how the Regulation and other policy and legislation could work better together. Only a few comments were made, including:

- A merger of the database / reporting tools should be considered provided a multi-query search function is built into this system (NGO);
- There is no coherence in the reporting (one global access portal). Reporting is split in silos with different competencies at the EU level (e.g. REACH ECHA/ E-PRTR EEA /eMars JRC Ispra / BREF review JRC Sevilla / LCP-D reporting DG ENV etc.) (NGO);
- Similar reporting requirements should be streamlined so that the same or similar data are not being gathered and/or reported multiple times. It would be desirable and informative to see how E-PRTR can better inform assessment needs under other legislation such as the Water Framework Directive (e.g. range of substances reportable under E-PRTR and current reporting thresholds for some pollutants and activities).(IE, CA);
- PRTR cannot cover whole territory emissions (Inventory) for a certain substance, as the coverage is incomplete by definition. PRTR covers a part of the industrial emissions being over a certain threshold. It is a useful and important cross-check for inventories, which are mainly compiled using top-down approaches. (DE, CA);
- As indicated under Question 19, there are some overlaps between the data requirements of the Annex II Questionnaire (QS) of Decision 2012/795/EU which relates to the Industrial Emissions Directive (IED) and the E-PRTR (i.e. installation name / Operator name; activities covered by Annex I of the IED; the installation coordinates (latitude / longitude); and the Competent Authority for the granting of relevant installation permits). Consequently, a very easy way to achieve some level of consolidation / streamlining of the IED and E-PRTR reporting requirements would be to simply remove from the Annex II QS those elements which are already a constant feature of the publicly accessible E-PRTR data on industrial facilities; and
- In addition to the above suggestion, and notwithstanding the annual returns (on emissions, discharges, waste transfers, etc.) that are provided by the Member

State Competent Authorities (CAs) for populating the E-PRTR, another - albeit potentially more complex - way of creating further synergies between the IED / E-PRTR would be to upgrade the Register's architecture in order to allow all parts of a reduced Annex II QS (i.e. Modules 1 to 4) covering the 2013 - 2016 timescale to be reported to the E-PRTR in 2017. This scenario could also apply to future Annex II-type QS reporting cycles and would allow for the adoption of an integrated reporting concept. Nevertheless, for the suggested integrated approach to work effectively / proportionately, certain aspects need to be factored into the equation and these are:

- The periodic reporting cycles for the Annex II QS should not be aligned with the annual E-PRTR reporting obligations so as to avoid imposing extra burdens on CAs; and
- Ideally, each CA should be able to directly submit responses to a reduced Annex II QS on the E-PRTR rather than doing so through a lead Government Department (otherwise individual CAs would still have to supply completed Annex II QS to the lead Department which would subsequently have to upload the various information sets on to the new E-PRTR reporting module - this would be extremely time consuming and resource intensive). (UK, CA).

### Relevance

An overview of how stakeholders thought **the objectives of E-PRTR correspond to current needs**. The responses are summarised in Figure 5.27.

*Figure 5.27 Do the objectives of the E-PRTR Regulation still fulfil the needs of what the E-PRTR serves?*



It can be seen that across all classes the respondents view the objectives as either largely relevant or relevant to some extent. Three specific comments made by Competent Authorities were:

- E-PRTR provides a uniform basis for knowledge, participation and information. To be more effective the database should be more easily accessible for the public. This would need to encompass all technical possibilities, internet, apps, etc., this could be an option for future work. E-PRTR could be adapted to new technical possibilities. (NL, CA);

- Waste transfer reporting especially in case of transboundary shipments, where we are obliged to report final destination of waste recovered or disposed does not help or does not foster public knowledge in environmental affairs. (SL CA); and
- Thresholds and included activities for agriculture are insufficient to be useful. Some thresholds are too low, many are too high. But this requires a statistical study: is 90% of the emissions covered by the current threshold? How does the emission from the E-PRTR facilities relate to the diffuse sources? (NL, CA).

These comments show that there are limitations within the application of the Regulation which affects the delivery of the objectives. However, the Regulation only aims to contribute towards its objectives, so that while improvements are possible, full delivery requires the overall application of a range of policies.

An NGO stated that the objectives of E-PRTR correspond to current needs “to no extent”, pointing out “the E-PRTR does not support any compliance promotion at installation level nor environmental standard setting because crucial parameters are not available to assess environmental performance”. We understand this commentary to apply to the relevance of the objectives, rather than the role of E-PRTR in achieving them. It is unlikely that this meant that public participation is not, for example, a relevant objective.

Targeted stakeholder questionnaire respondents were specifically asked about **potential obsolete, unnecessary or missing provisions in the Regulation** on a range of pollution types and sources or process issues. The results are summarised in Table 5.62.

*Table 5.62 What provisions are missing from the E-PRTR? And what provisions included within the E-PRTR are no longer necessary?*

		<b>Competent Authorities</b>	<b>Industry</b>	<b>Others</b>
<b>Annual reporting of data to competent authority</b>	Obsolete		2	
	Unnecessary	1	1	1
	Missing	2	4	
<b>Annual reporting from Member States under article 16</b>	Obsolete		1	
	Unnecessary	2		
	Missing		5	
<b>Reporting of off-site transfers of waste</b>	Obsolete		1	1
	Unnecessary	3	2	
	Missing	4	3	
<b>Reporting of pollutants in waste water emissions</b>	Obsolete		1	1
	Unnecessary	1	2	
	Missing	2	4	1
	Obsolete	1	1	1

		<b>Competent Authorities</b>	<b>Industry</b>	<b>Others</b>
<b>Geo-referencing data such as 'long' and latitude' co-ordinates or NUTs polygon regions</b>	Unnecessary	1	1	1
	Missing	2	5	1
<b>Reporting of diffuse sources of pollution</b>	Obsolete		2	1
	Unnecessary	4	1	
	Missing	7	4	4
<b>Quality assurance requirements</b>	Obsolete		1	
	Unnecessary	1		1
	Missing	7	6	3
<b>Reporting guidance document</b>	Obsolete	6	3	1
	Unnecessary			
	Missing	4	5	
<b>Confidentiality provisions</b>	Obsolete	1	1	1
	Unnecessary	4		1
	Missing	4	5	2
<b>Penalty system</b>	Obsolete		1	
	Unnecessary	1		
	Missing	5	4	3

It can be seen that generally a minority of respondents reported that they considered there to be obsolete, unnecessary or missing provisions. In many cases the responses were not accompanied by a comment. It is clear, however, that the most commonly reported missing provisions concern diffuse pollution, quality assurance, confidentiality and penalties. The most commonly reported obsolete provision concerns the guidance. Specific comments that were made include:

- On off-site transfers waste there is overlap as it is covered by Regulation (EC) No 1013/2006 (PT, CA; UK Industry). However, IE (CA) considers there to be a missing provision as E-PRTR class activity 5c only covers non-hazardous waste disposal activities and does not cover non-hazardous waste recovery activities. Consideration should be given to including both recovery and disposal;
- Waste data are effectively useless since they do not contain enough detail. The Waste Framework Directive does not include non-waste management sites so is useful, but requirements for these to report are ineffective for comparisons or use of data. Reporting of waste management sites is necessary since data are not available elsewhere at site level, so the details are needed in reporting to produce waste management statistics. (UK, CA);

- On pollutants in waste water, UK (Industry) considers this unnecessary as it is covered by other regulations. An NGO stated that concentration levels and flow rate are missing (should be same unit as MAC under the EQS Directive 2013/39/EU, Annex II);
- On pollutants in waste water, these are sent to a treatment facility and may not have an environmental footprint. However it is useful to know how much wastewater is produced by a site. It may be helpful to include where the wastewater is going to track treatment/efficiency of treatment site. (UK, CA);
- On diffuse pollution MT (CA) states that E-PRTR is not the optimal way of collecting data of diffuse sources when this is not related to specific facilities;
- On geo-referencing, NL (CA) and UK (CA) state that the requirements are unnecessary as longitude and latitude is sufficient as NUTS can be calculated;
- On diffuse pollution, requirements are missing for industrial sources only that are, for example, below the reporting threshold. This is also the case for sites below the capacity threshold, but are still a directly related activity. (UK, CA);
- On QA, it would be useful to make unification with IED activities (CZ, CA);
- On QA, it may be time to introduce methods as the ETS did. Perhaps these could be incorporated in BREFS. (UK, CA);
- On reporting guidance, some stated it was obsolete and some missing, but for similar reasons. A UK CA stated, for example, that the guidance requires updating, enhancements, clarifications and corrections. Comments included: Need to update for example with new standards and on diffuse sources of pollution and emissions from products (SE, CA); Missing more detailed information and explanations (HR, CA); The guidance document is key to a correct management of implementation at a national level. The lack of clarification of issues that arise from experience leads to different approaches hence different results. The guidance document is obsolete and needs to be reviewed (PT, CA); Reporting guidance must be updated based on knowledge and expertise reached over the years (ES, CA); Guidance needs to be updated and a Frequently Asked Questions database established for queries around interpretation and guidance. Suggest a Member State workshop to discuss key areas of where the guidance can be updated and aspects further clarified (e.g. further guidance on off-site transfers of waste and pollutants to waste waters) (IE, CA);
- On confidentiality, ES (CA) stated that the confidentiality provision must be applied strictly. It is necessary to define the same criteria and for the same fields in term of comparability, at EU level. There is no sense that some countries make publicly available all the PRTR information while others keep it confidential. A UK CA stated that mass emissions or waste transfers under PRTR should not be limited by confidentiality as there is no good reason for this to be the case; and
- On penalties, a UK CA stated this is unnecessary - naming and shaming is more effective and penalties have not been required under PRTR.

Targeted stakeholder questionnaire respondents were also asked if there are **any new needs that should be reflected in the E-PRTR Regulation**. Comments received included:

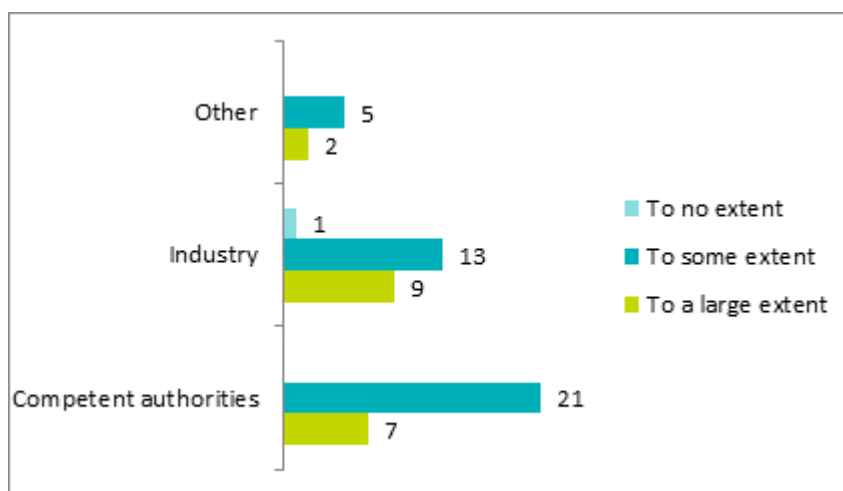
- A need to review the thresholds for some of the parameters. (DK, CA);
- E-PRTR thresholds should be reviewed taking into account E-PRTR experience, new environmental legislation (for example, IED Directive) and even BAT techniques. (PT, CA);
- More accessible information (e.g. disclosure through apps, etc.). (NL, CA);

- Elimination of the threshold value to obtain information on all releases to air, water and land of any pollutants specified in Annex II. (ES, Industry);
- More commentaries and explanations about the reporting of pollutants in waste water, air and soil. (ES, industry);
- It could be interesting to develop periodical “news” in the media, like TV, newspapers, radio, and social media, focusing on citizen knowledge and participation. (ES, other);
- The connection to IED instead of IPPC. (LCP IED for example). (SE, CA; MT, CA; IE, CA);
- There is a problem with the interpretation of releases to soil. Gathered information is of limited use on the national and EU level. (CZ, CA);
- If other obligations require a Member States to report other pollutants, then the E-PRTR should reflect this (e.g. PM2.5, black carbon). (NL, CA);
- E-PRTR should be complementary to new environmental reporting schemas (IED Directive, for example). (PT, CA; IE, CA);
- The addition of certain activities that are now covered by the IED. (MT, CA);
- Taking account of improved data needs as described earlier (NGO);
- Currently the activities which are required to report under the Regulation differ from the activities in IED. (BG, CA);
- General reporting of all facilities (including nil returns) is a new need. (DE, CA);
- Definitions for the activities included in the sector “Waste and wastewater management” should be better phrased in order to clarify which activities are included and which are not. Capacity thresholds in this case often do not allow for clear identification of waste sector facilities in the E-PRTR scope or out of the scope. (IT, CA);
- Emissions/transfers reporting threshold values should be revised to ensure that pollutants are adequately pictured in the E-PRTR (i.e. as in the case of ammonia emissions from intensive pig and poultry facilities). (IT, CA); and
- A measure of site size (employees or something based on production – electricity generation, number of animals etc.). This should include resource use – water, electricity, inputs from other facilities etc. Also compliance performance against permit(s). Also E-PRTR could include activities not previously covered – e.g. radioactive substance emissions and waste data. E-PRTR also needs better definitions and inclusions of waste producing and management sites. (UK, CA).

Targeted stakeholder questionnaire respondents were asked **the extent to which the Regulation had contributed to the specific 7EAP of improving the knowledge and evidence base for EU environmental policy**. The results are provided in the Figure below. Most in all categories thought that it had to some extent, with fewer to a large extent. An ES (other) stated that the Regulation “is essential for the achievement of the objectives” of the 7EAP. An IT CA stated that at the moment E-PRTR is the only point source related set of emissions/transfers data available at EU scale (and often at Member State level too). An NGO, however, stated that while the Regulation provides emission information, the register does not link this to effects on EU environmental standards, hence it only contributes “to some extent” to achievement of the 7EAP objective of improving the knowledge base. A UK CA did comment also that, while it had responded positively to the question, the response was primarily based on the assumption that the Commission has used, and will continue to appropriately utilise, the E-PRTR to inform the development of EU environmental policy.

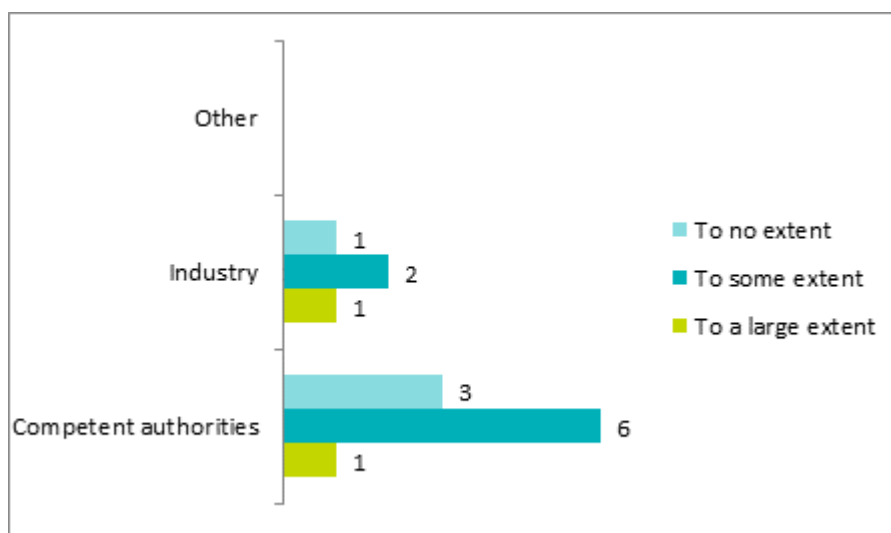


*Figure 5.28 To what extent does the E-PRTR help achieve the 7EAP objective of improving knowledge and evidence base for environmental policy?*



Targeted stakeholder questionnaire respondents were asked has **the adaptation of the Regulation to scientific and technical progress** been appropriate and involved stakeholders. The responses to this question are summarised in Figure 5.29. It is clear that few did respond and that, of those that did, most thought this had been appropriate and involved stakeholders to some extent.

*Figure 5.29 Has the adaptation of the Regulation to scientific and technical progress been appropriate and involved stakeholders?*



Targeted stakeholder questionnaire respondents were also asked if there had been **any technological advancements or changes to industrial processes** which means that the activities included under Annex I of the Regulation are no longer suitably matched to modern industrial activities? This question sought to elicit comments from respondents.

Comments received included:

- Further scientific knowledge about health and environment damages caused by pollution. (ES, Industry);
- Inclusion of new substances in environmental rules. (ES, Industry);
- Continuous monitoring of certain substances (dioxins, furans, mercury). (ES, Industry);
- Improvements in the measurements in situ of the pollutions emitted. (ES, Industry);
- Improvements in the quality of the data. (ES, Industry);
- Improvements in the expression of the results. (ES, Industry);
- Significant improvement has been made on the part of the actors concerned. The information contained in the PRTR - España has been improved, revised and updated. This has paved the way in order to identify the weaknesses on which work has to be done, and the strengths that have to be fostered. (ES, other);
- Advances on monitoring and techniques related to sampling are always improving. It can be interesting to check by chemical substances or families. Reviews of scientific publications and communications with scientific groups could be interesting. Companies providing technical equipment also could help, costs and investment on technologies are a big issue. (ES, other);
- For large scale of modern industries neither list of pollutants neither their thresholds in not relevant e.g. very few chemicals used in hydraulic fracking are listed in Annex 2 of Regulation. (SI, CA);
- It could be relevant to investigate whether some activities never report over the threshold – should they be deleted or should the threshold values be lower. (DK, CA);
- The discussion on revision of the list of activities would be useful, particularly changes of the thresholds. (CZ, CA);
- Hydraulic fracturing is clearly an industry that needs clarification for E-PRTR. Furthermore, the IED Directive clarified some IPPC issues hence those clarifications should be taking into the scope of E-PRTR. (PT, CA);
- At the start PRTR (and even more its predecessor EPER) was aligned with the IPPC Directive. The changes in the IED Directive regarding activities etc. have not yet been incorporated in E-PRTR. (DE, CA); and
- We would not support including 'hydraulic fracturing' activities to the E-PRTR Regulation's requirements. Any 'hydraulic fracturing' related developments can be covered by the Annex I categories which Competent Authorities are currently using for the purposes of reporting data from conventional oil / gas operations that fall within their respective regulatory remits. (UK, CA).

Targeted stakeholder questionnaire respondents were asked if there any new needs that should be reflected in the E-PRTR Regulation. This resulted in the following comments on potential needs:

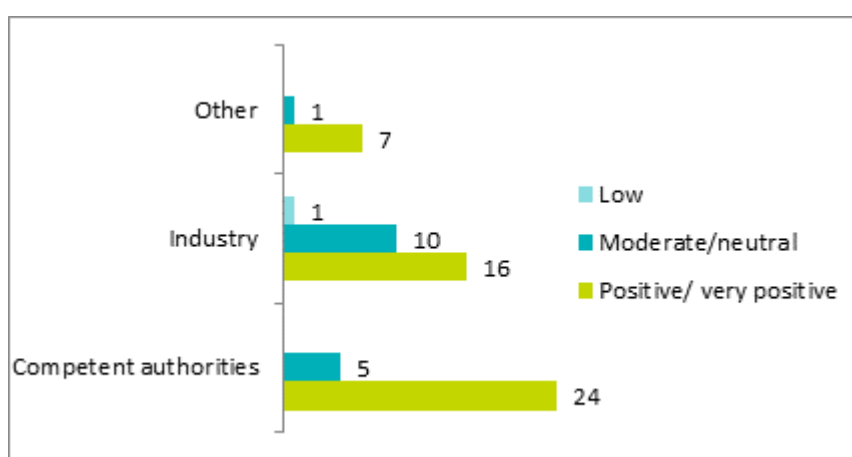
- A need to review the thresholds for some of the parameters (DK, CA);
- E-PRTR thresholds should be reviewed taking into account E-PRTR experience, new environmental legislation (for example, IED Directive) and even BAT techniques. (PT, CA);
- More accessible information (e.g. disclosure through apps, etc.) (NL, CA);

- Elimination of the threshold value to obtain information on all releases to air, water and land of any pollutants specified in Annex II (ES, Industry);
- More commentaries and explanations about the reporting of pollutants in waste water, air and soil. (ES, industry);
- It could be interesting to develop periodical “news” in the media, like TV, newspapers, radio, and social media, focusing on citizen knowledge and participation. (ES, other);
- The connection to IED instead of IPPC. (LCP IED for example). (SE, CA; MT, CA; IE, CA);
- There is a problem with the interpretation of releases to soil. Gathered information is of limited use on the national and EU level. (CZ, CA);
- If other obligations require a Member States to report other pollutants, then the E-PRTR should reflect this (e.g. PM2.5, BC) (NL, CA);
- E-PRTR should be complementary to new environmental reporting schemas (IED Directive, for example). (PT, CA; IE, CA);
- The addition of certain activities that are now covered by the IED Directive (MT, CA); and
- Taking account of improved data needs as described earlier (NGO).

#### *EU added value*

Targeted stakeholder questionnaire respondents were asked about their overall view of E-PRTR. The responses are in the Figures shown below. From all categories the majority of respondents stated that their view was positive and almost all of the rest were moderate/neutral. This value is more strongly perceived by the competent authorities than industry. This response reflects the perceived value described in the previous question.

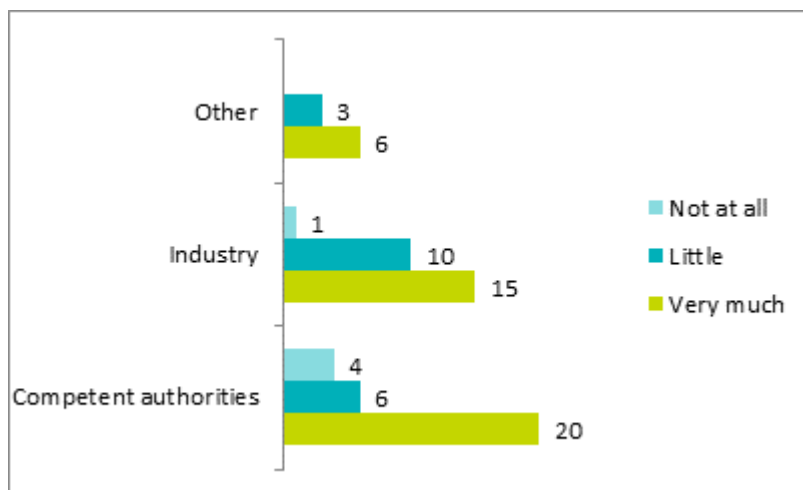
*Figure 5.30 What is the overall perception of the E-PRTR and available information on industrial pollution?*



Targeted stakeholder questionnaire respondents were also asked if they thought **the existence of the E-PRTR is valued by users**. This question asked respondents how they thought others valued the E-PRTR. The responses, summarised below, are largely

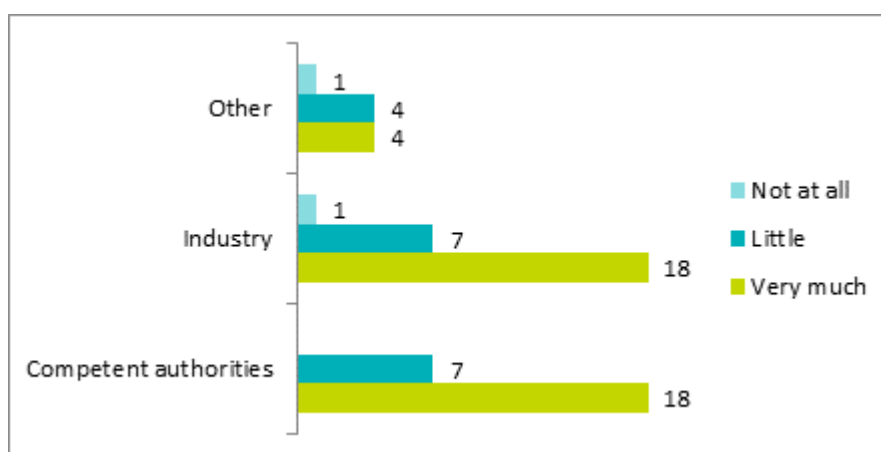
similar to those for previous question, with most thinking that the E-PRTR is valued by users.

*Figure 5.31 How have the different provisions of the regulation been accepted by stakeholders?*



An important part of the perception of the E-PRTR and its data reside in the **trust of the information presented**. A question specifically asked about trust and the responses are summarised in Figure 5.32. The large majority of competent authority and industry respondents stated that they thought there was trust, but there are those who do not think so. It is important to note that the question does not ask whether the respondent trusts the data, but whether others do.

*Figure 5.32 What level of trust do you think users place in the data presented within the E-PRTR*

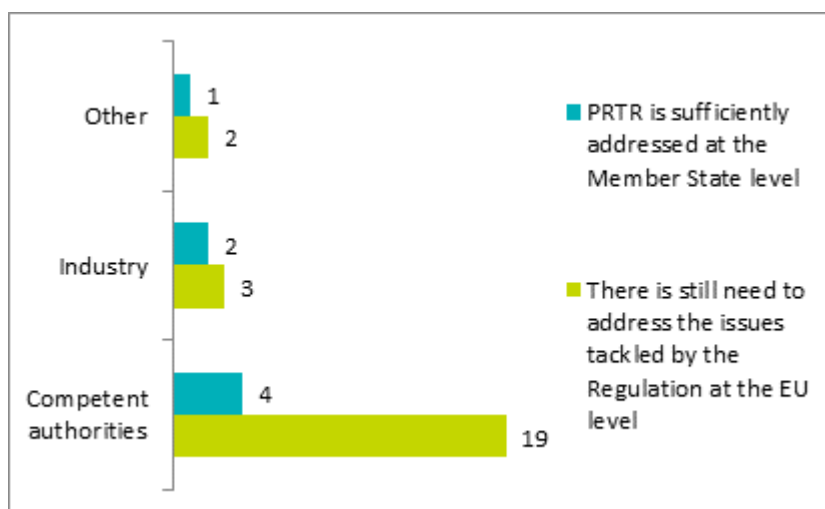


Targeted stakeholder questionnaire respondents made a number of comments in relation to trust, including:

- There is trust, but also a certain uncertainty, when comparing between Member States and between sectors. (DK, CA);
- The process generally guarantees sufficient quality, although quality checks sometimes show shortcomings in the data provided by operators and validation by competent authorities. Complexity is an important cause. Thus simplifying the E-PRTR regulation and streamlining with other EU reporting requirements is important. We hear from some stakeholders that occasionally competitors from other countries for the same or comparable processes do not report substances that are being reported by Dutch companies. (NL, CA);
- Sometimes there are data presented which are not updated according to the quality tests which have effects on users trust. (SE, CA);
- A high percentage of data provided by E-PRTR are calculated or estimated - not measured. (ES, industry);
- The data presented are not a true reflection of the pollutant releases and transfers of industrial activities. (ES, industry);
- The data presented on the E-PRTR website are reliable. (ES, industry);
- Not all the data presented are a true reflection of the pollutant releases. Currently a number of non-refineries facilities are reporting as "refineries". (ES, industry);
- Sometimes we have detected mistakes in the units of measurement. It would be very useful to introduce validation rules to detect these mistakes. (ES, CA);
- One source of trust problems is due to misinterpretation of the E-PRTR reporting criteria (reporting thresholds). (IT, CA); and
- The information contained in the PRTR still has room for improvement. Although the quality of information is improving over time, it has not yet reached the level where decisions can be taken solely based on its information. In particular cases, the Regional authorities have not yet come to unify the way in which the information is entered into the system (see item 12). (ES, other).

Finally, with regard to EU added value, Targeted stakeholder questionnaire respondents were asked **whether there is still a need to address issues through an EU level Regulation**. The responses, summarised below in Figure 5.33, show support for EU level intervention on this issue.

Figure 5.33 Do the issues tackled by the Regulation continue to required action at the EU level?



## Appendix H Follow-up targeted consultation

### H.1 Overview

As indicated in Section 3, a follow-up targeted telephone consultation was conducted with 18 stakeholders. The key messages from those discussions are summarised below (Sections H.1.1 - H.1.7).

Note that no stakeholder has been directly quoted to ensure anonymity, as requested by those participating in the follow-up consultation.

#### H.1.1 Aggregation of data and matching reporting activity codes under E-PRTR

It was remarked by two stakeholders that difficulties arose sometimes owing to the fact that the definitions and activities in the E-PRTR are similar but not the same as those in the IED; although no specific examples were given in this regard. It was also observed by one stakeholder that in some cases there is no harmonisation between definitions in the IED and E-PRTR, for example wood treatment related activities.

Additional difficulties were reported by two stakeholders as a result of changes to other reporting activity codes, including changes to the numbering of activities in the IPPC following the adoption of the IED (which led to confusion among operators reporting to the E-PRTR), and changes to NACE codes. According to one stakeholder, in 2011, approximately 13 companies across Europe were reporting data against the wrong code due to changes to NACE codes; affecting 80% of the reported chlorinated pollutants in the inventory and more than 50% of the reported methane emissions.

#### H.1.2 Integration of environmental reporting requirements within one tool

Three stakeholders referred to national examples where environmental reporting requirements have been integrated within one tool. For example, where a PRTR website has incorporated reporting requirements under SED, LCPD inventories, waste storage, NEC Directive, GHG emissions (in accordance with the Kyoto Protocol), CLRTAP, UNECE, IED, Seveso, WFD, and POPs. Two benefits of such integration, as identified by two of these stakeholders, is that it offers unified reporting and that it is more efficient for operators and businesses to have only one reporting stream which can cover different aspects. In addition to integration with other reporting requirements, one example was provided to illustrate where PRTR reporting is integrated within national statistics – both to generate statistics and to validate them.

Stakeholders held divergent views as to how such integration of environmental reporting requirements might work at a European level. Several opportunities for synergies were identified, for example reporting under the IED could be harmonised with the E-PRTR to increase the level of information available in relation to E-PRTR data. Similarly it was felt that there was scope to develop the supporting contextual information for E-PRTR data by incorporating information reported under the WFD, UNFCCC or POPs – although no specific examples were provided. One stakeholder highlighted that integrating LCP reporting requirements with E-PRTR could be useful as a means of providing data on capacity information as LCP reporting includes information on size of facility.

However, six stakeholders cautioned that the integration of environmental reporting requirements within one tool might not be appropriate at an EU level. Several different examples were given as to why, as follows:

- Difficult to integrate the different reporting periods and deadlines (e.g. reporting for the LCP and the PRTR);

- Linking administrative data will require adjustments to systems and operating software (e.g. reporting for the LCP and the PRTR);
- Concerns that information could be lost in order to make the process smoother where aspects of reporting requirements are the same but not all (e.g. LCP, IED, Seveso, WFD); and
- Potential difficulties in relation to confidentiality claims.

Two stakeholders referred to Inspire, recognising that it has potential but noting that no steps towards integration with the E-PRTR are feasible to date. Although it is hoped that the Annex I requirement of Inspire to create a basic register linked to information from the Chamber of Commerce could be a way to minimise the amount of information asked of operators, this is not currently technically feasible.

### H.1.3 Existence of data gaps

Data gaps, whereby information that should be reported is missing from the E-PRTR inventory, were discussed by five stakeholders, and in most cases different issues were raised. In sum, data gaps are reported with respect to:

- Diffuse emissions to air and water (the only issue to be referred to by two different stakeholders). In particular it was discussed that there are difficulties monitoring releases where the pollutant is present in low concentrations and in such cases there are wide variations in reporting between countries and industrial sectors – particularly as there are no clear rules on how to report emissions below detection limits which lead to different treatment by Member States;
- Specific pollutants – e.g. mercury where there is over reporting from waste water treatment plants due to inaccurate emissions factors and under reporting from combustion plants because it is too difficult to monitor and measure emissions in flue gas;
- Reporting by specific facilities – e.g. in the case of sludge incinerators in one Member State where it was expected that they should be reporting emissions and yet they weren't; and
- Classification of releases – e.g. how to classify the release of lixivium from landfills, either as water discharge or as a waste transfer.

It was generally felt that more could be done to address the existence of data gaps, with one stakeholder suggesting that more guidance could be helpful in this respect.

In addition, one stakeholder reported that information concerning pollutants outside the current scope of the E-PRTR is missing, and that an extension of the pollutants covered by the E-PRTR is needed to reflect new substances in the market.

### H.1.4 Discussions on the usefulness of thresholds and the variability of reporting that it leads to

Although several issues with the current thresholds were identified, there is consensus among those stakeholders identifying the issues that thresholds are useful and that where necessary, they should be revised rather than removed. The issues discussed are summarised as follows:

- Thresholds for certain pollutants are too high. Pollutants specified by stakeholders include: ammonia (in one Member State the threshold is so high that only 10% of emissions are captured by the E-PRTR); NO<sub>x</sub>; and phenol. In general terms it is also felt that the thresholds have led to smaller datasets;
- Thresholds are interpreted differently across Europe by the respective agencies in charge of reporting. E.g. the chromium threshold could be interpreted as chromium 6 and/ or chromium 3; and



- Thresholds mean that not all Annex I installations are obliged to report, and thus there are wide variances year on year for which installations are reporting and no requirement for installations to report why they are not reporting one year compared to another. E.g. when a facility has a poor commercial year, they might be below the reporting thresholds and do not need to report.

In terms of revising the thresholds, it was suggested by two stakeholders that thresholds should be revised to reflect the development of best available techniques and that thresholds could be aligned with BAT conclusions and BREFs. It was also commented that if thresholds are revised, toxicity and effects on health and environment should be taken into account when setting the thresholds. Another stakeholder also suggested that there should be flexibility in how the thresholds are applied between parties to the convention.

#### H.1.5 Challenges of engaging the public and increasing public participation

The number of hits to national PRTR websites was provided by two stakeholders (between 3,000 and 4,000 per month in one case, and up to 5,000 per month in the other). Although in both instances the stakeholder did not provide any insight as to the actual engagement with the data by the website users. According to the stakeholders consulted, examples of public participation with the E-PRTR include:

- Data quality assurance (use by industry to check the reliability of their own reporting);
- Academic research and other research projects;
- Countries thinking of joining the Kiev Protocol and others working on implementing PRTR; and
- Informing the decision of where to move to by locating facilities in the surrounding area (this specific example was given by an academic specialising in chemistry who is familiar with the data).

Three stakeholders also reported examples of initiatives at national level which have been launched to increase public participation, which could apply to the E-PRTR (although no quantitative evidence to show how successful these initiatives have been was provided). Examples include:

- Explaining to operators what happens to the data once reported in a guidance document to improve awareness among operators of the importance of the data they report, and subsequently improve their engagement with the data;
- Directly contacting interested stakeholders such as NGOs with updates to PRTR data; and
- Creating a network among researchers and the PRTR to encourage collaboration – including sharing data, and making use of the data provided and subsequent analysis.

It was generally felt that public participation with the E-PRTR is limited and that there is scope for improvement. Suggestions include:

- Provide more contextual information – e.g. including data on capacity and links to installation permits, and data on water and energy consumption. This issue was raised by four stakeholders;
- Integrate E-PRTR data with other environmental reporting data so that the public has access to all information from one source (according to one stakeholder); and
- Information on emissions but does not say what it means for citizens (according to six stakeholders). E.g. in Israel the government uses data from the PRTR to provide information about lung cancer and cancer from air pollution based on

geographic emissions data. It is felt by some that changes are needed to enable the public to make meaningful comparisons and interpret the data as otherwise the real value for people is limited and that the current raw quantity of data is not helpful for public. In two cases, concerns were also raised with regards to the resulting potential for the public to misinterpret E-PRTR data with examples of headlines in the media referring to the 'biggest polluters' or 'most polluting industry' without providing any context.

#### H.1.6 Relationship of the E-PRTR with other existing PRTRs

Three stakeholders commented positively on the relationship of the E-PRTR with other PRTRs. In two cases, stakeholders commented that the process of submitting data to the E-PRTR can also act as a quality check for PRTR data. Another benefit identified is that the E-PRTR is a pre-requisite for having the opportunities to have a European wide picture.

Alternatively, several issues on the relationship of the E-PRTR with other PRTRs were raised. Concerns were raised by three stakeholders with regard to the comparability of PRTR data – namely that estimations reported to the E-PRTR are not always comparable as national guidance documents with emission factors to support reporting can vary between countries. It was felt by one stakeholder that guidance on reporting the data, e.g. on how to convert concentration (Nm3) into mass flow (g/tonne) would help to minimise such reporting inconsistencies, in addition to guidance on the limitations of the data and how far the interpretation of these could go. One stakeholder also commented that owing to the many steps in submitting data, there can be errors during the transposition of data from PRTR to E-PRTR. Lastly, according to another stakeholder, the E-PRTR quality assurance process can be quite time consuming for the competent authority with respect to the time needed to respond to the outliers check, especially when in most cases the outliers are legitimate resulting from accidental releases, or the absence of reporting of a facility for a specific year linked to the activity or pollutant threshold.

One suggestion for strengthening the links between the E-PRTR and PRTRs was made by including information on the E-PRTR website for how related national legislation is implemented and facility compliance. It was felt that this would allow an understanding of how each individual facility is complying with the EU legislation, where gaps are and where more support is needed at country level.

#### H.1.7 Use of E-PRTR for other environmental reporting (e.g. waste reporting and urban waste water reporting)

Stakeholders discussed the issue of using of E-PRTR for other environmental reporting in relation to waste.

It was highlighted by two stakeholders that the purpose of E-PRTR reporting is different to waste reporting, and therefore the use of E-PRTR in this respect is limited. Particularly in light of the existing thresholds which fail to capture many transfer emissions from waste (e.g. the mercury thresholds which would mean in some cases that no mercury is reported from WWTPs). In addition, it was reported by two stakeholders that the different activity codes presents an issue where attempts to cross reference the two datasets are made. Moreover, it was commented by another two stakeholders that the way in which E-PRTR data is collected, processed, reported and presented is not compatible with waste reporting or with urban waste water reporting. Subsequently, if E-PRTR data was used for waste reporting or urban waste water reporting, it was flagged that information or detail would likely be lost and the quality of data reported could be jeopardised (e.g. where more detailed information for a larger number of facilities is reported under the UWWTD compared to data reported for the E-PRTR/ where compliance with the UWWTD has been mapped but not under E-PRTR).

Alternatively, one stakeholder did recognise that the use of E-PRTR could lead to some benefits for urban waste water reporting as E-PRTR data is more recent and the processes for reporting are electronic (whereas under the UWWTD reporting is by paper and the latest data available to date is from 2010 and 2012).

Although, examples were provided by three Member States to illustrate where PRTR reporting is integrated within national waste statistics – both to generate statistics and to validate them, it was felt by a different stakeholder that the use of E-PRTR data for waste statistics at European level is limited due to the variability in activity codes.

Another issued raised by one stakeholder is that the option to report the amount of waste or pollutant in waste exists in the Kiev Protocol but has not been implemented in the E-PRTR. Of the countries reporting to the E-PRTR only the Czech Republic has made use of this option; whereas the other countries just report the amount of waste transferred. The stakeholder in question is of the opinion that reporting the pollutants in waste is more important for the public to know than the actual amount of waste, although it recognises that this could be difficult to implement at a European level. In the meantime the stakeholder suggests that lessons learned from the Czech experience are shared.

#### H.1.8 Other

Information concerning costs was provided by a few stakeholders. According to the responses given, the capital cost of creating a website for the PRTR inventory was in the range of €1-2 million, and annual running costs of running the PRTR website were in the range €150,000 – €700,000.

In addition, data was provided concerning the amount of time required for reporting (~40 hours per annum), and for competent authorities to process the data (~4 hours per submission). However it appears to relate to national PRTR.

## Appendix I Public consultation

### I.1 Questionnaire for public consultation

*Public Consultation - Evaluating the European Pollutant Release & Transfer Register (E-PRTR) Regulation*

*What is the E-PRTR Regulation?*

It requires some 28,000 industrial facilities across the EU to **report** their annual emissions of **specified pollutants** and **waste transfers** to national authorities, for forwarding to a Europe-wide register – the European **pollution register** (E-PRTR) – which will make the data public.

Read more at: <http://prtr.ec.europa.eu/pgAbout.aspx>

*Why are we consulting?*

To provide input into an ongoing evaluation of the Regulation, including delivery of objectives, efficiency, effectiveness and relevance of the E-PRTR requirements and whether they reflect the needs to European citizens, businesses and policy makers today. This public consultation will be one important part of the evaluation which will also be supported by independent analysis, workshops, interviews, etc.

The questionnaire consists of four short introductory questions about the persons completing the questionnaire. Following this there are 27 substantive questions. Many of these are multiple choice questions. There are opportunities to provide more detailed comments. The substantive questions are structured around the following themes:

- scope of E-PRTR;
- providing data to the register;
- checking & forwarding data;
- understanding the register website; and
- usefulness of the register.

You do not have to answer all of the questions – though we are grateful for as much input as you can provide. Answering all the questions should not take longer than **30 minutes**.

You can **comment on both national and European registers**. This will be clearly marked in the questions. Please comment based on your experience where relevant.

If you would like to raise other **issues not covered by the questionnaire**, please email us at: [ENV-EPRTTR@ec.europa.eu](mailto:ENV-EPRTTR@ec.europa.eu)

*Introductory questions*

New Section

A. Are you replying as?

- ☐ Interested individual / citizen
- ☐ Stakeholder / expert

B. Are you representing?

- ☐ Private company
- ☐ Utility provider
- ☐ Non-governmental organisation (NGO)
- ☐ Academic / scientist / researcher
- ☐ National authority
- ☐ Local / regional authority
- ☐ European institution
- ☐ International body
- ☐ Industrial or trade association
- ☐ Consumer association
- ☐ Other association
- ☐ Other

C. If you are representing a company/enterprise? What type of company?

- ☐ SME (Small or medium enterprise)
- ☐ Non-SME

D. What country are you from?

- ☐ AT – Austria
- ☐ BE – Belgium
- ☐ BG – Bulgaria
- ☐ CH - Switzerland
- ☐ CY – Cyprus
- ☐ CZ – Czech Republic
- ☐ DE – Germany
- ☐ DK – Denmark
- ☐ EE – Estonia
- ☐ EL – Greece
- ☐ ES – Spain
- ☐ FI – Finland
- ☐ FR – France
- ☐ HR – Croatia
- ☐ HU – Hungary
- ☐ IE - Ireland

- ☐ IS - Iceland
- ☐ IT - Italy
- ☐ LI - Liechtenstein
- ☐ LT - Lithuania
- ☐ LU - Luxembourg
- ☐ LV - Latvia
- ☐ MT - Malta
- ☐ NL - Netherlands
- ☐ NO - Norway
- ☐ PL - Poland
- ☐ PT - Portugal
- ☐ RO - Romania
- ☐ RS - Serbia
- ☐ SE - Sweden
- ☐ SI - Slovenia
- ☐ SK - Slovakia
- ☐ UK - United Kingdom
- ☐ EU level organisation
- ☐ Other

In which language are you providing answers to the questions in this questionnaire

*Questions on the scope*

New Section

1. Are your responses concerning?

- ☐ A national pollution release and transfer register (PRTR)
- ☐ The European Pollution emission register (E-PRTR)

If referring to a national pollution emission register, please indicate which:

2. How often do you access the pollution register?

- ☐ Once per week or more frequently
- ☐ Between once per week and once per month

- ☐ Between once per month and once per year
- ☐ Never

3. What are the main reasons you access the pollution register? (You can choose more than one category)

- ☐ To review my own data on the E-PRTR site
- ☐ To examine pollution emissions in my local area
- ☐ To compare emissions between activities, facilities, regions, etc.
- ☐ To carry out trend analysis for specific pollutants or activities
- ☐ To use the data for overall analysis of emissions data

Other (please indicate reason below)

4. Which categories of data do you most often examine? (You can choose more than one category)

- ☐ Emissions to air
- ☐ Emissions to water
- ☐ Waste transfers
- ☐ Releases to land
- ☐ Off-site transfers of waste
- ☐ Off-site transfers of pollutants in waste water destined for waste-water treatment
- ☐ Releases from diffuse sources into air
- ☐ Releases from diffuse sources into water

*Providing data to the register*

5. Are you responsible for providing data to a national emission register?

- ☐ Yes
- ☐ No

If your answer is No, please go directly to question 9

6. Regarding the collation of data to be sent to the register:

6a. Are the data easy to provide, given other monitoring and reporting activities?

- ☐ Yes
- ☐ No
- ☐ Do not know

6b. Is collating the data time consuming?

- ☐ Yes
- ☐ No
- ☐ Do not know

Please comment on which aspects of data collation are more and less time consuming for you. If possible include an estimate of the time needed (in hours) to collect the data.

7. How do you send the data?

- ☐ Electronically
- ☐ On paper
- ☐ Don't know

8. In your view is it simple to submit the data?

- ☐ Very simple
- ☐ Simple
- ☐ Medium
- ☐ Complicated
- ☐ Very complicated

*Checking and forwarding the data*

9. Are you responsible for checking the data provided at national level and forwarding them to the designated European agencies?

- ☐ Yes
- ☐ No

If your answer is No, please go directly to question 13

10. Regarding the verification of data to be sent to the EU:

10.a. Have you noticed an improvement in the quality and completeness of data reported by operators?

- ☐ Yes
- ☐ No
- ☐ Do not know

10.b. Is the verification of the data time consuming?

- ☐ Yes
- ☐ No
- ☐ Do not know



Which aspects of the verification are the most time consuming for you? Please provide an estimate of the time needed for each.

11. How do you forward the data to the EU?

- ☐ Electronically
- ☐ On paper
- ☐ Do not know

12. In your view, is it simple to forward the data to the EU?

- ☐ Very simple
- ☐ Simple
- ☐ Medium
- ☐ Complicated
- ☐ Very complicated

*Understanding the pollution register website*

13. a Please indicate if you are commenting on a national database or the EU database

- ☐ National database
- ☐ EU database

13.b Do you find the pollution register easy to navigate? (E.g. in presenting pollution of different types, from different activities, in different locations).

- ☐ Yes
- ☐ Partially
- ☐ No

Please indicate in the table below which parts are easier or more difficult to navigate/interrogate

	Easier to navigate/ interrogate	More difficult to navigate/ interrogate
Industrial activities	<input type="text"/>	<input type="text"/>
Area overview	<input type="text"/>	<input type="text"/>
Pollutant releases	<input type="text"/>	<input type="text"/>
Pollutant transfers	<input type="text"/>	<input type="text"/>

Waste transfers	<input type="text"/>	<input type="text"/>
Map search	<input type="text"/>	<input type="text"/>
Time series of pollutant releases	<input type="text"/>	<input type="text"/>
Time series of pollutant transfers	<input type="text"/>	<input type="text"/>
Time series of waste transfers	<input type="text"/>	<input type="text"/>
Diffuse releases into air	<input type="text"/>	<input type="text"/>
Diffuse releases into water	<input type="text"/>	<input type="text"/>

14. What could be done to make the register more user-friendly? Could any features be usefully added?

- ☐ More assistance
- ☐ Other search possibilities
- ☐ Additional environmental information
- ☐ More details on particular topics
- ☐ Links to specific websites

Further comments

*Usefulness of the pollution register*

15. Does the pollution register provide data which are useful to understand environmental concerns in your local environment?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

16. Do you believe the pollution register has increased transparency in environmental information and decision making?

- ☐ Yes
- ☐ Partially

- ☐ No
- ☐ Do not know

17. Do you believe the pollution register has increased engagement of the public in *European* environmental information and decision making?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

18. Do you believe the pollution register has helped to increase the engagement of the public in the *local* environment and/or environmental decision making?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

19. Are the data useful for benchmarking industry performance when comparing the performance of individual installations or activities across Europe?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

20. Does the register provide data that are useful to inform policy development (national or EU)?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

21. Which data in the pollution register are of most use for developing policy? (You can choose more than one category)

- ☐ Emissions to air
- ☐ Emissions to water
- ☐ Waste transfers
- ☐ Releases to land
- ☐ Off-site transfers of waste

- ☐ Off-site transfers of pollutants in waste water destined for waste-water treatment  
☐ Releases from diffuse sources into air  
☐ Releases from diffuse sources into water  
☐ Do not know

22. Are there other data sources of pollutant emissions which you find more useful for allowing participation in political decision making?

- ☐ Yes  
☐ Partially  
☐ No  
☐ Do not know

If yes, please indicate up to 3 sources, and why/in what circumstances they are more useful:

	Name of source	Why?	What circumstance?
Source 1	<input type="text"/>	<input type="text"/>	<input type="text"/>
Source 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Source 3	<input type="text"/>	<input type="text"/>	<input type="text"/>

23. Do you believe the pollution register has increased the accountability of operators of polluting activities?

- ☐ Yes  
☐ Partially  
☐ No  
☐ Do not know

24. Do you consider the creation and use of the register has contributed to the prevention and/or reduction of environmental pollution?

- ☐ Yes  
☐ Partially  
☐ No  
☐ Do not know

25. To what extent does the Regulation contribute to the objective of the 7th Environment Action Programme 'to improve the knowledge and evidence base for EU environment policy'?

- ☐ To a large extent
- ☐ To some extent
- ☐ Not at all
- ☐ Do not know

26. What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?

- ☐ Harmonisation of reporting
- ☐ Harmonisation of monitoring practices
- ☐ Development of a common approach and understanding in data collection and reporting
- ☐ Enhanced comparability across reporting countries
- ☐ Higher quality of data due to QA efforts deployed within the Reportnet environment
- ☐ Stimulation to participate for non EU countries
- ☐ Other

If 'other', you may comment here

27. Overall, do you think the pollution register provides information useful to your interests?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Do not know

Please comment on the usefulness of the pollution register, including what might make it more useful:

## **I.2 Public consultation report**

### *Introduction*

A public consultation was held between 23 July 2015 and 15 October 2015 in order to provide input into the evaluation of the Regulation, including delivery of objectives, efficiency, effectiveness and relevance of the E-PRTR requirements and whether they reflect the needs of European citizens, businesses and policy makers today. The results of this public consultation were one important source of evidence to support the evaluation which is also being supported by independent analysis, workshop and direct stakeholder consultation.

Stakeholders were informed about the public consultation through emails and personal contacts as well as announcements on the websites of DG Environment and the E-PRTR website itself.

The consultation questionnaire consisted of four short introductory questions to gather information about the person completing the questionnaire. Following this there were 27 substantive questions, many of which were multiple choice, together with opportunities to provide more detailed comments. The substantive questions were structured around the following themes:

- Scope of E-PRTR;
- Providing data to the register;
- Checking and forwarding data;
- Understanding the register website; and
- Usefulness of the register.

This appendix provides a summary and brief analysis of the responses received to the public consultation.

### I.3 Overview of the responses received

During the 12 weeks of the consultation 68 responses to the questionnaire were received. This is a low response rate for public consultations generally, however it may be a reflexion of the specialised nature of the Regulation. The initial questions of the consultation asked for information about the respondent. While there were different types of respondent from different locations, the distribution of responses does not justify to present separate statistics of analyses (e.g. between those responding as businesses or as authorities). The only exception to this concerns the response to the question on whether respondents were reporting on national registers or the EU level register, where a similar number responded to each. Therefore, for this question, it is appropriate to present the conclusions of the responses as overall statistics together with separate statistics for those responding on national registers and on the EU level register.

**It is important to note that some respondents indicated they were responding to both national and EU level registers. Therefore, the sum of responses for national and local registers often is greater than the total. On other occasions some respondents did not answer a question, so the totals are lower.**

The responses to the questionnaire are summarised according to the specific questions themselves. These are retained in order to allow readers to make easy cross reference to the original questionnaire if needed.

### I.4 Analysis of the responses

#### *A. Are you replying as?*

Respondents were asked if they were replying as interested individuals or as stakeholders/experts. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. It can be

seen that the vast majority stated that they were stakeholders/experts and few interested individuals responded.

*Table 5.63 Overview of responses received to question A*



	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Interested individual / citizen	6	9%	2	5%	4	12%
Stakeholder / expert	62	91%	38	95%	31	88%
No answer	0	-	0	-	0	-

*B. Are you representing?*

Respondents were asked to indicate who they were representing. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. It can be seen that the overwhelming majority of respondents are from private companies, utilities or industry associations, thus representing providers of data to pollution registers. There were few responses from local/regional authorities and only one from a national authority. No NGO or academic, responded.

*Table 5.64 Overview of responses received to question B*




	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Private company	42	63%	25	62.5%	21	62%
Utility provider	9	13%	5	12.5%	5	15%
Non-governmental organisation (NGO)	0	-	0	-	0	-
Academic / scientist / researcher	0	-	0	-	0	-
National authority	1	1.5%	0	-	1	3%
Local / regional authority	8	12%	4	10%	6	17%
European institution	0	-	0	-	0	-
International body	0	-	0	-	0	-

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Industrial or trade association		7	9%	5	12.5%	2	6%
Consumer association		0	-	0	0%	0	-
Other association		0	-	0	0%	0	-
Other		1	1.5%	1	2.5%	0	-
No Answer		0	-	0	-	0	-

*C. If you are representing a company/enterprise? What type of company?*

For those representing companies, respondents were asked if they represented a small or medium enterprise (SME). The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. A small majority of those responding represented a non-SME and this division was similar for those responding on national registers and for those responding on the EU level register.






*Table 5.65 Overview of responses received to question C*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
SME		20	30%	12	30%	11	32%
Non-SME		33	49%	19	47.5%	17	50%
No Answer		14	21%	9	22.5%	6	18%





*D. What country are you from?*

Respondents were asked to indicate which country they were from. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. As responses for many countries were lacking, the table only includes countries from which responses were received. From these it can be seen that the distribution is far from even, with nearly a third of responses being received from Portugal and nearly a fifth from Germany. Interestingly all countries for which responses were received have responses for both the national register and EU register. However, the distribution varies. For example, the majority of German responses concern the national register, while the majority of responses from Finland and the Netherlands concern the EU register.

*Table 5.66 Overview of responses received to question D*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Belgium		5	7.5%	3	7.5%	3	9%
Germany		13	19%	11	27.5%	3	9%
Spain		2	3%	1	2.5%	1	3%
Finland		8	12%	3	7.5%	6	17.5%
France		4	6%	3	7.5%	1	3%





		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Netherlands		6	9%	3	7.5%	6	17.5%
Portugal		22	33%	12	30%	10	29%
United Kingdom		5	7.5%	3	7.5%	3	9%
EU level		3	4%	1	2.5%	2	6%

### 1. Are your responses concerning?

Respondents were asked whether their responses were in relation to their national register or the EU level register. The responses received are set out in the table below. It can be seen that while more responded on national registers, the division is relatively even.






Table 5.67 Overview of responses received to question 1

		Answers	Percentage
A national pollution release and transfer register (PRTR)		40	53.5%
The European Pollution emission register (E-PRTR)		35	45.5%
No Answer		1	1%

### 2. How often do you access the pollution register?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. It can be seen that a significant proportion never access the register and that those that do are very rarely frequent visitors. Two thirds of respondents stated that they consulted a register between once per month and once per year. A very similar pattern was seen whether respondents were reporting on their consultation of national registers or the EU level register.

Table 5.68 Overview of responses received to question 2







		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Once per week or more frequently		1	1.5%	0	-	1	3%
Between once per week and once per month		4	5%	2	5%	2	6%
Between once per month and once per year		46	69%	27	67.5%	23	68%
Never		12	18%	7	17.5%	9	26%
No Answer		5	7%	4	10%	0	-

### 3. What are the main reasons for which you access the pollution register?

Respondents were able to choose more than one category. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. All of the suggested reasons were supported by several respondents. However, the only reason attracting more than half of responses was to consult its own data in the register. The next most important reasons were: to compare emissions (with other sources) and for the overall analysis of emissions data. While there were minor differences between the responses for national registers and the EU level register, the distribution of responses was relatively similar.

The consultation allowed respondents to comment or suggest other reasons for accessing the register. Most commented that their only reason to access registers was to submit data or to state that they never visited the register. One UK SME did not know the register was accessible. Only one respondent (DE SME) gave an additional reason which is to check that its data were correct and to compare the data with others.










Table 5.69 Overview of responses received to question 3

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
To review own data on the E-PRTR		37	54%	20	50%	21	59%
To examine pollution emissions in local area		8	12%	4	10%	4	12%
To compare emissions between activities, facilities, regions		16	22%	6	15%	10	26%
To carry out trend analysis for specific pollutants or activities		8	12%	3	7.5%	5	13%
To use the data for overall analysis of emissions data		13	19%	6	15%	7	21%
No Answer		24	36%	16	40%	11	32%

### 4. Which categories of data do you most often examine?

Respondents were able to choose more than one category. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Results were similar for the responses for national registers and the EU level register. Emissions to air and to water have similar high responses – over two thirds of responses. Waste transfers were highlighted by just under half of respondents. Other categories of data were reported to be much less frequently consulted.



Table 5.70 Overview of responses received to question 4

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Emissions to air		48	70%	27	67.5%	25	71%
Emissions to water		42	61%	22	55%	25	71%
Waste transfers		30	45%	18	45%	13	38%
Releases to land		3	4%	3	7.5%	0	-
Off-site transfers of waste		14	21%	8	20%	6	18%
Off-site transfers of pollutants in waste water destined for waste-water treatment		8	12%	4	10%	4	12%
Releases from diffuse sources into air		10	15%	5	12.5%	6	18%
Releases from diffuse sources into water		3	4%	2	5%	2	6%
No Answer		15	22%	11	27.5%	6	18%

*5. Are you responsible for providing data to a national emission register?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Given that most of the respondents (see above) fall under a data provider category, it is not surprising that most respondents do provide data to a national register (this applies also to those commenting on the EU register).

Table 5.71 Overview of responses received to question 5

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		63	94%	37	92.5%	34	100%
No		5	6%	4	7.5%	1	-
No Answer		0	-	0	-	0	-

*6. Regarding the collation of data to be sent to the register:*

*6a. Are the data easy to provide, given other monitoring and reporting activities?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. For those responding on national

registers, just under twice as many responded that provision of data was easy to provide given other monitoring and reporting activities, but for those responding on the EU register there was an even split between those who thought data provision was easy and those who did not.

*Table 5.72 Overview of responses received to question 6a*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		39	58.5%	24	60%	17	50%
No		27	40%	15	37.5%	17	50%
Do not know		0	-	0	-	0	-
No Answer		2	1.5%	1	2.5%	1	-

*6b. Is collating the data time consuming?*

All respondents, without exception, stated that data collation is time consuming. Respondents were asked to provide estimates of the time they spent undertaking tasks to support the registers. The responses showed a wide range of figures, from relatively small amounts of time, to significant investments in time. These responses included:

- The time spent is considerable – setting up the internal reporting systems cost several man-weeks and the annual reporting costs several man-days in addition (BE non-SME private company);
- The activities of sampling, external analysis, calculation, handling the national data base, verifying takes about a week (DE non-SME private company);
- The data are collected monthly and take 2-3 hours per month to collate plus another 20 or more hours annually at the year-end for collation and independent verification (UK non-SME private company);
- Data are supplied for two sites – one the UK pollution inventory and one the E-PRTR. These take 24 hours and 40 hours per annum respectively. The main time is spent calculating the mass emissions (UK non-SME private company);
- A DE trade association broke the time taken in detail: Incorporation into the reporting system: 2 hours, procurement of data: 1-5 hours, processing of data: 2 hours, input in reporting system: 2-3 hours, verification: 1 hour; and
- Other estimates: 40 hours for an installation (NL and PT non-SME private companies); 4-5 persons 75% of time for two months, 25, 20, 5 and 4 hours (PT non-SME private companies), 25 and 20 hours (FR non-SME private companies), 'several working days', 25, 16 and 10 hours (4 FI non-SME private companies), 1-2 weeks and 24 hours (DE non-SME private companies), 200 hours for 74 sites (UK non-SME private company).

The main activities highlighted as time consuming are data collection, calculations of mass emissions, verification and uploading of data. Specific activities such as data on dust collectors, assessing off-site waste shipment, were noted as particularly time consuming.

Authorities did not provide quantitative estimates of the time taken. However, verification was identified as time consuming, as was difference in report formats. However, it was noted that some concerned with data provision are required for more than PRTR and, therefore, identifying which costs are due to PRTR and which due for other uses of the data is not possible.

### 7. How do you send the data?

In all cases, respondents replied that data were sent electronically (not by paper).

### 8. In your view is it simple to submit the data?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Responses were divided. Just under half thought that it was 'medium', with about a fifth each stating that it was either simple or complicated. More of those responding on the EU register thought that it was complicated compared to those responding on national registers.

Table 5.73 Overview of responses received to question 8

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Very simple	2	3%	2	5%	0	-
Simple	15	22%	8	20%	7	21%
Medium	31	47%	20	50%	14	41%
Complicated	19	28%	10	25%	13	38%
Very complicated	0	-	0	-	0	-
No Answer	1	-	0	-	1	-

### 9. Are you responsible for checking the data provided at national level and forwarding them to the designated European agencies?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Only three stated that they were responsible. This is not surprising given that most respondents were data providers.

Table 5.74 Overview of responses received to question 9

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes	3	4.5%	2	5%	2	6%
No	64	95.5%	38	95%	32	94%
No Answer	0	-	0	-	0	-

### 10. Regarding the verification of data to be sent to the EU:

#### 10.a. Have you noticed an improvement in the quality and completeness of data reported by operators?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. However, as most respondents were providers, only three answers were given, so no conclusions can be reached on responses to this question.

Table 5.75 Overview of responses received to question 10a

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes	1	1.5%	1	2.5%	1	3%
No	2	3%	1	2.5%	1	3%
Do not know	1	1.5%	0	-	1	3%
No Answer	63	94%	38	95%	31	91%

## 10.b. Is the verification of the data time consuming?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. However, as most respondents were providers, only three answers were given which all stated that they found verification to be time consuming. The only comment received was from the BE national authority, which noted that validation and keeping up to date the list of facilities are most time consuming.

Table 5.76 Overview of responses received to question 10b

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes	3	4%	2	5%	2	6%
No	0	-	0	-	0	-
Do not know	1	1%	0	0%	1	3%
No Answer	63	94%	38	95%	31	91%

## 11. How do you forward the data to the EU?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. However, as most respondents were providers, only three answers were given which all stated that they forwarded the data electronically.

Table 5.77 Overview of responses received to question 11

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Electronically	3	4.5%	2	5%	2	6%
On paper	0	-	0	-	0	-
Do not know	0	-	0	-	0	-
No Answer	64	95.5%	38	95%	32	94%

## 12. In your view is it simple to forward the data to the EU?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. However, as most respondents

were providers, only three answers were given which all stated that they found the forwarding of the data to the EU to be 'medium' difficulty.

*Table 5.78 Overview of responses received to question 12*

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Very simple	0	-	0	-	0	-
Simple	0	-	0	-	0	-
Medium	3	4.5%	2	5%	2	6%
Complicated	0	-	0	-	0	-
Very complicated	0	-	0	-	0	-
No Answer	64	95.5%	38	95%	32	94%

*13. Do you find the pollution register easy to navigate? (E.g. in presenting pollution of different types, from different activities, in different locations).*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. About 40% stated that they found ease of navigation to be 'partially' true, with about a fifth stating that it either was or was not easy. However, the degree of difficulty of navigation was greater for those respondents reporting on the EU level register than national registers.

*Table 5.79 Overview of responses received to question 13.1*

	All answers		National register		EU register	
	Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes	15	21%	6	15%	9	23.5%
Partially	26	39%	17	42.5%	11	32%
No	13	19%	11	27.5%	6	18%
No Answer	14	21%	6	15%	9	26.5%

Respondents were asked, in a supplementary question, which aspects of the registers they found easy or difficult to navigate. The results are presented in the table below. It is evident that some respondents find the registers difficult for all aspects of their navigation. However, navigation of categories such as industrial activities and pollutant releases is reported as easy by most respondents, but information on issues such as time series is considered to be difficult by the majority of respondents. For those areas which are considered to be easy, it can be seen that the ease of navigation is lower for those commenting on the EU level register.

Table 5.80 Overview of responses received to question 13.2







	Total		National registers		EU level register	
	Easy	Difficult	Easy	Difficult	Easy	Difficult
Industrial activities	33	9	25	1	8	8
Area overview	27	12	19	6	8	6
Pollutant releases	34	11	21	5	13	6
Pollutant transfers	18	7	13	4	5	3
Waste transfers	16	19	11	11	5	8
Map search	15	21	11	12	4	9
Time series of pollutant releases	15	22	12	10	3	13
Time series of pollutant transfers	8	20	5	11	3	10
Time series of waste transfers	9	21	5	12	4	9
Diffuse releases into air	14	17	9	7	5	10
Diffuse releases into water	12	13	8	5	4	8

*14. What could be done to make the register more user-friendly? Could any features be usefully added?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Most of the suggestions received similar levels of support (noting that nearly half did not comment), whether for national registers or the EU level register.



Table 5.81 Overview of responses received to question 14

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
More assistance		14	21%	8	20%	8	23%
Other search possibilities		13	19%	8	20%	6	18%
Additional environmental information		13	18%	6	15%	7	18%
More details on particular topics		17	25%	9	22.5%	9	26%
Links to specific websites		9	13%	5	12.5%	4	12%
No Answer		30	44%	19	47.5%	14	41%

Respondents were asked if they had additional comments on making the registers more useful. On the EU register, comments included:

- Links to the annual reports and web pages of the national authorities would be helpful;
- Respondents indicated that including links to companies' previous year's data would be helpful and provide faster access to the relevant data; and
- Providing a clearer understanding of historical trend information, given some data are based on estimations and calculations.

Comments on national registers (all from businesses) included:

- In general the amount of data to be reported is not linked to the risks and challenges of industrial activity (FR);
- A re-design is required as it is poor in navigation, speed, visibility and functionality (UK);
- It is useful to be able to search by substance and postcode and substance and grid reference (UK);
- The process of navigation is different to other platforms (DE);
- It would be useful to introduce features that allow for merger of data (DE);
- The register is not user friendly and only is practicable with assistance from the authority (TP);
- It would be useful to allow for comments to be made during submission of data, such as on analytical methods used (ES);
- In submitting data if one number is submitted incorrectly it is not possible to amend just that number, but the whole page must be re-entered (PT); and
- Fewer details should be asked of waste recipients addresses (PT).

*15. Does the pollution register provide data which are useful to understand environmental concerns in your local environment?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. There were very similar levels of response overall in all categories, although those responding on national registers were more likely to state that the registers did not provide the requisite data compared to those responding on the EU register.

*Table 5.82 Overview of responses received to question 15*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		15	22%	6	15%	9	26.5%
Partially		20	28%	11	27.5%	10	26.5%
No		16	23%	12	30%	6	17.5%
Do not know		12	18%	7	17.5%	7	20.5%
No Answer		5	7%	4	10%	3	9%

*16. Do you believe the pollution register has increased transparency in environmental information and decision making?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Of those that commented, similar responses were found for those who thought the register had increased transparency, partially or had not done so. However, the percentage of those who thought it had not increased transparency was greater for those commenting on national registers.






*Table 5.83 Overview of responses received to question 16*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		19	28.4%	10	25%	10	29.4%
Partially		16	23.9%	9	22.5%	8	23.5%
No		19	26.9%	13	32.5%	9	23.5%
Do not know		10	14.9%	5	12.5%	6	17.7%
No Answer		4	6.0%	3	7.5%	2	5.9%

*17. Do you believe the pollution register has increased engagement of the public in European environmental information and decision making?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Fewer thought that it had increased transparency, than those who thought it had partially done so, or not done so.






Table 5.84 Overview of responses received to question 17

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		10	13.4%	3	7.5%	7	17.7%
Partially		15	22.4%	8	20%	8	23.5%
No		19	28.4%	14	35%	8	23.5%
Do not know		19	28.4%	11	27.5%	10	29.4%
No Answer		5	7.5%	4	10%	2	5.9%

18. Do you believe the pollution register has helped to increase the engagement of the public in the local environment and / or the environmental decision making?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. For those who commented, the majority thought the registers had not increased engagement and this was particularly marked for those commenting on national registers. Of those who thought that registers had increased public engagement at local level, most thought that this was only partial.






Table 5.85 Overview of responses received to question 18

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		7	9.0%	3	7.5%	4	8.8%
Partially		13	19.4%	5	12.5%	9	26.5%
No		23	34.3%	18	45%	8	23.5%
Do not know		21	31.3%	11	27.5%	12	35.3%
No Answer		4	6.0%	3	7.5%	2	5.9%

19. Are the data useful for benchmarking industry performance when comparing the performance of individual installations or activities across Europe?

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. The responses were relatively evenly spread, particularly for the EU register.






Table 5.86 Overview of responses received to question 19

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		17	25.4%	9	22.5%	9	26.5%
Partially		21	31.4%	12	30%	8	23.5%
No		15	20.9%	10	25%	10	26.5%
Do not know		11	16.4%	6	15%	6	17.7%
No Answer		4	6.0%	3	7.5%	2	5.9%

*20. Does the register provide data that are useful to inform policy development (national or EU)?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Many respondents did not know. There was a spread of responses from other respondents, with those commenting on the use of the EU register for policy making being more positive than those commenting on national registers.







*Table 5.87 Overview of responses received to question 20*





		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		14	20.9%	8	20%	7	20.6%
Partially		17	23.9%	6	15%	10	26.5%
No		11	16.4%	10	25%	5	14.7%
Do not know		22	32.8%	13	32.5%	11	32.4%
No Answer		4	6.0%	3	7.5%	2	5.9%

*21. Which data within the pollution register are of most use for developing policy?*

Respondents were able to identify more than one category. The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Just under a half did not comment, but of those that did, just a half referred to data on emissions to air and water as of most use, with waste transfers the next most useful. All categories of data were thought to be useful for developing policy by at least one respondent. It is interesting to note that this distribution of responses is very similar to that for question 4 which asked about which categories of data the respondents themselves consulted.

*Table 5.88 Overview of responses received to question 21*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Emissions to air		33	47.8%	17	42.5%	16	44.1%
Emissions to water		32	46.3%	16	40%	16	44.1%
Waste transfers		21	31.3%	11	27.5%	11	32.4%
Releases to land		10	14.9%	7	17.5%	3	8.8%
Off-site transfers of waste		12	17.9%	8	20%	4	11.8%
Off-site transfers of pollutants in waste water destined for waste-water treatment		7	10.5%	4	10%	3	8.8%

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Releases from diffuse sources into air		4	6.0%	3	7.5%	1	2.9%
Releases from diffuse sources into water		3	4.5%	1	2.5%	2	5.9%
Do not know		20	29.9%	15	37.5%	11	32.4%
No Answer		10	15.0%	6	15%	4	11.8%






*22. Are there other data sources of pollutant emissions which you find more useful for allowing participation in political decision making?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. The majority of respondents did not answer or did not know. Of those that did, half thought there was not another data source.

Respondents also provided the following additional comments:

- Statistics of national professional organizations more relevant than the compilation of data in the register as comparison between countries is not possible given differences in approach (FR non-SME private company);
- Annual reports by the national authorities are more comprehensive, faster and more accurate (FI non-SME private company);
- National emissions inventory is more complete (DE trade association, BE local/regional authority);
- International reporting (e.g. LRTAP, NEC, MMR, UNFCCC) provides additional information (BE national authority);
- BAT processes providing information on releases under different circumstances (FI non-SME private company); and
- IED monitoring results provide more detailed information, as does information on waste shipment (EU level private company).

*Table 5.89 Overview of responses received to question 22*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		10	14.9%	7	17.5%	4	11.8%
Partially		4	4.5%	1	2.5%	3	5.9%
No		14	20.9%	6	15%	10	29.4%
Do not know		26	38.8%	18	45%	12	35.3%
No Answer		14	20.9%	8	20%	6	17.7%

*23. Do you believe the pollution register has increased the accountability of operators of polluting activities?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Most did respond to this question. The largest group were those who thought accountability had been increased 'partially', followed by those who thought registers had not increased accountability. The negativity of the answers was higher for those commenting on national registers.

*Table 5.90 Overview of responses received to question 23*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		14	20.9%	6	15%	8	23.5%
Partially		26	37.3%	15	37.5%	11	29.4%
No		19	28.4%	14	35%	10	29.4%
Do not know		3	4.5%	1	2.5%	3	8.8%
No Answer		6	9.0%	4	10%	3	8.8%

*24. Do you consider that the creation and use of the register has contributed to the prevention and/or reduction of environmental pollution?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Of those that did comment, the majority thought that the registers had not contributed to pollution reduction. Of those who thought the registers had contributed, about half thought they had done so 'partially'.






*Table 5.91 Overview of responses received to question 24*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		10	14.9%	5	12.5%	6	17.7%
Partially		12	17.9%	7	17.5%	5	14.7%
No		29	43.3%	21	52.5%	13	38.2%
Do not know		11	16.4%	3	7.5%	8	23.5%
No Answer		5	7.5%	4	10%	2	5.9%

*25. To what extent does the Regulation contribute to the objective of the 7th Environment Action Programme "to improve the knowledge and evidence base for Union environment policy"?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Nearly half of respondents did not, or were unable to, comment. Of those that did, the majority thought the register partially contributed to this objective.

Table 5.92 Overview of responses received to question 25









		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		6	9%	3	7.5%	3	8.8%
Partially		26	37.3%	15	37.5%	12	32.4%
No		7	10.5%	6	15%	4	11.8%
Do not know		21	31.3%	10	25%	14	41.2%
No Answer		8	11.9%	6	15%	2	5.9%

*26. What is the additional value from the E-PRTR Regulation compared to what could be achieved at national level?*

Respondents were asked about specific features that the European register has over what could be achieved at national level. The responses received are set out in the table below. The most important 'added-value' highlighted were those in relation to the 'harmonisation' of reporting and monitoring. The other area strongly highlighted was that the E-PRTR enhances comparability across countries.

Respondents were asked if there were further points on the additional value of the EU level Regulation. Comments made included that it helps contribute to a more level playing field (NL trade association) and that it provides a general idea of emissions across the whole EU (FR SME), thus supporting the benefits of harmonisation and comparability. However, the added value of the E-PRTR was also viewed as being undermined by problems in the register, such as the incompleteness of data and difficulties in comparing directly emissions data (PT SME and FI non-SME private company) and a DE trade association stated that for most businesses there was not an added value at European level.






Table 5.93 Overview of responses received to question 26

		All answers	
		Answers	Percentage
Harmonisation of reporting		34	50.8%
Harmonisation of monitoring practices		20	29.9%
Development of a common approach and understanding in data collection and reporting		23	34.3%
Enhanced comparability across reporting countries		34	51
Higher quality of data due to QA efforts deployed within the Reportnet environment		8	11%
Stimulation to participate for non EU countries		7	10%
Other		4	6%
No Answer		16	24%

*27. Overall, do you think the pollution register provides information useful to your interests?*

The responses for all answers and separately for those reporting on national registers or the EU level register are set out in the table below. Of those that answered, over two thirds thought the register provides, or partially provides, information which is of use to them.

*Table 5.94 Overview of responses received to question 27*

		All answers		National register		EU register	
		Answers	Percentage	Answers	Percentage	Answers	Percentage
Yes		21	31.3%	10	25%	12	35.3%
Partially		19	26.9%	11	27.5%	8	20.6%
No		16	23.9%	12	30%	10	29.4%
Do not know		2	3%	0	0%	2	5.9%
No Answer		10	14.9%	7	17.5%	3	8.8%

*Final comments*

At the end of the consultation, respondents were given the opportunity to raise any further points that they wished. Points raised included:

- Concern was expressed on the fact that the register process is bureaucratic and creates administrative burden (BE non-SME private company, DE non-SME private company, NL trade association);
- One respondent highlighted that reporting requirements that are not important should be eliminated and the overall reporting frequency should be reduced to less than annual reporting (BE non-SME private company);
- One respondent highlighted the difficulty to combine the E-PRTR based on mass emissions with the information included in permits that set concentration limits for reporting against;
- The registers have data limitations, e.g. excluding particular sources (DE non-SME private company), lack of information on company performance (PT utility), so the comparability and usefulness of the data is reduced (also highlighted by FI non-SME private company);
- Further, respondents highlighted the fact that the thresholds raise issues of comparability between sectors and data comparability based on individual data is not possible (FI non-SME private company). It was also highlighted that the reporting thresholds are too high with one respondent indicating that he does not "report >90% of substances" (UK non-SME private company);
- To make the registers more useful, greater effort is need to ensure data are comparable for each parameter (FR non-SME private company and NL local/regional authority);
- Additional value could come from analytical reports, e.g. comparing countries or sectors (ES non-SME private company); and
- More effort needs to made to increase transparency and increase the publicity of the register (BE local/regional authority, PT SME).



## Appendix J Stakeholder workshop

### J.1 Background paper

A background paper was prepared and circulated to the workshop participants ahead of the workshop. The content of this paper is presented in this Section.

#### *Project background*

##### *Presentation of project and objectives*

The European Pollutant Release and Transfer Register (E-PRTR) is a publically available web-based database of information spanning the release of 91 pollutants to the environment and data on waste transfers, including transboundary hazardous waste. The E-PRTR is used to satisfy the EU regulation on Pollutant Release and Transfer Register (PRTRs) and the EU's role in being party to the Aarhus Convention on making such information publically available and to its Kiev Protocol.

As part of the EU's work on Better Regulation, the European Commission has undertaken to carry out periodic assessment of legislation to check that it is fit for purpose and still serving the needs that were identified when first adopted; commonly referred to as the regulatory fitness programme (or REFIT). The evaluation of the E-PRTR began in January 2015 and has included an assessment of the E-PRTR Regulation (including the website) and stakeholder engagement with data providers (industry), data managers (competent authorities), and data users. Further details on the criteria used for REFIT evaluations are provided in Section 1.3.

During the review of the elements gathered during the consultation (including the public consultation) it has become apparent that the role and use of the E-PRTR Regulation has changed beyond the original scope. Not least, this has included its growing importance with each subsequent year of data that has been collected and been made available, allowing more detailed trend analysis from data that can be downloaded from the website. The project team therefore began by looking at the Regulation itself and the development of the 'intervention logic' (provided in Annex I of this document), to fully understand the needs, objectives, actions, consequences and impacts (positive and negative) of how the current system works. This includes understanding the added benefits that the E-PRTR Regulation has provided which may now translate into new needs (e.g. the use of E-PRTR as a benchmarking tool for environmental performance).

The work to date has included a detailed analysis of the E-PRTR, its website, reports provided by Member States under Article 7 of the Regulation, related policy areas and developing EU landscape. This also includes the triannual review of data in accordance with the obligations on the Commission under Article 17. The study has also included two rounds of stakeholder engagement which has involved targeted surveys aimed at data providers/managers and data users respectively. There has also been a wider public consultation open to all made available through 'Your voice in Europe', the European Commission's dedicated website. Following the completion of the targeted survey phase there has also been a series of follow-up telephone interviews with those respondents who provided information or opinions warranting further exploration.

This paper provides workshop participants with useful insight regarding the initial results of this evaluation across the five themes outlined within the REFIT evaluation process (Effectiveness, Efficiency, Coherence, Relevance, and Added EU value). It will also provide participants with a number of key options for further exploration and discussion at the E-PRTR workshop which will be held on the 4th November in Brussels, Belgium. For those attending the workshop we kindly ask that you read this document and

familiarise yourself with the intervention logic to be sufficiently briefed to engage with the workshop part of the evaluation.

### *Policy context*

#### *Introduction*

The E-PRTR is the successor to the European Pollutant Emission Register (EPER). EPER was set up by Decision 2000/479/EC to implement the requirements of Article 15(2) of the IPPC Directive requiring that “the results of monitoring of releases [...] held by the competent authority shall be made available to the public”, whilst also serving the reporting of emissions for the purpose of monitoring the environmental effectiveness of IPPC Directive implementation. The EPER was the first European wide register for emissions to air and water. In 1998 the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice on Environmental Matters (the Aarhus Convention) entered into force. A Protocol on pollutant release and transfer registers (PRTR) was adopted under this Convention in 2003. The EU Member States and the EU are Parties to the Convention.

The E-PRTR Regulation was adopted in 2006 to implement the Protocol. The basic structure of the E-PRTR is similar to the EPER, however, the E-PRTR extends the scope of the releases to be reported (e.g. additional activities covered). The E-PRTR Regulation goes beyond the requirements of the Protocol by including inter alia, five additional pollutants and setting reporting thresholds for off-site transfers of waste water. The Regulation requires that the information reported by Member States is made available online. This requirement is implemented through the E-PRTR website.

#### *The Kiev Protocol and E-PRTR Regulation*

The relationship between the Kiev Protocol and the E-PRTR Regulation is of critical importance for understanding why the Regulation contains the provisions that it does and to considering the context for amending the Regulation. Key points to note are:

- The Kiev Protocol is adopted under the Aarhus Convention, which is focused on public participation and access. This sets the context of the primary purpose of PRTR;
- The Protocol contains some alternative approaches for Parties (e.g. relating to thresholds), which are not included in the EU Regulation. This ensures uniformity of approach across the EU and consistency within the EU Register; and
- The Regulation has a very limited number of additional elements to the Protocol (e.g. for water discharges).

If the review of E-PRTR identifies aspects that could be changed, the international law context means that the following types of options are available:

- Amendments to systems and processes not defined in law can be implemented as considered necessary;
- Amendments to the Regulation for aspects not established in the Protocol (or to add further elements) can be undertaken through proposal by the Commission and adoption through the ordinary legislative procedure; and
- Amendments to the Regulation for aspects that implement the Protocol in EU law would require amendment of international law through the processes at UN level. Equally however, changes to the Regulation that still respect the detail of the Protocol would not need such an amendment of International law.

### *REFIT context*

REFIT stands for “Regulatory Fitness”. The concept of REFIT was first highlighted in the 2012 Commission Communication on Regulatory Fitness (COM(2012) 746), but it draws on earlier thinking, such as on the concepts of a regulatory “Fitness Check”. An

evaluation under of a piece of legislation under REFIT seeks to determine if that legislation is fit for purpose.

The Commission published its latest Communication on Better Regulation (COM(2015) 215) on 19 May. The Communication included an item governing REFIT evaluations: State of Play and Outlook (SWD(2015) 210) and a Better Regulation “Toolbox”, which provides a step by step guide for undertaking evaluations.

The Commission in its 2014 REFIT Communication also announced that it will prepare repeals of legislation, inter alia, in relation to standardized reporting in the area of environment. In this context, the Better Regulation Communication of 19 May 2015 (COM(2015)215) announced a broad review of reporting in several policy areas, which has already been already initiated for regarding environmental legislation. Therefore, the actions undertaken in the context of the E-PRTR REFIT process interlinks with the broad policy context on reviewing reporting as a whole under the environmental *acquis*.

To understand whether legislation is fit for purpose, the REFIT analysis follows a structured approach (as set out in the Toolbox). This is used throughout this project, including in questionnaires to stakeholders, the wider public consultation and the workshop. This is centred on five themes:

- Have the objectives been met? This is the evaluation of the **effectiveness** of the legislation. Legislation should be designed so that its objectives can be achieved;
- Were the costs involved justified given the changes which have been achieved? This is the evaluation of the **efficiency** of the legislation. Objectives may be met, but at high cost. Alternative approaches might have met the same objectives at lower cost;
- Does the action complement other actions or are there contradictions? This is the evaluation of the **coherence** of the legislation. Coherence as stated here involves the compatibility of means, but it also involves core issues of coherence of legal texts;
- Is action still necessary? This is the evaluation of the **relevance** of the legislation. Is the law still addressing an issue that needs to be addressed at EU level and is it covering this adequately (e.g. are there gaps or, alternatively, unnecessary obligations)? and
- As part of the EU’s approach to policy making, there is a need to ensure that EU policy is integrated and providing the best benefit possible. The **EU added value** theme is intended to assess what additional benefits the E-PRTR regulation might bring compared to action taken at Member States level.

These five themes are used to assess a piece of legislation, in this case the E-PRTR, to ensure that it fully meets the needs defined within the Regulation and any new needs that have developed since the inception of the Regulation. In making use of the five themes it is also important to consider any linkages between themes, for example the theme on ‘efficiency’ relates to (1) reducing costs of the current reporting, or (2) increasing the quality/usefulness of E-PRTR data. This means that a discussion on efficiency has links to at least effectiveness (data quality), coherence/EU added value (contribute to other reporting systems). Where these linkages exist we will explore the relationship and merits of a given issue across all relevant themes. This will be an important aspect of the discussions at the workshop to deliberate on the finalisation and prioritisation of the issues detailed in this document and further expanded upon at the workshop.

The following Sections explore each of these five themes which will also form specific parts of the discussion at the workshop.

### *Support for workshop discussions*

This Section of the document will now provide you with the initial results of the evaluation to date spanning the five themes outlined under REFIT. Each Section will begin with explanation of the theme and how it relates directly to E-PRTR. It will then detail the issues raised during the consultation phase and finally provide details of the potential options for further discussion and debate at the workshop.

We invite the participants to make available, wherever possible, quantified information on costs, as only little such information was made available by questionnaire respondents or through interviews.

### *Effectiveness*

#### **Introduction to 'effectiveness'**

'Effectiveness' is the REFIT theme which aims to examine whether a piece of legislation has been *effective* on delivering its primary objectives. In this case, whether the E-PRTR meets the objectives laid out within Article 1 of the Regulation. The overall needs which the E-PRTR aims to satisfy are illustrated within the intervention logic provided in Annex I of this document, which cover the following:

- i. Foster public participation in environmental affairs;
- ii. Better knowledge of pollution/exposure to pollutants;
- iii. Promote transparency and accountability in the sphere of the environment;
- iv. Improve environmental performance; and
- v. Effectively engage citizens.

Since the implementation of the E-PRTR Regulation, the E-PRTR has provided what is arguably the largest single data set on pollutant information; one that is readily accessible by anyone with internet access and provides data encompassing the entire EU and EFTA nations. The annual provision of data means that the importance of this data-set has grown year-on-year as additional use of the data for trend analysis has become possible.

The accessibility and scale of the E-PRTR website provides a tool that can be used in multiple ways, potentially exceeding the scope of the original objectives laid out within the regulation. The E-PRTR is also expected to take over from its predecessor (EPER) in collating data into a format that it can be used by industry and policy makers to assess and monitor environmental performance across a range of industry sectors, in particular for installations covered by the IPPC Directive now replaced by the Industrial Emissions Directive (IED).

The engagement with stakeholders has considered how the E-PRTR is being used in practice and what additional benefits provided by the E-PRTR are now translating into new needs that cannot be satisfied by other policy elements. Satisfying fully all needs (new and old) may require that the way data is collated and presented needs amendment, or even that additional information may be needed particularly to enable assessment of environmental performance.

#### **Key findings from the study and consultation on 'effectiveness'**

- All respondents highlighted the value of the E-PRTR Regulation and largely referred to the website and underlying data set as a valuable tool, with very few similar data-sets being as available or comprehensive;
- There was a clear difference in perspective between industry operators and competent authorities regarding fostering public participation; Industry operators

believe that the E-PRTR does a good job of fostering public participation, while Competent Authorities believe public participation is poor. This difference in view may be down to how the respective parties interpret the meaning of 'public participation' in environmental policy making;

- Key barriers to better use of the E-PRTR was a need for more context within the data to understand what it all means and how it relates to existing policy and planning. This would be necessary to allow the general public to be more involved in participating in environmental decision making. This being the case any additional contextual information should be presented in a manner that reaches a non-technical audience;
- Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data;
- To be of more use when defining benchmarking, and to be able to use the E-PRTR as a tool for environmental performance, it was felt that more data was needed; e.g. on environmental performance ratings, production data, size/ age of plant, abatement technology used;
- Some users highlighted data quality issues / data gaps as a possible barrier to making the E-PRTR as effective as it could be, with reporting thresholds in particular a part of this issue affecting data completeness across the EU; and
- Potentially some issues identified in how data is aggregated within the E-PRTR website, e.g. should be easier to compare national totals for different pollutant emissions and transfers, data should be able to be visualised over several years to compare trends.

#### **Points for discussion on 'effectiveness'**

- What options could be used to foster more public interactions with the E-PRTR data? Examples may include a trends and highlights report, further development and detail of the E-PRTR library, targeted workshops or stakeholder events. What about the role of academia and research using E-PRTR data? Does more context need to be included on the data quality issues beyond information already published by the European Environment Agency?
- What additional meta-data might be needed to help industry make additional use of E-PRTR for the prevention and reduction of pollution through enhanced environmental performance and benchmarking? E.g. production data, capacity data, plant size (linked to permit), abatement details;
- What additional options could be used to make the E-PRTR website more accessible? E.g. should data be disaggregated differently? What other features might be needed? And
- Would the INSPIRE Directive based requirements help in addressing the issues of metadata, and context needed for bench-marking and better data-sharing and accessibility?

#### *Efficiency*

#### **Introduction to 'efficiency'**

The 'efficiency' theme within the REFIT evaluation relates to how *efficient* the processes are that help develop and deliver the key objectives of the E-PRTR regulation. In practice these processes can be sub-divided into groupings with the key aspects being:

*Data providers*

- Development of emission estimate / waste transfer data needed to carry-out reporting; and
- Aggregation of data to meet the required reporting structure of the E-PRTR;

*Data Managers*

- Collation of all data provided into a data-set for national PRTRs which is then provided to the E-PRTR; and
- Data quality and validation checks used to ensure that data is robust.

In terms of the E-PRTR REFIT particularly for costs, there are some complexities which have to be clearly delineated. The development of emission estimates reported under E-PRTR is perhaps more typically associated with other national and EU environmental legislation, including environmental permits and obligations under the Industrial Emissions Directive (IED). It is expected that this information would be generated even without the existence of the E-PRTR. Equally the data collation, and quality checking aspects carried out by data managers (usually Member States Competent Authorities) are aspects of the work that is already completed as part of the national level PRTRs. Again, if the E-PRTR did not exist, Member States would still need national PRTRs to comply with their obligation to the Protocol.

In this respect, the burden upon data providers and data managers for the E-PRTR most closely relates to (1) the reporting structure and systems used within the E-PRTR, which involve principally the competent authorities of the Member States and the EU institutions (DG Environment and the EEA), and (2) how these structures and systems relate to those other pieces of legislation which drive the development of data for inclusion within the E-PRTR data-set.

**Key findings from the study on 'efficiency'**

- Many of the respondents from industry highlighted that there were differences in the systems used for E-PRTR and IED, in particular the 'economic activities' used by E-PRTR compared against the industry classification scheme for IED, which meant additional work was needed to aggregate data for E-PRTR;
- Some respondents highlighted that the sectors covered by the Annex I economic activities were defined in a way that does not enable useful comparison to other environmental legislation, particularly IED; and
- Responses also highlighted issues with reporting thresholds and ways the emissions data were obtained (i.e. monitored or modelled)<sup>69</sup>. While the reporting thresholds are intended to strike a suitable balance between burden to create data and value of the data provided; some operators have highlighted the fact that the reporting thresholds are actually higher than the requirements of the reporting under environmental permits. This adds additional burden upon operators to aggregate data in different ways to ensure that only above reporting threshold is provided to their competent authority.

<sup>69</sup> The Inclusion of reporting thresholds is intended to manage the burden between obtaining/generating data against the benefit it provides. For example, as the reporting guidelines allow the use of multiple techniques, it is possible to use non-monitoring approaches which would create estimates below the available limits of detection that monitoring provides. The effort and burden to quantify very low emission estimates may outweigh the benefit of having such data included within the E-PRTR, particularly if that burden is upon small-medium sized enterprises.

## Points for discussion on 'efficiency'

The options for effectiveness relate to the two key aspects from the stakeholder engagement, namely how the E-PRTR equates to other legislation (particularly IED) and what is the current and ongoing benefit of the reporting thresholds to maintain a smooth transition of data from operators to competent authorities, as follows:

- What are the main issues regarding alignment the structure and nomenclature of the E-PRTR to IED?
- Are there any perverse incentives / issues that closer alignment with IED might bring? E.g. if the activities to report were amended to bring it closer to IED, would this affect other aspects negatively such as reporting under the Water Framework Directive?
- Would the overall effects of lowering / removing reporting thresholds affect the burden on industry operators positively or negatively? and
- What aspects should be considered in the context of better reporting, in particular regarding administrative burden, use of electronic information tools, simplicity of reporting and avoiding duplication of work related to overlapping reporting obligations.

### *Coherence*

#### **Introduction to 'coherence'**

'Coherence' examines the extent to which the Regulation is coherent with other EU laws that share similar objectives. For example, are the same definitions used for the same types of activities? Coherence is important as authorities and businesses are often responsible for implementing several items of EU law and unjustified differences between items of legislation can raise unnecessary difficulties around interpretation or practical application.

As E-PRTR concerns the collection and reporting of information on emissions, discharges and waste from specified activities, the issue of coherence with EU legislation addressing these issues is most relevant. This includes the Industrial Emissions Directive, Priority Substances covered by the Environmental Quality Standards Directive, Waste Statistics Regulation, etc. Do these items of legislation have the same definitions and do they cover the same activities for the same pollutants and thresholds? Also, are there differences on the timing and processes for reporting?

It is important to note that differences between legislation are not necessarily problematic. Where differences are found, it is necessary to determine if these have negative practical consequences.

#### **Key findings from the study on 'coherence'**

- There are differences between E-PRTR and IED, such as on specific definitions of activities and similar but not identical wording. It should be noted that PRTR was developed after the adoption of IPPC, but before revision into IED;
- Practical coherence with IED for operators depends upon the specific requirements for monitoring and reporting determined for permit compliance checking by regulators;
- Large combustion plants under IED do provide an annual inventory on emissions, but also provide additional operating data not required by E-PRTR, therefore making installation comparison easier;
- There are also differences in scope with other data sources such as EMEP (Convention on Long Range Transboundary Air Pollution) which covers activities

not included in Annex I of E-PRTR, and Water Information Systems for Europe (WISE) which covers not only releases and losses but environmental concentrations, data on biota. These differences in scope are not necessarily an issue in themselves, but the need for clear and well aligned definition of sources is important for transparency when assessing why emission estimates differ between E-PRTR and other sources;

- There are differences (and cross-reference) to the Environmental Quality Standards Directive, but the practical relationship between the directive and E-PRTR will be difficult to determine until River Basin Management Plans (RBMPs) are reported in March 2016. This includes the inventories of releases and losses encompassed by the RBMPs;
- Fewer issues were raised by the respondents on the coherence of E-PRTR and the INSPIRE directive; and
- On a practical level, some do note that data found under systems (e.g. EMEP) may differ from those under E-PRTR – which may be an issue of practical rather than legal coherence. This recognises that the calculation methods used under E-PRTR defined to an extent by the legislation.

In discussing coherence issues it is important to distinguish the simple differences between laws from the differences that cause problems. Further, in looking to address problems of coherence, one obvious solution is to amend one law to bring it into line with another, or where new legislation is created to ensure that the objectives do not exacerbate or instigate problematic issues with existing legislation. In doing this, care must be taken to avoid knock-on consequences for coherence with other legislation. Further, in the case of E-PRTR, the context of international law (as described earlier) needs to be taken into account. However, where coherence issues stem from aspects of practical implementation, they may be solved through non-legislative approaches.

### **Points for discussion on 'coherence'**

- What are the most problematic issues concerning coherence? Which cause burdens to operators and/or authorities?
- Are there good cases of actions taken to reduce problems arising from lack of coherence?
- What coherence problems affect what activities are to report? What substances are to report? The timing or processes of reporting?
- For any important differences, what changes are suggested? (E.g. if legislation should be the same, which is better to follow?) One possible approach would be to see how the objectives of related policy instruments align, e.g. E-PRTR and IED;
- How well is the E-PRTR contributing to the objectives of other EU law? (e.g. air, water, waste reporting for industry); and
- Do the differences between E-PRTR and other data-sets such as EMEP affect the reliability of the data and the way it is used by stakeholders?

### *Relevance*

#### **Introduction to 'relevance'**

The 'relevance' analysis examines to which extent the Regulation's (original) objectives (still) correspond to the needs and objectives. The extent to which the Regulation meets the objectives is covered under 'effectiveness'. However, needs may change and objectives may change. For example, other EU laws may establish systems for collection and reporting of pollution data.



## Key findings from the study on 'relevance'

Most respondents felt that the objectives of E-PRTR are still relevant. The objectives to provide a register of pollution emissions from key sources for use by the public and other stakeholders is seen as important. However, there are criticisms that the E-PRTR does not fully deliver on these objectives. This criticism is linked to the discussion on effectiveness. Examples of relevance problems identified include:

- The scope boundaries of the E-PRTR (e.g. thresholds for reporting; activities included) mean that while a useful set of data can be compiled for aiding public participation in environmental matters; data completeness issues (data gaps, below threshold data, diffuse emissions) means that the data-set will constrain the capacity to see the 'whole' picture. E.g. total emissions being made up of Industrial emissions vs diffuse emissions;
- Other inventories or collections of pollution information at EU level do not match the scale of E-PRTR – the register is not being replaced by other systems;
- A particular use for the register seems to be to compare (benchmark) industry across the EU, but useful data to support this (e.g. production activity alongside pollution emissions) is not in the inventory. This is not an original stated objective and, therefore, it could be argued that addressing this point would increase the relevance of the Regulation;
- Responses from the targeted questionnaires and follow-up interviews, particularly those within the 'other' category (i.e. non-governmental, non-industry) highlighted concerns around the visibility and awareness of the E-PRTR within the public conscious. This could be an area where further work is needed to ensure that the E-PRTR meets the relevance theme; and
- Reporting on treatment of waste under the Waste Statistics Regulation is not complementary to the requirement to report on the transfer of waste under the E-PRTR Regulation, such as in relation to on-site waste generation and management and the use of EU waste codes. This therefore poses the question on how well does the E-PRTR correlate to the waste shipment and waste statistics data and what needs the E-PRTR fulfils in this area?

## Points for discussion on 'relevance'

- Are the original objectives still relevant to the current needs of those utilising the E-PRTR?
- Are there additional objectives that E-PRTR ought, or could, address?
- One of the original objectives of the E-PRTR was prevention and reduction of emissions to the environment. Is the E-PRTR Regulation still relevant to help contribute towards this objective? If not, what obstacles or barriers stop it from facilitating this objective?
- One of the original objectives of the E-PRTR was to facilitate public participation in environmental policy making. What alternatives to the E-PRTR exist? Does the E-PRTR remain fully relevant to meeting this objective? Are there any conflicts with other policy that hinder its relevance? and
- How useful and relevant is the waste data gathered under the E-PRTR in supporting waste policy regarding industrial activities?

*EU added value***Introduction to 'EU added value'**

The consideration of 'EU added value' of the Regulation is an examination of the additional value resulting from the provisions in EU law, compared to what could be achieved by Member States at national and/or regional levels.

EU added value has as main focus whether the most appropriate governance level is at EU or Member State level. As the EU is bound by the Kiev Protocol, it is clear that the EU has to transpose the protocol in EU law. Therefore, the question is what is the added value of EU law in implementing the Protocol beyond that of the Member State implementing it on their own. This could cover aspects such as making it possible for EU citizens to make comparisons across the EU regarding emissions that affect them, ease of access for evidence base in policy making, international level quality checks scrutiny of the data by a wider audience.

**Key findings from the study on 'EU added value'**

The findings show that the value of the EU level register and the processes to deliver this as provided by the Regulation are strongly supported. The specific aspects of added value that are cited include:

- The provision of an EU-wide database;
- Harmonisation of reporting;
- Harmonisation of monitoring practices;
- Development of a common approach and understanding in data collection and reporting;
- Enhanced comparability across reporting countries; and
- Higher quality of data due to QA efforts deployed by the EEA.

The Regulation is seen therefore as adding value both in the data facility that it provides and in the harmonisation of data collection across Member States needed to support this data facility. However, whilst this EU added value is recognised as a valuable objective of Better Regulation, there is concern that this value is not being fully delivered. These concerns usually relate to data quality issues, such as:

- There are shortcomings in the data provided by operators and validation by competent authorities;
- Sometimes there are data presented which are not updated;
- A high percentage of data provided by E-PRTR are calculated or estimated - not measured; and
- Although the quality of information has improved over time, it has not yet reached the level where decisions can be taken solely based on its information.

These concerns relate to the database itself. However, the purpose of the database (and against which EU added value needs to be judged) is for public information and benefits derived from that functionality. The findings show that public use of the EU Register is sporadic and may link to specific events or news items. Its users are more likely to be professional actors (policy makers, industry, NGOs, etc.). Public engagement with registers is more obvious at national level. Therefore, it is worth considering what the EU added value should be for the European register.

**Points for discussion on 'EU added value'**

- What are the key values from the standardised processes for reporting and in having a European pollutant register?

- Do the perceptions of EU added value vary between providers, users and others?
- How do these 'EU added values' relate to the objectives for E-PRTR?
- Are there aspects of the implementation of the Regulation which do not add value? Can these be improved or are they not needed?
- What aspects can be improved to increase the EU added value? (Note that issues relating to efficiency, etc., are addressed above).

### *Next steps*

The study to date has carried out a consultation phase with data providers, data managers and data users; supported by additional desk based research to assess how the E-PRTR regulation works with related policy areas. The review has been completed within the scope of a REFIT evaluation across the five themes of REFIT as identified by the EU Better Regulation policy.

The completion of the work to date has identified a series of issues for further discussion. We plan to make use of the workshop to openly debate these issues with the delegates present and work together to discuss ensure that all issues and aspects are fully identified and characterised. While the study to date has encompassed a wide range of stakeholders we would still welcome further feedback and actively encourage the delegates attending to use the opportunity to explore with us the details listed within this document.

The opportunity to debate with the Commission, project team and peers in industry and government will be of high value to explore the linkages between the five themes and true needs of the E-PRTR within the modern world. Annex II of this document provides an overview of the logic for this process.

The workshop (to be held in Brussels on 4 November), will therefore be used to complete the following tasks:

- To discuss the E-PRTR and its value at European and wider international levels;
- To contribute towards the identification of issues and areas for improvement against the intervention logic and five REFIT themes;
- Feedback to the delegates on the finalised set of issues identified to seek opinion on which issues hold the highest need for prioritisation; and
- To share views on the contribution of the register to capacity building, public awareness and support in decision making.

Shortly after the workshop a paper will be issued collating the discussion expressed by the stakeholders present on the day. The final project report which will be published in the first half of 2016.

## **J.2 Workshop report**

This report presents summaries of the workshop held on the evaluation of the E-PRTR in Brussels on 4 November 2015. The aim of the workshop was to present the preliminary results reached by the project team on the evaluation of the E-PRTR and gather feedback and further evidence from a range of stakeholders including Member State Competent Authorities, NGOs and trade associations.

### *Project background*

#### *Policy context*

The E-PRTR is the successor to the European Pollutant Emission Register (EPER). EPER was set up by Decision 2000/479/EC to implement the requirements of Article 15(2) of the IPPC Directive requiring that "the results of monitoring of releases [...] held by the competent authority shall be made available to the public", whilst also serving as the

reporting of emissions for the purpose of monitoring the environmental effectiveness of IPPC Directive implementation. The EPER was the first European wide register for emissions to air and water. In 1998 the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice on Environmental Matters (the Aarhus Convention) entered into force. A Protocol on pollutant release and transfer registers (PRTR) was adopted under this Convention in 2003. The EU Member States and the EU are Parties to the Convention.

The E-PRTR Regulation was adopted in 2006 to implement the Protocol. The basic structure of the E-PRTR is similar to the EPER, however, the E-PRTR extends the scope of the releases to be reported (e.g. additional activities covered). The E-PRTR Regulation goes beyond the requirements of the Protocol by including inter alia, five additional pollutants and setting reporting thresholds for off-site transfers of waste water. The Regulation requires that the information reported by Member States is made available online. This requirement is implemented through the E-PRTR website.

#### *The Kiev Protocol and E-PRTR Regulation*

The relationship between the Kiev Protocol and the E-PRTR Regulation is of critical importance for understanding why the Regulation contains the provisions that it does and to considering the context for amending the Regulation. Key points to note are:

- The Kiev Protocol is adopted under the Aarhus Convention, which is focused on public participation and access. This sets the context of the primary purpose of PRTR; and
- The Regulation has a very limited number of additional elements to the Protocol (e.g. for water discharges).

#### *REFIT context*

REFIT stands for "Regulatory Fitness". The Commission in its 2014 REFIT Communication also announced that it will prepare repeals of legislation, inter alia, in relation to standardised reporting in the area of the environment. To understand whether legislation is fit for purpose, the REFIT analysis follows a structured approach (as set out in the Toolbox). This is used throughout this project, including in questionnaires to stakeholders, the wider public consultation and the workshop.

This is centred on five themes:

- Have the objectives been met? This is the evaluation of the **effectiveness** of the legislation. Legislation should be designed so that its objectives can be achieved;
- Were the costs involved justified given the changes which have been achieved? This is the evaluation of the **efficiency** of the legislation. Objectives may be met, but at high cost. Alternative approaches might have met the same objectives at lower cost;
- Does the action complement other actions or are there contradictions? This is the evaluation of the **coherence** of the legislation. Coherence as stated here involves the compatibility of means, but it also involves core issues of coherence of legal texts. I.e. how does the PRTR function in relation to related policy and reporting requirements placed on industry and to related emission inventories?
- Is action still necessary? This is the evaluation of the **relevance** of the legislation. Is the law still addressing an issue that needs to be addressed at EU level and is it covering this adequately (e.g. are there gaps or, alternatively, unnecessary obligations)? and
- As part of the EU's approach to policy making, there is a need to ensure that EU policy is integrated and providing the best benefit possible. The **EU added value**

theme is intended to assess what additional benefits the E-PRTR regulation might bring compared to action taken at Member States level.

These five themes are used to assess a piece of legislation, in this case the E-PRTR, to ensure that it fully meets the needs defined within the Regulation and any new needs that have developed since the inception of the Regulation. In making use of the five themes it is also important to consider any linkages between themes, for example the theme on 'efficiency' relates to (1) reducing costs of the current reporting, or (2) increasing the quality/usefulness of E-PRTR data. This means that a discussion on efficiency has links to at least to effectiveness (data quality), and coherence/EU added value (contribute to other reporting systems). The aim of the workshop was to discuss the five themes and where linkages could be identified, to explore the relationship and merits of a given issue across all relevant themes.

The following Sections explore each of these five themes, which were considered and discussed with the delegates in attendance.

### *Introduction and welcome*

The aim of the project was presented by the chair, Chris Allen. He reminded the delegates that the evaluation was taking place under the REFIT programme, which aims at ensuring that the existing EU legislation is fit for purpose, and delivers on its objectives in an efficient way. This included explanation of the five themes stated above and reference to a short background document which had been circulated in advance of the meeting.

As part of the introduction the chair the participants were asked to identify sources of quantitative information (e.g. costs, time). The group acknowledged the difficulties in identifying and producing quantified cost information and that the Commission called on participants to provide such input after the meeting, where possible.

### *Workshop discussions*

#### *Effectiveness*

#### **Introduction to 'effectiveness'**

'Effectiveness' is the REFIT theme which aims to examine whether a piece of legislation has been *effective* on delivering its primary objectives. In this case, whether the E-PRTR meets the objectives laid out within Article 1 of the Regulation. The overall objectives are as follows:

- i. *Foster public participation in environmental affairs*
- ii. *Better knowledge of pollution/exposure to pollutants*
- iii. *Promote transparency and accountability in the sphere of the environment*
- iv. *Improve environmental performance*
- v. *Effectively engage citizens*

Since the implementation of the E-PRTR Regulation, the E-PRTR has provided what is arguably the largest single data set on pollutant information; one that is readily accessible by anyone with internet access and provides data encompassing the entire EU and European Free Trade Association (EFTA) nations. The annual provision of data means that the importance of this data-set has grown year-on-year as additional use of the data for trend analysis has become possible.

The accessibility and scale of the E-PRTR website provides a tool that can be used in multiple ways, potentially exceeding the scope of the original objectives laid out within the regulation. The E-PRTR is also expected to take over from its predecessor (EPER) in collating data into a format that it can be used by industry and policy makers to assess

and monitor environmental performance across a range of industry sectors, in particular for installations covered by the IPPC Directive now replaced by the Industrial Emissions Directive (IED).

The engagement with stakeholders has considered how the E-PRTR is being used in practice and what additional benefits provided by the E-PRTR are now translating into new needs that cannot be satisfied by other policy elements. Satisfying fully all needs (new and old) may require that the way data is collated and presented needs amendment, or even that additional information may be needed particularly to enable assessment of environmental performance.

### **Key interim findings from the study and consultation on 'effectiveness'**

Ahead of the workshop, a series of key findings were identified and provided to the stakeholders. These included:

- All respondents highlighted the value of the E-PRTR Regulation and largely referred to the website and underlying data set as a valuable tool, with very few similar data-sets being as available or as comprehensive;
- There was a clear difference in perspective between industry operators and competent authorities regarding fostering public participation; Industry operators believe that the E-PRTR does a good job of fostering public participation, while Competent Authorities believe public participation is poor. This difference in view may be down to how the respective parties interpret the meaning of 'public participation' in environmental policy making;
- Key barriers to better use of the E-PRTR was a need for more context within the data to understand what it all means and how it relates to existing policy and planning. This would be necessary to allow the general public to be more involved in participating in environmental decision making. This being the case any additional contextual information should be presented in a manner that reaches a non-technical audience;
- Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data;
- To be of more use when defining benchmarking, and to be able to use the E-PRTR as a tool for environmental performance, it was felt that more data was needed; e.g. on environmental performance ratings, production data, size/ age of plant, and abatement technology used;
- Some users highlighted data quality issues / data gaps as a possible barrier to making the E-PRTR as effective as it could be, with reporting thresholds in particular a part of this issue affecting data completeness across the EU; and
- Potentially some issues identified in how data is aggregated within the E-PRTR website, e.g. should be easier to compare national totals for different pollutant emissions and transfers, data should be able to be visualised over several years to compare trends.

### **Key points discussed on 'effectiveness'**

The break-out session on effectiveness discussed several points; the following key points were reported to the plenary:

- Defining the target group:
  - When attempting to improve public engagement, the first step should be to recognise that the E-PRTR is used by different stakeholders, on

different levels and for different reasons. For this reason, the E-PRTR needs to cater for all these different needs; and

- Recognising these diverse stakeholder groups is essential in order to meet the objectives of the Regulation.
- Definitional elements:
  - Objectives of the Regulation are multiple and can be considered achieved or not depending on what is being considered.
- Raising the overall baseline standard:
  - Reporting basics need to be improved in particular quality of data, precision and transparency;
  - Discussions were held in relation to the quality of data presented in the E-PRTR. Participants emphasised the fact that air emissions are the most complete and that these data are of the best quality of data presented in E-PRTR. Both air and water datasets are considered to include the right type of data (e.g. quality, completeness, and context) however gaps in the water datasets were highlighted. However in relation to waste data the feedback was less positive as participants highlighted the difficulty to compare waste data to the waste statistics data and the waste transboundary shipment data. Releases to land were also considered as challenging as diffuse releases (in particular spreading on land of sludges and manure) are more important than releases from facilities and these are not accounted in the E-PRTR.
- Contextualising the data
  - Understanding what the data means in broader terms;
  - Linking the E-PRTR to other sources that help contextualise those numbers; and
  - Extracting meaningful information on performance.
- Integration within E-PRTR of improvements rather than dramatic expansion and large scale changes that would threaten the existing time series.

In addition, the following points were discussed:

- Reporting flaws and discrepancies can still be observed in some of the datasets;
- In some Member States, only a relatively small share of installations are above threshold and report. For example, in Germany out of 10,000 installations conducting relevant activities only 4,000 are above threshold and required to report. This poses the question of the suitability of the thresholds. Several stakeholders highlighted that due to the reduction of emissions in the past years, the thresholds for some pollutants are too high;
- The lack of contextual information makes it difficult to understand the data. Some guidance on the interpretation of data presented in the E-PRTR should be drafted. It could include some further information on pollutants and their sources which have been identified as suitable ways to engage with the public. This guidance could also help understand the difference in mind-sets when dealing with air or water emissions; and
- In addition to the guidance above, other possible guidance documents were identified as useful:
  - While there is a guidance existing on E-PRTR reporting, stakeholders found that it was not specific enough and that some sector specific

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- guidance could be drafted to assist industries in converting emissions concentrations included in the permits into tonnage; and
- Information on the methodologies used for reporting in order to increase the transparency and if possible standards on how to calculate and estimate emissions for specific sectors. Reference was made to the OECD booklet on techniques to estimate releases<sup>70</sup>.
  - The E-PRTR website should be re-thought, it should be branded, taking example of websites developed in Germany and Spain. The key aspect of the website is that it is potentially used by a range of different users with different needs. A first step should be the mapping of the target groups needs so that a response to these needs can be envisaged;
  - While more context has been identified as potentially useful, it is important to understand what the E-PRTR is expected to deliver and distinguish the explicit objectives (e.g. public information) from the implicit objectives (e.g. monitoring BAT implementation). If it is a tool to provide the emissions data and information from facilities falling under the reporting requirement, then the objectives of the Regulation's objectives are achieved. If the aim of the E-PRTR is more than that, then more efforts are needed to improve accessibility and understanding from all the varied stakeholders, particularly the general public;
  - On public participation and engagement of the public, the success of the E-PRTR depends on what does 'engaging' the public mean. Some highlighted the difficulty in engaging with the public, often NGOs are the only interested stakeholders;
  - On benchmarking, three main aspects were discussed:
    - Several participants highlighted that it would be useful to use E-PRTR for benchmarking but that this is impossible due to lack of contextual information. Discussions were held on the benefits to add more information. While it was acknowledged that activity data can be sensitive and that it is important to not disrupt the timeline available, the participants were agreeable to the use of E-PRTR for this purpose; and
    - Discussions were also held on the value of E-PRTR data in providing information to identify whether BAT implementation reduces emissions. In practice this requires the same contextual information as benchmarking to be able calculate evolution of emission intensities per sector per production volume unit. Again, the participants appeared to be in favour of the use of E-PRTR data for this purpose.
  - The final point discussed was integrating in E-PRTR information on the processes and abatement techniques used to correlate with emission levels and provide basis information for the revision of BREFs (for example). This suggestions seemed to trigger less adhesion from participants, with several worrying that too much would be expected from the E-PRTR. It was reminded that the E-PRTR should not be expected to do everything and that the IED requirements should not be retro-fitted into the E-PRTR. However, discussions were held on the possibility (and usefulness) of linking the E-PRTR with other reporting systems, including national systems.

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<http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO%282011%297/PART1&docLanguage=En>



## Conclusions on key interim findings

The feedback received from stakeholders on key interim findings on effectiveness is presented in the table below.

**Table 5.95** *Overview of conclusions of workshop on key interim findings on effectiveness*

Interim conclusions	Feedback from workshop participants
All respondents highlighted the value of the E-PRTR Regulation and largely referred to the website and underlying data set as a valuable tool, with very few similar data-sets being as available or comprehensive.	Endorsed The time series was highlighted as particularly valuable
There was a clear difference in perspective between industry operators and competent authorities regarding fostering public participation: Industry operators believe that the E-PRTR does a good job of fostering public participation, while Competent Authorities believe public participation is poor. This difference in view may be down to how the respective parties interpret the meaning of 'public participation' in environmental policy making.	Endorsed
Key barriers to better use of the E-PRTR was a need for more context within the data to understand what it all means and how it relates to existing policy and planning. This would be necessary to allow the general public to be more involved in participating in environmental decision making. This being the case any additional contextual information should be presented in a manner that reaches a non-technical audience. Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data.	Complemented The barriers were acknowledged but there were resistance in transforming the E-PRTR too radically. Contextual information on pollutants and their source of emissions, data quality and meta-data were welcomed. Information such as production outputs were deemed more difficult to get.
To be of more use when defining benchmarking, and to be able to use the E-PRTR as a tool for environmental performance, it was felt that more data was needed; e.g. on environmental performance ratings, production data, size/ age of plant, abatement technology used.	Modified, the participants questioned whether it was the role of the E-PRTR or whether this was the role of some other reporting tool (e.g. IED reporting). The NGOs were supportive of this conclusions, while industry representative were less in favour. Some Competent Authorities indicated that they hold this information already, other highlighted that it would require additional effort to collect this.
Some users highlighted data quality issues / data gaps as a possible barrier to making the E-PRTR as effective as it could be, with reporting thresholds in particular a part of this issue affecting data completeness across the EU.	Endorsed, in particular with regard to how the data is worked out (e.g. estimated, calculated or measured).
Potentially some issues identified in how data is aggregated within the E-PRTR website, e.g. should be easier to compare national totals for different pollutant emissions and transfers, data should be able to be visualised over several years to compare trends.	Endorsed

### Efficiency

#### Introduction to 'efficiency'

The 'efficiency' theme within the REFIT evaluation relates to how *efficient* the processes are that help develop and deliver the key objectives of the E-PRTR regulation. In practice these processes can be sub-divided into groupings with the key aspects being:

#### Data providers

- Development of emission estimate / waste transfer data needed to carry-out reporting; and
- Aggregation of data to meet the required reporting structure of the E-PRTR.

### *Data Managers*

- Collation of all data provided into a data-set for national PRTRs which is then provided to the E-PRTR; and
- Data quality and validation checks used to ensure that data is robust.

In terms of the E-PRTR REFIT particularly for costs, there are some complexities which have to be clearly delineated. The development of emission estimates reported under E-PRTR is perhaps more typically associated with other national and EU environmental legislation, including environmental permits and obligations under the Industrial Emissions Directive (IED). It is expected that this information would be generated even without the existence of the E-PRTR. Equally the data collation, and quality checking aspects carried out by data managers (usually Member States Competent Authorities) are aspects of the work that is already completed as part of the national level PRTRs. Again, if the E-PRTR did not exist, Member States would still need national PRTRs to comply with their obligation to the Protocol.

In this respect, the burden upon data providers and data managers for the E-PRTR most closely relates to (1) the reporting structure and systems used within the E-PRTR, which involve principally the competent authorities of the Member States and the EU institutions (DG Environment and the EEA), and (2) how these structures and systems relate to those other pieces of legislation which drive the development of data for inclusion within the E-PRTR data-set.

### **Key interim findings from the study on 'efficiency'**

Ahead of the workshop, a series of key findings were identified and provided to the stakeholders. These included:

- Many of the respondents from industry highlighted that there were differences in the systems used for E-PRTR and IED, in particular the 'economic activities' used by E-PRTR compared against the industry classification scheme for IED, which meant additional work was needed to aggregate data for E-PRTR;
- Some respondents highlighted that the sectors covered by the Annex I economic activities were defined in a way that does not enable useful comparison to other environmental legislation, particularly IED; and
- Responses also highlighted issues with reporting thresholds and ways the emissions data were obtained (i.e. monitored or modelled)<sup>71</sup>. While the reporting thresholds are intended to strike a suitable balance between burden to create data and value of the data provided; some operators have highlighted the fact that the reporting thresholds are actually higher than the requirements of the reporting under environmental permits. This adds additional burden upon operators to aggregate data in different ways to ensure that only above reporting threshold is provided to their competent authority.

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<sup>71</sup> The Inclusion of reporting thresholds is intended to manage the burden between obtaining/generating data against the benefit it provides. For example, as the reporting guidelines allow the use of multiple techniques, it is possible to use non-monitoring approaches which would create estimates below the available limits of detection that monitoring provides. The effort and burden to quantify very low emission estimates may outweigh the benefit of having such data included within the E-PRTR, particularly if that burden is upon small-medium sized enterprises.

## Key points discussed on 'efficiency'

The break-out session on efficiency led to discussions on several points related to the efficiency of the E-PRTR Regulation. The following key aspects were identified by the group as key in improving the efficiency of the Regulation:

- The inclusion of reporting thresholds means that facilities are always required to monitor either to provide emissions when above the reporting thresholds or to verify when emissions are below the reporting thresholds. This has been identified as a burden (monitoring requirements even when below thresholds are burdensome);
- Closer alignment of the reporting requirements of the E-PRTR to other environmental reporting systems (at operator and competent authority levels especially), for example wording of activities to match more closely the wording used in the IED; and
- Some operators have highlighted the fact that the reporting thresholds are actually higher than the requirements of the reporting under environmental permits. This adds additional burden upon operators to aggregate data in different ways to ensure that only above reporting threshold is provided to their competent authority.

In addition, the discussions identified the following points:

- Lowering the thresholds could cause some administrative burden for some installations. However it was highlighted that in many cases monitoring that is done for other purposes is used to check whether the installation is above or below threshold, so in many cases the data are already available, simply not reported. Some Member States already publish data under thresholds (Sweden and the Netherlands for example);
- On linking E-PRTR with Best available technology reference documents (BREFs), there were hesitation on whether this was possible or even suitable. However on a better integration of reporting, E-PRTR has a role to play. Industry operators often have to report similar information to several reporting systems, so there is a potential for improving the efficiency of the overall reporting requirements;
- Better mirroring of the activities in the annex of the IED and activities targeted by the E-PRTR are needed. Some competent authorities are spending a disproportionate amount of time providing explanation on this. Further guidance appeared as being needed;
- Efficiency would be achieved if all Member States were using the same methodologies for estimating, measuring or calculating emission data, there is internal harmonisation within Member States but not between Member States themselves;
- On the pollutants included in the Regulation, it was highlighted that E-PRTR reporting does not lead to a true reflection of solvents emissions or emissions from agriculture. In addition, the increasing importance of diffuse emissions was highlighted. This can be the case for a number of pollutants where control of industrial emissions causes reductions in total emissions; and means that those diffuse sources such as road transport, or run-off from fields become an increasingly important part of the overall total release. Effort has been made within the E-PRTR to provide estimates for diffuse emissions, particularly for road transport but not on an annual basis, and not in a fashion that is easily comparable to the industry data in the PRTR;
- In order to improve efficiencies in reporting methods it would be useful to have, in addition to the existing guidance on reporting, additional sector specific guidance

for industry with further indication on reporting. It could include guidance on dealing with emissions that are below the level of quantification, when to measure, when to estimate, difficulties on monitoring trace emissions and how to measure pollutants. This guidance should also include emissions factors so that calculated emissions are comparable; and

- The overlook of emissions of CO<sub>2</sub> from biomass is considered to be a gap as it misses out on a range of emissions and potential comparability with other datasets. Similarly the non-reporting of emissions from manure is considered to be a gap.

### Conclusions on key interim findings

The feedback received from stakeholders on key interim findings on efficiency is presented in the table below.

*Table 5.96 Overview of conclusions of workshop on key interim findings on efficiency*

Interim conclusions	Feedback from workshop participants
Many of the respondents from industry highlighted that there were differences in the systems used for E-PRTR and IED, in particular the 'economic activities' used by E-PRTR compared against the industry classification scheme for IED, which meant additional work was needed to aggregate data for E-PRTR.	Endorsed however this seems to affect Member States unevenly, for some this is not so much of an issue while for other this monopolise the majority of the support 'helpline' resources.
Some respondents highlighted that the sectors covered by the Annex I economic activities were defined in a way that does not enable useful comparison to other environmental legislation, particularly IED.	Endorsed, this was identified as a key during the workshop to which more guidance should be provided
Responses also highlighted issues with reporting thresholds and ways the emissions data were obtained (i.e. monitored or modelled). While the reporting thresholds are intended to strike a suitable balance between burden to create data and value of the data provided; some operators have highlighted the fact that the reporting thresholds are actually higher than the requirements of the reporting under environmental permits. This adds additional burden upon operators to aggregate data in different ways to ensure that only above reporting threshold is provided to their competent authority.	Endorsed

## Coherence

### Introduction to 'coherence'

'Coherence' examines the extent to which the Regulation is coherent with other EU laws that share similar objectives. For example, are the same definitions used for the same types of activities? Coherence is important as authorities and businesses are often responsible for implementing several items of EU law and unjustified differences between items of legislation can raise unnecessary difficulties around interpretation or practical application.

### Key interim findings from the study on 'coherence'

Ahead of the workshop, a series of key findings were identified and provided to the stakeholders. These included:

- There are differences between E-PRTR and IED, such as on wording of activities which are similar but not identical. It should be noted that PRTR was developed after the adoption of IPPC, but before revision into IED;
- Practical coherence with IED for operators depends upon the specific requirements for monitoring and reporting determined for permit compliance checking by regulators;

- Large combustion plants under IED do provide an annual inventory on emissions, but also provide additional operating data not required by E-PRTR, therefore making installation comparison easier;
- There are also differences in scope with other data sources such as EMEP (Convention on Long Range Transboundary Air Pollution) which covers activities not included in Annex I of E-PRTR, and Water Information Systems for Europe (WISE) which covers not only releases and losses but environmental concentrations, data on biota. These differences in scope are not necessarily an issue in themselves, but the need for clear and well aligned definition of sources is important for transparency when assessing why emission estimates differ between E-PRTR and other sources;
- There are references made to the Environmental Quality Standards Directive, but the practical relationship between the directive and E-PRTR will be difficult to determine until River Basin Management Plans (RBMPs) are reported in March 2016. This includes the inventories of releases and losses encompassed by the RBMPs;
- Fewer issues were raised by the respondents on the coherence of E-PRTR and the INSPIRE directive; and
- On a practical level, some do note that data found under different systems (e.g. EMEP) may differ from those under E-PRTR – which may be an issue of practical rather than legal coherence. This recognises that the calculation methods used under E-PRTR defined to an extent by the legislation.

In discussing coherence issues it is important to distinguish the simple differences that are not source of issues and those that cause problems. Further, in looking to address problems of coherence, one obvious solution is to amend one law to bring it into line with another, or where new legislation is created to ensure that the objectives do not exacerbate or instigate problematic issues with existing legislation. In doing this, care must be taken to avoid knock-on consequences for coherence with other legislation. Further, in the case of E-PRTR, the context of international law (as described earlier) needs to be taken into account. However, where coherence issues stem from aspects of practical implementation, they may be solved through non-legislative approaches.

### **Key points discussed on 'coherence'**

The plenary session on coherence lead to discussions on several points related to the internal and external coherence of the E-PRTR Regulation. The following key aspects were identified by the group as key in improving the coherence of the Regulation:

- Issues were groups around three themes:
  - Coherence with the IED:
    - While there was a very close coherence between the EPER and the IPPC this is not the same for the E-PRTR and the IED. Allowing the breakdown of reporting installation level would be useful and a different disaggregation for reporting would solve the issue of main activity. A better coherence between IED and E-PRTR is suitable, all IED activities should be covered by the E-PRTR. However a complete alignment is not deemed suitable;
    - Some Member States indicated that the reporting has been integrated and they are happy to share information that could be useful;
    - Some guidance could be drafted to help interpret complicated terminology such as 'main activity', and 'point source'; and

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- The time series that has developed since the creation of the E-PRTR in 2006 (first reporting year 2007) has become increasingly important. Therefore any changes made to the existing approach or structure need to be taken with care so as not to jeopardise value of the time series in place.
  - Coherence with other datasets:
    - The E-PRTR does not provide a useful source for understanding the BREF process. All the information included in BREF and BAT conclusions are in terms of concentration while E-PRTR is in tonnes of pollutants;
    - It was highlighted that it is difficult to consider coherence in isolation to efficiency and effectiveness. The objectives of the E-PRTR are not simply the general objectives of reporting. EPER was initially created to monitor emissions from IPPC installations and the effectiveness of implementing BAT. It was then captured by the 'access to information' agenda. There are other processes being followed to develop a reporting system under the IED;
    - The relationship of the E-PRTR and EMEP (the LRTAP) data was discussed, in EMEP the reporting is for large point sources, in several Member States these sources are not E-PRTR installations; and
    - On the coherence of the E-PRTR reporting with the reporting required under the Large Combustion Plant Directive, it would be useful if the E-PRTR could include the option to report at stack level and include the stack height. This would help in create a more coherent database.
  - Coherence with wider legislation:
    - Coherence with the Solvents Emission Directive was highlighted where the threshold is much lower than the reporting threshold in the E-PRTR.
  - Conclusions:
    - How to increase the potential for use of E-PRTR as a tool to help gauge the industry performance (e.g. with BAT) needs to be reflected upon, there was not a clear agreement on the fact that E-PRTR should be used for this purpose;
    - Extended time-series allowing assessment of trends, are an important component to the dataset. This needs to be maintained; and
    - The difference between installation level and facility level can be valuable and warrants further discussion.

### **Conclusions on key interim findings**

The feedback received from stakeholders on key interim findings on coherence is presented in the table below.

*Table 5.97 Overview of conclusions of workshop on key interim findings on coherence*

Interim conclusions	Feedback from workshop participants
There are differences between E-PRTR and IED, such as on wording of activities which are similar but not identical. It should be noted that PRTR was developed after the adoption of IPPC, but before revision into IED.	Endorsed
Practical coherence with IED for operators depends upon the specific requirements for monitoring and reporting determined for permit compliance checking by regulators.	Endorsed
Large combustion plants under IED do provide an annual inventory on emissions, but also provide additional operating data not required by E-PRTR, therefore making installation comparison easier.	Endorsed
There are also differences in scope with other data sources such as EMEP (Convention on Long Range Transboundary Air Pollution) which covers activities not included in Annex I of E-PRTR, and Water Information Systems for Europe (WISE) which covers not only releases and losses but environmental concentrations, data on biota. These differences in scope are not necessarily an issue in themselves, but the need for clear and well aligned definition of sources is important for transparency when assessing why emission estimates differ between E-PRTR and other sources.	Endorsed
Fewer issues were raised by the respondents on the coherence of E-PRTR and the INSPIRE directive.	Modified, During the breakout discussions focus was given to the multiple reporting requirements placed upon industry. A single platform would be very welcome. Plans under INSPIRE would require just such a platform as part of the data model information provided.
There are references made to the Environmental Quality Standards Directive, but the practical relationship between the directive and E-PRTR will be difficult to determine until River Basin Management Plans (RBMPs) are reported in March 2016. This includes the inventories of releases and losses encompassed by the RBMPs.	Endorsed
On a practical level, some do note that data found under systems (e.g. EMEP) may differ from those under E-PRTR – which may be an issue of practical rather than legal coherence. This recognises that the calculation methods used under E-PRTR defined to an extent by the legislation.	Endorsed

## Relevance

### Introduction to 'relevance'

The 'relevance' theme examines to what extent the Regulation's (original) objectives (still) correspond to the needs and objectives for current use. The extent to which the Regulation meets the objectives is covered under 'effectiveness'. However, needs may change and objectives may change. For example, other EU laws may establish systems for collection and reporting of pollution data.

### Key interim findings from the study on 'relevance'

Ahead of the workshop, a series of key findings were identified and provided to the stakeholders. These included:

Most respondents felt that the objectives of E-PRTR are still relevant. The objectives to provide a register of pollution emissions from key sources for use by the public and other stakeholders is seen as important. However, there were criticisms that the E-PRTR

does not fully deliver on these objectives. Examples of relevance problems identified include:

- The scope boundaries of the E-PRTR (e.g. thresholds for reporting; activities included) mean that while a useful set of data can be compiled for aiding public participation in environmental matters; data completeness issues (data gaps, below threshold data, diffuse emissions) means that the data-set will constrain the capacity to see the 'whole' picture. E.g. total emissions being made up of Industrial emissions vs diffuse emissions;
- Other inventories or collections of pollution information at EU level do not match the scale of E-PRTR – the register is not being replaced by other systems;
- Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data;
- Responses from the targeted questionnaires and follow-up interviews, particularly those within the 'other' category (i.e. non-governmental, non-industry) highlighted concerns around the visibility and awareness of the E-PRTR within the public conscious. This could be an area where further work is needed to ensure that the E-PRTR meets the relevance theme; and
- Reporting on treatment of waste under the Waste Statistics Regulation is not complementary to the requirement to report on the transfer of waste under the E-PRTR Regulation, such as in relation to on-site waste generation and management and the use of EU waste codes. This therefore poses the question on how well does the E-PRTR correlate to the waste shipment and waste statistics data and what needs the E-PRTR fulfils in this area?

### **Key points discussed on 'relevance'**

The plenary session on relevance lead to discussions on several points:

- E-PRTR fulfils needs that are at different levels and of different scales:
  - Benchmark for industry stakeholders;
  - Overview of emissions for policy development; and
  - Other public needs.
- To foster public participation it may be useful to link the E-PRTR data to additional information such as monitoring data, permits or inspection reports;
- Free of charge access to basic data is important;
- Comparability of data can be considered in terms of:
  - Type of data; and
  - Quality of data.
- E-PRTR could be made more useful through:
  - Linking it to other (e.g. national) databases;
  - Reporting additional data (e.g. on the size of facility as a mandatory indicator required at EU level, operational hours, number of employees);
  - Adjusting capacity thresholds and categorizing facilities (e.g. by size);
  - Adding disclaimers informing on appropriate uses of data; and
  - Comparing data recorded in a given year against the target for that year.



The following key aspects were identified by the break out group as key in improving the relevance of the Regulation:

- It is important to establish whether the initial objectives of the E-PRTR are still valid. The context when EPER was established is not always well understood today and different groups of users have different needs. It is a challenge to present one register that will satisfy the needs of all stakeholders;
- The E-PRTR only presents raw data, it is unclear how useful this is for the public;
- It would be useful to clarify to which extent public participation is an objective of the E-PRTR. Is this the only overriding objective that the E-PRTR should serve or is its application more broad?
- The right level of engagement was also discussed, the EU level was identified as most suitable to then guide action at national level in a coherent way; and
- For some pollutants the thresholds may be more sensitive for policy relevance than for other pollutants – relevance of the database for different objectives.

### Conclusions on key interim findings

The feedback received from stakeholders on key interim findings on relevance is presented in the table below.

*Table 5.98 Overview of conclusions of workshop on key interim findings on relevance*

Interim conclusions	Feedback from workshop participants
The scope boundaries of the E-PRTR (e.g. thresholds for reporting; activities included) mean that while a useful set of data can be compiled for aiding public participation in environmental matters; data completeness issues (data gaps, below threshold data, diffuse emissions) means that the data-set will constrain the capacity to see the 'whole' picture. E.g. total emissions being made up of Industrial emissions vs diffuse emissions.	Endorsed
Other inventories or collections of pollution information at EU level do not match the scale of E-PRTR – the register is not being replaced by other systems.	Endorsed
Industry operatives highlighted the importance of the E-PRTR in assessing environmental performance and benchmarking against other operators in the same industry sector. However, this has proven difficult due to a lack of context or meta-data.	Endorsed
Responses from the targeted questionnaires and follow-up interviews, particularly those within the 'other' category (i.e. non-governmental, non-industry) highlighted concerns around the visibility and awareness of the E-PRTR within the public conscious. This could be an area where further work is needed to ensure that the E-PRTR meets the relevance theme.	Endorsed
Reporting on treatment of waste under the Waste Statistics Regulation is not complementary to the requirement to report on the transfer of waste under the E-PRTR Regulation, such as in relation to on-site waste generation and management and the use of EU waste codes. This therefore poses the question on how well does the E-PRTR correlate to the waste shipment and waste statistics data and what needs the E-PRTR fulfils in this area?	Endorsed

### *EU added value*

#### **Introduction to 'EU added value'**

The consideration of 'EU added value' of the Regulation is an examination of the additional value resulting from the provisions in EU law, compared to what could be achieved by Member States at national and/or regional levels.

EU-added value has as main focus whether the most appropriate governance level is at EU or Member State level. As the EU is bound by the Kiev Protocol, it is clear that the EU has to transpose the protocol in EU law. Therefore, the question is 'what is the added

value of EU law in implementing the Protocol beyond that of the Member State implementing it on their own'. This could cover aspects such as making it possible for EU citizens to make comparisons across the EU regarding emissions that affect them, ease of access for evidence base in policy making, international level quality checks scrutiny of the data by a wider audience.

### **Key interim findings from the study on 'EU added value'**

Ahead of the workshop, a series of key findings were identified and provided to the stakeholders. These included:

The findings showed that the value of the EU level register and the processes to deliver this as provided by the Regulation were strongly supported. The specific aspects of added value that are cited included:

- The provision of an EU-wide database;
- Harmonisation of reporting;
- Harmonisation of monitoring practices;
- Development of a common approach and understanding in data collection and reporting;
- Enhanced comparability across reporting countries; and
- Higher quality of data due to QA efforts deployed by the European Environment Agency (EEA).

The Regulation was seen as adding value both in the data facility that it provides and in the harmonisation of data collection across Member States needed to support this data facility. However, whilst this EU added value was recognised as a valuable objective of Better Regulation, there were concern that this value was not being fully delivered. These concerns usually related to data quality issues, such as:

- Shortcomings in the data provided by operators and validation by competent authorities;
- Data presented which are not updated;
- A high percentage of data provided by E-PRTR are calculated or estimated - not measured; and
- Although the quality of information has improved over time, it has not yet reached the level where decisions can be taken solely based on its information.

These concerns relate to the database itself. However, the purpose of the database (and against which EU added value needs to be judged) is for public information and benefits derived from that functionality. The findings showed that public use of the EU Register is sporadic and may link to specific events or news items. Its users are more likely to be professional actors (policy makers, industry, NGOs, etc.). Public engagement with registers was more obvious at national level.

### **Key points discussed on 'EU added value'**

The discussion on the 'EU added value' was handled in a different way to the other themes. Rather than an open discussion within the plenary or break-out sessions, where the responses were taken from delegates based on the background paper circulated in advance of the meeting, or personal opinion on the day. The EU added value theme made use of three different vested stakeholders to provide different perspectives on how the value and use of E-PRTR. This included a representative from industry who helps derive and provide data as well as make use of the E-PRTR data for environmental assessment. A representative from an NGO organisation who makes use of the E-PRTR

to help inform engagement with environmental policy making and a representative from the European Environment Agency, who has a role in data management and overseeing the development of the E-PRTR.

The three representatives were allowed to provide a short presentation giving their personal opinions on the theme of EU added value before questions were invited from delegates. The overview of the key messages from the presentations is given thus:

Jean-Pierre Debruxelles, Fuels Europe

- Notes the facility-level reporting approach varies with installations (with Annex 1 activities under IED). For refineries many facilities are reporting information that is not reflective of a refinery as per definition - this leads to an over-estimate (inaccurate picture) of refining emissions;
- Reporting unit (total annual emission as opposed to emission rates used under BREF and BAT) and reporting threshold makes it impossible to practically make use of the E-PRTR for the assessment of environmental performance information;
- There is a general understanding that public participation in the use of the E-PRTR is low; it was suggested that at EU level the E-PRTR may have some greater benefits to understand how emissions of pollutants are released across a wider geographic area. This kind of knowledge might be useful for comparison between Member States or to look at EU trends. However for local emissions or use by the general public for emissions in their own local vicinity the PRTR is a much more limited tool. This is because the use of reporting thresholds means that not all sources are identified, and limiting to Annex I activities without inclusion of diffuse sources means that the general public don't get a fair reflection of the true emissions close to their home;
- It would be valuable to have an online function to report / correct mistakes, which would allow such issues to be rectified more quickly; and
- The E-PRTR is an important policy making tool and it should be preserved and with this role it is fit for purpose.

Aliki Kriekouki, European Environment Bureau (EEB)

- The EU added value of the E-PRTR is obvious and is supported by the preliminary findings of the REFIT evaluation made available in the interim report;
- Feedback is needed to make sure the objectives of the E-PRTR are being delivered – fostering public participation, and improving environmental performance;
- Upgrade in quantity and quality of data, in particular format of the data that would allow better interpretation from experts; and
- As an example the US EPA portal: Toxic Release Inventory, has the same objective as the E-PRTR but includes all these characteristics, such as better explanation of what the data means and contextual information to allow further assessment.

Eva Goossens, European Environment Agency

- The E-PRTR is one registry for use by all; while an EU wide knowledge base is not a primary objective it could be a 'new need'. Information in the E-PRTR is used for policy making, evaluation and evaluators (e.g. EEB, industry etc.);
- There is potential for the E-PRTR to be used as a benchmarking tool by industry and policy makers. From this perspective the potential use of the E-PRTR to foster improved environmental performance is an EU added value of E-PRTR in alignment with other policy such as IED and BAT. However to fully make use of the E-PRTR for this purpose this requires information on facilities' performances and sectors' performances;

- At EU level, the Quality Assurance (QA) is complex. In order to make it more efficient, an EU wide review of data, involving national experts across evaluating data could be beneficial. This would be similar to the National Emissions Ceiling (NEC) Directive approach;
- The scope for further improvement of the E-PRTR would include:
  - quality assurance;
  - harmonisation between Member States on approaches used (e.g. estimates calculations and measurements);
  - environmental performance data;
  - coherence with other EU environmental laws; and
  - threshold evaluation to ensure a full and consistent data-set.
- The added-value of E-PRTR was acknowledged, and participants were encouraged to think about what the E-PRTR is now and what it could be if specific changes were made. Much of the changes could be done without amendment to the Regulation, for example linking to other data sources such as permits might be a positive step within E-PRTR.

Following the presentations the delegates were allowed to raise points for discussions or ask the panellists further questions. During this discussion it was noted that voluntary (non-mandatory) information is not helpful as many operators would not provide it. If additional information was desirable for bench-marking or environmental performance assessment the need for this data would have to be mandatory.

Other delegates suggested that smaller changes might achieve the same end result, for example it may be possible to provide links to the environmental permits, which are required by law to be publically available under IED. Such permits would have information regarding capacity and emission limit values. However the counter argument was that this information is not always publically available, and when it is, it may only be available in the language of the specific Member State in case, and even then sometimes scanned documents are used which can be hard to read and interpret.

The issue of continuity was also raised, where the E-PRTR has now been in place for several years it provides a valuable data-set for time-series analysis and trends across the EU. Amendment of the E-PRTR to make it more accessible was welcomed, but care should be taken not to make large scale amendments which would lose the value of the time-series data.

## Conclusions on key interim findings

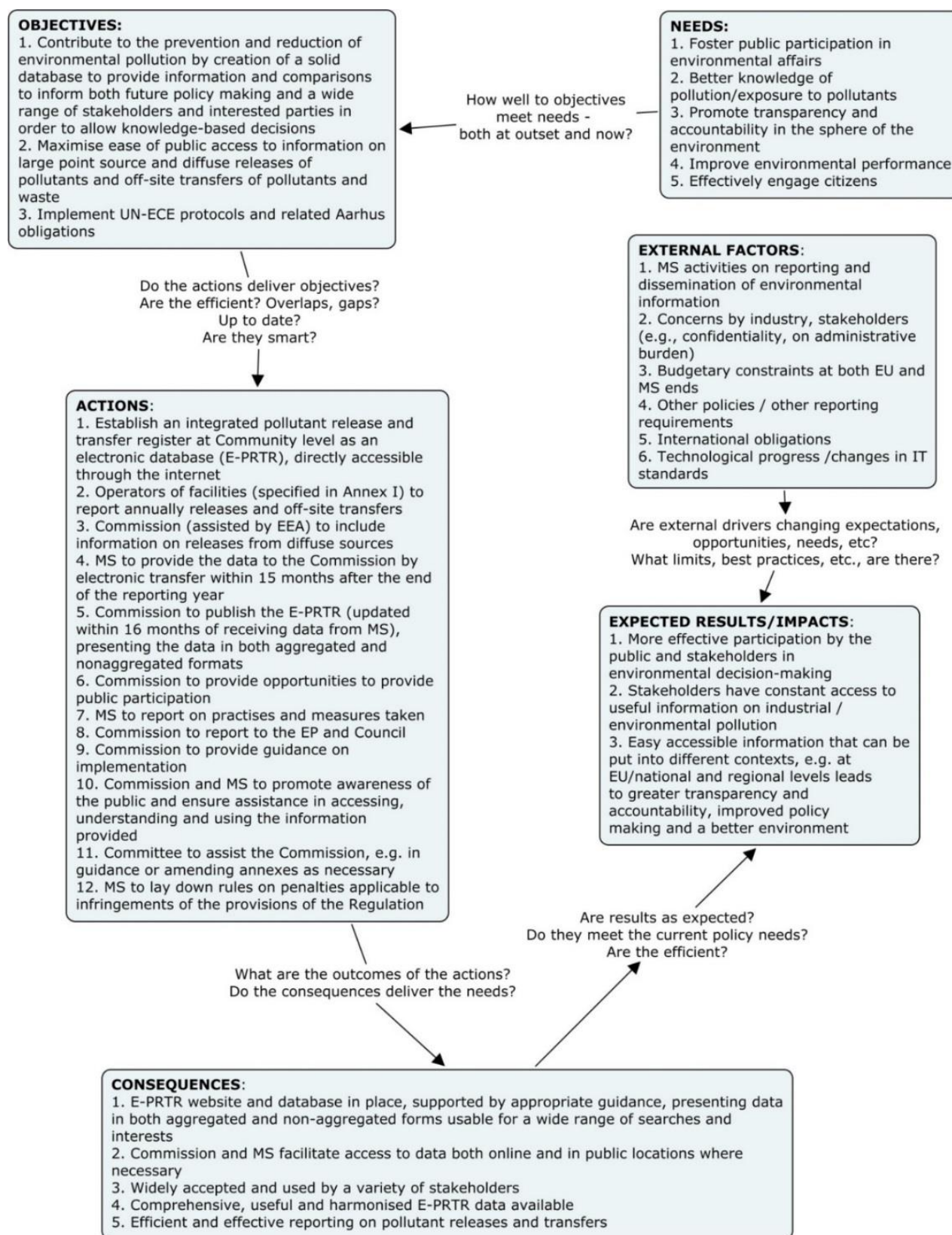
The feedback received from stakeholders on key interim findings for EU added-value is presented in the table below.

**Table 5.99** *Overview of conclusions of workshop on key interim findings on EU added value*

Interim conclusions	Feedback from workshop participants
<p>The findings showed that the value of the EU level register and the processes to deliver this as provided by the Regulation were strongly supported. The specific aspects of added value that are cited included:</p> <ul style="list-style-type: none"> <li>• The provision of an EU-wide database;</li> <li>• Harmonisation of reporting;</li> <li>• Harmonisation of monitoring practices;</li> <li>• Development of a common approach and understanding in data collection and reporting;</li> <li>• Enhanced comparability across reporting countries; and</li> <li>• Higher quality of data due to QA efforts deployed by the European Environment Agency (EEA).</li> </ul>	<p>Endorsed, however uncertainty on the QA techniques used at Member State level was quoted as one area of uncertainty.</p>

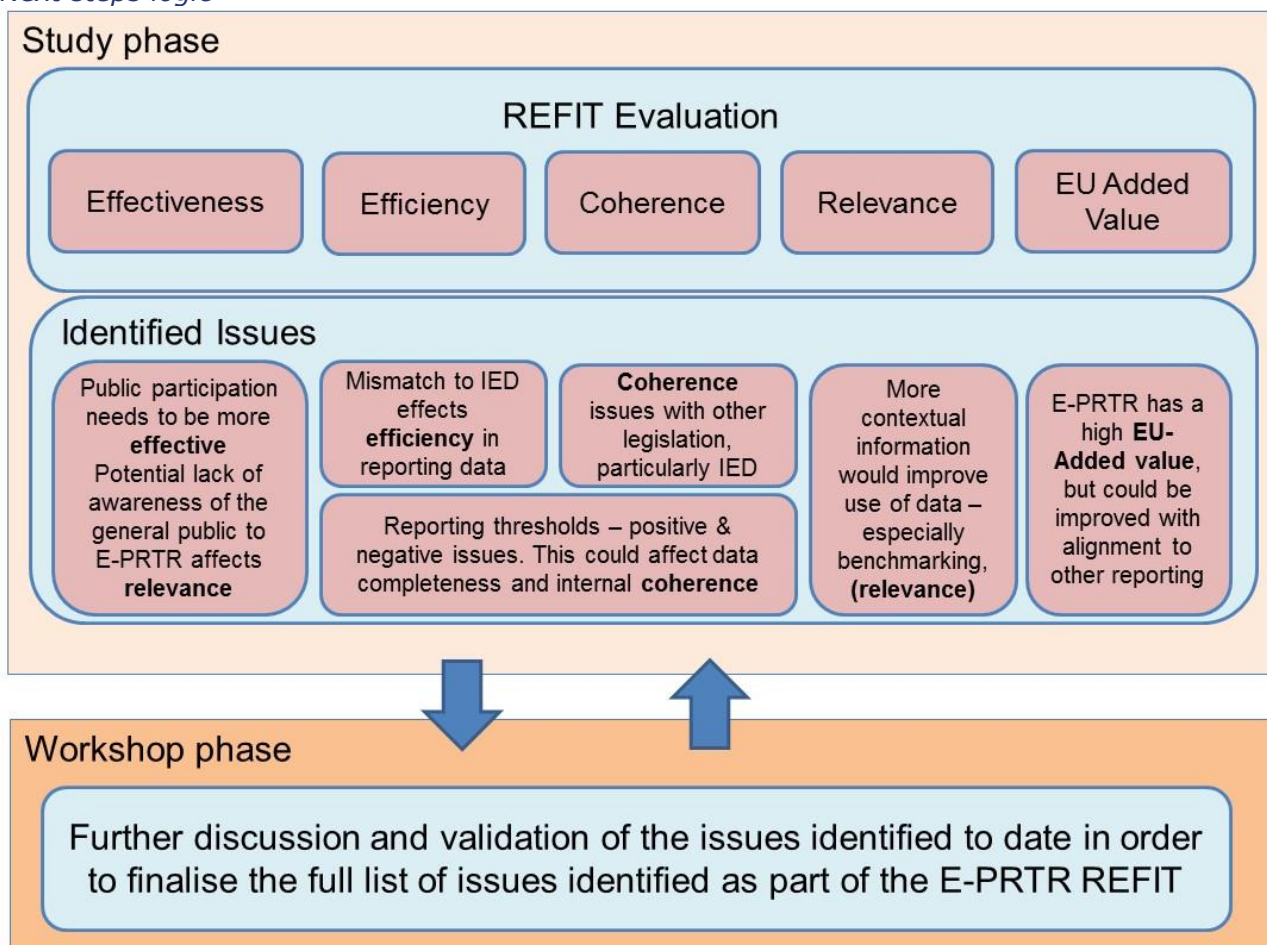
Interim conclusions	Feedback from workshop participants
<p>The Regulation was seen as adding value both in the data facility that it provides and in the harmonisation of data collection across Member States needed to support this data facility. However, whilst this EU added value was recognised as a valuable objective of Better Regulation, there were concern that this value was not being fully delivered.</p> <p>These concerns usually related to data quality issues, such as:</p> <ul style="list-style-type: none"> <li>• Shortcomings in the data provided by operators and validation by competent authorities;</li> <li>• Data presented which are not updated;</li> <li>• A high percentage of data provided by E-PRTR are calculated or estimated - not measured; and</li> <li>• Although the quality of information has improved over time, it has not yet reached the level where decisions can be taken solely based on its information.</li> </ul>	Endorsed
<p>However, the purpose of the database (and against which EU added value needs to be judged) is for public information and benefits derived from that functionality. The findings showed that public use of the EU Register is sporadic and may link to specific events or news items. Its users are more likely to be professional actors (policy makers, industry, NGOs, etc.). Public engagement with registers was more obvious at national level.</p>	Endorsed

## Intervention logic





## Next steps logic



## Appendix K Interaction of the E-PRTR Regulation with other legislations

### K.1 E-PRTR Regulation and Kiev Protocol How far does the Protocol constrain options to amend the E-PRTR Regulation?

The E-PRTR Regulation is the implementing instrument for the EU of the Kiev Protocol, as the EU is a Party to the UNECE Aarhus Convention. Unlike laws developed at EU level, this means that there is less flexibility open to the EU institutions in amending the Regulation (assuming that the EU continues to transpose the Protocol correctly!).

In examining the degrees of flexibility available, the following types of situation may arise in comparing the two legal texts:

1. The Protocol sets an absolute requirement that is repeated in the Regulation:
  - There is **NO flexibility** to do anything less stringent than that requirement; and
  - There **may be flexibility** to do more than is required in the Protocol.
2. The Regulation includes requirements that are not in the Protocol:
  - There **IS flexibility** to remove or reduce these additional requirements; and
  - There is **likely to be flexibility** to add to these additional requirements.
3. There are options in the Protocol that have not been included in the Regulation:
  - There **IS flexibility** to introduce these options into the Regulation.

Table 5.100 summarises the key elements of the Regulation and comments on whether there is flexibility to alter those elements by reference to the provisions in the Protocol.

*Table 5.100 Summary of key elements of the Regulation*

Element in Regulation	Relationship to Protocol	Comment on flexibility to amend
<b>Art. 1: Purposes of the Regulation</b>	The 3 purposes are also in the Protocol	There is no particular issue arising from this. Additional purposes could be added, if desired, but this is not a particular concern.
<b>Art. 2. Definitions</b>	Some definitions are derived from the Protocol (Art.2 – 1, 9, 10, 11, 12, 16, and 17). Some are new in the Regulation (2, 3, 4, 5, 6, 7 and 8)	There is, therefore, some flexibility to amend definitions that are unique to the Regulation or, indeed, add further definitions.
<b>Art. 3 Content of the European PRTR</b>	This is not directly in the Protocol. However, it is derived from the requirements of the Protocol.	The Art. Is very broad in statement. It is not possible to reduce this 'content', although further content could, presumably, be added if desired.
<b>Art. 4.1 Design and structure: searching and identifiers</b>	The list is derived from Art. 5 and 6 of the Protocol, except that the Regulation adds the requirement for installations to also be identified to their respective river basin.	The search terms and identifiers cannot be reduced, except for 'river basin'. Further terms could, of course, be added if considered useful.



Element in Regulation	Relationship to Protocol	Comment on flexibility to amend
<b>Art. 4.2 and 4.3: ease of access and links to other sites</b>	These provisions are additional to the Protocol.	The Art. 4.2 requirement to maximise ease of access is consistent with the Art. 1 objective. It is not prescriptive as to the level of 'ease of access' and is, therefore, actually flexible itself. The links are to existing sites. Both Art. 4.2 and 4.3 could be amended as considered appropriate.
<b>Art. 5: reporting by operators</b>	These extensive provisions are drawn from Arts. 7 and 9 of the Protocol. The thresholds pertaining to installations in the Regulation following Art. 7.1 of the Protocol. Art. 7.2 contains an alternative threshold measure based on the number of employees. This is not incorporated into the Regulation.	Although these are extensive provisions in the Regulation, the requirement for the annual reporting for pollutants listed for installations listed is all in the Protocol. The Regulation could be amended to introduce the flexibility available for thresholds [Note that no one has raised this and such a system would make interpretation of comparable data more problematic than it already is]
<b>Art. 6. Releases to land</b>	This is a clarification not derived from the Protocol.	This is a short point clarifying a relationship to the Waste Framework Directive. It is there to aid coherence. It can be amended if EU waste law changes and amendment would be need to aid or increase coherence.
<b>Art. 7. Reporting by Member States</b>	This is not in the Protocol.	The Protocol requires reporting from operators to authorities, so all provisions relating to how Member States are to report are new. The remaining provisions in place are for all data submitted by operators to be reported within 15 months after the end of the reporting year. There would be flexibility to amend this if needed. Art. 7.3 also requires the Commission/EEA to incorporate the data in the European register within 21 months after the end of the reporting year. The basic provision seems difficult to amend, but the deadline could be altered if needed.
<b>Art. 8 Releases from diffuse sources.</b>	This is also part of the Protocol.	The provision is not particularly prescriptive as it aims to help identify diffuse sources. However, its provisions are fully able to be amended if needed.
<b>Art. 9. Quality assurance and assessment</b>	The requirements for QA by operators and competent authorities are from Art. 10 of the Protocol. The requirements on the Commission to co-ordinate QA and provide guidelines are additional to the Protocol.	The QA requirements are short and simple. There is no flexibility to reduce those on operators and competent authorities. However, if there are QA concerns that could be addressed in law, there is flexibility to add further provisions to the Regulation. There is full flexibility to amend any provisions relating to the Commission.
<b>Art. 10. Access to information</b>	The basic provision is for the information on the register to be free to the public. This is required under Art. 13 of the Protocol. The Regulation is slightly more complex in that it adds that if information is not in the European Register, the Member States should make it available.	The additional point is unlikely to be truly additional as the requirement on the Member State could be viewed as a direct obligation of the Member States as a party to Protocol. There is no flexibility to reduce the access provision. There is flexibility to add provisions which would aid in the access to information.
<b>Art. 11. Confidentiality</b>	This is coherent with Directive 2003/4 and is derived from Art. 12 of the Protocol.	There is no flexibility to amend this.
<b>Art. 12. Public participation</b>	The basic provisions are derived from Art. 13 of the Protocol.	The additional provisions are to allow the public to submit comments, etc., and for the Commission to take due account of

Element in Regulation	Relationship to Protocol	Comment on flexibility to amend
	However, those of Art. 12.2 and 3 of the Regulation are additional.	this. This provision could be amended if desired.
<b>Art. 13. Access to justice</b>	This derives from Art. 14 of the Protocol.	The access to justice provision refers to the 'parent' Convention and the Regulation cross refers to the EU implementing law. The provisions cannot be amended. Further, it would probably be difficult to add anything here without wider ramifications to EU law on this issue.
<b>Art. 14. Guidance document</b>	This is a new provision not in the Protocol.	This provision is directed to the Commission and has been implemented. There is, therefore, no point in deleting it, for example. If desired, further provisions on guidance, amended guidance, etc., directed to the Commission could be added.
<b>Art. 15. Awareness raising</b>	This is derived from Art. 15 of the Protocol.	The provision is very basic and cannot be reduced. There would be flexibility to add provisions on the Member States to undertake in order to help deliver improved awareness, if desired.
<b>Art. 16. Additional information to be reported by Member States</b>	This is all additional to the Protocol.	These are reporting obligations on the Member States for Member States to explain how they have implemented each of the provisions of the Regulation (other than the basic supply of information under Art. 7). These are provisions to allow for the Commission to check compliance and could be freely amended if needed.
<b>Art. 17-19: Review by Commission, amendments to annexes and Committee procedure</b>	These are all additional to the Protocol.	These are common concluding Articles in EU law, but all could be amended if needed.
<b>Art. 20. Penalties</b>	This is additional to the Protocol.	In theory this could be amended. However, the Article is the standard text in much EU law and, therefore, amendment would seem unlikely to be possible.
<b>Annex I: Activities</b>	This list is derived from the Protocol.	Noting the point above about the alternative measure of capacity, the Regulation follows the Protocol very closely in definition of activities and their capacity thresholds (where appropriate). There is little deviation (e.g. for coherence with the Landfill Directive). There is effectively no flexibility to remove any activity from the list or to increase the threshold for reporting. There is full flexibility to add activities and/or reduce or remove thresholds for reporting.
<b>Annex II: Pollutants</b>	The list (pollutant to air, water or land and thresholds) is almost a repeat of that in the Protocol, with some exceptions: <ul style="list-style-type: none"> <li>- Dioxins and furans to all media are at lower thresholds</li> <li>- There are several additional pollutants to water to be reported.</li> </ul>	For almost all pollutants there is no provision to remove them from the reporting list or to raise the threshold for reporting. The exceptions are those noted opposite. It should be noted that several of the new water pollutants are included in the EQSD (but that does not require annual report to the European level). There is full flexibility to add further pollutants and/or reduce or remove any thresholds for reporting.
<b>Annex III: Format for reporting</b>	This is not in the Protocol.	This could be fully amended if the reporting format was considered to be able to be improved.

## K.2 IED

There are several strands in the relationship between IED and E-PRTR. These include:

1. The direct legal cross-referencing between the instruments;
2. The requirements for reporting for Annex I installations within IED;
3. The specific requirements for reporting for specified types of installations within IED (e.g. LCP);
4. Coherence of detailed elements of IED, such as definitions; and
5. The non-legal processes in place, such as reporting schemas.

### *The legal obligation for Annex I installations*

Provisions for Annex I activities are set out in Chapter II of IED. Requirements for monitoring and reporting by operators are set out in Art. 14. This Article establishes the requirements for permit conditions and it is within the permit conditions and monitoring and reporting requirements are prescribed.

Art. 14.1 states that Member states shall ensure the permit has all measures necessary to ensure permit compliance and that this shall include (Art. 14.1.c) "suitable emission monitoring requirements specifying: measurement methodology, frequency and evaluation procedure". Art. 14.d states that a further obligations is "to supply the competent authority regularly, and at least annually, with information on the basis of emission monitoring referred to in point (c) and other required data that enables the competent authority to verify compliance with the permit conditions."<sup>72</sup> It is important to note that Art. 16 states that monitoring shall be based on the conclusions on monitoring described in BREFs.

From these provisions, the following are clear:

- The permit should contain both monitoring and reporting obligations;
- Operators are not necessarily required to report all data collected during monitoring;
- The minimum frequency of reporting is annual (consistent with E-PRTR); and
- The purpose for monitoring and reporting is to enable the competent authority to verify permit compliance.

From this, the following can be concluded:

- Inclusion of additional reasons for reporting not linked to permit compliance is not required by IED; and
- Verification of permit compliance does not necessarily require monitoring and/or reporting of all substances for which ELVs are established (e.g. if there is a clear link between quantities of substances emitted).

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<sup>72</sup> Note that both sub-Articles also make specific reference to requirements where permit conditions do not follow BREF recommendations, but this is not directly relevant to the analysis here.

### Reporting by Member States

Reporting requirements by Member States under IED are set out in Art. 72. Art. 72.1-2 applies to all of IED, while the remainder of the Article only applies to LCPs.

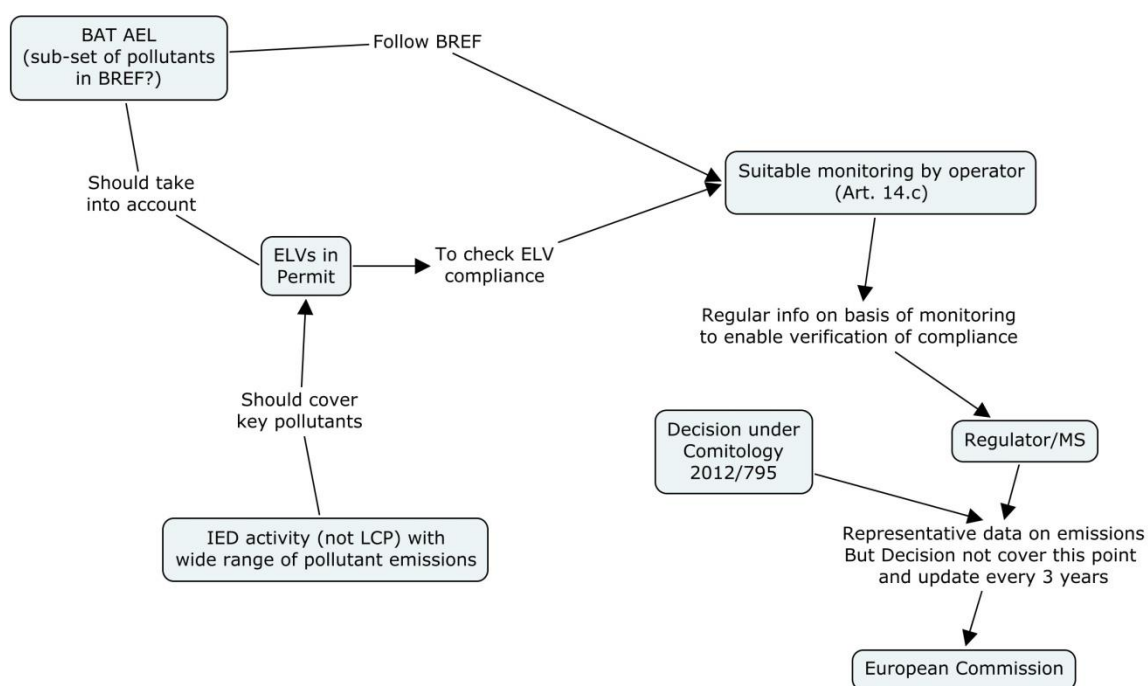
Art. 72.1 requires Member States to ensure information is made available to the Commission “on the implementation of the directive”, inter alia, “on representative data on emissions and other forms of pollution”. Art. 72.2 states that the “type, format and frequency” is to be agreed through the Regulatory Procedure.

From this it is evident that the purpose of supplying information is to provide an understanding of IED implementation. Further, the Article does not provide the basis for reporting of any type of inventory, as most data reported are to be “representative”.

For LCPs, the reporting requirements are different. Art. 72.3 requires Member States to establish an annual inventory of emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust (as total suspended particles). Further, this is to be accompanied by a range of other information such as energy input, operating hours, etc. However, while this establishes an annual inventory for which comparison may be made with E-PRTR, IED does not require this inventory to be reported to the Commission. Rather a summary of the annual inventory is to be made available to the Commission every three years.

Figure 5.34 summarises the monitoring and reporting requirements and processes for general IED installations.

Figure 5.34 Monitoring and reporting requirements under the IED



- The E- PRTR covers a wide range of pollutants;
- ELVs in IED permits may not cover all the E-PRTR pollutants from an installation;
- Monitoring may cover fewer pollutants than ELVs (but this might not be the case);
- Reporting to a regulator draws on monitoring to show compliance;

- Only representative data from this sub-set (compared to E-PRTR) required under Art. 72 to be reported to EU level; and
- But Decision on reporting does not cover this.

Therefore, there is an overlap in monitoring and reporting activity between E-PRTR and IED. At this stage (for non LCPs) this is not to EU level. At operator level, this depends entirely on the scope of pollutants required to be monitored and what regulators require for reporting. This will vary between installations, regulators and Member States.

#### *Coherence of definitions*

A specific possible is whether definitions are consistent between IED and E-PRTR. 'Definitions' are set out in various contexts. Both E-PRTR and IED have an early Article with 'definitions', but the terms also needs to encompass issues such as the definition of individual types of activity (e.g. in Annex I).

#### *Formal definitions, comparing Article 2 of E-PRTR and Article 3 of IED.*

The table below follows the order of terms listed in E-PRTR. Note that terms for waste, hazardous waste, waste water, disposal and recovery are not all captured by IED, but all are cross references to other EU environmental law by both instruments, so comparison is not needed.

E-PRTR Term	Comparison with IED
<b>The public</b>	Same (3.16)
<b>Competent authority</b>	Not defined
<b>Installation</b>	Largely the same (taking account of specific IED issues) (3.3)
<b>Facility</b>	Not defined
<b>Site</b>	Not defined
<b>Operator</b>	Largely the same (3.15)
<b>Reporting year</b>	Not defined
<b>Substance</b>	Not defined
<b>Pollutant</b>	Different – see below
<b>Release</b>	Not defined (but probably capture in IED definition of 'pollution')
<b>Off-site transfer</b>	Not defined
<b>Diffuse sources</b>	Not defined (but mentioned in IED definition of 'pollution')

E-PRTR defines 'pollutant' as "a substance or a group of substances that may be harmful to the environment or to human health on account of its properties and of its introduction into the environment".

IED defines 'pollutant' as "the direct or indirect introduction, as a result of human activity, of substances, vibrations, heat or noise into air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment".

The scope under IED is much wider, both in terms of what is introduced into the environment and the impacts this might have. This is understandable given the overall objective to prevent or reduce the impact that installations have on the environment. Further, the IED definition is more critical as this overall IED objective should drive decisions on implementation. The E-PRTR definition is less critical as it does not directly impact the specific obligations of E-PRTR, which are separately specified.

#### *Definitions of individual activities*

With regard to the activities (installations/facilities) covered by IED and E-PRTR, the following table provides definitions under each of the laws where these either differ or where, in one or other, a definition is missing. It is important to stress that difference does not mean a problem for coherence. For example, underground storage of waste and carbon capture and storage are regulated under IED, but are not included under E-PRTR. This means that data are not included in the register, but this is not necessarily a coherence problem for operators, regulators, etc. Similarly, E-PRTR has categories of activity not included under IED (e.g. open cast mines).

There are, however, differences in some of the definitions. For some the implications are not clear. For example, for several categories of chemical industry activities, E-PRTR adds 'on an industrial scale' to its definition. IED, instead, captures all of this type of activity. On the other hand, these activities may not take place except in an industrial setting. The added clause in E-PRTR is not defined and, therefore, is ambiguous.

For the waste management category, IED has much more detailed definitions for specific categories of installation. The basic definition is similar to E-PRTR, but details of different treatment types of added to the IED definition. In practical terms this might make little difference.

<b>IED Annex I</b>	<b>E-PRTR Annex I</b>
Energy industries	
<b>Gasification or liquefaction of:</b> <b>(a) coal;</b> <b>(b) other fuels in installations with a total rated thermal input of 20 MW or more.</b>	Installations for gasification and liquefaction
	Coal rolling mills above 1T/h
Mineral industry	
<b>N/a</b>	Opencast mining and quarrying with area of 25 ha
<b>3.1c. production of magnesium oxide in kilns with a production capacity exceeding 50 tonnes per day</b>	N/a
Chemical industry	
<b>4.3. Production of phosphorous-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers)</b>	As IED, but includes production 'on an industrial scale'
<b>4.4. Production of plant protection products or of biocides</b>	As IED, but includes production 'on an industrial scale'

IED Annex I	E-PRTR Annex I
<b>4.5. Production of pharmaceutical products including intermediates</b>	As IED, but includes production 'on an industrial scale'
<b>4.6. Production of explosives</b>	As IED, but includes production 'on an industrial scale'
Waste and wastewater management	
<b>5.1. Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities:</b> <b>(a) biological treatment;</b> <b>(b) physico-chemical treatment;</b> <b>(c) blending or mixing prior to submission to any of the other activities listed in points 5.1 and 5.2;</b> <b>(d) repackaging prior to submission to any of the other activities listed in points 5.1 and 5.2;</b> <b>(e) solvent reclamation/regeneration;</b> <b>(f) recycling/reclamation of inorganic materials other than metals or metal compounds;</b> <b>(g) regeneration of acids or bases;</b> <b>(h) recovery of components used for pollution abatement;</b> <b>(i) recovery of components from catalysts;</b> <b>(j) oil re-refining or other reuses of oil;</b> <b>(k) surface impoundment.</b>	Installations for the recovery or disposal of hazardous waste. Threshold: receiving 10 tonnes per day.
<b>Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment::</b> <b>(i) biological treatment;</b> <b>(ii) physico-chemical treatment;</b> <b>(iii) pre-treatment of waste for incineration or co-incineration;</b> <b>(iv) treatment of slags and ashes;</b> <b>(v) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.</b>	Installations for the disposal of non-hazardous waste. Threshold: capacity of 50 T/d.
<b>Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, and excluding activities covered by Directive 91/271/EEC:</b> <b>(i) biological treatment;</b> <b>(ii) pre-treatment of waste for incineration or co-incineration;</b>	N/a

IED Annex I	E-PRTR Annex I
<p>(iii) treatment of slags and ashes;</p> <p>(iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.</p> <p>When the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day.</p>	
5.5. Temporary storage of hazardous waste not covered under point 5.4 pending any of the activities listed in points 5.1, 5.2, 5.4 and 5.6 with a total capacity exceeding 50 tonnes, excluding temporary storage, pending collection, on the site where the waste is generated	N/a
5.6. Underground storage of hazardous waste with a total capacity exceeding 50 tonnes	N/a
	Urban waste water treatment plants. Capacity: 100,000 p.e.
Independently operated treatment of waste water not covered by Directive 91/271/EEC and discharged by an installation covered by Chapter II	Independently operation industrial WWTPs which serve on or more activities of this annex. Threshold: 10,000 m <sup>3</sup> /d
Other activities	
6.c. [production of] one or more of the following wood-based panels: oriented strand board, particleboard or fibreboard with a production capacity exceeding 600 m <sup>3</sup> per day	N/a
N/a	Intensive aquaculture. Threshold: production capacity of 1,000 T/y of fish or shellfish
<p>Treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed from:</p> <p>(i) only animal raw materials (other than exclusively milk) with a finished product production capacity greater than 75 tonnes per day;</p> <p>(ii) only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day or 600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any year;</p> <p>(iii) animal and vegetable raw materials, both in combined and separate products, with a finished product production capacity in tonnes per day greater than:</p> <p>75 if A is equal to 10 or more; or,</p> <p>[300- (22,5 × A)] in any other case,</p>	<p>Treatment and processing intended for the production of food and beverage products from:</p> <p>i) Animal raw materials (other than milk) Threshold: finished product capacity of 75 T/d</p> <p>ii) Vegetable raw materials. Threshold: finished product capacity of 300 T/d (on quarterly basis)</p>



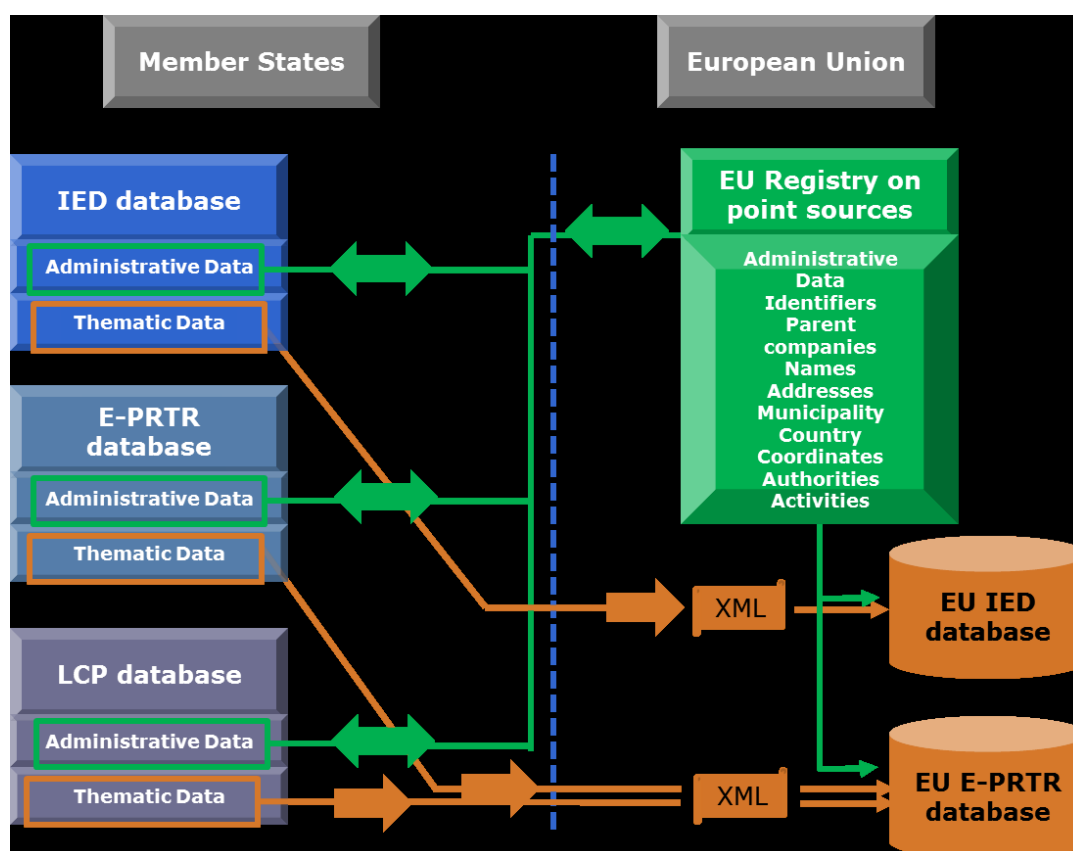
IED Annex I	E-PRTR Annex I
<p>where 'A' is the portion of animal material (in percent of weight) of the finished product production capacity.</p> <p>Packaging shall not be included in the final weight of the product.</p> <p>This subSection shall not apply where the raw material is milk only.</p>	
<p>Capture of CO<sub>2</sub> streams from installations covered by this Directive for the purposes of geological storage pursuant to Directive 2009/31/EC</p>	N/a

*Practical initiatives to enhance coherence of inventory reporting for LCPs and E-PRTR*

As explained above, inventory information on mass emissions from LCPs needs to be reported and this presents a potential overlap with E-PRTR. There are differences in scope of substances covered and frequency. However, it does present an opportunity to develop tools for practical coherence of the reporting activities as to date there have been different reporting tools for administrative and geographical data related to industrial point sources (e.g. different existing approaches for assigning IDs).

The EEA has been working on this practical coherence and the issue has been discussed at the E-PRTR Expert Group. Work is taking place to create streamlining between the processes, developing a single identifier based system for all industrial point sources. This would be full coherence with INSPIRE and cover data flows under IED and E-PRTR (not only on mass emissions). Figure 5.35 (from DG ENV) illustrates the objectives for data flows for the new integrated reporting, showing the coverage of E-PRTR, LCP and wider IED reporting.

Figure 5.35 Covering of existing environmental reporting under E-PRTR, LCP and IED



Source: presentation from DG ENV to E-PRTR Expert Group November 2015.

The actions being taken are to integrate LCP reporting into E-PRTR, with a restructuring of the E-PRTR xml schema, supported by guidance and tools within Reportnet. The practical processes are ongoing. The details are beyond the scope of this evaluation, but the process demonstrates the fact that overlaps between EU law which potentially present coherence issues, can be addressed through changes in the practical application of those rules.

### K.3 Water Law

There are various interactions between industrial emissions and EU water law and policy. Emissions are important pressures on water bodies and could cause problems in meeting the Good Status objectives of the Water Framework Directive 2000/60/EC. Therefore, measures would need to be adopted to tackle these emissions, which might be done through permit conditions under IED. Understanding overall mass emissions through E-PRTR might be one component of this framework. However, this represents a general context of interaction, rather than raising any questions of coherence.

A specific point of interaction with EU water law is with the Urban Waste Water Treatment Directive – as E-PRTR requires reporting on discharges from WWTPs covered by the UWWTD. The threshold for reporting under E-PRTR is WWTPs with a population equivalent of 100,000 or more. This does not match thresholds for much of the UWWTD (e.g. 150,000 p.e. or 10,000 p.e. for sensitive areas). Thus there is some potential issue of coherence here. Further, reporting under UWWTD is slow, though this is being addressed through greater use of electronic reporting. However, data tend to be older.

Further, reporting tends to be on capacities, levels of treatment, etc., rather than specific substances and certainly not the range of substances covered by E-PRTR. Finally, reporting under UWWTD is used to populate an online viewer. This is in advance of E-PRTR, providing a visual display of the data, including whether WWTPs are compliant. This is something which could be taken up in future design for display of E-PRTR data.

Another clear point of interaction between E-PRTR and EU water law where coherence issues might arise is with Directive 2008/105/EC on environmental quality standards in the field of water policy (Priority Substances Directive). This directive establishes quality standards for specified substances to be met in water bodies (integrated into the objective setting of the Water Framework Directive). Member States are required to monitor water, biota and/or sediments to determine if the standards are being met. However, in order to provide contextual information on the substances, Member States are also required to produce inventories of the emissions of these substances and report on these. This is the clear point where coherence issues might arise with E-PRTR.

Article 5 sets out the requirements on the inventories of emissions, discharges and losses. This requires that "Directive 2000/60/EC, under Regulation (EC) No 166/2006 and other available data, Member States shall establish an inventory, including maps, if available, of emissions, discharges and losses of all priority substances and pollutants listed in Part A of Annex I to this Directive for each river basin district or part of a river basin district lying within their territory including their concentrations in sediment and biota, as appropriate". Art. 5.1 specifically states that the information sources shall include "information collected in accordance with Articles 5 and 8 of Directive 2000/60/EC, under Regulation (EC) No 166/2006". Thus there is a direct cross-reference to E-PRTR. Indeed Recital 21 states the aim for coherence "In order to avoid duplication of work by establishing those inventories and to ensure the coherence of those inventories with other existing tools in the area of surface water protection, Member States should use information collected under" [E-PRTR].

Art. 5 further states that the basic reporting framework for the inventories is to be integrated into the reporting under the Water Framework Directive, i.e. within the River Basin Management Plans. Effectively, this means that the first report will be within the RBMPs due to be published in December 2015 and reported to the Commission in March 2016 and then updated on a six-yearly basis.

Therefore, it can be seen that the following potential issues arise with coherence between the Priority Substances Directive and E-PRTR:

- The substances covered by each law;
- The sources covered by each law;
- The reporting frequency; and
- The practical processes for reporting.

There are differences between the substances covered by E-PRTR and the Priority Substances Directive. The Priority Substances Directive initially was developed from a list presented in the Water Framework Directive and the adoption of E-PRTR deviated from the UN Protocol on its coverage of water pollutants in order to be more coherent with the Water Framework Directive (as explained in the Explanatory Memorandum to the proposal). The differences between the water pollutants specified in the Protocol and E-PRTR are set out in the Section on efficiency and explored further there. However, the Priority Substances Directive evolved from the Water Framework Directive in its coverage of substances. Further, the Priority Substances Directive has since been amended, developing a Watch List of substances (which have yet to be formally

adopted). The substances covered are, therefore, evolving, taking account of new threats, such as endocrine disruptors. However, this does not present an issue with coherence. Rather it is a practical challenge to the Member States. The Priority Substances Directive simply states that Member States should use E-PRTR data in developing their inventories. Where substances are not covered by E-PRTR, other data will need to be sought.

A similar point arises when considering sources covered. The difference between the legislation is clear. E-PRTR specifies the sources of pollutants (with thresholds) that are to form the source of information for the inventory. The Priority Substances Directive does not. Therefore, if there are important sources not covered by E-PRTR, they should be assessed. This would also be driven by the need to understand pressures under the Water Framework Directive. Again, E-PRTR contributes to inventories under the Priority Substances Directive, but is not necessarily sufficient for that purpose. It is important to note that the issue of sufficiency not only concerns the type of sources, but also emissions below E-PRTR reporting thresholds. Thus operators with below E-PRTR threshold emissions of priority substances might need to be included in the Priority Substances Directive inventories.

A further difference concerns the timing of reporting. The E-PRTR is an annual report, while the Priority Substances Directive requires a report on an inventory every six years. This also does not present a coherence issue. The inventory under the Priority Substances Directive does rely on E-PRTR data and, therefore, should not be more frequent than E-PRTR (which it is not). The E-PRTR inventory does not rely on inventory information under the Priority Substances Directive.

It is also important to note that the Priority Substances Directive formally requires a spatial resolution of the inventory at River Basin District scale or the national part of an international RBD. The current reporting practice for the RBMP requests information on the sub-unit scale to improve pan-European comparability (5000-50000 km<sup>2</sup>). The inventory is not aimed at waterbody level. This is different to the spatial presentation of data under E-PRTR. However, there can be a compatibility (e.g. as accommodated within INSPIRE).

Finally, there is the process of reporting. The inventories under the Priority Substances Directive are to be reported in RBMPs. To support this, the Common Implementation Strategy of the Water Framework Directive has developed detailed reporting schemas and guidance on all aspects of reporting, including the priority substance inventories. These are integrated within the wider water reporting. When the inventories are finally reported, it will be useful to examine differences with the E-PRTR register. In future it may be worth seeing whether some integration is possible between the two. However, at most there will be overlap, rather than full synergy.

CIS Guidance (No. 28) "Technical Guidance on the Preparation of an Inventory of Emissions, Discharges and Losses of Priority and Priority Hazardous Substances" was published in 2012. The guidance does not discuss coherence with E-PRTR, but use of the E-PRTR register is included. The guidance states that the inventory is a tool that can be used for various purposes, including:

- assist in establishing and implementing targeted reduction of emissions, discharges and losses of PS;
- demonstrate the efficacy of RBMP Programmes of Measures;
- assess if or to what extent monitored concentrations are caused by natural sources or processes or long-range transport processes;
- support the Commission in checking compliance with the objectives of the WFD;

- assist in checking the effectiveness of measures implemented to achieve the reduction and phasing out of emissions required by the provisions of the WFD;
- identify gaps in knowledge and hence where there is a need to develop new strategies/policies; and
- assist with the implementation of the Marine Strategy Framework Directive.

This list demonstrates the use to which pollution inventories may be put. The guidance recommends a step wise approach to developing the inventories. As a first step an assessment of current relevance of the substances at the RBD level should be undertaken in order to identify those substances which are clearly of minor relevance so that future effort can focus on those of most concern. The aim is to identify substances that can threaten the achievement of good chemical status and the guidance states that data from PRTR show releases which might lead to concentrations of concern. The second step is more detailed analysis and the guidance again notes the information on point sources available in PRTR.

In conclusion, E-PRTR has an important role to play within a specific aspect of EU water law implementation. There are differences between its scope and requirements compared with EU water law. These differences are not thought to present coherence problems. However, further work on this could be undertaken once the inventories under the Priority Substances Directive become available during 2016 and the extent of overlaps, differences, etc., with E-PRTR become clearer. The Priority Substances Directive requires that the Commission, by 2018, verify that emissions, discharges and losses as reflected in the inventory are making progress towards compliance with the reduction or cessation objectives laid down in the Water Framework Directive and the coherence aspects could be addressed at this stage.

#### **K.4 E-PRTR and EU waste legislation**

The issue of coherence between E-PRTR and EU waste law is not simple and the complication is driven by significant coherence issues within the waste acquis itself. In particular two pieces of legislation, Regulation No. 2150/2002 on waste statistics and Commission Decision No 2015/955/EU on the list of waste, have different definitions and categorisations for waste. Further, the Waste Shipment Regulation uses waste codes derived from the Basel Convention. An additional problem is that some EU countries have not (yet) implemented the European List of Waste or have their own additional waste codes which do not exist in other countries/regions. This makes it very difficult to compare waste statistics. E-PRTR, in its collection of data on waste transfers, is an element in this landscape.

The result of this lack of consistency is either that Member States report quite different figures to DG ENV and Eurostat (according to the relevant legislation) or they generate data using one approach (e.g. France does this via PRTR) and use these data for all reporting. The problem of the former approach is that there can be major differences in numbers reported by Member States for the same type of waste. The problem with the latter is that some of the reporting is not technically compliant. In either case, there are major problems in understanding comparability of data within and/or between Member States.

One approach to improving consistency is to start with the producer and the waste code assigned to that waste. This would suggest building on E-PRTR. We understand a comprehensive study on waste statistics will be launched at the end of 2016. This will, of course, form part of the Commission's wider Fitness Check of environmental reporting.

The proposed revision to the Waste Framework Directive (COM(2015) 595) in the circular economy package includes a reference to E-PRTR. This is with regard to hazardous waste, for which the proposal would require establishments to collect information on movement, etc., of waste and make this available through electronic registries. Member States may also establish registries for other waste streams. The proposal states that Member States shall use the data on waste reported by industrial operators in E-PRTR (proposal Art. 35, 1 and 4-5).

It can be seen, therefore, that while coherence of waste data and reporting under EU law raises concerns over coherence, is complex and includes E-PRTR, the issue is well beyond the scope of evaluation of E-PRTR itself. It can only be solved by review of the waste acquis as a whole (along with related law such as E-PRTR and IED) and proposals for change developed after such a review. This evaluation has, therefore, to defer to this wider ongoing and future review and legal development.

## **K.5 INSPIRE**

The INSPIRE Directive 2007/2/EC is a key item of EU environmental law when considering any aspect of data collection or reporting, such as E-PRTR. However, the consideration of the interaction with INSPIRE is not so much an issue of legal coherence, but of practical integration.

INSPIRE aims to create an EU spatial data infrastructure for environmental information, so facilitating sharing of information between Member States and EU level organisations and better public access to spatial information. The Directive requires that common Implementing Rules are adopted in a number of specific areas (Metadata, Data Specifications, Network Services, Data and Service Sharing and Monitoring and Reporting). These Implementing Rules are adopted as Commission Decisions or Regulations, and are binding in their entirety. These objectives are consistent with the more specific objectives of E-PRTR. INSPIRE is being implemented in stages, with the aim of full implementation by 2019.

Art. 8(2) of the directive states: "The implementing rules shall address a common framework for the unique identification of spatial objects, to which identifiers under national systems can be mapped". This means that objects which can be determined spatially should be allocated unique identifiers and these identifiers can therefore be used across data systems, facilitating integration of those systems. E-PRTR facilities are easily spatially determined and, therefore, can be provided with such identifiers under INSPIRE.

The EEA/JRC has been working to develop an approach to integrating pollution emission information within INSPIRE. This work includes not only E-PRTR, but also IED and Seveso III. This includes technical identifier issues such as namespaces, links to mapping, etc. The coherence between E-PRTR and INSPIRE is delivered by integrating the systems. What is important to note is not simply the coherence with INSPIRE, but that INSPIRE is a tool for coherence. It can be seen that the current initiative on industrial emissions provides a basis for better practical coherence of data between E-PRTR and IED/Seveso. Furthermore, INSPIRE geographic identifiers allow for integration with river basin planning, thus going beyond the river basin identification already within E-PRTR – hence the potential for further practical coherence.

## K.6 EU ETS

The ETS requires regular assessment and reporting of greenhouse gas (GHG) emissions from a wide range of activities (not just industry) and many of these activities are covered by the E-PRTR. It is necessary to stress the importance of accurate information on emissions. Trading in GHG emissions means that emission allowances have a monetary value. This places the need for accurate emission information in a different context to all other emission monitoring and reporting under EU environmental law.

Operators of plants have to hold GHG emission permits and are allowed to emit these gases up to a fixed allowance that would be determined by the appropriate Member State.

Article 14 of the Directive calls for the Commission to establish monitoring and reporting guidelines to help put the GHG ETS into practice. In 2004, the Commission published a Decision (2004/156/EC) to this effect. The guidelines, *inter alia* call for the monitoring and reporting to be based on the following principles: completeness, consistency, transparency, accuracy, cost-effectiveness, materiality, faithfulness and improvement of performance in monitoring and reporting emissions. Operators of installations are required to document all data for the installation's emissions from all sources belonging to activities listed in Annex 1 to the Directive. They are also required to operate an effective data management system and retain such information for a period of at least ten years. These data will then be submitted, verified and used by the competent authority to ensure sufficient number of allowances have been surrendered by the operator in respect of that same installation. These guidelines have since been amended (e.g. 2007/589/EC).

Regarding coherence with the EU Emissions Trading Scheme Directive 2009/29/EC, the majority of respondents agreed that it is coherent. Some expressed the following coherence problems:

- Activities and thresholds are not the same as in E-PRTR and the scope of the two laws is different;
- CO<sub>2</sub> emissions are hard to compare because of different definitions of installations in EU ETS and facilities in E-PRTR;
- ETS emissions are based on fuel consumption, but E-PRTR data does not identify fuel consumption; and
- The more detailed quality checking under ETS could serve to enhance the reliability of reporting by installation operators under the E-PRTR, thus enhancing the quality of data available at, and reported by, Member States.

## K.7 Seveso

The Seveso III Directive 2012/18/EU replaced earlier versions of directives (1982 and 1996) to help prevent and manage accidents from major industrial activities. The revised directive, *inter alia*, updated the substances covered, strengthened citizens' rights on access to information, justice and on participation in decision-making and improved the way information is collected, managed, made available and shared.

With regard to E-PRTR, it is important to note that Seveso III is not concerned with assessing or reporting on routine emissions. It requires industrial activities to assess risks, produce safety management plans, communicate these, etc., and set in place measures if accidents were to occur. Thus there are thematic overlaps with E-PRTR on transparency and public engagement in decision making (e.g. consultation on safety plans), but this a matter of coherence of principle rather than practice. The principle issue that arises concerns the definitions used by Seveso III, such as 'facility' and 'unit'.





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