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Development of the Protocol

Report on the outcomes of the survey on the experiences in implementing the Protocol on Pollutant Release and Transfer Registers*

Prepared by the Bureau

Summary

The present report was prepared by the Bureau pursuant to a request by the Working Group of the Parties to the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters at its seventh meeting (Geneva, 28 and 29 November 2019, ECE/MP.PRTR/WG.1/2019/2, para. 37).

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Introduction

1. The present document was prepared pursuant to the request by the Working Group of the Parties to the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) at its seventh meeting (Geneva, 28 and 29 November 2019, ECE/MP.PRTR/WG.1/2019/2, para 37). The Bureau considered the matter at its sixteenth meeting (Geneva, 29 November 2019) and decided to launch a survey in March 2020 to further gather experiences among the Protocol's Parties and interested stakeholders on the Protocol implementation, including challenges and possible approaches to develop pollutant release and transfer registers (PRTRs) beyond the Protocol's requirements. Substantive responses to the survey were received from the following Parties: Albania, Czechia, the European Union and its member States in a consolidated response, Israel, Montenegro, Republic of Moldova, Serbia, Switzerland and Sweden. Experts from Croatia, France, Hungary, Ireland, Lithuania, the Netherlands, Spain and the European Environmental Bureau also responded. The consolidated response from the European Union and its member states included references to the following reports and studies:

(a) Commission Staff Working Document on the Regulatory Fitness and Performance evaluation of the European-PRTR (E-PRTR) Regulation;¹

(b) Report from the Commission to the European Parliament and the Council on progress in implementing the E-PRTR Regulation;²

(c) Review of E-PRTR implementation and related guidance.³

2. Section I of this report summarizes key survey outcomes based on the respondents' experiences in implementing the Protocol. The section covers all questions contained in the survey by listing respondents' responses per thematic subchapter. The respondents' answers to specific survey questions and topics are kept while noting that experiences shared in the responses may fit under other items as well. Hence, possible associations with other thematic subchapters are given in footnotes to the respective topics. The report uses the wording employed in the responses as much as possible and makes changes only where it is necessary to clarify the meaning of the responses.

3. Section II suggests grouping different topics into four major categories as part of the general conclusions based on the survey. In addition, the responses received and the survey questionnaire are provided in accompanying documents (ECE/MP.PRTR/WG.1/2020/Inf.1 and ECE/MP.PRTR/WG.1/2020/Inf.2).

I. Summary of key survey outcomes

A. General strengths, weaknesses, opportunities and threats

4. Respondents to the survey observed the following concerning strengths, weaknesses, opportunities and threats for the Protocol:

Strengths

5. The Protocol, being a global treaty, establishes common standards that promote comparability of information on pollutant release and transfer between countries.

It provides a solid framework for:

¹ SWD (2017) 710 final; available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1513176768325&uri=SWD:2017:710:FIN>.

² COM (2017) 810 final; available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1513173747248&uri=COM:2017:810:FIN>.

³ See <https://circabc.europa.eu/ui/group/f80de80b-a5bc-4c2b-b0fc-9c597dde0e42/library/95139dd8-0ec0-40aa-a561-ec97b4dd4df3/details>.

- (a) Collecting information from the source (facilities);
- (b) Promoting easy public access, transparency and trust;
- (c) Making data and experience comparable globally, by defining mandatory reporting and dissemination of data;
- (d) Collecting data that allow for fact-based decision-making and the reduction of pollutant releases to the environment;
- (e) Facilitating sharing of experience on good practices, including preventing pollution and policy development.

6. In addition, effective PRTR systems allow for a reduction of reporting burdens for companies and government authorities, facilitate implementation of an integrated approach to governance, such as through applying practices promoting sustainable development, and creating linkages with related systems for use as a basis for planning processes and for preparing different national reports.

7. An integrated and coherent PRTR provides the public, industry, scientists, local authorities, governmental and non-governmental organizations with a database for comparisons and future decisions in environmental matters.

8. Making publicly available good quality data on pollutant releases from point and diffuse sources facilitates countries' efforts to reduce pollution.

9. For European Union member States, PRTR is an important instrument in the European Union environmental *acquis* because of the information it makes publicly available on the performance of large industry. An evaluation that was part of a better regulation initiative showed that there is wide stakeholder appreciation of the value that the E-PRTR brings to the topic of access to environmental information. The E-PRTR is seen as an easily accessible and valuable dataset, with no comparable alternative when it comes to a consistent data inventory on industrial emissions across the European Union.⁴ The E-PRTR provides added value as an example of integration of different, national PRTRs allowing for easy data comparison through a common platform. This includes ensuring consistent implementation of reporting also on additional pollutants and with lower thresholds across the European Union. This benefit has increased further because some non-European Union Parties to the Protocol have decided to use the E-PRTR.

Weaknesses

10. Binding requirements of the Protocol, i.e., reporting requirements, need to be further aligned with the current information needs of our society, so as to increase their usefulness for policymaking and for public awareness. There is no mechanism in place to ensure that the requirements are reviewed in an appropriate way.

11. Information on pollutant releases and transfers based solely on the specified reporting requirements under the Protocol is not accurate enough to drive decisions related to improving pollution prevention efforts by owners and operators.

12. Major limitations are directly linked to the scope and formulation of the Activities and Pollutants covered and the thresholds set. In addition, the narrow scope of Activities and Pollutants, including the reporting thresholds (for pollutants and waste transfers) could mean that the data are not interpreted correctly, i.e., readers could assume that it's all releases and transfers, not just those that are above the threshold.

13. The current reporting suffers from several other limitations (it is not comprehensive: no specification for reporting on diffuse sources, no continuous reporting across the supply/value chain. It is not integrated with relevant context information on, for example, production methods and volume, specification on disposal and recovery activities, showing links between activities and pollutant groups, permit information, consumption of resources,

⁴ SWD (2017) 710 final, p. 24.

etc.). These limitations affect its usefulness as a tool to increase public participation, guarantee transparency and facilitate benchmarking and compliance promotion activities.

14. Emission/transfer data alone give no indication of the emission intensity, which makes it difficult to compare facilities and whether facilities implement Best Available Techniques (BAT).

15. An increase in the number of Parties, including from beyond the United Nations Economic Commission for Europe (ECE) region, would facilitate use and analysis of data not only at the regional level.

16. There is a low general awareness of the Protocol and its strengths.

17. PRTR systems are often not aligned with obligations under other multilateral environmental agreements and other relevant commitments.

18. There is a lack of technical capacity within companies to carry out emissions monitoring and produce reliable data.

19. Data interpretation could be further supported. For the general public in European Union member States, additional background information is needed to better understand and use PRTR data. Additional context would be beneficial if PRTR data is to be used more for benchmarking the environmental performance of industrial activities (i.e., specific activity data, production capacity) in European Union member States. Some concerns were raised that the available data mainly cover large point sources and that more should be done to ensure that information on diffuse emissions is better represented in PRTRs.

Opportunities that could be exploited to the Protocol's advantage

20. Extension of the Protocol's substantive scope regarding, for example, activities and pollutants, or non-pollutant-related reporting (i.e., resource consumption and production volume), and global geographic coverage of PRTRs, would increase open access, availability and use of data for the public.

21. PRTRs can help to improve the balance between a minimal reporting burden and having a comprehensive and connected database, thereby improving efficiency of resources spent by different stakeholders and institutions on reporting and disseminating pollutant releases and transfers-related information reporting.

22. There is also an opportunity for better linkage with regulatory inspections and permits.

23. In European Union member States, the PRTR is appreciated as an efficient tool and its evaluation did not identify an excessive administrative burden. Most stakeholders considered that the effort required of data providers was minimal. Data managers also found the level of effort to be appropriate to the benefits provided by the disclosure of PRTR data. However, the resources required by the PRTR could be further reduced by harmonizing its reporting with other environmental legislation. The PRTR could be made more efficient and coherent if there is further harmonization with closely related environmental reporting obligations. Adding more contextual data to the existing PRTR would improve its effectiveness as a comprehensive source of environmental information.⁵ Additional context could be provided by such measures as increasing the granularity of activity descriptions, including quantitative activity data and better explaining the possible health and environmental impacts of the stated releases, as well as better signposting access to further information on air and water quality.⁶ E-PRTR ensures consistent implementation of the Protocol across the European Union, allowing for easy data comparison. This benefit has increased further because some non-European Union Protocol signatories have decided to use the E-PRTR.

⁵ Ibid., pp. 25–27.

⁶ COM (2017) 810 final, pp. 6 and 9.

Threats that could cause negative impact

24. There is potential for PRTR data to be misinterpreted as they are limited to specified lists of activities and pollutants and include reporting thresholds. PRTRs are often designed to give a picture of significant releases and waste transfers but might not be comprehensive enough for specific activities or pollutants.

25. Outdated core requirements, loss of harmonization and sensitive cost/benefit-ratio of bottom-up reporting require careful selection of reporting requirements.

B. Activities⁷*Issue*

26. Seven out of seventeen⁸ survey respondents answered that they collect point source information on activities that are not listed in annex I to the Protocol. Examples of additional activities are magnesium oxide production, asphalt production, oil production, waste transfer stations and all industrial facilities with a permit to operate.

27. Ten out of seventeen survey respondents answered that they use lower capacity thresholds for some of the activities listed in annex I to the Protocol. Examples of activities where lower thresholds are used are intensive livestock production, aquaculture, combustion plants and wastewater treatment plants.

28. Ten out of seventeen survey respondents answered that, based on their experiences, not all relevant industrial activities are included in annex I to the Protocol to be able to collect 90 per cent of the national total from industrial activities of each pollutant. The answers relate both to capacity thresholds as well as missing activities.

29. Regarding capacity thresholds, respondents answered that thresholds need to be adjusted for some activities in order to capture a significant level of releases. Examples of such activities are wastewater treatment plants, combustion plants, livestock (pigs and poultry), aquaculture and tanneries.

30. Regarding missing activities, respondents reported that activities are missing in their PRTRs in order to capture 90 per cent of releases. Examples of such activities are magnesium oxide production, carbon dioxide storage, metal working, battery manufacture, soil recovery sites, products, cattle rearing and waste management.

31. Parties with experience in using their PRTR for more activities and lower capacity thresholds than provided for by the Protocol, observed the following:

Added value

(a) A reduction of workload for reporting, where the PRTR system covers pollutants and uses thresholds as required under other national and international reporting obligations, i.e., no duplication of reporting, and synergies in data quality- and management-related work;

(b) A possible increase in data quality;

(c) An increase in the use of PRTR data for different purposes, depending on the activities added and including improved fact-based decision-making for government authorities, public and industry.

Challenges

(a) Parties that reviewed the comprehensiveness of PRTR reporting found that it is not sufficient for some pollutants or group of pollutants. This was linked to:

(i) Relevant activities not being included in the PRTR;

⁷ See ECE/MP.PRTR/WG.1/2020/Inf.1 (sheet (A) "Activities") for a list of activities as referred to in survey responses.

⁸ See paragraph 1 of the present report for a list of survey participants.

- (ii) Capacity thresholds being too high;
- (iii) Reporting thresholds for pollutants being too high;
- (b) A proportional increase of workload in reporting, data quality and management-related work.

Discussion

Other existing reporting obligations⁹

32. The synergies made by being able to use PRTR reporting mechanisms for other existing reporting obligations outweighs the additional workload for those Parties that made that step and harmonized their PRTR reporting with other reporting obligations. In addition to the synergies, Parties report that current information technology solutions reduce the number of staff needed for management of increased data quantity.

33. Parties also report on using PRTR data to crosscheck with other data for increased data quality in both cases, the usefulness of which depends on the degree of comparability and harmonization between the different data sets.

Adding new activities to national reporting obligations

34. Parties also reported that they could not collect information on activities not listed in annex I to the Protocol on a national basis but require an international agreement to set up the legal basis for any additional reporting obligations.

Comprehensiveness of reporting¹⁰

35. Regarding the comprehensiveness of reporting, Parties seem to have two main options in integrating missing releases into their PRTRs:

- (a) Using a bottom-up approach with lower capacity thresholds and adding relevant activities, with the consequence of having polluters report directly on releases;
- (b) Collecting data not per point source reporting but using a top-down approach for sources with lower release quantities, with a well-defined reporting requirement for competent authorities or business associations to report the data.

36. The decision as to which of the two above-mentioned approaches is preferable depends on the economic structure of countries and sectors, as well as the characteristics of different groups of pollutants and the main intended purpose of the data. A study by Parties to the Protocol identifying where possible clear advantages lie in choosing one approach over the other or in applying them in parallel would help Parties in solving this challenge and reduce the workload on individual Parties in finding a way to ensure comprehensive and cost-effective PRTR data in good quality.

C. Pollutants¹¹

37. Eight out of seventeen respondents to the survey answered that they collect information, on a point source level, on pollutants that are not listed in annex II to the Protocol. Ten out of seventeen respondents to the survey answered that they collect information, on a point source level, on pollutants with lower pollutant thresholds than those set in annex II to the Protocol.

38. Ten out of seventeen respondents answered that not all pollutants that are crucially important for the environment and for human health are listed in annex II to the Protocol. The answers differ in structure: some refer to single pollutants or groups of pollutants, while

⁹ Additional considerations of this issue are covered in subsection O.

¹⁰ Additional considerations of this issue are covered in subsection D.

¹¹ See ECE/MP.PRTR/WG.1/2020/Inf.1 (sheet (C) "Pollutants") for a list of pollutants as referred to in survey responses.

others refer to pollutants that are listed in relevant European Union legislation (for example the Industrial Emissions Directive (IED),¹² the National Emission Ceilings Directive (NECD),¹³ the Water Framework Directive (WFD),¹⁴ Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH),¹⁵ the Biocidal Products Regulation (BPR),¹⁶ and Regulation (EC) No 540/2011 concerning the placing of plant protection products,¹⁷ multilateral environmental agreements (for example, the Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention)) and other relevant processes (for example, the Proposal For A Harmonized List Of Pollutants by the Organization for Economic Cooperation and Development (OECD)¹⁸). Also, pollutants for which current emissions from point sources cause adverse effects to health and/or the environment should be considered. Respondents also flagged that consideration should be given to a mechanism for continually revising the list of substances in releases/transfers. Such revision could include better alignment with the reported substances under other legislation or international commitments.

39. An extensive review of E-PRTR implementation has been performed and, regarding assessment of pollutants, it was concluded that:

(a) Thirty-eight additional pollutants have been suggested for addition to annex I to the E-PRTR Regulation as a result of the analysis of the IED, media-specific European Union legislation on waste and air, water, soil and waste pollution, and international conventions, as well as member States and international PRTRs. The addition of these pollutants would help the European Union and member States to track progress in addressing key media-based legislation including the NECD and the WFD;

(b) Other pollutants of concern may emerge in the future, most notably through the WFD watch-list process, under which pollutants may be identified as new priority substances. To assist future assessments of the scope of the E-PRTR pollutant list, tracking of this process is encouraged;

(c) For pollutants for which the E-PRTR captures less than 90 per cent of all industrial releases, reporting thresholds should be lowered. There are 11 air pollutants and 14 water pollutants with lower than 90 per cent capture of all industrial releases.

40. Parties with experience in using their PRTR for more substances and lower thresholds than provided for in the Protocol observed the following:

Added value

(a) A reduction of overall workload for reporting, where the PRTR system fulfils reporting requirements as defined under other national and international reporting obligations;

(b) A possible increase in data quality;

(c) An increase in the use of PRTR data for different purposes.

Challenges

A proportional increase of workload in reporting, data quality and management--related work.

¹² See <https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>.

¹³ See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.344.01.0001.01.ENG&toc=OJ:L:2016:344:TOC.

¹⁴ See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060> and <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32013L0039>.

¹⁵ See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R1907-20140410>.

¹⁶ See <https://echa.europa.eu/de/information-on-chemicals/biocidal-active-substances>.

¹⁷ See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02011R0540-20150903>.

¹⁸ See [www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono\(2014\)32&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2014)32&doclanguage=en).

Discussion

*Other existing reporting obligations*¹⁹

41. For those Parties that harmonized their PRTR reporting with other reporting obligations, the synergies outweigh the initial investment.

42. Parties also reported that consideration should be given to a mechanism for regular revision of the list of substances in releases/transfers. Such revision could include better alignment with the reported substances under other legislation or international commitments.

43. Parties also report on using PRTR data to crosscheck with other data for increased data quality in both cases, the usefulness of which depends on the degree of comparability/harmonization between the different data sets.

Adding new pollutants to national reporting obligations

44. Parties also reported that they cannot add pollutants on a national basis but require an international agreement to set up the legal basis for any additional reporting obligations.

Comprehensiveness of reporting

45. Value was identified in looking into reporting of releases of substances that are identified through different lists, including the watchlist under the WFD, the REACH, the BPR, or Regulation (EU) No 540/2011 on plant protection products, etc. Some pollutants on such lists also represent substances that are essential for economic activities and the functioning of our society, while being potentially harmful. Integrating into PRTRs those pollutants that are not to be banned, restricted or meant to be replaced increases the ability of Governments and stakeholders to engage effectively in the sound management of chemicals throughout their lifecycle. Regarding biocides and plant-protection products, top-down reporting on the active substance level could be more appropriate than bottom-up reporting from point sources.

D. Waste

46. Twelve out of seventeen respondents to the survey answered that they collect information, on a point source level, about waste generation and waste amount (recycled, landfilled, exported). Five out of seventeen respondents to the survey answered that they collect information, on a point source level, about the recycling rate for different waste streams according to the European Waste Catalogue (EWC).²⁰

47. In that context, Parties and stakeholders observed the following:

Added value

(a) A reduction of overall workload for reporting, data quality and management-related work where the PRTR system covers pollutants and uses thresholds as required under other national and international reporting obligations;

(b) A possible increase in data quality;

(c) An increase in the use of PRTR data for different purposes, including Value Chain approaches, with information that covers, for example, input suppliers to end market buyers, determining BAT in industrial activities (there will be a forthcoming OECD report on the topic) and facilitating the implementation of circular economy objectives and Sustainable Development Goals.

¹⁹ Additional considerations of this issue are covered under subsection O.

²⁰ See <https://ec.europa.eu/environment/waste/framework/list.htm>.

Challenges

- (a) Quality issues and confidentiality claims for more detailed information on waste data are some of the obstacles for integrating the aspect into national PRTRs;
- (b) A proportional increase of workload in reporting, data quality and management-related work.

Discussion*Other existing reporting obligations²¹*

48. Added value would lie in being able to link or integrate PRTR with other existing reporting obligations, i.e., Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) annex IV²² (disposal operations). Numbering the operations listed under annex III to the Protocol would be a relatively easy step in determining from the reported data which recovery or disposal was executed.

49. There also seems to be opportunity to better harmonize different existing waste reporting schemes in national legislation. European Union countries have done this to some extent, for example, through the EWC and Regulation (EC) No. 2150/2002 on European Union waste statistics.²³

Enacting circular economy and sustainable development related policies²⁴

50. Some Parties identified value in using the Protocol on PRTRs to harmonize waste- and recycling-related reporting, with a view also to improve their capacity and fitness in enacting circular economy- and sustainable development-related policies. Parties can request a report on the topic and discuss the suitability of using PRTRs for improved waste- and recycling-related reporting. The EWC and Regulation (EC) No. 2150/2002 could be a basis for such discussions.

E. On-site transfer

51. Five out of seventeen respondents to the survey answered that they collect information, on a point source level, about on-site transfer of waste or pollutants (for example, via internal wastewater treatment plant).

52. There is limited experience available on the above-mentioned topic. Parties and stakeholders observed:

- (a) Where more accurate information on internal waste transport and its management was made available, these data facilitated monitoring purposes;
- (b) Technically, information on waste treated at a facility is collected for waste statistics in the same way as the PRTR data;
- (c) There is currently no legal ground for collecting such information from facilities under PRTR.

Discussion

53. The issue, being linked to management of waste and recycling, can be an integrated part of discussions on how to improve waste- and recycling-related comprehensive reporting, as appropriate. Parties can request a report on the topic and discuss the suitability of using PRTRs for improved waste- and recycling-related reporting.

²¹ Additional considerations of this issue are covered in subsection O.

²² See www.basel.int/TheConvention/Overview/TextoftheConvention/tabid/1275/Default.aspx.

²³ See <https://eur-lex.europa.eu/legal-content/en/LSU/?uri=CELEX:32002R2150>.

²⁴ Additional considerations of this issue are covered in subsection K.

F. Storage

54. Four out of seventeen respondents to the survey answered that they collect information, at a point source level, about storage on site (either on pollutants or waste).

55. There seems to be limited experience available on this topic. Parties and stakeholders specified the issue further, as in the following:

(a) The storage of non-hazardous waste for more than one year and/or hazardous waste for more than 6 months is considered as a waste treatment operation, i.e., it should be reported to the environmental institution;

(b) There is a link to the European Union Seveso III Directive requirement,²⁵ where information on the use/amount/measures taken to control the risk of the presence of dangerous substances needs to be collected and provided to the public. However, this information is not integrated into other public databases such as the IED Registry or the European Chemicals Agency database;

(c) Some related information is gathered via the information exchange for identifying BATs under the IED;

(d) Data about waste storage, geographical coordinates, EWC and amount of waste are collected;

(e) Waste sheets for reporting include:

(i) Capacity of temporary storage;

(ii) State of temporary storage at 1 January and 31 December of the reporting year;

(iii) Activities with waste on place of origin: quantity (t) D/R method-for recovery (R); for disposal (D);

(iv) Statistical data;

(v) Data on landfill on location;

(vi) Recovery of waste on/in soil (D2)/deep injection waste in soil (type and quantity of produced waste; data from results of analysis of waste).

56. Respondents further observed the following:

Added value

(a) Storage information can help to address challenges related to monitoring waste movement;

(b) Improved waste management;

(c) Improved risk management and knowledge on amounts of chemicals of concern stored;

(d) Improved integration of data, including the use of the data for reports to institutions and on the state-of-the-environment;

(e) More data about waste and transfer of waste; statistical data for waste statistics.

Challenges

(a) Increased amounts of information require increased human capacity for both companies and public authorities. There is also a need for an information system for data processing;

(b) Integration of data;

²⁵ See <https://ec.europa.eu/environment/seveso/legislation.htm>.

- (c) Currently, only wastes transferred from a facility are used for PRTR reporting. From a technical aspect, the form used to collect PRTR data may be used to collect this information in future;
- (d) There is no legal ground to collect it via the environmental report;
- (e) Countries see no challenges, once an international agreement is reached on the issue;
- (f) Relevance is questionable; cost/benefit-ratio is not favourable.

Discussion

57. The issue seems linked to a number of different national and international initiatives and agreements, including the Stockholm Convention, and with possible opportunities for synergies with the implementation of the Protocol on PRTRs. The main concern regarding the Protocol's objective is possible releases of pollutants from storage places. Other concerns include risks associated with the presence of substances.

58. Possible challenges for reporting on storage places and being linked to pollutant transfers, management of waste and recycling could be an integrated part of discussions on how to improve waste- and recycling-related comprehensive reporting, as appropriate. Parties can request a report on the topic and discuss the suitability of using PRTRs for improved waste- and recycling-related reporting.

59. The option to use PRTR maps as a dissemination tool for related databases as to display existing data on storage sites and related information seems possible for a variety of examples. Usage of PRTRs as dissemination tool for storage databases would also be a step towards promoting integration of PRTR with other databases. Examples may include mapping of persistent organic pollutants storage under the Stockholm Convention, or work on the prevention and disposal of obsolete pesticides by the Food and Agricultural Organization of the United Nations.²⁶

G. Reporting requirements for diffuse sources

60. Four out of seventeen respondents to the survey answered that they included specific reporting requirements for diffuse sources.

61. Respondents to the survey further specified that:

(a) Diffuse data are taken from other data sources, for example, derived from reporting under the United Nations Framework Convention on Climate Change (UNFCCC), or the Convention on Long-range Transboundary Air Pollution (CLRTAP) for diffuse air emissions of pollutants;

(b) Some diffuse sources are covered as small point sources with reporting from the owner/operator, based on not having capacity thresholds and/or through simplified reporting forms, for example, agricultural activities.

62. The respondents observed the following challenges:

(a) Given the systemic difference between how data from diffuse sources are collected, it is challenging to integrate them without ambiguity in a platform that only holds point source data from facilities. The mixing of non-harmonized sources of data poses difficulties in explaining the comparability of the different data sets on a dissemination platform;

(b) Solutions exist to display data from different sources, while minimizing confusion and allowing for adequate interpretation and comparability of the different data sets;

(c) Current display of diffuse sources is often limited to a few activities/sectors;

²⁶ See www.fao.org/agriculture/crops/obsolete-pesticides/how-deal/inventory-risk/en/.

- (d) Harmonized methods of calculating the diffuse releases/emission factors are missing;
- (e) Institutions that should report on the diffuse sources are not defined;
- (f) Diffuse emissions from products are rarely covered in PRTRs;
- (g) It is challenging to present information on diffuse sources together with information on point source level in the register since they are derived from different data sources with different approaches (top-down, bottom-up).

Discussion

63. Including data from diffuse sources is key to comprehensive dissemination of pollutant releases to the environmental media. Not all Parties disseminate diffuse sources data. European Environment Agency members sometimes refer to the regional E-PRTR platform for data on diffuse sources from their countries. Defining reporting requirements for diffuse releases should be considered to close significant reporting gaps for releases of pollutants from sources when considering national totals of pollutant releases. It is hence closely linked to Parties' implementation of thresholds for reporting and capacity thresholds, and the extent of the list of activities.

64. Comprehensiveness of reporting, as discussed under point B Activities (see paras. 35 and 36 above, i.e. options in integrating missing releases into PRTRs), also needs to be considered in the context of specification of reporting requirements for diffuse sources. Parties could continue to share good practices and exchange information on how data on diffuse sources and point sources can be presented on maps.

H. Energy consumption

65. Seven out of seventeen respondents to the survey answered that they collect information, on a point source level, about energy consumption.

66. Regarding the reporting of energy consumption through PRTRs, Parties and stakeholders specified the issue further. They state that current reporting of energy consumption data is sometimes part of regular PRTR reporting and is often limited to specific activities/sectors and linked to other existing reporting, such as on Large Combustion Plants (LCPs) (input by type of fuel), waste incinerators, air emission and greenhouse gas inventories.

67. Survey respondents observed the following:

Added value

- (a) Improved comparability of pollutant releases and possibility of analysing yearly variations in pollutant releases;
- (b) Good verification tool for validation and review of reported pollutant release data;
- (c) Good data for reporting to other reporting obligations, such as CLRTAP and greenhouse gas (GHG) inventories;
- (d) Useful for development of emission factors;
- (e) Direct correlation with climate change mitigation and resource efficiency overall.

Challenges

- (a) The reporting of energy consumption to the competent authority seems to pose few challenges;
- (b) Sometimes, confidentiality issues are claimed;

(c) Reported data on energy consumption are sometimes not disseminated to the public.

Discussion

68. Despite it not being a pollutant, a number of Parties have integrated reporting on energy consumption into their PRTR system. These data are often not disseminated to the public, nor are they available in a structured way for all activities under the Protocol. The following challenges need further discussion, for example, based on a specific report:

- (a) How to best harmonize reporting between countries and with existing reporting and apply these in a structured way in PRTR reporting;
- (b) Possible integration of non-pollutant categories in PRTR reporting;
- (c) Ways to make such data available in a transparent way to the public while respecting provisions of the Protocol related to confidentiality matters.

I. Water consumption

69. Eight out of seventeen respondents to the survey answered that they collect information, on a point source level, about water consumption.

70. Respondents to the survey further specified that:

- (a) Water consumption data in some cases are an integrated part of the national reporting by facilities;
- (b) Other sources for information on water consumption exist and are used, including gathered via the information exchange for identifying BATs under the related IED. They are not always easily available to the public.

71. Parties and stakeholders observed the following:

Added value

- (a) Useful for validating and reviewing data reported by facilities;
- (b) Useful information to draw up reports, for example, to different national and European Union institutions, or on the state-of-the-environment;
- (c) Supports effective supervision and management by controlling authorities;
- (d) By using the water consumption and amount of pollutants in wastewater a “polluter-pays” fee can be calculated.

Challenges

- (a) The reporting of water consumption as part of PRTR reporting seems to pose few challenges, although increased information requires increased workload for both companies and public authorities;
- (b) Sometimes confidentiality issues are claimed and there is a lack of legal ground for collecting information from the facilities in a structured way.

Discussion

72. Despite it not being a pollutant, a number of Parties have integrated reporting on water consumption into their PRTR system. These data are often not disseminated to the public, nor are they available in a structured way for all activities under the Protocol. The following challenges need further discussion, for example, based on a specific report:

- (a) How to best harmonize reporting between countries and with existing reporting, and apply these in a structured way in PRTR reporting;
- (b) Possible integration of non-pollutant categories in PRTR reporting;

- (c) Ways to make such data available in a transparent way to the public.

J. Other aspects

73. Nine out of seventeen respondents to the survey answered that they collect information, on a point source level, about any other aspects (for example, production volume).

74. Respondents to the survey further specified:

(a) Production volume; Number of operating hours in year; and Number of employees;

(b) Production volume according to the permit (permit level and actual level) are collected but not in a structured way. The information is not included in the national PRTR. The production volume will, from 2021 on, be obligatory in the E-PRTR reporting for those sectors where the Commission has established units and metrics for reporting, but it will not be published at a facility level;

(c) Similarly to PRTR reporting, other public authorities collect contextual information from operators that can be relevant;

(d) Adding other aspects to PRTR reporting or dissemination can further include:

(i) Steps that lead towards better integration of different systems and information, for example “single access databases” including direct links to other national and regional authorities;

(ii) Useful search filters and functions for increased database usability;

(iii) Improve visibility and comparability of permit conditions, derogations, inspection reports and compliance reports;

(iv) A minimal list of permit conditions-related information for better benchmarking of real-time environmental performance and better use of information for other purposes (for example, BAT reference documents (BREFs)) or compliance assessment against environmental quality standards;

(v) Guarantee real-time access to important data like flow rates, continuous emissions monitoring results;

(vi) Harmonize data structures by providing templates to Parties to report under the same format (for example, the IED Electronic Permit Template);

(vii) Monitor transposition and implementation regarding transparency in a forum, for example, as part of the PRTR platform.

75. Survey respondents observed the following:

Added value

(a) The potential to examine relationships between emissions, waste transfers and production;

(b) Emission factors can be developed;

(c) Facilities can be compared;

(d) Annual variations in emissions can be explained.

Challenges

(a) Production volume alone is not automatically useful data for precise analysis in the context of pollutant releases. In many cases, there is more than one kind of product/production output for a facility;

(b) Identifying a common format across sectors is challenging;

- (c) Legal issues regarding confidentiality;
- (d) Optional reporting is of some, albeit limited, use.

Discussion

Production volume

76. Despite it not being a pollutant, a number of Parties have integrated reporting on production volume into their PRTR system. These data are often not disseminated to the public, nor are they commonly available in a structured way for all activities under the Protocol. The following challenges need further discussion, for example, based on a specific report:

- (a) How to best harmonize reporting between countries and with existing reporting and apply these in a structured way in PRTR reporting;
- (b) Possible integration of non-pollutant categories into PRTR reporting;
- (c) Ways to make such data available in a transparent way to the public.

Other aspects

77. Other aspects, for example, better integration with other information sources and regulation, such as permits, were also mentioned as improvements to PRTRs, for example, significantly increasing the usefulness of already disseminated information. This can often be done by linking consistently relevant contextual information, or directly presenting related non-PRTR information on a single platform (for example, a PRTR website).

K. Reporting related to sustainable development and circular economy

78. Four out of seventeen respondents to the survey answered that they had reporting related to sustainable development and circular economy.

79. Respondents to the survey further specified:

- (a) Adequate reporting requirements that would enable the public to track progress towards the achievement of the Sustainable Development Goals – a PRTR with additions could help in this way;
- (b) Currently, only some Parties have added reporting requirements that enhance the usefulness of PRTR data for Sustainable Development Goal progress tracking, such as input and output parameters of economic activities, like resource consumption and production output;
- (c) Implementation of design features that would facilitate the use of PRTRs for progress tracking could include:
 - (i) Enabling evaluation of comparative, snapshot and trend analysis, including of global trends;
 - (ii) Enabling evaluation of impacts of environmental policies and programmes;
 - (iii) Improving integration and public knowledge of human and ecosystem health issues;
 - (iv) Characterizing transboundary impacts of releases, waste flows and resource consumption;
 - (v) Identifying pollution prevention opportunities, such as release or consumption per unit of production, or efficiency of pollution prevention techniques;
 - (vi) Enabling review of environmental performance and efficiency;
- (d) Useful indicators could include, for example:

- (i) Ratio of pollutant releases and production outputs (including releases of chemicals of concern from products, i.e., “diffuse emissions”);
- (ii) Ratio of recyclability of resources and waste prevention per production output;
- (iii) Effectiveness rating of measures taken to prevent pollution and reduce impact.

80. Survey respondents observed the following:

Added value

(a) Better transparency and benchmarking tools would facilitate improved implementation of regulations on industrial activities and assist environmental authorities with enforcement, for example, members of the public could pick up on discrepancies and unreported breaches and violations. It would also support implementation of the Aarhus Convention obligations (access to information, public participation, and access to justice);

(b) Drive improvements in industry through delivering user-friendly information technology tools on environmental performance of industrial installations, and providing useful and end user-friendly access to data and information already generated by the industry;

(c) Increased accessibility of data related to sustainable development and circular economy. For example, work is ongoing to develop indicators for sustainable industry based on E-PRTR data;

(d) These analyses enable us develop policies in accordance with the Sustainable Development Goals.

Challenges

(a) Information technology-related issues where reporting is still in paper format;

(b) Not all economic agents report according to PRTR regulations and the data are not complete for a country’s economy;

(c) The data are not requested from those responsible for tracking progress in achieving Sustainable Development Goals and circular economy objectives. The reason for this is not known.

Discussion

81. The use of PRTR data to facilitate the achievement of Sustainable Development Goals and circular economy objectives is currently applied by a few countries, with a number of countries in a preparatory phase for, for example, upgrading their related reporting requirements. Basic PRTRs, as established, for example, following the Protocol’s minimum requirements, include valuable information related to analysing progress in achieving the Sustainable Development Goals.²⁷ The addition of reporting of non-pollutant in- and out-put data from industrial processes to a PRTR system enhances the value for analysing progress and developing policies related to the achievement of Sustainable Development Goals and circular economy objectives. The latter can be a key driver for political will to close gaps in the collection of relevant parameters through reporting by facilities and the use of Protocol on PRTRs standards regarding access to and usefulness of available data.

82. The following challenges need further discussion, for example, based on a specific report:

(a) How to best harmonize reporting between countries and with existing reporting and apply these in a structured way in PRTR reporting;

²⁷ See, for example, the Organization for Economic Cooperation and Development, “On the Use of PRTR Information in Evaluating Progress towards Meeting the United Nations’ Sustainable Development Goals: An Action Plan for Data Analysis and Moving Forward”, ENV/JM/MONO(2019)33, 5 December 2019. See [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO\(2019\)33&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO(2019)33&docLanguage=En).

- (b) Possible integration of non-pollutant categories in PRTR reporting;
- (c) Ways to make such data available in a transparent way to the public.

L. Reporting to other multilateral environmental agreements

83. Eight out of seventeen respondents to the survey answered that they reported to other multilateral environmental agreements using PRTR.

84. Respondents to the survey further specified:

(a) The use of PRTR data in reporting for the European Union Emission Trading System,²⁸ IED (LCPs, volatile organic compounds, solvents emissions),²⁹ CLRTAP, waste statistics, GHG inventories and Basel Convention and other related reporting;

(b) PRTR data are used as additional information in several environmental requirements both at European Union and international levels.

85. Survey respondents observed the following:

Added value

- (a) Avoid duplication of reporting/best use of reporting;
- (b) Better calculation of emissions;
- (c) Better information and tracking;
- (d) Improved quality of data for, for example, UNFCCC and CLRTAP.

Challenges

(a) Staying up to date and adapting to changing reporting requirements under different reporting obligations;

(b) Lack of harmonization between different reporting obligations, for instance, in PRTR, total emissions of a facility are reported, whereas UNFCCC and CLRTAP require energy and process emissions separately;

(c) Although there is considerable information on air and water emissions in PRTR (and European Monitoring and Evaluation Programme) databases, there have been few cases of reported data related to the Stockholm Convention methodology. One possible reason for this lack of reported data may relate to the difficulty in accurately accounting for activity data in diffuse sources, for example, quantity of waste burnt on open fires for an entire nation. The Stockholm Convention aims to assist inventory compilers through the provision of guidance material such as the Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs.³⁰

Discussion

86. Using PRTR together with, and for, other existing reporting obligations may improve data quality and reduce costs for those who report, manage and use the data.

87. In connection with subsections B (activities), C (pollutants) above and O (Integrating with data and information of other sectors)³¹ below, an opportunity exists to reduce further the reporting burden. This can be done by improving cooperation under the Protocol regarding reporting to other multilateral environmental agreements, by, for example,

²⁸ See https://ec.europa.eu/clima/policies/ets_en.

²⁹ See <https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>.

³⁰ See <https://toolkit.pops.int/>.

³¹ With implementing a single window approach to reporting by operators and owners, e.g. through implementation of a modular built reporting system to allow for the accommodation of different minimum reporting requirements to different data sets.

monitoring development in relevant international reporting or establishing common equivalence tables and further harmonization between different reporting.³²

M. Implementing the “polluter-pays” principle

88. Five out of seventeen respondents to the survey answered that they use PRTR to implement the “polluter-pays” principle.

89. Respondents to the survey further specified:

(a) The national institution responsible for charging polluters uses an application that is connected with the PRTR in a way that they can collect data needed for calculating charges;

(b) Data are compared with data declared for the general tax on polluting activities;

(c) Fee for polluting activities for air and water pollution is generated based on PRTR data;

(d) The externalized damage costs of industrial activities are not displayed, on the other hand, operators often complain that they cannot afford to pay for pollution prevention/control measures. The cost-benefit assessment is hardly ever made at company/mother company level. The global burden on disease is not reported and no causal link to the polluters is made, therefore changing this approach would finally ensure that the scale of externalized pollution costs could at least be visualized. Those findings would be useful to share with investors, rating agencies and technology providers.

90. Survey respondents observed the following:

Added value

(a) Entities charged with implementing the “polluter-pays” principle can reach all needed data easily and directly through predefined reports;

(b) For example, €60 million is generated yearly in Serbia and dedicated to environmental activities.

Challenges

(a) Preparatory steps for such a project are challenging;

(b) Changes in relevant legislation must be correctly integrated into the system at all times;

(c) Enforcement of reporting by facilities leads more often to misdemeanour cases for not reporting.

Discussion

91. The “polluter-pays” principle is an effective tool to reach the Protocol’s objective to reduce releases of pollutants. Depending on the amount charged to polluters per amount of pollutant they release, the joint implementation of PRTR and the “polluter-pays” principle:

(a) Facilitates implementation of the “polluter-pays” principle;

(b) Increases the use and value of PRTRs for Governments;

(c) Effectively provides incentives for reporting facilities to engage in pollution prevention and reduce pollutant releases;

(d) Demands cooperation between government entities.

92. Due to the increased use and value of PRTRs for larger parts of the Government, additional attention is given to comprehensiveness and correct reporting by facilities. This

³² See ECE/MP.PRTR/WG.1/2020/Inf.1, sheets 1(B) and 2(B) for a comparative analysis of different international reporting obligations related to annexes I and II of the Protocol on PRTRs.

allows for better data quality and improved enforcement of reporting obligations, with an increased juridical component related to collection and treatment of PRTR data.

93. Parties could decide to continue sharing information on experiences with linking the two tools, including the amounts charged per pollutant.

N. Reducing and preventing pollution

94. Seven out of seventeen respondents to the survey answered that they use PRTR to promote “actions to reduce pollution” and share pollution prevention methods.

95. Respondents to the survey further specified:

(a) A key tool to achieve the objective of the Protocol on PRTRs is to identify where further pollution prevention/control could be possible so to prevent/reduce negative impacts at source, to enable benchmarking of similar activities and its operators. This would also foster compliance promotion to related regulation;³³

(b) PRTR reporting does not include information on pollution prevention methods applied or production methods used, a deficit when implementing BAT;

(c) BREFs provide some pollution prevention-related information for operators in European Union member States;

(d) Can facilitate promoting cases of successfully implemented reduction measures and their indirect promotion via media;

(e) Allows for comparison of data over time and control of possible inaction by operators or owners.

96. Survey respondents observed the following:

Added value

(a) Help operator to lower emissions and transfers;

(b) Supporting the spread of pollution prevention measures is a tangible step towards achieving the Protocol’s objective and may be of more direct use than reporting more accurately on damage done by pollutant releases and transfers, or at least a very effective addition to current uses of PRTR data;

(c) Reduce pollution releases and transfers;

(d) Increase transparency about production methods used and prevention measures taken and thus build trust between stakeholders.

Challenges

(a) A harmonized approach at the international level to set up a similar coding list for the various techniques that can be used does not exist. This would facilitate better grouping of techniques/uptake of BATs in various sectors;

(b) The use of PRTR to promote “actions to reduce pollution” and share pollution prevention methods seems to pose few challenges.

Discussion

97. Promoting “actions to reduce pollution” and sharing of pollution prevention methods can be achieved by adding reporting requirements for facilities concerning production methods used and specific pollution prevention measures applied in a facility. Parties can also consider how to help facilities wishing to reduce their releases, for example, how

³³ See more input made on this by the European Environmental Bureau and the European ECO Forum under the Quick Wins submission sent to the United Nations Economic Commission for Europe Secretariat on 18 January 2016.

operators and owners can receive expert guidance on steps they can take to achieve tangible improvements in preventing pollution.

O. Integrating data and information of other sectors

98. Nine out of seventeen respondents to the survey answered that they used PRTR data to integrate with data and information of other sectors, such as health, economy, infrastructure.

99. Regarding integrating with data and information of other sectors, Parties and stakeholders specified the issue further:

(a) For example, using information technology tools to derive from one reporting obligation the data for other reporting obligations (information technology correlation with waste databases so industry doesn't need to supply data twice);

(b) For example, integration in the context of establishing a single reporting portal for waste transfer data, integrate electricity output data from ENTSO-E,³⁴ inventories by national statistical institutes, other national and regional institutions/departments (for example, related to waste, water/urban waste water treatment plants), any other national inventories, See also Géorisques website³⁵ for an example of integrating different databases in one dissemination platform. Also, considerable efforts by the European Union are ongoing to integrate E-PRTR data into a European Union registry of industrial sites, together with data and information reported under the related IED.

100. Survey respondents observed the following:

Added value

- (a) Reduced burden on regulated community, i.e., no duplication of reporting;
- (b) Better harmonization of datasets;
- (c) Allows for provision of useful forms of data, such as through allowing users to derive pollution intensity/resource consumption by beneficial output (for example, electricity/heat provided) – being a more accurate means to compare environmental performance than annual totals of pollutant releases.

Challenges

- (a) The complexity of matching codes used under different reporting, i.e., codes are not matching between ENTSO-E entries and LCP entries or E-PRTR plant codes;
- (b) Ensure comparability and constantly up-dated information from other information sources;
- (c) Extra cost for, for example, an information technology solution capable of managing data across different reporting obligations.

Discussion

101. Parties integrate data in two main ways: (a) different reporting with PRTR reporting to collect data through, for example, single window reporting; and (b) integrate data and information from different sources in a single platform for improved dissemination of available data and information. The latter dissemination platforms may be called PRTR or other names but follow Protocol and Aarhus Convention provisions.

102. Integration is also reached by other means than single window reporting or dissemination. This includes, for example, using information technology tools to derive data for other reporting obligations from data reported under PRTR, or by integrating clear links to contextual information and data, available from other platforms.

³⁴ See <https://www.entsoe.eu/>.

³⁵ www.georisques.gouv.fr/.

103. There are smooth transitions between different approaches to integrating reporting and providing easy and useful access to relevant data and knowledge related to pollutant releases and transfers. Choosing between the different approaches largely depends on existing national infrastructure. Parties to the Protocol can continue to exchange on the advantages and disadvantages of different approaches to integrating different reporting in PRTR and how to disseminate related contextual information in a useful way.

104. Parties could continue to exchange on this topic and prepare specific advice and guidance on integration of different reporting and content to PRTR, including advice on international platforms to which PRTRs can be linked and preparation of new content collectively where this is of added value and does not depend on national particularities.

P. Improving waste and wastewater reporting³⁶

105. Nine out of seventeen survey respondents answered that they use PRTR to improve waste and wastewater reporting.

106. Regarding improving waste and wastewater reporting, Parties and stakeholders specified the issue further:

(a) There is a project to integrate wastewater output data within an industrial database that is currently limited to LCPs;

(b) Reporting could include information on the origin of water used in production processes, treatment techniques used and type of recipient water body for releases of wastewater;

(c) Improvement can be linked to reporting of additional waste-related data, including single reporting portal for waste transfer data;

(d) Can include transfers of waste quantities (which is required by the E-PRTR Regulation) as well as pollutants in waste transfers;

(e) A pollutant-specific approach may be more suitable for tracking the impact of waste on the environment than the current (waste-specific) approach. The Protocol's annexes could contain a list of the most hazardous substances that could be tracked via PRTRs in waste transfers, as in the Czech PRTR;

(f) Operators and owners need to enter data from existing reports of measurements for air and water pollution. They do not need to calculate any values themselves as the information technology system does it automatically;

(g) Related examples of improving waste and wastewater reporting are the 2018 report by the European Environment Agency on 'Industrial wastewater treatment – Pressures on Europe's environment',³⁷ and a project commissioned by the Swedish Environmental Protection Agency on how wastewater treatment plants report their emission data. The aim of the project was to conduct a targeted review of emission data from the wastewater treatment plants covered by the reporting requirements in accordance with E-PRTR.³⁸

107. Survey respondents observed the following:

Added value

(a) Integration with any other existing and related reporting would reduce burden on the regulated community, i.e., report once, not many times;

(b) More comprehensive and improved quality data;

(c) Facilitated access with having more information and data in one place.

³⁶ Additional considerations of this issue are covered under subsections D, E and F.

³⁷ See www.eea.europa.eu/publications/industrial-waste-water-treatment-pressures.

³⁸ See <http://naturvardsverket.diva-portal.org/smash/record.jsf?pid=diva2%3A1442529&dswid=8491> (in Swedish only).

Challenges

- (a) Increase in financial demand, based on more testing and work related to quality control;
- (b) PRTR data are facility data, while some reported information is at installation level. Indirect discharges (sent to urban wastewater treatment plants) are not reported under the facility information, so it is difficult to identify the (upstream) possible source of pollution;
- (c) Regarding wastewater reporting, there are several uncertainties in release data from environmental reports. For example, substances reported as below the limit of quantification (or detection limit) include silver, cadmium, chromium, mercury and lead. Many organic substances that are reported more sporadically are based on only a few samples. There are also different ways of handling values below the quantification limit when calculating emissions. There are examples in the data set that show that half, or the actual, quantification limit is used as a numerical value in the calculations. According to Swedish Environmental Protection Agency guidelines on how low values should be handled in calculations of emissions, half the quantification limit should be used.³⁹

Discussion

108. Improving waste and wastewater reporting may be closely linked to improved integration of different reporting obligations, where these exist, with similar advantages to other single window reporting obligations. There are further links to an improved understanding of progress towards, and development of, a sustainable and circular economy. Parties could continue an exchange on this topic and prepare specific advice and guidance on integration of different reporting and content into a PRTR.

II. General conclusions

109. Shared experiences show that many Parties engage in development of PRTRs, often going beyond the minimum requirements currently set by the Protocol. Many of the development efforts made by Parties are in-line with the targets set by focal area III on the development of the Protocol in the strategic plan for 2015–2020 (see ECE/MP.PRTR/2014/4/Add.1, decision II/2, annex) but are not coordinated among all Parties to the Protocol. There is potential for Parties to join efforts and improve international coordination, also with a view to establishing improved harmonization of PRTR-related reporting across the globe.

110. Respondents to the survey further highlight that, in order for the Protocol to respond to increased demand for easy-to-access integrated data and information, the Protocol and its implementation need to be kept up-to-date in relation to ongoing development of knowledge and regulations related to pollutant releases and transfers. This could lead, for example, to the Working Group discussing any relevant new developments on a yearly basis, including in relation to the reporting to other multilateral environmental agreements and other international instruments or to scientific and public debate.

A. Reporting

111. Positive experiences from those Parties having integrated other reporting obligations into their PRTR reporting, together with related documents presented, for example, in the response by the European Union and its member States (see Review of E-PRTR

³⁹ See <http://naturvardsverket.diva-portal.org/smash/record.jsf?pid=diva2%3A1377527&dswid=-9955> (in English) and http://extra.lansstyrelsen.se/smp/Sv/hur-gor-jag/verksamhetsutovare/Anvandarinstruktioner/Emissionsdeklarationen/Fyll_i_emissionsdeklarationen/Sidor/default.aspx?keyword=kvantifiering#8 (in Swedish only).

implementation and related guidance⁴⁰ and corresponding lists in sheets A (Activities) and C (Pollutants) of the Excel file on survey responses (ECE/MP.PRTR/WG.1/2020/Inf.1)), provide a strong basis for harmonized inclusion by Parties of activities and pollutants in PRTRs.

112. The survey also showed that there are many interlinkages between the topics discussed in section I. In order to achieve improved alignment of any related future work, the topics could be grouped under main categories. Categories related to reporting under the Protocol could be grouped as follows:

1. Sustainability – resource consumption and other non-pollutant data in Pollutant Release and Transfer Registers

113. There are challenges related to enabling Parties to make informed decisions in the context of sustainable development. Parameters, such as energy consumption (see subsection H), water consumption (subsection I) or production volume (subsection J (other aspects)), that are relevant for improved reporting related to sustainable development and circular economy (see subsection K) are integrated parts of reporting under some PRTRs. Among countries there is no harmonized approach available for implementation. The following specific challenges therefore require further discussion among Parties:

- (a) Possible integration of non-pollutant categories into Protocol reporting requirements;
- (b) How to best harmonize reporting between countries and with existing reporting and apply these in a structured way in PRTR reporting;
- (c) Ways to make such data available in a transparent way to the public.

114. Parties could first decide whether there is an interest in developing international guidance on sustainability in relation to PRTR development. Such guidance could cover existing interlinkages between different categories.

2. Pollutant releases – comprehensive registers and inventories

115. Work on the development of the Protocol related to annex I (see subsection B (Activities)) and annex II, (see subsection C (Pollutants)) and the specification of reporting requirements for diffuse sources (see subsection G) are closely interlinked in the context of overall comprehensiveness of PRTR data. Identifying, for instance, where possible clear advantages exist for choosing between a bottom-up or top-down approach for reporting on specific pollutant releases and transfers or when best to apply both approaches in parallel, would help Parties in specifying reporting requirements for diffuse sources. Engaging in this work jointly would reduce the workload on individual Parties in finding a way to ensure comprehensive and cost-effective PRTR data of good quality.

116. Comprehensive reporting also touches on the issue of how data are generated and reporting on relevant context, such as sharing pollution prevention methods (see subsection N (Promoting “actions to reduce pollution” and sharing pollution prevention methods)). In that context, when Parties make changes to their reporting requirements, the usefulness of reported data can further be increased by adding reporting on the processes that eventually lead to pollutant releases and transfers. The usefulness can also be improved further by including reporting on the applied methodology for measurement, calculation or estimation of releases and transfers.

3. Pollutant transfers – sound management of disposal and recovery of waste

117. Respondents shared experience on where they use their PRTR to supplement a variety of issues related to proper reporting for sound waste management. For example, specific challenges in waste management and monitoring of waste streams seem to be solvable when

⁴⁰ SR14 Final Report_31Jan2020_Ares.pdf, available at https://circabc.europa.eu/ui/group/f80de80b-a5bc-4c2b-b0fc-9c597dde0e42/library/b4eacd6d-4425-479a-a225-77306de6b060?p=1&n=10&sort=modified_DESC.

reporting on storage or on-site transfers is improved. For Parties to discuss the suitability of using PRTRs for improved waste and recycling (see annex III of the Protocol on recovery operations) related reporting seems timely and would benefit from grouping different aspects related to the topic (see subsections D (Waste), E (On-site transfer), F (Storage), P (Improving waste and wastewater reporting)). The EWC and European waste statistics could be a basis for such discussions. Furthermore, there seems to be value in using the Protocol on PRTRs to harmonize different approaches on waste- and recycling-related reporting that were shared by Parties with a view to improving Parties' capacities and fitness in enacting circular economy- and sustainable development-related policies.

B. Dissemination

118. The survey also provided experiences from respondents on how to better disseminate and make more use of the collected PRTR data. While proper reporting and data management are a requirement to generate knowledge, the way it is disseminated to stakeholders is the factor that determines whether Parties reach the Protocol's objective and reduce pollutant releases. The following area of work should hence be constantly considered and discussed by Parties:

From data to knowledge – providing useful information and fostering public participation for sustainable development

119. According to experiences shared in the survey, disseminating data in a way that allows informed decision-making by stakeholders and that provides knowledge about pollutant releases and transfers, is linked to:

- (a) Collecting the right parameters in a comprehensive way;
- (b) Connecting and integrating PRTR data with data and information of other sectors, such as health, economy and infrastructure, which have relevance in achieving the Protocol's objective more effectively (see subsection O);
- (c) Better integration with other information sources and regulation related to industrial policy, such as permits, was also mentioned as an improvement to PRTRs which, for example, significantly increases the usefulness of the already disseminated information (see chapter J (Other aspects)).

120. Guidance for Parties about relevant contextual information that is available from official websites, such as eChemPortal,⁴¹ if regularly updated, would allow Parties to harmonize their approach in linking information from relevant web pages. In addition, active integration with other databases has shown itself to be very effective in reducing costs and at the same time improving the usefulness of the provided data. Integration with other databases, however, largely depends on national infrastructure. Experiences of further integration of PRTR with other databases could continue to be shared in a structured way, for example, through expert support, specific projects or bilateral exchange on the topic, including study visits.

121. For improved dissemination, there is the opportunity to collectively develop global tools based on the harmonized minimum standards set by the Protocol. Parties could engage in the development of such tools.

C. Other issues addressed through the sharing of experiences in development of the Protocol on Pollutant Release and Transfer Registers

122. The Protocol is open for accession by any State Member of the United Nations. Given the prevalence of global supply chains, adherence to common international standards for

⁴¹ See www.oecd.org/chemicalsafety/risk-assessment/echempportalglobalportaltoinformationonchemicalsubstances.htm.

PRTRs by countries from all regions is a key issue for the reduction of releases and transfers by consumers and producers across the globe. Parties could discuss ways to effectively support ratification of the Protocol by States from all regions.

123. Experience shared in the survey shows that implementation of the “polluter-pays” principle through PRTR is an effective approach to achieving the Protocol’s objective of reducing releases of pollutants (see chapter M above). Parties could decide to continue sharing information on experiences with this approach, including on the amounts charged per pollutant.

D. Way forward

124. The survey demonstrated that PRTRs have significantly evolved since the Protocol was adopted in 2003. The survey also showed that there is a need to improve cooperation so as to address common challenges related to development of the Protocol. This can be done through consideration of the issue of development of the Protocol under the auspices of the Working Group of the Parties (through, for example, preparing a review pursuant to article 6 (2) of the Protocol, and organizing regular thematic sessions at its meetings). Parties could also take the lead on development-related issues through, for example, project groups with other interested Parties.
