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# **Economic Commission for Europe**

Meeting 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

# Working Group of the Parties

Seventh meeting Geneva, 28 and 29 November 2019 Item 4 (b) of the provisional agenda Promotion and coordination: global promotion of the Protocol

# **Report on the third Global Round Table on Pollutant Release and Transfer Registers**

# Summary

Pursuant to the success of the first and second Global Round Tables on Pollutant Release and Transfer Registers (Geneva, 19 November 2013, and Madrid, 24 and 25 November 2015, respectively), the third session of the Meeting 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 Environment Matters (Budva, Montenegro, 15 September 2017) and the first meeting of the Organization for Economic Cooperation and Development Working Group on Pollutant Release and Transfer Registers (New York, 27–29 June 2017) entrusted their respective Bureaux to explore an opportunity to organize a third global event and the Meeting of the Parties requested the secretariat to produce the reports of future Global Round Tables (ECE/MP.PRTR/2017/6, para. 12).





# I. Introduction

1. The first Global Round Table on Pollutant Release and Transfer Registers (PRTRs) (Geneva, 19 November 2013) received growing interest as a global platform for sharing ideas and showcasing the potential of PRTRs. At the third Global Round Table in 2019, participants saw examples from governmental, non-governmental, research and private sector organizations that deal with improving existing or establishing new PRTR systems. Innovative approaches to the use of PRTRs presented at the meeting were centred around the topics of PRTRs for achieving Sustainable Development Goals and the cross-cutting uses of PRTRs for different stakeholders.

2. The third Global Round Table was co-chaired by Ms. Tina Skårman (Sweden), Chair of the Meeting 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), and Mr. Noriyuki Suzuki (Japan), Chair of the Organization for Economic Cooperation and Development (OECD) Working Group on PRTRs.

3. The Global Round Table attracted representatives of Governments, non-governmental organizations (NGOs), industry, intergovernmental organizations and academic institutions from different continents to discuss PRTRs as a tool that facilitates the making and promotion of informed decisions for a sustainable future. The event helped to foster the exchange of experience between different Governments and stakeholders and build experts' capacities and promote synergy on PRTR-related issues.

4. The Global Round Table was a partnership undertaking, co-organized and serviced jointly by the United Nations Economic Commission for Europe (ECE) and OECD, in cooperation with the United Nations Environment Programme (UNEP) and the United Nations Institute for Training and Research (UNITAR). The four organizations matched their expertise and capacities to organize the joint meeting to promote the transfer of knowledge and foster environmental democracy around the world.<sup>1</sup>

# A. Attendance

5. The meeting was attended by delegations from the following States Members of the United Nations: Albania, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Cambodia, Canada, Croatia, Czechia, Denmark, Finland, France, Georgia, Germany, Israel, Japan, Kyrgyzstan, Malta, Mongolia, Morocco, North Macedonia, Norway, Peru, Poland, Republic of Moldova, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, Tajikistan, Tunisia, Turkmenistan, Ukraine and United States of America.

6. Also in attendance were representatives of the Commission for Environmental Cooperation (via video link), the European Union, the Economic Commission for Latin America and the Caribbean (ECLAC), OECD, UNEP and UNITAR.

7. Representatives of Aarhus Centres and professional, research and academic organizations were also present, as were representatives of international, regional and local NGOs, many of whom coordinated their input within the framework of the European ECO-Forum.

# **B.** Proceedings

8. Mr. Marco Keiner (Director, ECE Environment Division), in a welcoming statement, highlighted the importance of PRTRs in enhancing transparency and accountability and achieving the Sustainable Development Goals. He further emphasized the role of the Protocol on PRTRs as a prototype for establishing PRTRs across the globe, and strongly encouraged

<sup>&</sup>lt;sup>1</sup> Statements and other materials from the third Global Round Table are available at www.unece.org/prtr\_grt2018.html.

interested countries to accede to the Protocol and enjoy the solid framework for implementation that it offered.

9. His Excellency Dejan Zlatanović (Ambassador Extraordinary and Plenipotentiary, Permanent Representative of the Republic of Serbia to the United Nations Office and other international organizations in Geneva) delivered a keynote address, observing that PRTRs were central to his country's efforts to fulfil its international reporting obligations and facilitated the implementation of important pillars of sustainable policymaking, such as the "polluters pays" and "extended producer responsibility" principles. He underlined that, for all environmental sector actors, new opportunities were emerging, together with new risks. Such opportunities and risks should be addressed by sharing knowledge and setting standards globally that helped to provide a healthy environment for all and for future generations.

10. The Global Round Table was divided into four thematic sessions. During the first session, on "PRTRs across the world", participants learned about the current status of the establishment of PRTRs across the world, including major challenges in implementing or developing PRTRs, and relevant activities carried out by international organizations.

11. The second session, on "How to apply PRTRs to achieving the Sustainable Development Goals", provided an opportunity to share experience and opinions on how PRTRs contributed to the Goals' achievement.

12. Emerging opportunities and common challenges in development and implementation of PRTRs were discussed at a third session, on "Emerging PRTRs", with a focus on small group discussions on the following three topics:

(a) Variety of uses and users of PRTR systems and related communication strategies;

(b) The role of equivalency in data comparability and harmonization of PRTRs among countries;

(c) PRTRs that served as a single window access point to, for example, government services or fulfilment of a variety of reporting obligations, including to different international agreements.

13. The fourth session, on "PRTRs for different stakeholders", aimed to showcase the experiences and views of different stakeholders in panel discussions on how PRTRs could serve as a major driving force for pollution reduction throughout many sectors.

14. The third Global Round Table concluded with the key outcomes derived from the discussions and summarized jointly by the co-Chairs.

# II. Pollutant release and transfer registers across the world

## A. Presentations

15. Pursuant to introductory remarks by the Co-Chairs of the Global Round Table, Mr. Íñigo De Vicente-Mingarro (Chair, International PRTR Coordinating Group) presented an updated global map,<sup>2</sup> including a list with information on countries with active or developing PRTRs and those countries that had expressed an interest in building PRTR systems. He also introduced the important topic of global data comparability,<sup>3</sup> which would be discussed further during both the current meeting and future Coordinating Group future meetings.

16. Mr. Andrea Cararo (Chemicals and Waste Management Programme Unit, UNITAR) updated participants on ongoing UNITAR PRTR-related activities, including: the Global

<sup>&</sup>lt;sup>2</sup> See https://prtr.unece.org/.

<sup>&</sup>lt;sup>3</sup> For information on OECD work related to PRTR harmonization, see www.oecd.org/env/ehs/pollutant-release-transferregister/publicationsintheseriesonpollutantreleaseandtransferregisters.htm.

Project on the Implementation of Pollutant Release and Transfer Registers as a tool for Persistent Organic Pollutants reporting, dissemination and awareness raising for Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru; and the project on Strengthening Capacities for Developing a National PRTR in Support of Strategic Approach to International Chemicals Management Implementation in Mongolia.<sup>4</sup> In addition, the initial findings of an ongoing UNITAR study on the use of PRTR to support countries in reporting to the different chemical Conventions were presented.

17. Mr. Mohamad Kayyal (Programme Management Officer, Mediterranean Pollution Assessment and Control Programme, Barcelona Convention secretariat, UNEP) informed the participants about the Barcelona Convention secretariat's work related to reducing pollution from land-based sources into the Mediterranean Sea<sup>5</sup> and key aspects of PRTR activities, including the main challenges for implementation of PRTRs, particularly in southern Mediterranean countries. One aim was to develop further the existing National Baseline Budget system on pollution releases and harmonize it fully with the PRTR approach. Significant challenges included a lack of: legislation on reporting data to Governments; infrastructure; financial resources; and trained government authority and private sector staff.

18. Mr. Carlos De Miguel (Chief, Policies for Sustainable Development Unit, ECLAC) presented the recently adopted Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement); the first environmental treaty adopted in the ECLAC region.<sup>6</sup> He highlighted article 6 (4) – on establishing PRTRs – of the Regional Agreement and gave an overview of the current status of PRTRs in the region. He further underlined the importance of technical cooperation at the global level, stating that several opportunities existed for future cooperation on PRTR implementation and development.

19. Mr. Sokunthea Uon (Vice Chief, Department of Hazardous Substance Management, Ministry of Environment, Cambodia) said that significant steps had been taken towards implementing a PRTR system in Cambodia and a first pilot trial had led to a national executive proposal for such a system. More recently, software solutions for online reporting by the industrial sector and for the dissemination of PRTR and environmental information through a web portal had been commissioned. Dissemination strategies for PRTR data included a workshop, a web portal and social media as an important information source for the public. In addition, general guidelines for emission estimation techniques for use by industry reporters and related training workshops had been developed and implemented. Nevertheless, many challenges remained, including the limited nature of public and private sector actors' experience with chemical management. Full implementation of PRTR in the context of the Strategic Approach to International Chemical Management was planned to be achieved in 2020.

20. Ms. Nino Gokhelashvili (Head, Sustainable Development Division, Ministry of Environmental Protection and Agriculture, Georgia) reported that some PRTR-related data were currently available through different portals and that more information on water and waste would be made accessible electronically in the near future. Moreover, the environmental permit emap was being updated to present permit information and environmental impact assessment reports in a more user-friendly way. The overall aim was to establish a comprehensive environmental information system for Georgia. The system would include data on pollutant releases to air and water, on waste and on the use of water resources, alongside other environmental information from different public sources.

21. Ms. Sarantuya Jigjiddorj (National coordinator, "Strengthening Capacities for Developing a National PRTR in support of Strategic Approach to International Chemicals Management Implementation in Mongolia" project, Ministry of Environment and Tourism, Mongolia) informed participants that pollution was one of the major challenges facing Mongolia, particularly air pollution in Ulaanbaatar, which was mainly caused by four coal-fired thermal power plants and 160,000 household stoves. Water pollution – another priority

<sup>&</sup>lt;sup>4</sup> See http://prtr.unitar.org/site/projects.

<sup>&</sup>lt;sup>5</sup> See https://web.unep.org/unepmap/who-we-are/map/strategies.

<sup>&</sup>lt;sup>6</sup> See www.cepal.org/en/escazuagreement.

policy issue in water-scarce Mongolia – was caused mainly by activities such as mining, tanning, leather tanning, wool washing, waste disposal, agriculture and car wash points. There was a range of decisions and projects to address those and other environmental challenges, including implementation of the "polluter pays" principle and projects establishing monitoring systems and several separate inventories. The Government of Mongolia had begun developing a national PRTR that could be combined with the necessary improvement of relevant legislation. While the "polluter pays" principle was already in place, its implementation could be improved if linked to a PRTR system. There were plans to centralize maintenance of several environmental databases in a central PRTR system. That would allow for long-term sustainability and facilitate maintenance of institutional memory of lessons learned from a variety of projects related to pollutant releases and related impacts on human health and the environment.

22. Ms. Camila Alva Estabridis (Director of Pollution Control and Chemical Substances, Ministry of the Environment, Peru) said that Peru had signed the Escazú Agreement, which recognized explicitly the requirement for countries to have PRTR systems as a tool that contributed to access to environmental information. Peru was already working on PRTR implementation to provide useful information for various government authorities and nongovernmental interest groups. The process of establishing the PRTR had begun in 2005, with the ratification of the Stockholm Convention on Persistent Organic Pollutants; thus, from its inception, the PRTR had considered the industrial, mining and energy sectors and agricultural and agro-industry-related activities. Data reported to the PRTR included figures on: annual fuel and energy consumption; pollutant releases to air, water and soil of 144 substances; and the generation of hazardous waste. In recent years, training activities had reached 150 companies, 4,500 citizens and 150 government staff. Combined with a strong communication campaign, the training activities had led to greater trust between stakeholders and a major increase in voluntary reporting by companies. In designing its PRTR, Peru had met OECD PRTR-related standards and had identified a need to consolidate a registry mechanism that integrated other notification systems under a single window platform.

23. Mr. Mohamed Chérif Fourti (General Engineer, Tunisian Observatory for the Environment and Sustainable Development) pointed to the favourable legislative and institutional situation for the establishment of a PRTR, including civil society's role in the young democracy of Tunisia. For instance, the 2014 Constitution specifically guaranteed the right on access to information. Therefore, developing an information system like a PRTR would help the government authorities to do their work and facilitate exchange with civil society by sustainably installing transparency regarding the exchange of information between different stakeholders. Tunisia was currently working on ratification of the Aarhus Convention, including access to environmental information, and had requested support from the UNEP Mediterranean Pollution Assessment and Control Programme to install a national PRTR system that would cover 1,000 facilities. Relevant information – not currently publicly accessible – already existed, including a valuable information system on water-related pollution supporting operators of industrial facilities linked to pollutant-relevant management. One challenge faced was the duplication of data and information by different information sources. The Government had concluded that different systems needed to be restructured and data shared and dispersed through a comprehensive PRTR system.

### **B.** Discussion

24. During the ensuing discussion, a number of existing resources addressing, in particular, the topic of harmonization of PRTRs, were highlighted.<sup>7</sup> Moreover, opportunities for regional and bilateral cooperation, for example, between neighbouring countries,<sup>8</sup> were underlined.

<sup>&</sup>lt;sup>7</sup> See, for example, https://prtr.unece.org/; www.oecd.org/env/ehs/pollutant-release-transferregister/publicationsintheseriesonpollutantreleaseandtransferregisters.htm; www.cec.org/tools-andresources/taking-stock/taking-stock-online-north-american-industrial-pollution; and http://prtr.unitar.org/site/projects.

<sup>&</sup>lt;sup>8</sup> Comparable to ongoing work of the Commission for Environmental Cooperation.

25. Furthermore, a representative of Mongolia said that, currently, numerous separate inventories existed under different government entities. Many were under constant threat of discontinuation due to a lack of human and financial resources. Mongolia wanted to use the PRTR system to connect and combine those databases, thus ensuring continuity in a cost-efficient way. The negotiations to find an agreement on maintaining a common system for different entities would be important.

26. Pharmaceuticals – a big concern, for example, in India – were held by some to be an important group of chemicals in many PRTRs and would be a good topic for future discussion.

# **III.** How to apply pollutant release and transfer registers to achieving the Sustainable Development Goals

## A. Presentations

27. Ms. Lesya Karnaukh (Member of the Bureau of the Meeting of the Parties to the Protocol) stated that the principles of accountability, transparency, inclusivity and the rule of law contained in Sustainable Development Goal 16 and the Protocol were key to the implementation of all the Goals.<sup>9</sup> In particular, the Protocol supported implementation of the Goals by providing a legal institutional framework to handle related actions in a transparent and participative manner, by:

(a) Facilitating consensus building and providing support to multilateral processes;

(b) Assisting Parties in implementing their commitments through recommendations and guidance materials, capacity-building and coordination mechanisms;

(c) Sharing experience and offering support to other countries.

28. The Protocol also supported the promotion of transparency and a participatory approach in the implementation of other multilateral environmental agreements and international initiatives that helped to implement the Goals. Therefore, advancing the implementation of the Protocol's provisions would contribute towards the sound achievement of the Goals and their targets.

29. Mr. Steve Devito (Member of the Bureau of the OECD Working Group on PRTRs) highlighted the rapid development of PRTRs over the past twenty years, a development that was expected to continue, with most countries probably having PRTRs in place in the next twenty years. As more PRTRs were developed, there was a demonstrated need to implement them in a way that allowed information to be integrated and harmonized. Harmonization across PRTRs allowed more countries to contribute to and benefit from global-scale analyses to assess sustainability. Furthermore, sustainability did not begin and end with PRTRs, which were one of many factors that needed to be integrated with one another on the path towards a sustainable future.

30. Ms. Caitlin Briere (Programme Analyst, United States Environmental Protection Agency) gave an overview of an OECD project that demonstrated PRTRs' value in supporting and tracking achievement of the Sustainable Development Goals and targets.<sup>10</sup> She presented strategies for harmonizing PRTR data for use in international scale analysis, and provided guidance on how PRTR data from multiple PRTR systems could be used to track progress towards sustainability, giving specific examples of uses to track and achieve

<sup>&</sup>lt;sup>9</sup> Highlighted by Protocol Parties in the Budva Declaration on Environmental Democracy for Our Sustainable Future (ECE/MP.PP/2017/16/Add.1–ECE/MP.PRTR/2017/2/Add.1) and the document Your Right to Build a Sustainable Future: the Aarhus Convention, its Protocol on PRTRs and the Sustainable Development Goals (ECE/MP.PP/2017/18–ECE/MP.PRTR/2017/4).

<sup>&</sup>lt;sup>10</sup> Based on OECD, Framework on the Role of Pollutant Release and Transfer Registers (PRTRs) in Global Sustainability Analyses (Paris, 2017). Available at www.oecd.org/chemicalsafety/pollutantrelease-transfer-register/publicationsintheseriesonpollutantreleaseandtransferregisters.htm.

specific goals and targets that were most closely tied to chemical and waste management and human health impacts of chemical exposure.

31. Furthermore, the development of a proof of concept for a global analysis of PRTR data was presented. In addition to data on releases of pollutants, the analysis could include economic information and regulatory activities as indicators, which were variables that might impact pollutant releases and could be used to report on progress in achieving, for example, target 12.4 of the Sustainable Development Goals.

32. Ms. Cheryl Keenan (Senior Analyst, Eastern Research Group) provided further insights into a software tool that had been developed under the PRTR Sustainable Development Goals project and that had been developed in the Qliksense<sup>11</sup> data visualization and exploration platform. The tool currently included PRTR data for nine reporting years from seven PRTRs (including the European Pollutant Release and Transfer Register, with its information coming from 33 countries) and for 14 pollutants to air, water and land, as well as reporting by dozens of industry sectors. The tool also included USEtox characterization factors<sup>12</sup> to compare toxicity scores of the different pollutants and gross domestic product data for the different countries, to help normalize data for improved trend-analysis and data comparability.

33. The tool covered two targets: (a) the simplified aggregation and presentation of a large number of data points; and (b) a means to easily explore the details of the data. For example, the tool would allow a country, a company or any other interested user to track progress or to see the origin of a specific trend. The underlying idea was that, by understanding a trend, one would be able to identify which country, sector, medium or facility was driving that trend. Understanding trends could potentially enable actors to take steps to reverse them – which would ultimately accelerate progress in meeting a set goal (for example Sustainable Development Goals and targets) – or to scale up the positive actions and policies that were most effective.

### 1. Pollutant release and transfer registers building on existing reporting structures

34. Mr. Grégoire Nimeskern (Engineer in charge of Pollutant Release and Transfer Register, General Directorate for Risks Prevention, Ministry for the Ecological and Inclusive Transition, France) presented the various steps from data reporting to data dissemination and addressed the current design, aims and challenges for future development of the French PRTR that built on existing reporting structures, including the link to achieving the Sustainable Development Goals.

35. Key challenges addressed included:

(a) Technical issues related to ensuring robust data management, quality assessment and validation, including by French regional authorities;

(b) Dissemination of data in a way easily understandable by all, including linking PRTR information to other relevant information, such as descriptions of substances and their toxicity, eco-toxicity and impact on climate change.

36. To cover the above-mentioned challenges, an integrated, single window reporting approach had been developed for the register, which covered international and national reporting obligations, including the European Union Emissions Trading System. The register was currently being evaluated with a view to improving data reporting and dissemination, including interoperability between different government databases.

37. Mr. Alex Radway (Policy Advisor, Directorate-General for Environment, European Commission), said that the European Union was fully committed to implementing the concept of sustainable development. That task was carried out through a number of measures at various levels, including by, for example, mapping how legislation could further contribute

<sup>&</sup>lt;sup>11</sup> See www.qlik.com/.

<sup>&</sup>lt;sup>12</sup> USEtox is a scientific consensus model endorsed by the United Nations Environment Programme (UNEP)/Society of Environmental Toxicology and Chemistry Life Cycle Initiative for characterizing human and ecotoxicological impacts of chemicals. Main output is a database of recommended and interim characterization factors including fate, exposure and effect parameters. See https://usetox.org/.

to achieving the Sustainable Development Goals. That work was done in parallel with a monitoring exercise carried out by Eurostat, which had issued its first report (updated annually) on the results of the exercise in 2016. To that end, Eurostat had established a set of 100 indicators that provided a reference framework for assessing progress towards achieving the Goals. The results of the report were available on a web page and could easily be searched with a view to future use.<sup>13</sup> While none of the 100 metrics relied on PRTR data, in the future it might be possible to add metrics linked to PRTR data for improved results.

38. Mr. Bastian Zeiger (Industry and Environment Expert, European Environment Agency) provided further insight into a project that used indicators to monitor European Union industrial emissions policy and its actual effects on emission levels and to contribute to United States Environmental Protection Agency efforts (see paras. 29 and 30 above). The project's scope included exploring the normalization of European Pollutant Release and Transfer Register data via activity, toxicity and damage costs associated with different substances, which could help, for example, to identify gaps in the regulatory framework or to analyse thresholds currently set in the European Pollutant Release and Transfer Register regulation.<sup>14</sup> Another aim was to track progress specifically related to target 9.4 of the Sustainable Development Goals– on environmental performance of industry – with an indicator on emission intensity, expressed per economic activity.

39. Mr. Orlando Cabrera-Rivera (Head of Unit, Environmental Quality, Commission for Environmental Cooperation) said that, in order to address cross-border environmental issues - for example, pollution sources scattered across shared ecosystems, watersheds and population centres – it was important to have accessible and comparable data. The North American PRTR initiative aimed to increase access to information on pollution sources and improve stakeholder participation and decision-making related to pollution reduction and prevention. In that context, and specifically through its Taking Stock reports and online database,<sup>15</sup> the Commission for Environmental Cooperation made comparable and provided context to data from the PRTR systems of Canada, Mexico and the United States of America. Access to PRTR data was an important tool for evaluating and achieving many of the Sustainable Development Goals. Recent Commission work on chemicals management focused on improving mercury trade statistics<sup>16</sup> and on the presence and migration of chemicals in consumer products. That work aimed to create awareness of chemicals management and to provide support in the development of related sustainable choices and practices.17

### 2. Potential of pollutant release and transfer registers

40. Ms. Maayan Porat Ganz (PRTR Advocate, Ministry of Environmental Protection, Israel) presented the Israeli PRTR, focusing on its role as a tool to achieve the Sustainable Development Goals. When it was established by law in 2012, the following additions compared to the minimum requirements in the Protocol on PRTRs were introduced:

- (a) Added requirements on water and energy consumption;
- (b) Reporting on waste transfer by type of waste;
- (c) Additional sectors and substances;

<sup>&</sup>lt;sup>13</sup> See https://ec.europa.eu/eurostat/web/sdi.

<sup>&</sup>lt;sup>14</sup> Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC, *Official Journal of the European Union*, L 33 (2001), pp. 1–17.

<sup>&</sup>lt;sup>15</sup> See www.cec.org/takingstock.

<sup>&</sup>lt;sup>16</sup> Commission for Environmental Cooperation, Enhancing the Alignment of North American Trade Statistics on Elemental Mercury and Mercury-added Products (Montreal, 2017).

<sup>&</sup>lt;sup>17</sup> Commission for Environmental Cooperation, Furthering the Understanding of the Migration of Chemicals from Consumer Products. A Study of Per- and Polyfluoroalkyl Substances (PFASs) in Clothing, Apparel and Children's Items (Montreal, 2017).

(d) The possibility to require facilities to provide information on the specific method used to measure, calculate or estimate releases.

Furthermore, three examples were presented that showcased good practices for the 41. use of PRTRs in combination with other sectors and activities. First, the flagging of specific facilities for priority inspection based on PRTR data. PRTR data, particularly data on energy and water consumption, provided a clear picture of changes in facilities that required an inquiry (for example, 20 per cent change of water consumption by the facility). Second, consideration of tighter policies for non-Industrial Emissions Directive facilities,<sup>18</sup> as PRTR data had shown a reduction in Directive facility emissions throughout the years, as opposed to non-Directive facilities, where emissions had increased. Thirdly, the use of PRTR data as the trigger for improvements in the Haifa Bay industrial area, as they had made it possible to identify the Haifa Bay area as an emissions hotspot. The emissions density index established in 2014 – showed that Haifa's emission index was the highest in Israel. Those findings had been published, leading, in 2015, to discussions with the Ministry of Health and the linking of PRTR data to the occurrence of cancer in the area. Consequently, an air pollution reduction plan for Haifa had been developed. PRTR data showed the effectiveness of the measures after their implementation. The Israeli National Economic Council had commissioned a report examining possibilities for the Haifa Bay industrial area's future. The report, as quoted in the Israeli media, had found that it was economically feasible to shut down the refineries and complementary activities by 2025.

42. Mr. Nebojša Redžić (Head of Department, Environmental Protection Agency, Serbia) presented several aspects of the development of the Serbian PRTR as a useful tool for supporting decision-making. The Government used the PRTR as an efficient tool regarding a variety of tasks that needed to be performed by authorities from different sectors, including fulfilling other reporting obligations. To do so, it was considered an important step to not make use of the release thresholds provided in annex II to the Protocol. Adding reporting obligations, such as on material consumption, fuel consumption, products and technical data on stacks and wastewater outlets, made PRTR data interesting for aspects related to achieving sustainability. Furthermore, the PRTR collected data for fundraising for environmental protection through implementation of the "polluter pays" principle. Plans for the development of the Serbian PRTR included the addition thereto of the following elements:

(a) Publication of real-time data where their continuous measurements were taken;

(b) Tracking of waste transfers, to improve monitoring of transports of hazardous wastes;

(c) Functionality regarding the European Union Emissions Trading System for greenhouse gas releases.

43. Ms. Shanshan Ding (Green Supply Chain Project Manager, Institute of Public and Environmental Affairs, China) said that the Institute of Public and Environmental Affairs had been established in 2006 to promote information disclosure and transparency. The driving force behind the Institute was the concept that, once there was sufficient information in the public domain, different stakeholders would be able to participate in pollution control work. Thus, the Institute had created and was managing the Blue Map database,<sup>19</sup> which was also available as a mobile application. Blue Map provided information on pollutant releases from factories in China, including information on violations by and compliance of facilities and on whether a facility was identified by the Government of China as a "key polluting entity" that must provide additional real-time data on pollutant releases, also made accessible through Blue Map. Facilities could give public feedback regarding possible previous violations of laws, for example, by providing information on corrective action they had taken. By cooperating with brands such as Apple, Adidas and Nike, as well as local brands, the Institute had convinced operators and owners to provide more relevant information. The brands asked the manufacturers to complete reporting forms and publish their PRTR data. To

<sup>&</sup>lt;sup>18</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), *Official Journal of the European Union*, L 334 (2010), pp. 17–119.

<sup>&</sup>lt;sup>19</sup> See wwwen.ipe.org.cn/index.aspx.

evaluate how brands worked with their suppliers in China during the production process, the Institute applied a corporate information transparency index. One factor in the index was PRTR data. That work was therefore closely related to Sustainable Development Goal 12 on responsible production. The Institute also supported responsible consumption by having brands agree to place their logo on a map showing where facilities produce their products, providing the link between production and consumption of goods, and visualizing brand–supplier relations. Thus, for example, a consumer could see that it was good to buy from one specific brand, as its producers made efforts to reduce greenhouse gas emissions and toxic chemical and heavy metal releases. The brand was then able to showcase those efforts on a transparency map.

## **B.** Discussion

44. In the discussion, key figures regarding the management and use of some of the abovementioned exemplary PRTR systems were shared:

(a) Staff resources: for example, Serbia had 22 members in the team that managed the system, including 5 working on greenhouse gas emissions and the Convention on Long-range Transboundary Air Pollution and 17 working on PRTR and related system modules; the Institute of Public and Environmental Affairs had 40 full-time staff and outsourced some information technology tasks;

(b) Number of facilities covered: France had 15,000 facilities in the national system, 3,000 of which were reported to the European Pollutant Release and Transfer Register; the Institute of Public and Environmental Affairs violation database covered 3 million factories in China;

(c) Number of views of the web page: the Institute of Public and Environmental Affairs Blue Map had accumulated over 65 million views at the time of writing.

45. The issues of adding specific reporting obligations to the PRTR system and the integration of data originating from non-PRTR sources into PRTR web portals were also discussed. Regarding the question of which data were useful to collect and disseminate through PRTR systems, it was argued that, while a number of countries made, for example, useful additions to PRTR-related reporting obligations, or that countries integrated data from other sources to help users build knowledge and to facilitate the correct analysis of PRTR data by its users, it was also important to discuss possible related international standards. In that context, the links between national, regional and global indicators were also discussed, with the aim of learning about possible ways to improve their alignment.

46. Furthermore, participants mentioned that useful PRTR-related data were, in many cases, readily available to Governments; for example, European Union useful data on burned fuel was part of the inventory on large combustion plants, and information on best available production techniques was established and reviewed periodically. However, dissemination of such data to the public and sharing thereof among different parts of Government was a challenge. Moreover, the example of the Institute of Public and Environmental Affairs had shown that real-time air quality data could fit within a PRTR platform, thus enhancing PRTRs' attractiveness and usefulness for the public. NGOs were interested in learning about challenges in making such a use happen; for example, in the European Union, legal obligations to provide such data to the public existed but the data were often not currently used in Europe in a way similarly positive to the approach adopted by the Institute of Public and Environmental Affairs.

47. Regarding public interest in PRTR data, participants added that, by integrating different information sources under one platform and aggregating information that was useful to, and easy to understand for, different stakeholders, PRTR data could be opened to new users. The key to a successful PRTR was stakeholder involvement. It was not enough to collect data and put it in a database; there must be engagement with the public and other stakeholders. For example, it was good to play with different forms of data presentation to make it useful to different users, including industry actors, who might be incentivized to improve their skills and achieve higher levels of emission reductions.

48. Regarding industrial production activities and how to gain insights into processes and developments that affected their sustainability, it was noted that it was necessary to set data on pollutant emissions in context, ideally having production data and pollutant releases available together. Approaches to how to collect such data were often not standardized and could not currently be consistently applied across different sectors or comparing different PRTRs.

49. Participants also mentioned that, although impressive examples were shown by different countries, not many countries were currently able to use the data reported to their PRTRs for decision-making purposes. That situation needed to be improved.

# IV. Emerging pollutant release and transfer registers

50. With a view to fostering interactive discussions between participants, and to sharing their experience and knowledge about key steps in the development, implementation and use of PRTRs, issues relevant for emerging PRTRs in particular were addressed through bilateral sessions on the following three themes: "Variety of uses and users of PRTR systems and related communication strategies"; "Role of equivalency in comparability"; and "Single window approach/International reporting". The topics were first elaborated in separate groups. In each group, participants introduced their challenges, PRTR needs and related expectations. The outcomes of the group discussions were then shared and discussed with all Global Round Table participants.

51. Regarding the "Variety of uses and users of PRTR systems and related communication strategies", different user groups and related challenges were identified, along with the following uses for PRTR information:

(a) Tracking pollution prevention activities and identifying priority sectors or facilities;

(b) Developing chemical footprints;

(c) Helping brands (for example, global companies) to show and track their progress in achieving their environmental and sustainable management-related goals;

(d) Conveying chemical information to the next actors in the supply chain;

(e) Presenting economic impacts by linking pollutant releases with economic impact analysis;

(f) Developing default assumption of emissions from facilities.

52. It was agreed that PRTR data end-users' needs should be identified and met by data suppliers (i.e. Governments) by, for example:

(a) Making PRTR data accessible to the public and improving their dissemination through different media, for example, social media, journals and television;

(b) Presenting data in a more meaningful way by establishing a relationship between different needs of different groups of stakeholders and making clear the necessary links with other related information; for example, how substances affected people and the potential impact on health and the environment. That could be done by also providing links to data on air and water quality monitoring networks, toxic weighting and modelling of movement of chemicals in environmental media;

(c) Providing data in a simple way and allowing detailed information to be searched.

53. Key challenges for using PRTRs more widely were related to limitations based on the application of release thresholds in different PRTR systems and the fact that, while PRTRs should cover most of the pollutant releases into environmental media, that was not the case for some chemicals. Regarding the use of PRTR data related to monitoring progress in achieving the Sustainable Development Goals, it was important to better link PRTR data to existing reporting on the Goals' achievement and identify and monitor progress towards Sustainable Development Goals within sectors. In that context, it was noted that inspection

reports on compliance and corrective actions taken by operators could be used together with PRTR data to track progress in chemicals management and sustainable development. Information on products and their production process and facilities should also be more integrated to present more information to consumers that would enable them to make informed decisions when purchasing.<sup>20</sup> It was further mentioned that verification of data and comparison of sector performance at the country level would facilitate cross-sectoral sharing of knowledge. It was important to maintain and improve the international comparability of PRTR data with a view to adequately reflecting the development of new chemicals and uses of chemicals and related international agreements, including the work under the Strategic Approach to International Chemicals Management.

54. The group that had discussed the "Role of equivalency in comparability" had identified the following key issues: pollutants and activities listed in PRTRs did not always correspond; for example, activities that released pesticides were not always included in PRTRs, while pesticides were often part of PRTR reporting obligations; the pollutants included in different PRTRs were not always the same and, in some cases, different names were used for the same pollutant; different PRTRs had different sector coverage or different descriptions of activities while using the same codification; different approaches existed regarding reporting of wastes. In addition, it was noted that it would be useful to identify the target audience that could benefit from identification of equivalency/correspondences and specific uses, for example, in a global indicator.

55. Key challenges were to:

(a) Make available data and information that would facilitate data comparison; for example, the methods used to measure, calculate or estimate releases;

(b) Address the lack of guidance on the use of emission factors for combustion;

(c) Address the fact that processes and progress made in different sectors were very diverse.

56. The following opportunities and possible solutions were also discussed:

(a) Using conversion tools to make data from different sources comparable;

(b) Mapping reporting requirements under different instruments and agreements, including the use of emission inventories to analyse different ways of calculation and measurement and codes;

(c) Adding reporting obligations for data that served analytical purposes but were not necessarily made public;

(d) Developing guidance based on existing PRTR experiences and aimed at providing support to countries with emerging PRTR systems, in order to minimize challenges related to equivalence and comparability of data from the start. Helping countries to avoid known challenges;

(e) Better understanding the public's needs.

57. It was stated that it was important to encourage the different international PRTR groups in proposing projects that focused on the above-mentioned issues, challenges and possible solutions. It was proposed that the existing international legal requirements should be revised to identify a common and standardized way forward.

58. The "Single window approach/International reporting" discussion group highlighted the differences between national reporting structures, as well as the following key challenges for different groups of countries:

(a) Countries with existing PRTRs faced challenges related to harmonizing different systems; for example, reporting systems for multilateral environmental agreements and different reporting obligations under various European Union directives;

<sup>&</sup>lt;sup>20</sup> See also United Nations Environment Programme, *Measuring Progress: Towards Achieving the Environmental Dimension of the SDGS* (Nairobi, 2019).

(b) Countries in the process of implementing a PRTR and planning to establish, for example, an integrated modular, information technology system for all environment data, lacked common approaches to and standardized methods for establishing single window reporting;

(c) Countries willing to introduce PRTRs often lacked the staff and financial resources required to learn more about the possibilities of establishing PRTRs. They needed donor support for the initial steps of implementation.

59. Opportunities and solutions for countries with established reporting systems included further development of their legal frameworks and continued efforts related to harmonization of reporting obligations thereunder. Some countries were trying to rebuild their information technology systems and combine different reporting obligations under a modular PRTR system. Countries currently implementing a PRTR system might directly benefit from the negative experiences of countries with long-standing reporting systems. For countries currently implementing a PRTR system, for example, the step of establishing a single window reporting system might also present an opportunity to develop their PRTR system with support from donors operating in different areas.

# V. Pollutant release and transfer registers for different stakeholders

## A. Presentations

### 1. Pollution data – science, education and risk assessment

60. Following introductory remarks from the moderator, Mr. Jorge Ocaña (Manager, Chemicals and Waste Management Programme, UNITAR), Mr. Michael Petroni (State University of New York College of Environmental Science and Forestry) said that highlighting facilities that could be improved was a centrepiece of right-to-know legislation. He presented possibilities for helping communities to identify what was happening regarding pollutant releases in their surroundings by making use of a map application that provided relative risk rankings. The application could also be used by the industry to foster trust through transparency, as it allowed operators and owners to alleviate some public pressure by displaying their efforts to reduce pollutant releases and showing that they continued to work to further improve the situation over time.

61. The presented application highlighted, for example, the facility that posed the highest relative risk for health and environment in a given area. Contact details of facilities were made available and information about possible ongoing pollution prevention efforts, such as replacing chemicals with less toxic alternatives, was displayed within the application. Furthermore, a comparison with other facilities and their respective pollution prevention work was listed. Regarding substances, the latest research information was made available to users and associated risks were presented.

62. Ms. Mara Silina (Co-Chair, European ECO-Forum) gave a brief overview of unaccounted-for storage places for toxic chemicals and hazardous waste in Eastern Europe and Central Asia, where inclusion of obsolete storage places in PRTR systems would help to improve the management of such sites and reduce the related risks to human health and the environment.

63. The discussion turned to Chile, where it had been suggested that obsolete stocks, such as those containing pesticides should be included in the PRTR system, among other things, to inform reporting to other Conventions. Under the Stockholm Convention on Persistent Organic Pollutants, for example, countries had an obligation to establish inventories of stocks of persistent organic pollutants, polybrominated diphenyl ethers and other substances. Many

countries had finalized such work,<sup>21</sup> including projects that had created inventories of obsolete stocks of pesticides.<sup>22</sup> Such inventories could be shown on PRTR maps.

64. Mr. Fredrik Hallgren (Project Manager, Swedish Environmental Research Institute) gave a presentation on the use of cheap and small sensors to measure air and water pollution and on making the corresponding data available by using the Internet of things. The data could then be used as decision support for different stakeholders, with the aim of providing information in real time to stakeholders to allow them to take countermeasures and monitor their possible success.

65. The current focus was on large construction sites in cities, which were usually hotspots for pollution in both air and water. For such construction sites, cities needed to fulfil their obligation to monitor whether environmental standards were adequately met. That required a good temporal and spatial resolution of the measured data. Engaging in citizen science seemed a good solution in that context, as it helped to reduce the cost of establishing measuring networks while responding to the public's questions and interests. The project also integrated universities, schools and science centres, providing a very good opportunity to raise young people's awareness of the topic while improving the quality of measured data. The underlying software was based on open-source software, which offered advantages regarding the transparency of the work, procurement and the interoperability of the system in the future, facilitating long-term maintenance.

# 2. Consumption and production – Pollutant release and transfer registers as tools for sustainability

66. Mr. Masayuki Sekiguchi (Section Chief, Ministry of the Environment, Japan) said that PRTRs had a huge potential to inform decision-making for local environmental management. However, local authorities did not often make use of PRTR data to address local issues. He presented a project designed to enable national Governments to better support local governments in applying PRTR data. That aim could be achieved through making available good practices collected during a two-year survey. The survey had identified 19 good practices, which, for example, involved making use of PRTR data to quickly identify an unknown source of drinking water pollution involving a specific substance that was part of PRTR reporting. In the example, local authorities had used the PRTR data to quickly identify a particular facility as the source of the pollution.

67. Mr. Glenn Storbråten (Senior Advisor, Norwegian Environment Agency) said that PRTRs were a useful tool for informing stakeholders about issues related to sustainability and, in particular, to sustainable consumption and production. In Norway, adding data on energy consumption and releases from products to the PRTR had proven useful in that context. One challenge was the comparability of data between different facilities; for example, different production methods had different impacts on energy consumption and facilities used different methods for measuring energy consumption. In the future, efforts should be made to establish a standardized energy consumption reporting system.

68. Statistics Norway supplied the data on releases from products. The data still had a high uncertainty but nevertheless made information on related trends available to stakeholders. Products had increasingly become an important source of pollution, as emissions from production had become more and more controlled and efforts to reduce pollution had been effectively implemented.

69. Ms. Christina Raab (Implementation Director, Zero Discharge of Hazardous Chemicals) said that Zero Discharge of Hazardous Chemicals was a multistakeholder initiative, bringing together worldwide brands, retailers, factory owners, chemical manufacturers, certification companies and other stakeholder associations. The aim was to implement a sustainable chemistry framework across the global supply chain, with the ultimate aim of phasing out use of hazardous chemicals. Addressing the use and elimination

<sup>&</sup>lt;sup>21</sup> See, for example, http://chm.pops.int/Implementation/NIPs/Guidance/GuidancefortheinventoryofPBDEs/tabid/3171/De fault.aspx.

<sup>&</sup>lt;sup>22</sup> See www.fao.org/agriculture/crops/obsolete-pesticides/where-stocks/europe-stocks/en/.

of pollutants early on in the production process had proven to be an effective approach to achieving that aim. The focus of the programme was thus on management and elimination of pollutant releases from production rather than from final products. For example, hazardous chemicals removed from the production processes were consequently also removed from the final product.

70. Different tools had been developed, including a list of chemicals (Manufacturing Restricted Substances List) banned from intentional use and a data platform (Zero Discharge of Hazardous Chemicals Gateway). The platform consisted of a chemical module, where the industry uploaded data directly to the platform, much like with a national PRTR system, and a wastewater module, where samples were taken by authorized laboratories that followed a set of standardized testing methodologies. In order to not only report and exchange data but also to drive improvement across the supply chain, the reporting also included information on production techniques employed and, where Zero Discharge of Hazardous Chemicals standards were not met by operators, the facility owners concerned received support in implementing corrective actions and root cause analysis. In addition to sharing data among registered partners, and as a first step, some aggregated analytical results had been made publicly available since March 2018 and a colour-coded system (red, orange and green) showing compliance with the above-mentioned standards had been introduced. There was potential for cooperation between the Gateway and existing PRTR systems by using a letter of intent as an entry point.

71. Mr. Christian Schaible (Policy Manager for Industrial Production, European Environmental Bureau) presented a report<sup>23</sup> examining how effectively European countries made available online information about industrial pollution from large combustion plants. The report showcased how increased transparency and public participation in making available information on industrial activities enhanced the knowledge base on environmental performance of industrial activities. Criteria used for evaluating the related efforts of countries were based on the ease of use of those countries' databases, available search functions and the completeness and quality of information in the permits and other documents (inspection reports). While that evaluation showed mixed results, the report also identified good examples. One such good example came from Ireland, where it was possible to subscribe to RSS feeds for facilities and full transparency on exchange between operators and the competent authorities. That allowed stakeholders to stay informed of ongoing developments at a given facility and made it possible to benefit from public participation in an effective way that improved the outcomes of decisions taken by making them more sustainable.

72. Norway was a good example of a country providing essential information on a specific facility website under its current PRTR website. That included data on production output, energy generated, production volumes and information on flow rates of air and water (allowing calculation of concentration values for released pollutants) that were typically used in European Union Best available techniques Reference documents.<sup>24</sup> In Norway, permitted levels for releases of pollutants were displayed directly next to the actual release data from the facility concerned. That approach was a good example of putting PRTR data into a meaningful context and it was important to use such good examples that increased and facilitated the use of PRTRs to, for example, develop standardized approaches and improve international comparability.

## **B.** Discussion

73. In the subsequent discussion, several aspects of the above-mentioned presentations were highlighted by participants and addressed in more depth:

<sup>&</sup>lt;sup>23</sup> See https://eeb.org/Burning\_TheEvidence\_Map/public/index.html.

<sup>&</sup>lt;sup>24</sup> See http://eippcb.jrc.ec.europa.eu/reference/.

### 1. Pollution data – science, education and risk assessment

74. Participants highlighted the importance of integrating dispersion and risk modelling into PRTRs to be able to quickly identify any potential hotspots and accumulations of potential risks. Regarding the linking of PRTR data with those from measurement networks, it was said that there were several uses, including the use for reference, as, for example, facilities in PRTRs were often hotspots for releases of pollutants, sometimes close to a city, that were important to get right when modelling the distribution of pollution.

75. In order to account for risks from unaccounted and obsolete storage places, a number of participants stated that it would be necessary to put in place retroactive reporting for such sites. At the same time, prior existing reporting obligations were limited and some operators or owners might not even be aware of past disposal because there was no record of such operations. It was important for all disposal operations to be recorded and tracked as they might lead to, for example, groundwater pollution, which, if unaccounted for, could have major impacts on human health. Proper management of drinking water quality was made possible and affordable if potential risks from disposal sites were known and integrated into the respective competent authorities' work.

# 2. Consumption and production – pollutant release and transfer registers as tools for sustainability

76. It was highlighted that the purpose of emission reporting under the Industrial Emissions Directive and PRTRs was to know which pollutants had been released into the environment and what could be done to prevent pollutant releases. That was linked to discussions on the application of Best Available Techniques and the promotion of compliance with related regulations. Bringing different but related regulatory aspects together increased their respective improvement and allowed for the scaling up of sustainable practices in the industry.

77. Voluntary reporting by facilities to Zero Discharge of Hazardous Chemicals, while being flagged as non-compliant with Zero Discharge of Hazardous Chemicals standards, was driven by the possibility to show long-term commitment and steady improvement. Furthermore, brands and retailers had included reporting to Zero Discharge of Hazardous Chemicals in their contracts with production facilities, which introduced a legal obligation through the buyer–seller relationship.

## 3. Hurdles and challenges

78. Developing and developed countries faced different hurdles. For example, in developing countries, there were more small-scale facilities and the informal sector played a significant role. That made it more difficult to establish a comprehensive database on pollutant releases. In Peru, it was possible to use the PRTR to address the issue of informality of industrial activities. PRTRs' integration into existing management systems and structures often posed problems for developed countries. Improvement often required reorganization of existing structures, making high-level political commitment a pre-requisite.

79. There was still a lack of knowledge among the general population about the existence of PRTR systems. Without such knowledge, it was more complicated to reach out to stakeholders and generate political support. PRTRs were not sufficiently used to support decision-making, analyse trends or make proposals regarding pollution reduction and implementation of sustainable policies.

80. Furthermore, a lack of general education regarding chemicals and pollution and its impact on human health and the environment was a problem. A lack of education in combination with limited financial resources also resulted in difficulties in securing well-trained staff and in maintaining sustainable PRTR systems.

81. It was also a challenge to support companies in developing a strategy to make better use of their PRTR data and to improve their applied production processes to become more efficient.

### 4. Opportunities in establishing a pollutant release and transfer register

82. It was underlined that there was momentum for work on PRTR, with PRTRs gaining increasing support and being established all over the world in very different settings.

83. It was important to recognize that each stakeholder and each group had its own interests and to ask what they could gain from reporting and using PRTRs. Numerous opportunities had been identified throughout the different examples presented under the present item. Application of the ideas expressed in the above-mentioned presentations and willingness to focus further on different uses of PRTR for different stakeholders would lead to opportunities. Such an approach would also help stakeholders to engage more actively in PRTRs and to promote them in their respective field of work.

84. It was important to make available PRTR-related data from within the supply chain to Governments, companies and consumers to enable them to make sustainable procurement choices by making the link between the product purchased and the facility where it had been produced. That approach would be a catalyst for strengthening the global interoperability of PRTR systems, potentially greatly increasing the interest of consumers and producers in PRTRs, strengthening the buyer-producer relationship and engaging more stakeholders in that regard.

85. Opportunities had also arisen from developments in information technology and satellite imaging, for example, in air pollution-related work on the global scale.

86. At the national level, it was possible to start work on PRTR by focusing on a specific need – for example, to reduce air pollution in a specific locality – and on a small number of substances or activities, which could be added to later. Following such a step-by-step approach made it easier for some countries to introduce and make use of PRTRs for specific purposes in the beginning.

87. The full potential of PRTRs could be realized when opportunities to link them with other national or international obligations were taken, including, for example, the linking of PRTRs with the Stockholm Convention and the Minamata Convention on Mercury and the Strategic Approach to International Chemicals Management, which was difficult but important in order to improve chemical and environmental management.

# VI. Closing statements by the Chairs

88. The Chairs thanked the participating countries for sharing their achievements, challenges and commitments in the implementation of PRTR systems. They further observed that the meeting had been helpful for participants and agreed that many substantial ideas had been raised that would feed the PRTR implementation process.

89. The following outcomes of the third Global Round Table on PRTRs were presented by the Chairs:

### Pollutant release and transfer registers across the world

(a) In comparison to previous Global Round Tables on PRTRs, a continuously growing interest in the event had been observed among countries from different continents and organizations dealing with the improvement of existing, or the establishment of new, PRTR systems;

(b) Examples of the progress made and innovative approaches to the use of PRTRs had been illustrated, including: use of PRTRs to implement the "polluters pays" principle; addressing a number of waste management issues; integrating a variety of national and international reporting obligations; and improving trust between different stakeholders;

(c) Levels of development of PRTR systems varied in different countries, but their importance and the understanding of their potential had been recognized throughout all the above-mentioned presentations; (d) International organizations played an important role in capacity-building and advisory support on PRTRs; each organization contributed different expertise, related to technical matters, policy recommendations or legal and institutional frameworks;

(e) The Protocol on PRTRs had been used as a prototype for establishing PRTRs across the globe and the wealth of useful guidance material produced under OECD was helping countries to establish PRTR systems effectively. As the Protocol was open for accession by any State Member of the United Nations, interested countries were encouraged to accede to the treaty and to enjoy its solid framework for implementation. Countries were also strongly encouraged to use the OECD materials and other outcomes of OECD work for promoting and implementing PRTRs;

(f) Looking at progress in the implementation of PRTRs, it appeared that strong political will was the precondition for those remarkable achievements. PRTRs had become an important tool for improving access to information on pollutants and their releases, thereby promoting transparency in environmental matters worldwide;

### Pollutant release and transfer registers for achieving Sustainable Development Goals

(g) The key prerequisite for achieving most, if not all, of the Sustainable Development Goals and their specific targets, was informed decision-making processes;

 (h) Therefore, collection and active dissemination of data on pollution and public rights to information had become key drivers for the attainment of Sustainable Development Goals;

(i) PRTRs clearly had a role to play in that regard; they were best known as a tool for providing access to information on releases of pollutants and wastes;

(j) The overarching purpose of PRTRs in that context was, by enhancing transparency and accountability, to play a central role in promoting peaceful and inclusive societies and good governance (Sustainable Development Goal 16) across the 2030 Agenda for Sustainable Development;

(k) In addition, PRTRs were highly relevant to the achievement of specific Sustainable Development Goals. For example:

(i) The establishment of publicly accessible databases on the release of hazardous chemical substances with the potential to facilitate early warning and manage and reduce global health risks (target 3.D of the Sustainable Development Goals) and to strengthen global resilience to climate-related hazards and natural disasters (target 13.1 of the Sustainable Development Goals);

(ii) PRTRs were also relevant in the context of sustainable corporate practices, as they could make product information available to consumers, thus informing their choices. Public availability of such information incentivised companies to prevent pollution and helped to communicate their efforts in that regard. The collected data allowed for fact-based policy evaluation and sound management of chemicals (target 12.4 of the Sustainable Development Goals). In that way, the collected data contributed to the adoption of innovative and sustainable practices (target 12.6 of the Sustainable Development Goals).

(1) Work on Sustainable Development Goals meant the breaking of silos, as the required information should be presented in an integrated way. PRTRs could offer an effective way to address that issue. The major principles guiding the establishment of PRTRs regarding data quality, transparency and usefulness to the public could be applied to databases of other sectors, such as health, urban planning and consumer choices, which in turn, could be linked to PRTR data;

(m) In order to share that integrated information and make it actively available to all stakeholders for achieving the Sustainable Development Goals, there was a need to:

(i) Raise awareness and explain, particularly to decision-makers, how technical tools such as PRTRs could be used for policies in other sectors, related to, for example, health matters, energy consumption, consumer choices or urban planning;

(ii) Promote interlinking PRTRs with other databases;

(iii) Promote informed decision-making processes, both across sectors and at the household (consumer choices), local (for example, urban planning) and international levels;

(iv) Promote simple, single window reporting by polluters to Government.

(n) A joint political commitment at the international level, through the Budva Declaration on Environmental Democracy for Our Sustainable Future (ECE/MP.PP/2017/16/Add.1-ECE/MP.PRTR/2017/2/Add.1), had been made under the auspices of the Protocol on PRTRs. In turn, activities under OECD focused on preparing guidance material and carrying out specific projects to assist countries with practical implementation;

### Emerging pollutant release and transfer registers

(o) PRTRs could: help Governments to fulfil their international reporting obligations in a cost-efficient way; be combined with other data sources to support complex decision-making related to economic, social and environmental matters; and, enable Governments and relevant organizations to make data available in a form useful to the public;

(p) In order to improve and develop emerging PRTR systems, various challenges needed to be overcome and specific or common solutions identified;

(q) The discussion at the plenary and group levels had identified various challenges, as well as corresponding responses that would help to continue building a solid basis for future work and cooperation, including, the need to:

(i) Increase awareness of PRTRs;

(ii) Take steps to revise relevant legislation to enable a "single window" approach, where required;

(iii) Establish efficient reporting structures to reduce the reporting burden for operators and Governments;

(iv) Increase overall integration of PRTR systems with other relevant databases and knowledge platforms to help Governments to effectively fulfil their different international reporting obligations;

(v) Address the issue of use of thresholds in order to make data useful and accurate;

(vi) Improve traceability of chemicals in products;

(vii) Quantify the health impact of pollution, as failure to prevent pollution might cost more;

(viii) Identify information users' needs and take them into consideration when working on equivalencies;

(ix) Address overlap and inconsistency between reporting requirements related to pollutants and activities;

(x) Improve harmonization of PRTRs internationally;

(xi) Engage with the full range of uses and users of PRTR systems and develop related communication strategies in order to reach out and increase awareness;

(xii) Work closely with educational, academic and research institutions to reach out to young people to promote PRTR as a tool for educational purposes regarding sustainable development.

(r) It had been shown that each country and organization faced its own specific challenges and hurdles in making PRTRs efficient and useful instruments:

(i) Where there was a political will and the institutional arrangements permitted it, PRTR systems were established with the aim of providing "a single window" approach; (ii) In countries where the institutional arrangements prevented different authorities from establishing a fully integrated "single window" reporting system, political will was important regarding the exploration of alternative approaches. One example of such an approach was the establishment of reporting systems where the data flow inside the system could be managed separately for different purposes by different entities, while reporting by operators could be done through a single entry.

### Pollutant release and transfer register for different stakeholders

(s) Scientific research projects related to pollutant releases and transfers resulted in knowledge that helped to improve understanding of how pollutant releases and transfers had an impact on health and the environment. Such understanding was key to informed decision-making related to chemical management, health and other matters, and also to consumers' choice of different products;

(t) It was important to promote both the usefulness of scientific research among PRTR operators and active cooperation with academia and research institutions;

(u) It was important to promote and facilitate active participation of academia and research institutions, NGOs and consumer and private sector associations in the development of PRTR platforms to respond to stakeholders' needs;

(v) NGOs, academia and research institutions could focus their work on making data available in a user-friendly way.

90. Pursuant to the participants' statements, the Chairs concluded that the third Global Round Table had demonstrated remarkable synergies between the three partner organizations, which had matched capacities and expertise to co-organize a joint meeting. The event had also provided a unique platform for Governments, industry, NGOs, academia and research institutions and other stakeholders to share experiences and knowledge. There was general support for another joint event in the future.