"Global Project on the Implementation of Pollutant Release and Transfer Registers (PRTRs) as a tool for Persistent Organic Pollutants (POPs) reporting, dissemination and awareness raising for Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru"

Report on the third Project Steering Committee Meeting and Final Lessons Learned Workshop

25th – 27th March 2019
Siem Reap, Cambodia

Contents

List of Acronyms

CO	Carbon Monoxide
CO_2	Carbon Dioxide
ECLAC	Economic Commission for Latin America and the Caribbean
EPPO	Environmental Pollution Prevention Office of Moldova
GEF	Global Environment Facility
IPCC	Intergovernmental Panel on Climate Change
LAC	Latin America and the Caribbean
MEAs	Multilateral Environmental Agreements
MOE	Ministry of Environment
MINAM	Ministry of Environment of Peru
NMVOC	Non-Methane Volatile Organic Compounds
NO_x	Nitrogen Oxides
PCDD/ PCDF	Polychlorinated dibenzo-para-dioxins/polychlorinated dibenzofurans
PM	Particulate Matter
POPs	Persistent Organic Pollutants
PRTR	Pollutant Release and Transfer Register
PSC	Project Steering Committee
RET	Release of Estimation Technique
RETC	Registro de Emisiones y Transferencias de Contaminantes
SDGs	Sustainable Development Goals
SEPA	Serbian Environmental Protection Agency
UNECE	United Nation Economic Commission for Europe
UNITAR	United Nation Institute for Training and Research

Background information

1. The third Project Steering Committee (PSC) Meeting of the UNITAR/UN Environment/GEF "Global Project on the Implementation of PRTRs as a tool for POPs reporting, dissemination and awareness raising for Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru" was organized jointly by UNITAR and the Ministry of Environment of Cambodia, from the 25th to the 27th of March 2019 in Siem Reap, Cambodia. The workshops took place in the meeting room of the Angkor Paradise Hotel in Siem Reap.

2. The project's activities are focused in supporting the implementation of national PRTRs in the six participating countries. The aim is to improve access and accuracy of environmental data on persistent organic pollutants (POPs) and other chemicals considered as a priority in the countries. It also seeks to sensitize and encourage the participation in environmental issues of different actors, such as non-governmental organizations, citizens, students, among others; by implementing the national PRTRs.

3. The objective of the ***third Project Steering Committee*** (PSC) meeting was to bring together the national coordinators from participating countries, implementing agency (UN Environment), executing agency (UNITAR) and PRTR Protocol Secretariat (UNECE) in order to assess the results and outputs of project implementation, lessons learned and good practices and future PRTR activities. The PSC meeting acknowledged the completion of project's activities and the fulfilment of goals and objectives stated in the project document, as described by its mandate.

4. The PSC is formed by ***UN Environment*** (Implementing Agency), ***UNITAR*** (Executing Agency), ***UNECE*** (PRTR Protocol Secretariat) and National Coordinators of the participating countries, namely ***Belarus, Cambodia, Ecuador, Kazakhstan, Moldova and Peru***.

5. Besides the PSC meeting, the participants were invited to participate in a lesson learned exercise which helped the executing agency to collect lessons learned, best practices and recommendations from national implementation of PRTRs. In addition, the second day of the event was focused on the national implementation of PRTR system in Cambodia, with participants from government, national institutions and private sector industries involved during the PRTR pilot phase which presented their experience in reporting PRTR data to the national authority (MOE).

6. The overall number of participants of the three-days event was 41.

1. Project Steering Committee Meeting and Final Lessons Learned Workshop

1.1. Opening of the Meeting and organizational matters

7. Mr. Phet Picharra, *Director of the Department of Hazardous Substances Management, Ministry of Environment of Cambodia*, opened the PSC meeting by welcoming the participants to the PSC meeting and final workshop of the PRTR global project. Mr. Picharra thanked the GEF, UN Environment and UNITAR for the opportunity and support given to the participating countries in designing and then testing the national PRTRs systems.

8. Mr. Ludovic Bernaudat*, Programme Officer, UN Environment,* mentioned that it was the second time that UNITAR and UN Environment cooperated on PRTR projects, the initial phase of PRTR design was implemented from 2009-2012 (Phase I), the implementation and pilot testing was the core objective of the current period 2016-2019 (Phase II). Mr. Bernaudat continued his intervention by reminding to the participants that PRTRs are an innovative concept to support national chemicals management and national reporting to chemicals conventions, e.g. Basel, Rotterdam and Stockholm Convention, Minamata Convention. He concluded by stressing the fact that the lessons learned of the project will be a good opportunity to show to the donor organization (GEF) that the funding was useful and project objectives were achieved successfully.

9. Mr. Andrea Cararo, *Project Coordinator, UNITAR*, thanked the Ministry of Environment for proposing Cambodia as a hosting country for the final meeting of the global GEF PRTRs project and for assisting UNITAR in the organization of the workshop. Mr. Cararo welcomed the participants and stressed the importance of having this kind of meetings face-to-face: to facilitate coordinators from participating countries to share best practices and learn from other countries' experiences. He then briefed the participants on the scope and objectives of the Project Steering Committee meeting and final lessons learned workshop.

10. The opening remarks were followed by a tour-de-table to allow participants to introduce themselves.

11. Then, the provisional agenda was adopted, together with the methodology of work. The participants were briefed on the mandate of the PSC and its members. Mr. Cararo, UNITAR, was elected unanimously as the Chairman of the meeting.

1.2. UN Environment: project evaluation and next steps

12. Mr. Ludovic Bernaudat, representing the implementing agency, *UN Environment*, praised the participants for the satisfactory work undertaken by the national authorities involved in the implementation of the project and UNITAR, with the constant support of UN Environment. He stressed the fact that the management of activities, quality, and timing, of reporting were efficient during the implementation of the project.

13. Mr. Bernaudat underlined how the PRTRs holistic approach of chemicals and waste is quite unique and important. The UNEP-GEF Task Officer continued his intervention by briefing the participants on the next steps, in particular, the important aspects of the evaluation which will follow the a "theory of change" approach to explain how the activities undertaken by the project led to the intended results and objectives. Other aspects relevant to the evaluation will be the achievements and outputs from each of the countries, but also how to move forward on PRTR implementation and what are the needs at national level, including continuing the support at international level, e.g. a new project. These are the main aspects that will be considered by the evaluator, therefore it will be crucial what countries will communicate to the evaluator. The person is currently being selected by UN Environment and is expected to start her/his appointment in the next 3-4 months; the contact details of the evaluator will be then communicated to UNITAR and to national coordinators.

14. Mr. Bernaudat concluded his intervention by observing that the evaluation itself is an important aspect of the project as it will also define how to move forward, thus countries were invited to work together with UNITAR and UN Environment to get positive lessons learned, impact stories and data from all key national stakeholders involved in PRTR implementation and pilot testing. The evaluator will collect this information into the evaluation report that will be then shared with the participating countries for comments before finalization. It was made clear that only a positive evaluation will provide a solid base for new PRTRs project to be requested to the donor.

15. Participant from Belarus asked if there are any concrete possibilities that GEF will approve to continue working on PRTRs implementation in the current six countries. UN Environment replied that usually GEF is reluctant to finance the same type of project for different phases, and since the current project has been granted a Phase I on the design of PRTR systems and a Phase II on the implementation of PRTRs, thus it is unlikely that the GEF will finance a Phase III. However, countries were invited to work with UNITAR and UN Environment to develop a new project proposal that will integrate new aspects of PRTRs applications, e.g. MEAs reporting, and strengthening the current systems, including the full implementation at national level.

1.3. UNITAR: activities under the global component

11. Mr. Andrea Cararo, *Project Coordinator, UNITAR*, briefed the participants on the outcomes of the global component of the project, which started officially in November 2015 with the inception workshop in Madrid. Mr. Cararo presented, for each year of project implementation, an overview of the activities and milestones undertaken by UNITAR, besides the day-to-day management of the project, e.g. collection of PRTR guidance materials, updated PRTRs platform, video modules and webinars, and the ongoing finalization of UNITAR PRTRs Guidance Series and study on integrating PRTRs and MEAs reporting. He then briefed the participants on the different sections and resources available of the dedicated UNITAR PRTR Platform (http://prtr.unitar.org/site/home), including the meeting page were participants can find all the meeting's documents and presentations. The Project Coordinator continued the presentation by illustrating the functioning of the PRTR: Learn feature, which now include five video modules developed by UNITAR on PRTRs "hot-topics", such as legal framework, communication & dissemination of data, release estimation techniques, data standardisation and online reporting systems.

12. 85% of national budgets have been spent or allocated to implement national activities, only the national budget of Ecuador is currently unspent due to significant delays occurred at administrative level in the public sector in the country, e.g. new public procurement legislation, changes of ministries, and restructuring of the national PRTR team. However, it was agreed to continue working on the implementation of the PRTR project with the assistance of a third national institution (FIAS) which will be in charge of receiving, managing and reporting project funds transferred by UNITAR for the implementation of national activities in Ecuador.

13. The UNITAR project coordinator continued his intervention with the main challenges identified during the execution of the project. Among others, the lack of proper political commitment, efficient Interministerial coordination and changes in the ministries and national teams were identified as the most significant challenges for the participating countries. Mr. Cararo concluded his presentation by inviting participants to join the PRTR social media channels that have been developed by UNITAR, in particular the LinkedIn experts' group (UNITAR Professional PRTRs Networking Group) and Facebook (UNITAR's PRTRs Community)

14. The presentation can be found at the following link: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre1_unitar_global_component-1.pdf

1.4. Results of national PRTRs implementation

16. Mr. Daniel Omar Nuñez Ato, *National Coordinator RETC-MINAM*, started the presentation with the milestones of PRTR implementation in Peru, started in 2005-2007 with the ratification of the SC and started designing the PRTR system in 2007. Peru is also in the process of accessing OECD, thus PRTR is key at national level. The available legal instruments are also connected to the fact that Peru is party to several environmental conventions (e.g. Basel, Rotterdam and Stockholm Conventions, Minamata Convention on Mercury), and also the recent Escazu Agreement, signed by most of LAC countries in September 2018, which Peru is currently in the process of ratification.

17. The national coordinator continued his intervention by briefing the participants on the number and types of substances that are reported through the Peruvian PRTR: 144 substances, including all POPs, from industrial, energy & mines and agricultural sectors. Mr. Nuñez showed the recently developed PRTR online system that was used by MINAM to collect the PRTR reports from national industries. In particular, the MINAM received reports from 91 companies and 150 facilities from 2016 to 2018; also, in the last three years, 4,500 people were sensitised on PRTR topic and 150 government officials were trained. The industries trained in 2017 were 117 and 100 companies from the 7 regions of the country were added to the RETC Training programme in 2018, which included training on emissions calculation.

18. A first regional meeting was organized by the ministry of environment of Peru in Lima in November 2017; a second regional meeting was held on December 2018. Neighbouring countries such as Argentina, Ecuador, Colombia, Brazil, Chile, together with Panama, Mexico and Canada were invited to discuss the possibilities of having a regional PRTR integrated system. At the moment, MINAM is exploring the opportunity of having a single window reporting system (or so called *Ventanilla Unica* in Spanish) taking into account the positive examples from Chile, Mexico and Canada.

19. Agriculture, chemicals, foundry and fish products are the industrial sectors with the biggest reporting sectors with the higher emissions among the PRTR data provided. The national coordinator stated that more than 2 million tons of toxic substances released in the environment have been tracked down thanks to PRTR reporting. He continued his presentation by stressing the fact that the Peruvian PRTR took into account only emissions to water (both wastewater and public water) and air. Among the challenges identified, he mentioned the reluctance from industries to voluntary submitting PRTR information. The country is growing fast, moving towards developed countries standards, therefore, there is the fear that PRTR reporting could be a burden to economic growth instead of an opportunity. However, the objective of MINAM is to change this perception of PRTRs, an example given was of Peruvian companies that had to comply with Chinese standards of importing, and PRTR standardisation was seen as a possible solution, instead of an additional burden.

20. The technical component of PRTR implementation achieved by Peru is of a good level, however, the coordinator highlighted how important is to have the political process running in parallel as well. With this regard, he affirmed the crucial role of international organizations, such as UNITAR and UN Environment, to solicit governments to prioritize PRTRs in the national political agenda.

21. He then thanked UNITAR for the support and for the availability to meet the Ministry of Environment of Peru to discuss the sustainability of PRTR in the national agenda. Answering questions from participants, the coordinator asserted that industries are favourable for an introduction of the single window reporting mechanism. He concluded by explaining how the training was successful: it was crucial to involve multi-sectoral key actors since the beginning of the project through regular meetings where they were able to collect feedback as well. The trainings focused both on technical aspects, e.g. industries, and on information and education on chemicals and effects on human health, e.g. civil society.

22. The presentation can be found at the following link:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre3_peru.pdf

23. Ms. Tatiana Tugui, *National Coordinator - Environmental Pollution Prevention Office (EPPO), Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova*, briefed the participants on the activities and results of PRTR implementation in Moldova that have been achieved through two main projects focused on providing technical assistance on PRTR: the GEF "Global Project on the implementation of PRTRs and a tool for POPs reporting" and the SAICM QSP project on "Strengthening capacities for the development of PRTRs and supporting SAICM implementation". She then illustrated the four main steps of PRTR establishment in Moldova: (i) approval of the legal and regulatory framework; (ii) PRTR infrastructure assessment; (iii) training programme; (iv) reporting. The coordinator stressed the fact that the recent restructuring and changes within the national competent authorities in Moldova, have resulted in lower autonomy and authority of the ministry of environment, which was merged with the ministry of agriculture and regional development. However, the country will face new elections soon, thus re-establishment of the full authority of the MOE might be considered by the new government. Taking as example the latest restructuring of the ministry, she highlighted the importance of the early adoption of a national PRTR law in 2017 which allowed to significantly progress with setting of fully functional PRTR system and contributed to implement a mandatory reporting system, instead of a voluntary reporting from industries. EPPO considers that mandatory reporting provides solid bases for national PRTR implementation.

24. EPPO developed methodological guidelines on release estimation techniques for each sector, in national language, that were approved by the government and made mandatory for industries to use the guidelines for the estimation of pollutants' releases. The Moldovan PRTR system covers emissions from air, releases to water (based on measurements) and transfer of wastes. Diffuse sources of emission such as unauthorized landfills, agricultural activities, livestock farms and transportation will be added in the near future to the PRTR reporting and will be under the

responsibility of the Environmental Protection Agency; IPCC and EMEP/EEA guidelines have been proposed as basis for the calculation of non-point sources of emissions.

25. Regarding the development of the PRTR database, the national coordinator explained that the AIS PRTR is hosted by Mcloud platform, which is under government domain, and connected with other governmental platform services (Mpass, Msign, Mlog). The PRTR website is under the official government domain (www.retp.gov.md) and all reported data and national PRTR map is freely available online for public users.

26. Ms. Tugui briefed the participants on the future development of the national PRTR, which will contain data on the releases into air of substances reported under MEAs. For example, regarding the Stockholm Convention on POPs, she explained that some POPs, e.g. DDT, Aldrin, Chlordane, have been banned in Moldova, thus they are not included in the reporting. Moreover, POPs emissions are covered by sectors: (i) energy sector, (ii) production/processing of metals, (iii) mineral industry, (iv) chemical industry, (v) waste.

27. The Environmental Agency uses the PRTR data for reporting but also for aggregate analysis. During the first year of PRTR reporting, in 2017, the number of registered economic operators was 75, including 192 facilities. EPPO received 162 reports. Most of the emissions to air was reported by the thermal power plants, in particular releases of 30 pollutants among GHGs, POPs, heavy metals, particles and other gases. End of March was the deadline for reporting. Energy sectors accounted for 153 facilities, 29 facilities from food processing and the rest from mineral extraction, waste and wastewater treatment plants and chemicals industry. She then explained the usual validation procedure of PRTR reports: they are checked by EPPO and external experts and sent back to the facility for errors correction, if any. In order to support the economic operators within the PRTR reporting process, the intensive training activities divided into 3 cycles were conducted: presenting and testing the guidance materials and excel worksheets with industries; testing and piloting PRTR software among economic operators from different sectors; and combining training on use of calculation spreadsheets and reporting into the new system.

28. Among the main achievements of the PRTR project in Moldova, she identified the following: the adoption of the legally binding instrument for PRTR reporting and implementation; the development of detailed national guidelines; training programme for national stakeholders and the PRTR database system. The national coordinator stressed the fact that follow up activities should include the upgrade of IT system with online reporting, to avoid collecting excel reporting files from facilities; but also expanding the sectors, in particular focusing on emissions from agricultural activities; including the conversion from fuel to caloric values to be included in calculations methodologies. The development of an embedded errors checks, due to difficulties encountered by government officials that might not have a high level of expertise required to spot mistakes in the PRTR reports submitted by facilities.

29. EPPO conducted an internal evaluation and received positive responses from industries who participated in the PRTR pilot phase. She also mentioned the importance of using already available expertise in the country, which means internal capacity that could be provided by other ministries or department, e.g. climate change department. However, she concluded by stating that it was not easy to approve the national PRTR law within only two years of project implementation. The coordinator also thanked UNITAR for the support, flexibility and good collaboration during the project implementation. Ms. Tugui mentioned that climate change convention can also be used for next GEF project, now the stricter Paris Agreement requires countries to report every year or two and also to include reporting system to collect data directly from industries, this is where PRTR can play an important role. UN Environment agreed that a multifocal area proposal could be an option because it will bring a new idea.

30. The presentation can be found at the following link:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre2_rep_of_moldova-1.pdf

31. Mr. Uon Sokunthea, *National Coordinator, Ministry of Environment of Cambodia*, started his presentation with an overview of the key steps and main achievements of PRTR implementation in Cambodia: updated national PRTR proposal, sub-decree issued by the MOE that established the PRTR legal framework, awareness raising strategy on environmental information and PRTR data, national PRTR website (www.prtrcambodiamoe.gov.kh) and PRTR training programme for key national stakeholders. Training workshops for industries on PRTR estimation techniques included 42 facilities from 5 different sectors: cement production, coal power plant, textile/garment, bio-energy production and food production. With this regard, national manuals and guidelines for reporting were developed in Khmer and English language by the MOE. The PRTR pilot was conducted during the project. Participating industries had 3 months (until March) to send the reports to the MOE; from April to June the PRTR team within the MOE checked and validated the data; from July to September to compile the data and produce aggregate analysis and by December the PRTR data was disseminated to the public through the online website.

32. The national coordinator continued his intervention by showing the PRTR website to the participants and how to navigate the site, the PRTR map and the data search functions. Another important aspect was the implementation of the national communication strategy and outreach campaign conducted by the MOE with the aim to raise awareness about environmental information and national PRTR. The social media campaign was conducted using different means such as Facebook, where the public page of Cambodia PRTR reached more than 45,000 people with more than 1,000 followers. Representative from MOE were also invited to discuss about the project and the implementation of a national PRTR system through the main three channels of the national broadcasting. The public information campaign involved also seminars with more than 300 students from universities.

33. Mr. Sokunthea briefed the participants on the results of the PRTR survey that was conducted in Cambodia among a sample of 1,060 people: more than 60% of the people interviewed was already aware of the PRTR system, also thanks to the effective communication campaign. The national coordinator concluded his intervention by listing some of the challenges encountered during the project implementation: the lack of a proper PRTR legal framework approved and recognized at national level, as well as coordination and cooperation between industries and government; limited capacity and knowledge of national experts and consultants on emissions estimations and calculation; language barriers with Chinese companies that are operating in the country or importing chemicals to Cambodia. In addition, the establishment of the new government in 2018 resulted in a setback of a national PRTR legal framework adoption.

34. The presentation can be found at the following link:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre4_cambodia.pdf

35. Mr. Ivan Narkevitch, *National Coordinator, Belarusian Research Centre "Ecology"*, provided an overview of the activities conducted under the GEF PRTR project. Among others, he highlighted the development of the national PRTR proposal, the national training programme and the pilot testing of the PRTR reporting. The trainings were tailored for different national stakeholders. In particular, two workshops were organized for media and NGOs and one for government authorities and industries. The national coordinator stated that Belarus is in the process of ratification of the PRTR "Kiev Protocol". The necessary draft legal documents have been completed thanks to the GEF project and have been submitted to high level authorities for approval.

36. The PRTR pilot phase included almost 500 companies, mostly from the production and processing of metals (21% of reporting facilities), which agreed to submit PRTR information on a voluntary basis. The reporting substances embedded the 86 list of pollutants under the PRTR Protocol, plus 5 POPs under the Stockholm Convention. Regarding the reporting of off-site waste transfers, thresholds were set to two tons per year of hazardous waste and more than 2,000 tons for non-hazardous waste. It was highlighted that the highest level of air emissions in Belarus are accounted for PM, NMVOC, methane, ammonia, zinc.

37. The data will be made available to the public on the national PRTR website www.prtr.ecoinfo.by. The national coordinator then invited the national consultant, Mr. Dzmitry Melekh, *Belarusian Research Centre "Ecology"*, to present the functionalities of the PRTR website. Mr. Melekh navigated the participants through the website, how to perform specific search functions, information and data available. Suggestions were made by UNITAR project coordinator on how to improve the layout and structure of the different sections to make it more user friendly in the future.

38. Mr. Narkevitch affirmed how PRTRs can be seen as a green path to the development of chemicals industry. In the case of Belarus, information provided by the PRTR system will foster transparency and dialogue between government, industries and the public. The coordinator concluded by stressing the fact that NGOs play an important role in PRTR implementation: they can bring different views and methodologies to make PRTR data more accessible and improve public awareness.

39. The presentation can be found at the following link:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre5_rep_of_belarus.pdf

40. Mr. Nurgazy Abdulmanov, *National Coordinator, Information Analytical Environmental Protection Centre*, introduced to the participants the main pillars of the project implementation: juridical/legislative; guidance/support; IT technology; access to information; data standardization. At legislative level, a separate article (No. 491-V) was included in the Environmental Code in April 2016. Then, by a ministerial decree No. 241 the rules that established and maintained the PRTR system were adopted. Currently, the country is in the process of ratification of the "Kiev Protocol on PRTRs", which was included in the national agenda and international treaties to be signed by Kazakhstan in 2019.

41. Mr. Abdulmanov continued his presentation with the methodological support that was provided at national level under the GEF project, this included: the assessment of existing methodologies and guidance on PRTRs; the development of national estimation techniques guidelines for key sectors; the updated list of substances to be included in the PRTR reporting, which now included POPs and heavy metals in line with MEAs requirements. The key sectors identified were: (i) oil refining,

(ii) energy, (iii) mining, (iv) metallurgical and (v) chemicals. He also highlighted how the national guidelines have been integrated following the UNEP methodology for the estimation of POPs, in particular PCDD/PCDF in air, wastewater, soil and waste.

42. For this purpose, they conducted training activities to assist enterprises in the reporting. The pilot phase was carried out by more than 100 facilities from different industrial sectors (chemicals, energy, metallurgy, mining, construction and agriculture). The highest emissions reported regard CO released into air. The national coordinator explained to the participants how to access the national PRTR portal and its functionalities (https://prtr.kz).

43. Mr. Abdulmanov briefed the participants on the awareness raising campaign that was conducted to reach out to data users, public, industries and other governmental officers. Social media channels (Facebook, VK, Twitter) played an important role in the communication and engagement of users regarding PRTR knowledge and availability of data in Kazakhstan. Other initiatives included interviews on the radio and national television broadcasting and face-to-face training. More than 12 universities participated in the seminars. With regard to the PRTR training programme, more than 360 participants attended the workshops. Almost half of the participants were from the industries, 36% from public authorities and the rest from NGOs and international organizations. The training focused on both technical assistance for reporting industries and raising public awareness, participation and promotion of the national PRTR system.

44. Further steps of the implementation of PRTR in Kazakhstan will include the application of reporting thresholds, national guidelines on estimation of releases into soil and inclusion of POPs and heavy metals reporting according to MEAs. The national coordinator concluded his intervention by highlighting the best practices and lessons learned from the project implementation: improve broader awareness and participation by involving key national stakeholders since the beginning of the project; use of international methodologies for the calculation and estimation of pollutants emissions; integrating PRTR reporting into the national system of environmental regulation and reporting; involve national Aarhus Centres in the implementation of the strategy of public access to environmental information and PRTR data.

45. The presentation can be found at the following link: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre6_rep_of_kazakhstan-1.pdf

46. Ms. Stephani Salazar, *Environmental Specialist, Ministry of Environment of Ecuador,* briefed the participants on the funding principle of PRTR in Ecuador: to increase country's capacity to comply with MEAs reporting requirements, information exchange and awareness raising. She then introduced the legislation and regulations that provide a basis for the establishment of PRTR at national level, however, the objective will be to amend the current law in order to introduce specific PRTR provisions that will facilitate the implementation of such system and will serve as a legal framework to implement compliance with environmental law.

47. Ms. Salazar continued her intervention by showing the earlier stages of PRTR implementation (Phase I) in Ecuador, and the current activities under Phase II of the UNITAR/GEF project, that are planned to be implemented by the end of 2019. During the initial period of project, despite the administrative issues that led to significant delays in the implementation of project activities, the MOE managed to organize the inception workshop, liaising with the key national stakeholders, which were also invited to take part in the National Steering Committee of the project, and develop 90% of the PRTR software. In particular, adjustments were made to include SUIA requirements into the PRTR database. The structure of the system includes 5 sections of the database: (i) general technical information, (ii) hazardous waste, (iii) water, (iv) air, (v) annual emissions and transfers of chemicals substances. All industrial entities granted with environmental licenses,

currently registered in the SUIA system, will be requested to report PRTR data on annual basis. The results will be then published on the SUIA website. She then showed to the participants the key features of the PRTR reporting modules: the use of International Standard Industrial Classification of All Economic Activities (ISIC); resume data table (for all sections of the report); free access to report information for MOE technicians; reporting industries will be required to upload their industrial process diagram as well.

48. Moving to the planned activities for 2019, Ms. Salazar mentioned the important task to pilot testing the system and software, using an initial voluntary reporting approach. In addition, MOE will update the national PRTR proposal developed in 2013, together with the updated list of chemicals to be reported. Another substantive part of the activities to be conducted in the next months will be the training programme for key sectors and the development of national PRTR guidelines for emissions estimation and calculation. The delegate from Ecuador updated the PSC members about the administrative setbacks encountered by the MOE during the period 2017-2018 and how the issue of public procurement will be addressed by signing a new agreement between UNITAR, MOE and FIAS (Investment Fund for Sustainable Environment) to implement PRTR activities at national level. The role of FIAS, as third national institution, will be to receive and manage project funds on behalf, and under close collaboration, of the MOE. Ms. Salazar concluded her intervention by stating that PRTR implantation in Ecuador will support country's compliance with MEAs reporting, the regulation of industrial activities and promotion of cleaner production and increased public awareness of chemicals and other pollutants released into the environment.

49. The presentation can be found at the following link:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre7_ecuador_eng.pdf

1.5. Lessons learned and best practices

50. The PSC meeting continued after lunch break with the round table discussion on the lessons learned identified during the implementation of the project. National coordinators contributed to identify the lessons learned, best practices and recommendations on different topics regarding both administrative and technical issues encountered during the project.

51. The table below shows the template used to moderate the discussion. The lessons learned exercise included two main areas of discussion related to both technical and administrative issues, e.g. development of PRTR legal framework; updated PRTR national proposal; development of national guidelines on estimation techniques and training programme; PRTR pilot testing and awareness raising campaign; project administration, sustainability and established coordination mechanisms.

52. In Annex I of this report, it is provided a summary of the lessons learned and best practices identified during the PSC meeting by all participants.

Main topics	Key elements of discussion
TECHNICAL ISSUES	
Development of the PRTR legal framework	Lessons learned and best practices on: 1. Obtaining information on existing national environmental legislation and gaps for PRTR implementation and POPs reporting 2. Involvement of stakeholders during development of the assessment 3. Defining the legal status of a PRTR at national level 4. Validating the information gathered in the assessment 5. Availability and adequacy of guidance on developing the legal requirements for PRTR implementation
Updating of the national PRTR proposal	Lessons learned and best practices on: 1. Presenting the proposed system to decision-makers 2. Mainstreaming PRTR implementation, POPs reporting and information dissemination 3. Establishing a clear path of next steps to implement a PRTR at national level 4. Identification of existing national resources and future national needs to continue with PRTR implementation 5. Availability and adequacy of guidance on designing the PRTR key features
Developing national guidelines and PRTR training programme	Lessons learned and best practices on: 1. Definition of information dissemination methodologies 2. Linking PRTR scope to national priorities on monitoring and information dissemination 3. Availability and adequacy of guidance on designing the PRTR communication strategy 4. Design of sector specific training programme 5. Involvement of key national stakeholders in trainings 6. Organization of seminars and workshops
Pilot trial of the designed PRTR system	Lessons learned and best practices on: 1. Definition of pilot trial scope and timeframe 2. Defining a reporting format for the PRTR 3. Selection and acquisition of software and hardware for the PRTR and establishment of a PRTR database 4. Establishing thresholds 5. Identifying best emission estimation techniques (including those for POPs) 6. Selecting sectors and productive activities to report to the PRTR (including those emitting POPs) 7. Assessing inclusion of diffuse sources 8. Involvement and commitment of reporting facilities 9. Training for reporting facilities 10. Reporting by industrial facilities 11. Validation and presentation of data 12. Identification and presentation of lessons learned during the pilot trial (also regarding POPs reporting) 13. Identification of next steps to improve the designed system

	14. Availability and adequacy of guidance on PRTR testing
Awareness-raising and public participation	Lessons learned and best practices on: 1. Identification of strategies for public access to environmental information 2. Civil society involvement in the design of the PRTR (methodologies and online seminars) 3. PRTR information dissemination methodologies 4. Development of PRTR website 5. Communication materials
Use of PRTRs to report and disseminate information about POPs	Lessons learned and best practices on: 1. Identification of resource material on POPs emissions and estimation techniques 2. Obtaining information of POPs emissions 3. Adequacy of PRTRs to report POPs 4. Use of PRTR data on POPs to report to the Stockholm Convention Secretariat
ADMINISTRATIVE ISSUES	
Project administration	Lessons learned and best practices on: 1. Project design 2. Planning of work 3. Administrative procedures 4. Availability and efficiency of project managers in the international executing agency 5. Value and adequacy of international experts 6. Identification of national project coordinator
Coordinating mechanisms	Lessons learned and best practices on: 1. Establishment of a coordinating team/group and communication with the POPs team in the country 2. Commitment of all stakeholders 3. Information exchange among stakeholders 4. Involvement of civil society 5. PRTR responsibilities outside the implementing Ministry 6. Continued support of coordinating group to PRTR implementation and next steps of the process
Sustainability	1. PRTRs at the national level: a national priority? 2. Commitment of national authorities and decision-makers to PRTR implementation 3. Commitment and willingness of industry to continue with PRTR implementation 4. Commitment of civil society organizations to support PRTR implementation 5. Integration of the PRTR with other reporting systems at national level 6. Views regarding the ratification of the Kiev Protocol on PRTRs 7. Further activities to strengthen POPs reporting through a PRTR

1.6. UNECE: initiatives and updates

53. Participants were informed of the presentation made available by Mr. Kristof Doucot, *PRTR Protocol Secretariat, UNECE*, on the meeting webpage. Mr. Doucot was not able to join the meeting via webinar as initially scheduled due to internet connection problems in the meeting room. The presentation introduced the basics principles of PRTRs, e.g. reporting tool, database, data visualization and dissemination of information, and the related UNECE Protocol on PRTRs, better known as Kiev Protocol, which was adopted in 2003 and entered into force in 2009, including now 35 parties. The advantages of a legally binding instrument are many, among others, Parties, NGOs, Aarhus Centres and IGOs, can benefit of security and trust for new partnership, providing a strong signal of commitments and real progress to other entities. In the presentation it was illustrated the various aspects of PRTR implementation included in the Protocol text.

54. UNECE provided a brief summary of the main findings from the latest Global Round Table on PRTRs held in Geneva in November 2018: integration of a variety of national and international reporting obligations, i.e. support governments to fulfil their MEAs reporting, put into practice the pollutes-pay-principle, addressing waste management issues and improve trust between different stakeholders.

55. The presentation included also some key points to be considered for a dynamic development of PRTRs: a step-by-step implementation approach and links to national priorities areas. It was also mentioned that the 3rd Meeting of the OECD Working Group on PRTRs will be organized in OECD headquarters in Paris on 15-16 October 2019.

56. This Presentation can be found here: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre8_unece_prtr_secretariat.pdf

57. The Chairman thanked the National Coordinators for the participation and the good level of information shared and status of the project activities in most of the countries and closed the PSC meeting.

2. National Workshop on PRTR implementation in Cambodia

2.1. Impacts of PRTR implementation at national level: the Serbian experience

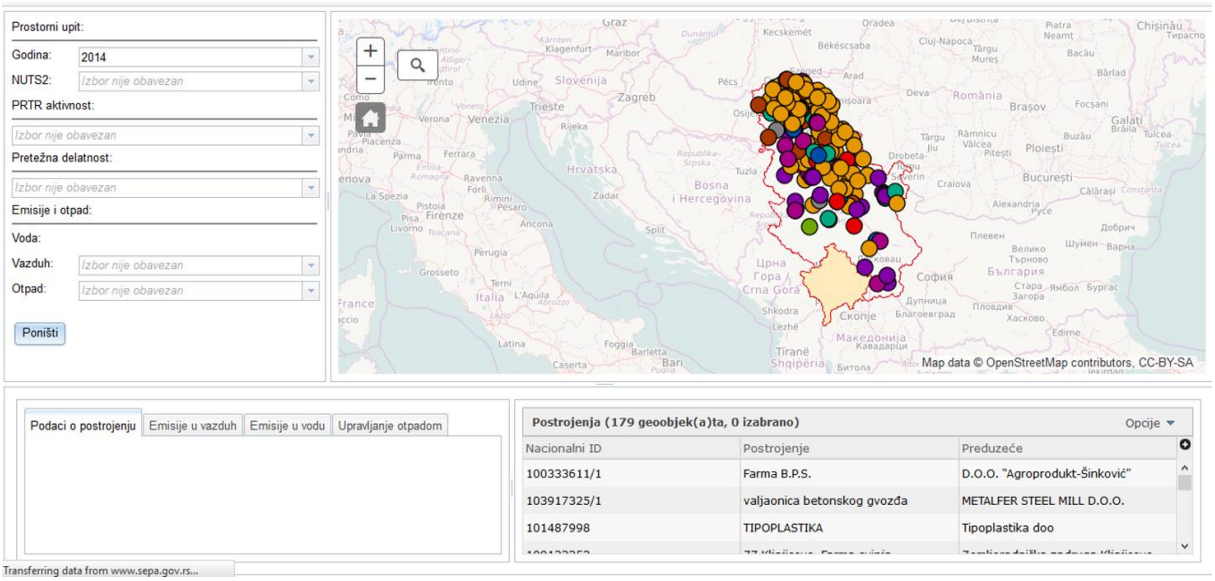
33. The opening remarks of the national workshop on PRTR implementation in Cambodia were given by H.E Sabo Ojano, *Secretary of State, Ministry of Environment of Cambodia*, that reiterated the importance of taking appropriate measures for the sound management of chemicals, as reflected by the commitment of Cambodia in joining the BRS Conventions and the work that is being done to ratify the Minamata Convention on Mercury as well. The implementation of a national PRTR, thanks to the GEF, UNITAR and UN Environment, is a first step towards a more comprehensive management of chemicals and monitoring of pollutants releases and transfers of hazardous substances.

34. The floor was then given to the international expert invited by UNITAR, Mr. Nebojša Redžić, *Head of Unit, Serbian Environmental Protection Agency*. The expert started his presentation with an introduction of the Serbian EPA and the work that is being undertaken on environmental protection by the national agency. The activities of reporting and data collection started in 2007 with the establishment of the National Register of Pollution Sources. In 2009, SEPA managed to adopt a legal framework for the national PRTR which led to the adoption of a set of by-laws that regulated the reporting system in 2010. The Serbian PRTR encompasses a series of thematic units: (i) emissions to air; (ii) emissions to water; (iii) emissions to soil; (iv) waste management; (v) products that become special waste streams after use.

35. SEPA started with the implementation of PRTR Protocol and E-PRTR directive in 2008. In 2010 and 2011, Serbia was able to ratify the PRTR Protocol and E-PRTR directive 166/2006 through

by-law. The first information system was developed in 2012 and in 2016 they added GIS information to the PRTR database. Mr. Redžić continued his presentation by describing some of the main features of the Serbian PRTR, e.g. there is no confidentiality towards SEPA, reporting facilities have to provide all the necessary information for the estimation and calculation of emissions, while SEPA will be in charge of keeping these information confidential by publishing only aggregate data; all amounts must be reported to SEPA, no thresholds are applied and the data is collected once a year through the PRTR software. Another characteristic is that most of the data fields to be filled out by facilities are drop down lists and mandatory fields that help avoiding mistakes by reporting industries.

36. Among the basis of the PRTR legal framework in Serbia there is the constitution, in particular Article 74 which state the right for people to healthy environment, then there is the law on environmental protection and specific sectoral laws. Different kind of guidelines have been developed by SEPA for using the IT system, form filling, and emissions estimation. It has to be noted that these guidelines are part of bylaw and their use is obligatory. The basis for developing these guidelines are the 2016 EMEP/EEA Air pollution inventory guidebook and 2015 IPCC guidelines for GHGs inventories. In addition, SEPA developed guidelines for livestock emissions (broilers, laying hens, pigs and cows), mining, households (considered diffuse sources) and currently working on landfills estimation techniques. Besides guidance documents, SEPA developed excel sheets for emissions calculators that are simple and easy to use tool for staff from reporting facilities.



37. Regarding the information system NRIZ, the expert stressed the fact that it is completely developed and managed internally at SEPA. The IT experts are employees of the EPA and this make it easier to adjust and improve the PRTR system as much as possible. The system is bilingual (Serbian, English) and it is available under the government domain: http://www.sepa.gov.rs/. For the scope and activities necessary for PRTRs, it is advised to build a modular IT system with GIS feature and online reporting only (paper or excel are not considered a valid submission of data in the Serbian PRTR). When the reporting deadline is approaching (at the end of March each year) more than 2,000 companies are online on the database, for this reason there are 12 servers operating to assure smooth submissions of reports. Moreover, based on the submitted data, the IT system can create aggregate analysis used later in SEPA reports. Mr. Redžić highlighted the fact that to ensure data quality the system should minimize free writing by the operators, which can be avoided with drop-down lists, queries and previously prepared reports, in addition, the use of code lists instead of words for search. He also mentioned that in the future, the updated Serbian PRTR will use blockchain technology as a validation tool applied

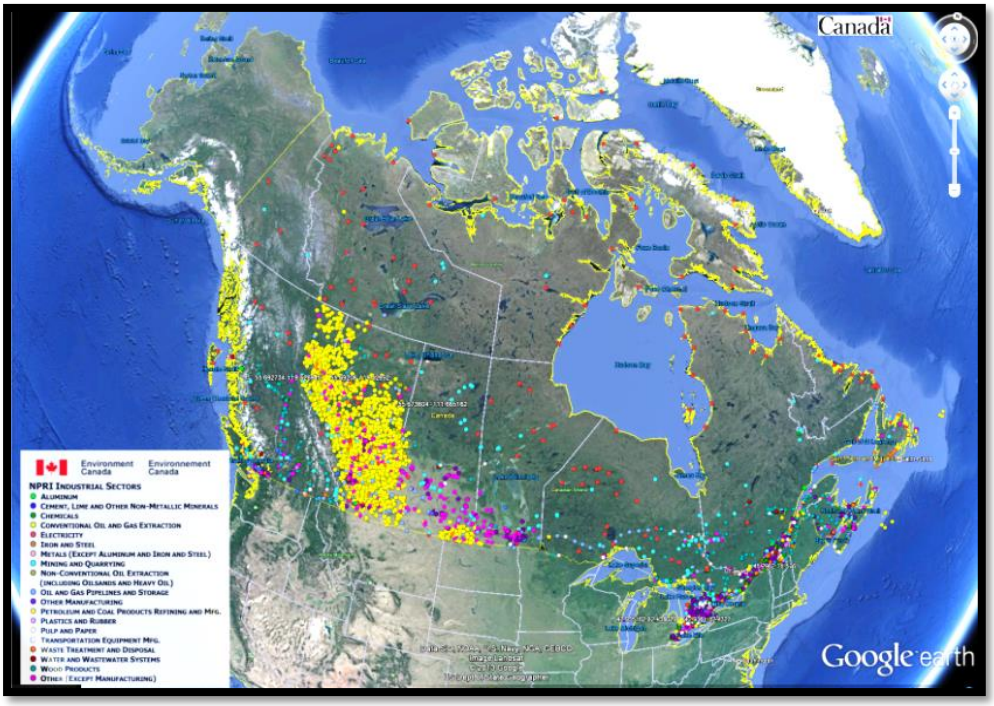
to the waste movement in Serbia and annual reporting on waste management. Another important aspect is that PRTR in Serbia is based on the "polluter pays principle" which has a dual function: fiscal, because it provides financial resources, and environmental, because it aligns the activities of businesses to the environmental policies. In the information system of the National Register, in the period from 2011 to 2018, SEPA collected data for fees that amount for around 600 million USD.

38. Regarding staffing, SEPA started with 1 person working on PRTR, now they have 7 permanent staff. In this way, in the case that companies need support when reporting, they can ask to SEPA team. Usually, around 15-20 seminars are held throughout the country every year for economic operators who must report. In the case that a company refuses to cooperate or submit the report, SEPA will start legal procedures. One challenge identified by the expert, was that small companies have usually very low continuity in reporting data. In Serbia they have different tools to present the PRTR data, the PRTR portal is only one of the tools available. The expert presented the PRTR portal, the map and examples of reports from industries. Mr. Redžić briefed the participants on the waste management portal NRIZ GIS and its filters (geographic areas, waste codes, amount) and the query system used in the open data portal. The expert concluded his presentation by showing the benefits of implementing PRTR for the different national stakeholders: companies, environmental authorities and public.

39. This Presentation can be found here:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre9_serbian_epa.pdf

40. Mr. Dérick Poirier, *Environmental and Climate Change Canada* provided to the participants a presentation on the impacts of PRTR reporting at national level and the multiple uses and applications of PRTR data in Canada. The presentation includes an introduction of the National Pollutant Release Inventory (NPRI), available tools for accessing NPRI data and how the Government, industries and national stakeholders make use of the data.

41. This Presentation can be found here:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre10_npri_canada.pdf



2.2. PRTR reporting and Multilateral Environmental Agreements (MEAs)

42. Mr. Andrea Cararo, *Project Coordinator, UNITAR,* was invited to present the next topic: opportunities to support national reporting to Multilateral Environmental Agreements (MEAs) and tracking SDGs implementation through the national PRTR database and annual reporting from industries and diffuse sourcing. Mr. Cararo introduced to the national participants the GEF Global project on PRTRs implementation and major outcomes. In particular for Cambodia, he identified the long-term opportunities deriving from the establishment of a national PRTR system, among others: develop a single environmental data pool and improve information quality; support Government in the periodic report to MEAs Secretariats; provide conditions to monitor and reduce air, water and soil pollution; support the access of national companies to international markets; establish industrial mapping of Cambodia and raise public awareness on environmental issues by providing public with easy accessible information on environmental emissions.

43. The coordinator continued his intervention by highlighting the numerous references to the use of PRTRs for national reporting in the texts of the different environmental conventions:

- **Stockholm Convention**: Article 10 “Each Party shall give sympathetic consideration to developing mechanisms, such as pollutant release and transfer registers, for the collection and dissemination of information on estimates of the annual quantities of the chemicals listed in Annex A, B or C that are released or disposed of”.
- **Minamata Convention:** Article 18 “Each Party shall use existing mechanisms or give consideration to the development of mechanisms, such as PRTRs where applicable, for the collection and dissemination of information on estimates of its annual quantities of mercury and mercury compounds that are emitted, released or disposed of through human activities”.
- **UNFCCC:** Article 4 mention the “Participation of the public and availability of environmental information”, Article 12 “Reporting to the secretariat the different sources of emission be sector”.

44. It was also highlighted the use of PRTRs data in the framework of the Sustainable Development Goals (SDGs). The information on emissions of pollutants and releases of chemicals substances into the environment from industries, and diffuse sources of pollution, that are collected annually by national PRTRs, can contribute in tracking the achievement of SDGs, in particular the following Goals could be measured by aggregating information from PRTRs: Goal 3, 4, 6, 11, 12, 13, 14, 16, 17.

45. This presentation can be found here: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre11_prtrs_meas_reporting_unitar.pdf

2.3. PRTR implementation in Cambodia

46. Mr. Laska Sophal, *PRTR Team, Ministry of Environment of Cambodia*, briefed the participants on the implementation steps of PRTR in Cambodia. The national expert was involved during the PRTR pilot phase and explained the importance of updating the national PRTR proposal, which was developed in 2018 and includes 7 chapters, to be used as a guidance document for the implementation of the PRTR activities. The Ministry of Environment also managed to issue a sub-decree on PRTR which gave the necessary political endorsement for the pilot phase, however, the sub-decree should be now promoted to national law for its full effectiveness. The list of chemicals to be reported to the PRTR currently includes 37 chemicals; in the next year it is planned to have an updated list with up to 87 substances. Mr. Sophal highlighted to the participants that during the pilot phase, thresholds for PRTR reporting were applied in order to obtain only significant reported data from the major industrial facilities in the following sectors: cement production, coal power plants, bio-energy production, textile, food and beverages. In Cambodia, 42 facilities from different provinces joined the first voluntary reporting of PRTR data.

47. The Ministry of Environment, under the activities of the project, in order to facilitate the collection of quality data, organized several trainings for reporting operators by inviting 2 focal points for each of the facilities. Two training seminars for all sectors together (150 participants in total), then training customized by sectors: 100 participants from the textile and garment factories and 20 participants from the cement production plants. Among the lessons learned, the national expert mentioned the need of more systematic capacity building activities and training programmes to be conducted separately for each industrial sector in order to maximize the learning experience of participants and improved train-the-trainers approach. It was mentioned that during the trainings the Ministry provided participants with handy guidebook on release estimation techniques for each type of selected industrial sector.

48. Mr. Sophal explained that the Ministry received 38 reports: 30% of the reports received were provided through online reporting system, meanwhile the majority (70%) still reported on hardcopies. The explanation given by the operators to the Ministry was that the majority considered difficult to report the information requested, while other reasons were lack of staff and limited time to spend on the reporting format. The presentation continued with the challenges encountered during PRTR implementation: limited knowledge among national experts and staff from the Ministry; lack of coordination among national agencies; limited number and capacity of IT staff; changes of staff in selected facilities; need of more training for industries and more computers in the training rooms; too many reporting requirements from different agencies; language barriers since most economic operators that have to report to the PRTR are Chinese companies which don't speak Khmer. Among the lessons learned, Mr. Sophal stated that political support is key for PRTR implementation.

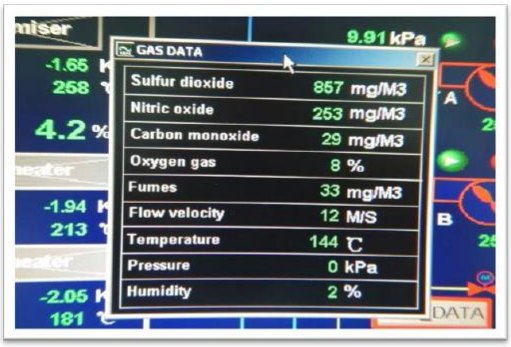
49. Among the questions raised by the participants, if there are any language requirements for foreign investors to operate in Cambodia. The expert form the Ministry replied that at the moment, the only requirement is to hire more that 50% local employee, however there is no requirement to use Khmer language.

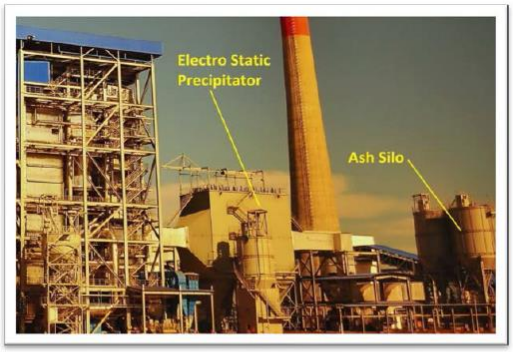
50. The presentation can be found here: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre12_implementation_of_prtr_cambodia.pdf

2.4. PRTR pilot: experiences from the private sector

51. Mr. Ouk Ya, *Cambodia Energy Limited*, was invited as representative from the private sector that participated in the pilot phase of PRTR in Cambodia. He started his presentation with an introduction of the company and the business structure. The company is an independent energy producer, using in particular coal fired power plant 2×51 MW (Net) consist of two coal fired steam generators (boiler), two turbine generators and balance of plant (BOP) system. The boilers are utilized with coal firing and Circulating Fluidized Bed (CFB) type. The advantages of Boiler CFB technology is low SO_2 emissions, low NOx emissions, low CO and carbon emissions. Among others, the main emissions from the plant regard SO_2, NO_2, PM, CO, CO_2. The company has installed several monitoring systems for air and water in the framework of environmental protection. Their production is linked to the demand from EDC, and depends on the seasons, since during rainy season they use hydroelectric plants, meanwhile during the dry season they use coal burning plants. For the calculation of emission into air they have used the available monitoring data for the calculation following the guidance developed by the industry. Participants asked the representative from Cambodia Energy Limited if there are other reporting requirements the industry is complying with and/or if they are subject to polluter-pays-principle. The reply was that, currently, in Cambodia they are not applying the polluter-pays-principle, however they are submitting correction actions to be taken by reporting industries.

52. The presentation can be found here: http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre13_cambodian_energy_limited.pdf





53. Ms. Khen Samrith, *Kampot Cement Co.,Ltd,*, a quality assurance engineer from "K-Cement" in Dongtong district was invited to present the experience of her company during the PRTR pilot in Cambodia. She started the presentation by introducing the structure of SCG company which is a company that produces chemicals, packaging and cement/building materials as well. The production process of cement produces emissions in various different stages, e.g. grinding raw material and burning process. She highlighted in particular the emissions to air (dust, NOx, SO2, CO, VOC), water (BOD, COD, TDS, TSS, Chlorine) and land (As, Hg) that were reported during the pilot phase of PRTR. The data used for reporting were coming mostly from the monitoring stations and from the continuous emission monitoring (CEM) installed directly at the stacks.

54. The company is also involved in environment protection projects focused on CO2 reduction such as solar power generation, eco products, waste management, use of natural resources, water consumption, waste heat recovery. Currently they are producing 30% of the overall electricity needed by the cement plant, the remaining 70% is provided by EDC. With regard to the training provided by the government under the GEF project, she mentioned that she attended 3 seminars organized by the MOE, which were useful for her to then be able to report back to her team. In the case of K-Cement, the data quality is validated by the experts' team of the company before submission; moreover, the same team of experts provides the monitoring data used for the calculations. In conclusion, for this particular industry, it was not a burden to report to PRTR system and they had no issues in making their data available online, also considering that the company is well developed and has the capacity and acquired knowledge for reporting PRTR data.

55. The presentation can be found here:
http://cwm.unitar.org/cwmplatformscms/site/assets/files/1444/scm3_pre14_k_cement.pdf

2.5. Raising awareness on PRTR in Cambodia

56. The national coordinator Mr. Uon Sokunthea, *Ministry of Environment of Cambodia,* presented the national awareness raising strategy that helped the dissemination of PRTR results and improved PRTR knowledge in the country. Among others, one of the main outputs was the development of the national PRTR website which is now available online at www.prtrcambodiamoe.gov.kh. The website is meant to be used and browsed by both reporting operators and public users, thus for this purpose it has a log-in interface for facilities that needs to submit reports and a public section with background information on PRTR for public users, including an interactive map showing the position and detailed information about the reporting industries (general information and data on releases of pollutants).

57. The national coordinator briefed the participants on the different stages and outcomes of the awareness raising strategy, which included the development of outreach materials such as small handy booklet on release estimation techniques by sector and guidance manual on PRTR in Khmer. In addition, to improve awareness of PRTR in the country, several seminars and events were organized to build PRTR knowledge among NGOs, university students and government officials working on related fields. In particulars, it was highlighted that the specific training programme for professors and students from universities was attended by more than 300 students from engineering and chemicals course of studies. In the case of non-governmental organizations, Mr. Sokunthea explained that in Cambodia there are more than 5,000 registered NGOs, however only few were involved in the trainings, due to the fact that only few of these organizations are actually working on chemicals issues; these NGOs were part of the national steering committee since the beginning of the project. He also mentioned that during Phase I of GEF PRTRs project, NGOs in Cambodia supported the outreach campaign on PRTR and it was stressed the fact that NGOs involved is key for the dissemination of information to the public.

58. He then concluded his presentation by showing the participants the different social media channels, such as the official Facebook page of PRTR Cambodia, that were used to communicate and engage with a broader audience about the project and PRTR activities in Cambodia. The last component of the awareness raising strategy was the evaluation of the effectiveness of the outreach campaign that will be presented into a final report to be submitted to UNITAR in the next weeks.

2.5. Briefing on future steps of PRTRs implementation

59. The workshop ended with a briefing on the next steps of PRTR implementation in the six countries and round table discussion on the possibilities to continue working on a full national implementation of PRTRs with UN Environment and UNITAR technical support. It was highlighted that the current project will be completed in December 2019, thus participating countries, implementing agency (UN Environment) and UNITAR have 6 months to develop a structured plan for future activities to be presented to the donors. In particular, the GEF 7 cycle can still be considered: the chemicals and waste GEF focal area has the higher chances to obtain available funding. However, taking into consideration UNITAR proposal to link PRTRs reporting to climate change convention and GHGs inventories, Mr. Bernaudat mentioned that for the climate change GEF focal area, the national coordinators will need to check first with their respective GEF focal point how much of the funding has been already allocated, according to GEF-7 STAR Country Allocations.

60. Countries asked when it could be possible to send the necessary endorsement letters, the UNEP/GEF Task Manger replied that it is still an early stage to send letters to UN Environment. He also stressed the fact that a Phase III of PRTRs implementation has low probability to be approved by the GEF, indeed there is a need to re-think and re-design a multi-country project on

PRTRs. UN Environment welcomed the proposal of UNITAR to link future PRTRs project to support countries in reporting to different MEAs. UN Environment took the opportunity to inform national coordinators that the project evaluation is about to start in the next months and will be conducted following the theory of change, including achievements and how to move forward and the need of new projects, therefore, it will be key what countries will report to the evaluator, which is currently being selected by UN Environment and will be communicate to UNITAR and then to the countries. Mr. Bernaudat explained that the evaluation itself is an important aspect of the project. It will define the next steps to take to strengthen the PRTRs system that have been pilot tested in the previous project's phases and will support the development of a new working package outputs and objectives to be presented to the GEF. The evaluation will produce a report by collecting stories and data from countries and key stakeholders, the report will be then sent to comments from countries. The evaluation will have to be positive in order to request new funding to the donor.

61. Cambodia supported the continuation and strengthening of national PRTR with more training and capacity building for national consultants; the MOE is working on self-monitoring from industries which could be linked to PRTR implementation. Another positive aspect was that fort the first time the industries, including foreign economic operators, attended the trainings and responded positively to the request of submitting the reports. Regarding financial matters, the MOE is already contributing to the PRTR budget, even if it is still a small portion compared to the funding made available by the international cooperation projects, however it is an important sign that there is political willingness to continue. Another example is the need of industrial mapping in the country, and this activity can be link to PRTR continuation.

62. Ecuador mentioned that the Ministry is working on several activities for the next months, including a new work plan and schedule of work that are being drafted and will be sent to UNITAR. It was also mentioned the possibility of a face-to-face meeting with the Minister to obtain the necessary political endorsement and signatures of the new tripartite agreement between UNITAR-MOE-FIAS. Project's activities will last at least until the end of the current year.

63. Moldova stated the country is currently moving into the direction of implementing a single window reporting system, in particular for MEAs reporting, in order to ease the burden of reporting for both industries and national authorities. In Moldova PRTR is still a priority due to the fact that it is linked to the PRTR Protocol and Aarhus Convention, therefore the implementation plan needs to be constantly updated. It was noted that a regional component might be considered for future PRTRs funding. It was also noted that UNITAR proposition to link PRTR with climate change and waste reporting could help Moldova to collect the required data on pollutants emission and releases of hazardous chemicals in one unique database and collect the information only once every year from industries, animal breeding, energy sector, etc. It was stressed the fact that the Paris Agreement on Climate Change it has now a requirement to disaggregate the emissions to at the facility level, thus each country will have to revise national inventories in order to provide more detailed and specific information for targeting and reducing emissions, i.e. National Determined Contributions (NDC), and contribution to the worldwide target of containing global warming. In this context, it is clear that PRTRs becomes a crucial tool to develop and maintain at country level.

64. Peru mentioned that recently there was a slow-down on PRTR activities due to ending of the project, but also due to relevant changes at governmental and ministerial level, however the interest on strengthening and adopting a full national PRTR system is high. Considering also the recently adopted Escazu' Agreement (September 2018) and the process of accessing OECD, the MINAM still consider PRTR as a national priority. Peru highlighted the opportunity to also include a PRTR-related article in the National Action Plan (NAP) for the Minamata Convention on mercury that is currently being developed.

65. Kazakhstan supported the proposal to continuing working with UNITAR and UN Environment on future PRTR project opportunities. In the case of Kazakhstan, the PRTR legal framework has been adopted under the GEF project and the country is in the process of ratifying the PRTR Protocol,

however, there is still the need to train national officials, facilities operators and the public users. For future implementation of PRTR in Kazakhstan, it was pointed out that ratification of the Protocol, bringing legislation in line with the requirements of the PRTR Protocol, the application of reporting thresholds, and inclusion of POPs and heavy metals reporting, as well as further the integration with other national reporting mechanisms and ecological monitoring system will prove the importance of maintaining a national pollutant release and transfer register.

List of Annexes:

- *Annex I:* Summary of lessons learned & best practices
- *Annex II:* Agenda
- *Annex III:* List of participants

Annex I: Summary of Lessons Learned & Best Practices

Topic	Lessons learned		Best practices and recommendations
	Success	Weaknesses	
TECHNICAL ISSUES			
Legal PRTR framework	(i) Development of a specific legal framework for PRTRs to be used to support the ratification of the PRTR Protocol and subsequent approval of national law on PRTR reporting (ii) Ratification of the PRTR Protocol as an instrument for a faster and easier implementation of national law on PRTRs (iii) Adoption of international legally binding agreements and MEASs to facilitate approval of legal provisions on PRTRs, e.g. BRS Conventions, UNFCCC, Minamta Convention of Mercury, Escazu' Agreement, etc. (iv) Initiation of the process of accession to the OECD to foster adoption of legal provisions on PRTRs	(i) The adoption of a national PRTR law requires political support (ii) Administrative and bureaucratic processes might request several years before the promulgation of a national law (iii) Frequent changes of governments and/or ministries might lead to delays in the approval of the PRTRs law. (iv) In the case of developing countries, national priorities might differ, e.g. economy and welfare have a more prominent role in the national agenda compared to environmental legislation, while in developed countries could be easier to invert the scale of priorities.	1) For those countries that are not in the position to modify the current national environmental legislation, the recommendation was to develop two different parallel systems by combining provisions from international agreements and national law. In the case of Moldova, the initial voluntary system of reporting was accepted by industries because it was linked to international reporting requirements e.g. climate change convention and GHGs mandatory reporting. 2) Working together with national stakeholders and businesses associations since the beginning of PRTRs implementation. 3) Make sure it is clear in the PRTR legislation that the national system is in line with international requirements and that in the long term PRTRs will be mandatory and ready to integrate the different current reporting into a single window reporting submitted once every year. 4) Suggested best practice was to include an article on the responsible national institution for PRTRs (usually the MOE) in the draft text of the ratification decree. This procedure contributed to avoid raising issues on the responsibilities and gave the necessary decisional power to the MOE to issue a decree on PRTR as secondary law, without modifying for example the current air pollution law or other related environmental laws.

			5) Inclusion of legal provisions on PRTRs in the national decrees that usually follow the ratification process of the different MEAs, e.g. provision on climate change convention, Minamata convention, etc.
National PRTR Proposal	(i) The updated national PRTR proposals were used by national coordinators as a useful tool to plan and organize activities, set timeframe, milestones, objectives, outputs. roles and responsibilities at national level (ii) Developing or updating national PRTR proposals to be seen as an exercise for the national teams to review the different steps and activities of PRTR implementation (iii) The national PRTR proposals identified the necessary budget, staffing, benefits for national stakeholders and proposed measures for the sustainability of the system in the long-term	(i) Too detailed or technical document could refrain readers, e.g. policy-makers, to grasp the concept of PRTRs and relevant actions to be taken (ii) Difficulties at the beginning of the project implementation to assess the relevant national infrastructure for PRTR implementation and estimate the necessary budget and staff to maintain national PRTR in the long-term	6) Provide an executive summary of the PRTR proposal for policy-makers. While the full and more detailed version will be used by experts. 7) The national PRTR executive proposal to be used as a manual for PRTR implementation at national level.
National guidelines and trainings	(i) Development of national guidelines on available release estimation techniques (RETs) to support industries during the reporting phase (ii) National guidelines developed following the already available international guidelines from UNEP, IPCC, EMEP and, for example, the emission factors	(i) Technical problems or bugs encountered during the test phase of the online reporting platform and database (ii) Involvement/attendance of relevant participants. Training seminars attended by high-level management of reporting facilities, instead of employees that would have actually overseen the calculation and submission of PRTR reports within the facility	8) Training programme should be divided by target audience and industrial sectors. However, in some cases, and to a certain level, it was also possible to merge sector and/or economic activities. 9) Invite national experts to present and discuss during the trainings. For example, in some case, the statistic office and environmental inspection agency provided information and contact details of training participants. 10) Recommendation to develop interactive guidelines on PRTRs. For example, training videos

	developed by Australia and US EPA. (iii) Good knowledge and expertise at national level in order to develop national guidelines (iii) Use of rooms equipped with computers for trainings and practical exercises on PRTR reporting using electronic tools (iv) Training programmes for industries were successful because in most cases were linked to the fact that PRTR reporting was going to be made compulsory in the long-term	(iii) Need to have a clear understanding of available RETs in order to adapt international standards into national guidelines (iv) Industries might question if the national guidelines developed are correct, e.g. formula or emission factors used, or in line with international standards (v) There might be difficulties to train staff from the ministries on technical issues related to RETs, if they don't have the necessary expertise in the field	could be used by industries to train new staff. 11) Attendance of industries at the PRTR training programme organized by the Ministry could be considered as a pre-requisite for obtaining operational permit (and/or environmental permit) or as secondary requirement for additional permissions. In this case, if industries refuse to submit reports to PRTR, they cannot operate. 12) Take into account the requirements of international conventions while developing national guidelines. 13) Attend trainings provided by IGOs, such as UNITAR and UN Environment on the use of mercury toolkit, and then apply the knowledge at national level. 14) Once training programme is being implemented, create a roaster of national PRTR experts. 15) Schedule enough time (e.g. full day seminar) for the training of national stakeholders.
Pilot testing PRTR	(i) At the initial stage of PRTR pilot phase the application of reporting thresholds might result in lower number of facilities to submit voluntary reports (ii) Provide support to reporting facilities, in particular small/medium enterprises (iii) Develop customized national emission factors (iv) Provide calculation sheets and RETs manuals beforehand	(i) During the first report exercise under the national PRTR, industries might refrain from submitting their data on a voluntary basis or they can raise confidentiality issues during public debates (ii) Validation of submitted data and quality check (iii) Lack of national expertise and knowledge to develop RETs to be used during the pilot phase (iv) Not enough knowledge and data to be able to calculate emissions from diffuse sources of pollution, e.g. agriculture, livestock, transportation	16) National coordinators and PRTRs teams to seek support from the Ministry to send official requests to industries to participate in the pilot testing and submission of data. 17) Change from voluntary to mandatory reporting to increase the number of submitted reports and data collected. 18) Divide companies reports in groups related to the economic activity/sub-activities 19) Implement PRTR platform to allow online reporting from industries. No reports on hardcopies. 20) Use regional expertise when available and/or cooperation with neighbouring countries, e.g. use of same emission factors. 21) Study tour in countries with more developed PRTRs in order to learn faster, e.g. learning the

			methods to estimate emissions from diffuse sources of pollution. 22) Develop guidelines on RETs currently available and international standards to be followed.
Awareness raising activities	(i) Positive involvement of the public during the training programme for civil society, in particular participants from industrial areas or most polluted districts of the city (ii) The development of national PRTR websites was key tool to raise awareness and provide PRTR data (iii) Aarhus Centres supported awareness raising and reach out activities related to PRTRs and access to environmental information (iv) Training seminars for civil society were successful using the argument of access to environmental information and public health aspects related to the exposure to chemicals, hazardous substances and pollutants	(i) There might be difficulties in some countries to engage and train NGOs that have an extensive knowledge of chemicals, pollution and environmental related issues, e.g. in Cambodia, NGOs were focusing mostly on social issues (ii) IT development might require more than one testing and several adjustments after the launching (iii) People trained during the outreach campaign, e.g. participants from NGOs, could change position or job, with the risk of jeopardizing the acquired knowledge of the organization on PRTRs topic	23) NGOs to support the awareness raising campaign and reach out to citizens. 24) Engage also NGOs that are not directly involved on PRTRs or in environment related issues, e.g. customized training on PRTRs focused on the social aspects, access to information, justice, protection of indigenous people, etc. 25) Q/A session to collect feedback of each seminar/event. 26) Organization of a training programme that goes beyond the project implementation. 27) Establish a national day and organize activities to sensitise citizens on environmental matters, chemicals and emissions into the environment. 28) The development of PRTR database and online platform requires clear indications to be given to IT developers that don't have previous experiences with PRTRs. 29) The public website and PRTR database have to be tested and improved at least twice a year, e.g. tests and improvements to be implemented before and after the submission of PRTR reports from facilities.
PRTR and MEAs reporting	(i) Integrating PRTRs and MEAs reporting will assure sustainability of PRTR systems (ii) Coordination mechanism established between national authorities and	(i) Reporting requirements of the different MEAs could differ from PRTRs (ii) Adaptation of PRTRs reporting to be aligned with reporting requirements of the different MEAs	30) Establishing a "single-window" reporting system to simplify the administrative burden by providing a place (i.e. PRTR) where all environmental information is reported once by data providers and made available to all relevant authorities.

	departments responsible for the reporting to the different conventions		
ADMINISTRATIVE ISSUES			
Project administration	(i) National Coordination Team formed within the relevant national institution (ii) National coordinator supported by international experts and national consultants (iii) Constant communication between executing agency (UNITAR), national coordinators and implementing agency (UN Environment)	(i) Change of national coordinator might jeopardize PRTR knowledge and lead to delays of national activities (ii) In same cases the legal revision of country's agreement took more time than expected	31) Establishment of a national coordinating team within the relevant national authority to support the national coordinator in the implementation of project activities. 32) Involvement of national coordinators, public officers and experts that took part of previous phases of the project and/or have a basic knowledge of PRTRs
Coordinating mechanisms	(i) Ministerial decree to obtain official endorsement and commitment from the members of the National Steering Committee (NSC) (ii) Establish a national coordination mechanism in order to avoid duplication of efforts between ministries, departments and national agencies	(i) The NSC might have difficulties in meeting frequently if members are coming from different provinces in the country (ii) It might me difficult to reach consensus within the NSC if there's a high number of members	33) Involvement of all relevant national stakeholders since the beginning of PRTR implementation and organization of national activities 34) Ministerial decree to establish the National Steering Committee (NSC). 35) Establish Interministerial cooperation to facilitate the flow of information and avoid duplication of efforts at national level
Sustainability	(i) Establish PRTRs legal framework and approval of national law	(i) Legal framework to provide sustainability of PRTR system might take years to be approved (ii) National resources not sufficient	35) National PRTR law is the backbone for the sustainability of the system in the long term. 36) Allocation of national budget to continue the management of the system: staff, data collection, software maintenance and upgrade, data verification and publication of the results.

Annex II: Agenda

PROJECT STEERING COMMITTEE MEETING

Date: Monday, 25th March 2019
Time: 09:30 – 19:00
Location: Angkor Paradise Hotel, Siem Reap

Time	Content
09:00 – 09:30	Registration of Participants
09:30 – 09:50	**Opening of the Meeting** *Ministry of Environment of Cambodia, UN Environment, UNITAR*
09:50 – 10:00	**Item 1. Organizational matters and meeting objectives** *Election of Chairman, adoption of meeting agenda, methodology of work, objectives of the meeting, mandate and members of the project steering committee* (SCM3_3_Organization and Meeting Objectives)
10:00 – 10:20	**Item 2. Project Implementing Agency (UN Environment): Evaluation and next steps** *Ludovic Bernaudat* *Programme Officer, UN Environment*
10:20 – 10:40	**Item 3. Report on the activities carried out under the global component (UNITAR)** *Activities, challenges, reports and overview of expenditures* (SCM3_Pre1_UNITAR Global Component) *Andrea Cararo* *Project Coordinator, UNITAR*
10:40 – 11:00	*Coffee break*
11:00 – 13:00	**Item 4. Project Results: Country component (National Coordinators)** *Activities, outputs and results* (SCM3_Pre2,3,4,5,6 and 7) *PRTR Peru* – *Daniel Núñez Ato* *PRTR Moldova* – *Tatiana Tugui* *PRTR Cambodia* – *Uon Sokunthea* *PRTR Belarus* – *Ivan Narkevitch* *PRTR Kazakhstan* – *Nurgazy Abdulmanov* *PRTR Ecuador* – *Stephani Salazar*
13:00 – 14:00	*Lunch*
14:00 – 15:30	**Item 5. Lessons learned and best practices** *Round table discussion to gather lessons learned, best practices and recommendations identified during the implementation of the project. Participants will be asked to contribute in the identification of lessons learned and best practices on different topics regarding both administrative and technical issues.* (SCM3_7_Lessons Learned)
15:30– 15:50	*Coffee break*
15:50 – 17:30	**Item 6. Initiatives and updates from the PRTR Protocol Secretariat** *(webinar)* (SCM3_Pre8_UNECE PRTR Secretariat) *Kristof Doucot* *Programme Officer, UNECE*
17:30 – 18:00	**Conclusions and closure**
19:00	**Welcome cocktail**

FINAL LESSONS LEARNED WORKSHOP AND PRTR IMPLEMENTATION IN CAMBODIA

Date: Tuesday, 26th March 2019
Time: 09:00 – 17:30
Location: Angkor Paradise Hotel, Siem Reap

Time	Content
09:00 – 09:30	Registration of Participants
09:30 – 09:45	**Opening of the Meeting** *H.E Sabo Ojano* *Secretary of State,* Ministry of Environment of Cambodia
09:45 – 10:20	**Item 1. Impacts of PRTR implementation at national level** *Presentation of concrete impacts of PRTR implementation in Serbia* (SCM3_Pre9_Serbian EPA and SCM3_Pre10_NPRI Canada) *Mr. Nebojša Redžić* *Head of Unit, SEPA*
10:20 – 10:45	**Item 2. PRTR reporting and Multilateral Environmental Agreements** *Presentation of the UNITAR study on how to integrate PRTR into MEAs reporting* (SCM3_Pre11_PRTRs & MEAs Reporting UNITAR) *Andrea Cararo* *Project Coordinator, UNITAR*
10:45 – 11:15	*Coffee break*
11:15 – 12:30	**Item 3. PRTR implementation in Cambodia** *Mr. Laska Sophal* *Team Leader PRTR Pilot,* Ministry of Environment of Cambodia
12:30– 13:00	*Q/A Session*
13:00 – 14:00	*Lunch*
14:00 – 15:30	**Item 4. Collection of PRTR data: Experiences from national industries** *Moderator: Mr. Uon Sokunthea, Ministry of Environment of Cambodia* - Mr. Ouk Ya, *Cambodia Energy Limited* - Ms. Khen Samrith, *K-Cement*
15:30 – 16:00	*Coffee break*
16:00 – 16:30	**Item 5. Raising awareness on PRTR: National Communication Strategy** *Mr. Uon Sokunthea* *National Coordinator,* Ministry of Environment of Cambodia
16:30 – 17:00	*Q/A Session*
17:00 – 17:30	**Closing remarks** *Ministry of Environment of Cambodia*

BRIEFING ON FUTURE STEPS ON PRTR IMPLEMENTATION

Date: Wednesday, 27th March 2019
Time: 09:00 – 14:00
Location: Angkor Paradise Hotel, Siem Reap

Time	Content
09:00 – 09:30	**Opening of the working session**
09:30 – 11:30	**Item 1. Discussion of future steps on PRTR implementation and national commitments** *What are the national priorities?* *How to integrate PRTR into a national single window reporting?* *Synergies with already approved projects? Or how to integrate a PRTR component?*
11:30 – 13:00	**Item 2. Sources of funding and new PRTR project proposals** *Development of a follow-up workplan*
13:00 – 14:00	*Lunch*

Annex III: List of participants

Country	Representative	Contact information
Belarus	Mr. Ivan Narkevitch	Coordinator of International Projects International Projects RUE Bel SRC Ecology Parwan 2, Behind Kardan University 76 Yakibova Str. Minsk, Belarus Tel: +375 17 367 65 43 Email: ivan.narkevitch@mail.ru
	Mr. Dzmitry Melekh	National PRTR Consultant RUE Bel SRC Ecology Parwan 2, Behind Kardan University 76 Yakibova Str. Minsk, Belarus Tel: +375 17 367 65 43 Email: melekhdima@gmail.com
Cambodia	Mr. Uon Sokunthea	National Coordinator, Officer, Department of Hazardous Substance Management Ministry of Environment 48, Samdech Preah Sihanouk, Tonle Bassac, Chamkarmon Phnom Penh, Cambodia Tel: +855 12 369 070 Email: sokunmoe@gmail.com
	Mr. Phet Picharra	Director, Ministry of Environment, Department Hazardous Substances Management Morodok Techno Building (Lot 503) Tonle Bassac, Chamkarmorn Phnom Penh Cambodia Tel: +855 12 369 070 Email: phetpichhara@gmail.com
Ecuador	Ms. Stephani Salazar	Environmental Specialist, National Environmental Control Direction, Ministry of Environment Madrid 1159 and Andalucía, Quito - Ecuador Tel: +593 23987600, Ext 1118/1119 Email: stephani.salazar@ambiente.gob.ec
Moldova	Ms. Tatiana Tugui	Manager Environmental Pollution Prevention Office Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova Str. Dosoftei 156A , bir 310 MD 2012, Chisinau, Republic of Moldova Tel: +373 22 22 25 42 Email: tatiana.tugui@eppo.md

	Ms. Tatiana Echim	Environmental Expert Environmental Pollution Prevention Office Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova Str. Dosoftei 156A , bir 310 MD 2012, Chisinau, Republic of Moldova Tel: +373 22 22 25 42 Email: tatiana.echim@eppo.md
	Ms. Maria Popescu	Financial manager Environmental Pollution Prevention Office Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova Str. Dosoftei 156A, bir 310 MD 2012, Chisinau, Republic of Moldova Tel: +373 22 22 25 42 Email: contabilitate@eppo.md
Peru	Mr. Daniel Omar Nuñez Ato	Department of Information and Environmental Research Ministry of Environment Av. Javier Prado Oeste 1440, San Isidro Lima, Peru Tel: +511 611 6000 ext. 1336 Email: dnunez@minam.gob.pe
	Mr. Cesar Manuel Llanos Puga	General Directorate of Environmental Quality Ministry of Environment Av. Javier Prado Oeste 1440, San Isidro Lima, Peru Tel: +511 611-6000 anexo 1256 Email: cllanosp@minam.gob.pe
Kazakhstan	Ms. Madina Tauyekelova	National Consultant, Information Analytical Environmental Protection Center of the Ministry of Energy of the Republic of Kazakhstan (RSE IAC) Astana, Kazakhstan Tel: + 7 7172 570002 Email: madina.tauyekelova@gmail.com
	Mr. Nurgazy Abdulmanov	Project Coordinator, Information Analytical Environmental Protection Center of the Ministry of Energy of the Republic of Kazakhstan (RSE IAC) Astana, Kazakhstan Tel: + 7 7172 79 9642 Email: prtr.kz@gmail.com

International Organizations

Institution	Representative	Contact information
United Nations Environment Programme (UN Environment)	Mr. Ludovic Bernaudat	Project Officer Chemical Branch, Division of Technology, Industry and Economics United Nations Environment Programme 11-13 Chemin des Anémones Châtelaine, Switzerland Tel: +41 22 917 81 86 Fax: +41 22 797 34 60 Email: ludovic.bernaudat@unep.org
United Nations Institute for Training and Research (UNITAR)	Mr. Andrea Cararo	Project Coordinator Chemicals and Waste Management Programme United Nations Institute for Training and Research Ch. de Balexert 7-9 Châtelaine, Switzerland Tel: +41 22 917 8344 Fax: +41 22 917 8047 Email: andrea.cararo@unitar.org
United Nations Economic Commission for Europe (UNECE)	Mr. Kristof Doucot	Environmental Affairs Officer Office S-407, Palais des Nations Tel: +41 22 917 1390 Email: kristof.doucot@unece.org

International Expert

Mr. Nebojša Redžić	Head of Unit, Department for National Register of Pollution Sources, Serbian Environmental Protection Agency Tel: +381-11-286-10-68 Email: Nebojsa.redzic@sepa.gov.rs