SEVENTH MEETING OF THE ADVISORY COMMITTEE OF THE PCB ELIMINATION NETWORK (PEN)

2 to 3 December 2016, Asunción, Paraguay

Meeting report, January 2017

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Acronyms and abbreviations

AC	Advisory Committee
ANDE	Administración Nacional de Electricidad
BCRC	Basel Convention Regional Centre
BEP	Best Environmental Practices
BRS Secretariat	Secretariat of the Basel, Rotterdam and Stockholm Conventions
CEE	Central and Eastern Europe
CHM	Clearing House Mechanisms
CICG	Le Centre International de Conférences Genève (The Geneva International Conference Centre)
COP	Conference of the Parties
DPRK	Democratic People's Republic of Korea
DTIE	Division of Technology, Industry and Economics (DTIE)
GEF	Global Environment Facility
GMP	Global Monitoring Plan
GRULAC	Group of Latin American and Caribbean Countries
HWE	Hazardous Waste Europe
IGO	Inter-Governmental Organization
IMF	International Monetary Fund
IPEN	International POPs Elimination Network
NGO	Non-Governmental Organization
NIP	National Implementation Plan
PEN	PCB Elimination Network
PCB	polychlorinated biphenyls
POPs	Persistent Organic Pollutants
PCN	polychlorinated naphthalene
PPM	Parts per million
SEAM	Secretaria del Ambiente del Paraguay
SC	Stockholm Convention

sccp	short-chained chlorinated paraffins
SCRC	Stockholm Convention Regional Centre
ToRs	Terms of Reference
UN	United Nations
UN Environmment	United Nations Environment
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
UNITAR	United Nations Institute for Training and Research
WEOG	Western Europe and Others Group

7th Meeting of the Advisory Committee of the PEN

First meeting day - 2 December 2016

1. Opening Remarks

The seventh meeting of the Advisory Committee of the PEN was held from 2 to 3 December 2016 in El Gran Hotel de Paraguay in Asunción, Paraguay. The meeting was organized by the Chemicals and Waste Branch of the Economy Division of the United Nations Environment (UN Environment) that functioned as the secretariat of the PEN. The meeting was hosted by the Paraguayan Ministry of Environment, Secretaria del Ambiente (SEAM). The agenda of the meeting is attached as Annex B.

1.1 Ms. Anna Ortiz (PEN member and meeting chair) and Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch)

Following registration of the participants, the meeting was opened by Ms. Anna Ortiz, the chair of the meeting. Ms. Jacqueline Alvarez welcomed all participants and provided a short introduction into the situation of PCB in Paraguay. In October 2015, a PCB accident had taken place at a PCB equipment storage site maintained by the Administración Nacional de Electricidad (ANDE). Large amounts of transformers, capacitors and other PCB containing equipment had caught fire, which had resulted in large amounts of releases of dioxins and furans. The accident had led to great attention for the PCB issue in the country. Ms. Jacqueline Alvarez said that the accident should be seen as an important case study from which lessons could be learnt.

After, Ms. Jacqueline Alvarez drew attention to the upcoming eighth Conference of the Parties (COP-8) that was going to be held from 24 April to 5 May 2017. She stressed that the seventh meeting of the Advisory Committee of the PEN served as an important moment to prepare for COP-8 and to put concrete recommendations and strategies on behalf of the PEN forward.

1.2 Ms. Kei Ohno (Basel, Rotterdam and Stockholm (BRS) Conventions Secretariat)

Subsequently, the word was given to Ms. Kei Ohno. She welcomed all participants on behalf of the Basel, Rotterdam and Stockholm (BRS) Conventions Secretariat. Among others, she mentioned that she was looking forward to discussing the outcomes of the Effectiveness Evaluation committee during the meeting.

1.3 Mr. Fernando Britez (Secretaria del Ambiente, SEAM)

Following, Mr. Fernando Britez gave the participants a warm welcome to Paraguay on behalf of the Minister of Environment, Mr. Rolando de Barros Barreto Acha. He also referred to the accident that had taken place in Paraguay in 2015 and mentioned that the accident had led to major attention for the PCB issue in the country. He informed the participants that the United Nations Industrial Development Organization (UNIDO) had successfully launched a PCB project a couple of days earlier. According to Mr. Fernando Britez, a significant number of (international) PCB experts were present during the launch and good recommendations were provided. He said to be expecting things to move forward rapidly and that Paraguay was looking forward to close collaboration with partners such as the PEN, Global Environment Facility (GEF) and the United Nations (UN). He concluded his opening words saying that the PCB accident in 2015 had created many opportunities for Paraguay to improve the situation of PCB in the country and could be seen as a very important incident and a lesson learnt in the global context.

Figure 1. Meeting participants, December 2016

2. Organization of the meeting

2.1 Adoption of the agenda and approval of the chair of the meeting

Ms. Anna Ortiz briefly outlined the agenda, noting that the objective was to share information and prepare for COP-8. All participants approved the position of Ms. Anna Ortiz as the chair of the meeting.

2.2 Membership of the Advisory Committee of the PEN: a new member and two WEOG vacancies

The composition of the Advisory Committee of the PEN was as follows at the time of the meeting:

Party-nominated Members		
Region	**Country**	**Name**
Africa	Nigeria	Stella Uchenna Mojekwu
	Rwanda	Aloys Kamatari
Asia and Pacific	China	Jinhui Li
	Iran	Sanaz Jafarzadeh
Eastern European Group	Moldova	Ion Barbarasa
	Romania	Mihaela Claudia Paun
GRULAC	Costa Rica	Anna Ortiz
	Jamaica	Tara Dasgupta
WEOG	*TBD*	
	TBD	

Other Stakeholders
NGO: Jindrich Petrlik - International POPs Elimination Network (IPEN)
Technical Professional: Urs Wagner - Environmental Technology Limited (ETI)
Industry: Hugues Levasseur - Trédi/Séché Environnement
Holder of PCB: Claudia Cabal - Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)
IGO: Alfredo Cueva, United Nations Industrial Development Organization (UNIDO)
MEA: Kei Ohno-Woodall - BRS Secretariat

Figure 2. List of PEN Advisory Committee members as of December 2016

Ms. Anna Ortiz introduced the newest Advisory Committee member, Ms. Claudia Cabal. She would represent holders of PCB within the Advisory Committee.

Despite several communications, the Western Europe and Others Group (WEOG) had not provided the two nominations needed for each of the UN regions, meaning that these seats were still vacant. The participants of the meeting briefly discussed the vacancy and agreed that renewed attempts

would be made to fill the two vacancies before the eighth meeting of the Advisory Committee of the PEN, including with the help of Mr. Hugues Levasseur.

The list of members as of January 2017 can be found in Annex A.

2.3 Introduction round

Ms. Anna Ortiz invited all participants to briefly introduce themselves. The participants of the first meeting day are listed below. The complete list of meeting participants can be found in Annex C.

1. **Ms. Anna Ortiz**, PEN member, Costa Rica. Environmental consultant, Ministry of Environment and Energy.
2. **Ms. Sanaz Jafarzadeh**, PEN member, Iran. Ministry of Energy in Iran.
3. **Mr. Hugues Levasseur**, PEN member, Industry. Vice-chairman, Hazardous Waste Europe.
4. **Mr. Guillermo Pineda**, Paraguayan consultant, UNIDO project on PCB.
5. **Ms. Kei Ohno**, PEN member, Basel, Rotterdam and Stockholm (BRS) Conventions Secretariat.
6. **Mr. Alberto Capra**, Basel Convention Regional Centre (BCRC) in Argentina.
7. **Ms. Claudia Cabal**, PEN member, holder of PCB.
8. **Ms. Stella Mojekwu**, PEN member, Nigeria. National Project Coordinator.
9. **Mr. Koebu Khalema**, Basel and Stockholm Conventions Regional Centre (BCRC-SCRC) in South Africa.
10. **Ms. Maria Cárcamo**, on behalf of NGO PEN member Mr. Jindrich Petrlik, Non-Governmental organization (NGO), International POPs Elimination Network (IPEN).
11. **Mr. Urs K. Wagner**, PEN member, Technical Professional. Owner, Environmental Technology Int. Ltd. (ETI).
12. **Mr. Jorge Ocaña**, Manager, Chemicals and Waste Management, United Nations Institute for Training and Research (UNITAR).
13. **Ms. Rocio Vely**, Head of Environmental Management, Administración Nacional de Electricidad (ANDE).
14. **Ms. Gloria Rivas**, Head of Environmental Planning, Administración Nacional de Electricidad (ANDE).
15. **Mr. Fernando Britez,** Director of Environmental Quality Control and Focal Point of the Stockholm Convention, Secretaria del Ambiente (SEAM)
16. **Ms. Karem Elizeche,** Stockholm Convention Focal Point, Secretaria del Ambiente (SEAM)
17. **Mr. Ovidio Espinola**, Head of the Department of Norms and Standards and Alternative Focal Point of the Stockholm Convention, Secretaria del Ambiente (SEAM)
18. **Ms. Elsemieke de Boer**, United Nations Institute for Training and Research (UNITAR), PEN Secretariat.
19. **Ms. Jacqueline Alvarez**, United Nations Environment Programme (UN Environment), Chemicals and Waste Branch, PEN Secretariat.
20. **Mr. Alfredo Cueva**, PEN member, Inter-Governmental Organization, United Nations Industrial Development Organization (UNIDO).

3. Objectives of the meeting and expected outcomes

3.1. Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch)

Before elaborating on the objectives of the meeting and the expected outcomes, Ms. Jacqueline Alvarez remarked the following. First, she stressed the importance of having a number of PCB experts present at the meeting as well as representatives from two regional centres. She highlighted the role

of the regional centre in South Africa within the Southern African Development Community (SADC) project and the work of the regional centre in South America on the GEF mining project that was undertaken in Chile and Peru and had already finalized providing several materials and introducing non-combustion technologies to destroy PCB mining. Ms. Jacqueline Alvarez kindly invited everyone to participate in the meeting, since their expertise was valued for the topics of discussion. Finally, she gave a special thanks to Mr. Fernando Britez (SEAM) and mentioned that his help in preparing the meeting had been of great value.

3.2. Ms. Anna Ortiz (PEN member, Costa Rica)

Ms. Anna Ortiz added the following to the remarks provided by Ms. Jacqueline Alvarez. She said that it was of high importance to put the PCB issue back on the agenda for the upcoming COP. The deadlines of 2025 to phase out the use of PCB equipment and of 2028 for final disposal of PCB were nearing soon and if the trend would continue as such, it would be hard to meet.

3.3. Objectives of the meeting and expected outcomes – Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch)

Ms. Jacqueline Alvarez emphasised the theme of the approach taken at that time: *PCB – A Forgotten Legacy?* She added to this that for one reason or another, it had been hard to find the right key to put the importance of the issue back on the agenda.

Ms. Jacqueline Alvarez proceeded explaining that in preparation for COP-8, regional meetings had been scheduled to be held in the months before. After having asked the participants who expected to attend one of these regional meetings, Ms. Stella Mojekwu informed the participants that she would take part in the regional meeting for Africa.

Subsequently, Ms. Jacqueline Alvarez pointed out that the PEN should not be focussing on its wish list, but on concrete acts. She also said that it was of importance to put the issue of PCB in Open Applications forward. She concluded her words by stressing that it was of crucial importance to target concrete things in the future.

3.4. Questions and comments

Mr. Jorge Ocaña requested more information regarding the side event during COP-8. Ms. Kei Ohno answered that this would be discussed in further detail during the second agenda point during the second meeting day.

Ms. Kei Ohno commented that it was important to promote the PEN as a network that looked beyond the participation of the Advisory Committee - all members should be involved as the PEN had hundreds of PEN members. Consequently, she asked the participants for suggestions for an adequate approach. Ms. Anna Ortiz remarked that resources should be taken better advantage of.

Mr. Urs K. Wagner commented that aimed should be for lively discussions during the meeting since all meeting participants had a common understanding. He added to this that it was of high importance for the PEN to speak up for and to be heard at COP-8. He also reminded that PEN was ready for concrete and sustainable contributions, but without the COPs support somehow paralyzed. The PEN Platform should be supported and used again after COP-8 as it was before 2011.

Ms. Jacqueline Alvarez, in response to Ms. Kei Ohno, highlighted the fact that the regional centres were invited to this meeting. She also mentioned that the PEN secretariat had been aiming for a more interactive approach to contact the PEN members, such as webinars. Finally, she commented that Mr. Sam Adu-Kumi was likely to attend a number of regional meetings, such as the ones from Asia, GRULAC

and CEE. Mr. Jorge Ocaña mentioned he would also attend the regional meetings and he offered his assistance to the PEN if needed.

4. Contributions from PEN members: the status of the work plan, thematic groups and case studies

Next on the agenda were several presentations by PEN Advisory Committee members, covering the status of the work plan, thematic groups and case studies.

4.1.a. Ms. Stella Mojekwu (PEN member, Nigeria) – Nigeria polychlorinated biphenyls (PCBs) Management Project

Ms. Stella Mojekwu gave presentation on a PCB management project in Nigeria. The project was a response to the implementation of the National Implementation Plan (NIP) and sought to meet the commitments of Nigeria for PCB under the Stockholm Convention.

The project was a four-year program initiated in February 2012. It had been funded with a grant from the Global Environment Facility (GEF) and Government counterpart funding.

One point that came forward in the presentation was that at the closure of the project there were still unspent funds which was as a result of implementation challenges which included delayed commencement of the project (project launch), non-release of counterpart funds from the government, cumbersome procurement processes, delay in getting “no objection” for project activities and incessant changes in project design due to evolving external factors. The implementing agency refused to extend the time to enable the project complete all outstanding critical activities. However, considerable progress towards its outcomes and Project Development Objective (PDO) was made.

Ms. Stella Mojekwu mentioned that a second phase project with the UNDP as the implementing agency titled “Environmentally Sound Management and Disposal of PCBs in Nigeria” was about to commence and that the project document was being developed.

4.1.b. Questions and comments

PEN AC members highlighted their concern about unspent funds in a project that still had outstanding critical activities. Mr. Alberto Capra commented that the regional centre in South America had experienced a similar situation. One project had components with overlapping activities that with the implementation were identified and solved, in addition priorities for countries changed as the project was implemented, reallocating funds in activities that would lead to a more direct way of eliminating PCBs. Anyway, there were still some funds remaining to be executed.

Ms. Jacqueline Alvarez proposed to brainstorm about how to deal with leftover money, such as was the case in Nigeria and the regional centre in South America.

Mr. Jorge Ocaña said that the PEN should be promoted as a network. In order for a good exchange of information within this network, a platform for exchange of information would perhaps be something to consider and they offered to help developing one, similar to the platforms UNITAR had developed for mercury.

Ms. Kei Ohno asked the meeting participants to think what the PEN network should look like.

4.2.a. Ms. Anna Ortiz about comments by PEN Advisory Committee members Mr. Tara Dasgupta (PEN member, Jamaica), Mr. Ion Barabasa (PEN member, Moldova) and Mr. Aloys Kamatari (PEN member, Rwanda)

Ms. Anna Ortiz shared comments of Mr. Tara Dasgupta and Mr. Ion Barabasa, who were not able to be present during the meeting. Mr. Tara Dasgupta had informed the PEN members that the Governments of most of the Caribbean islands had serious financial issues to complete inventories of PCB. According to him, GEF funding could often not be accessed since IMF had not been in support of "in kind" contribution. Hence, he had stressed that it was extremely important to find a way to help these small island countries to complete inventories and dispose all their PCB.

Mr. Ion Barabasa had informed the PEN members that it was important to focus on reliable PCB inventories. If this will not be considered, major future problems in relation to cross-contaminations and high clean-up costs could be faced. He had also informed the PEN members about the expected launch of a PCB project in Uzbekistan.

It was also mentioned that Mr. Aloys Kamatari had prepared a PowerPoint presentation for the meeting on Management and Disposal of polychlorinated biphenyls in Rwanda. The objective of the PCB project in Rwanda had been to reduce environmental and human health risks from PCB releases through the introduction of cost-effective environmentally sound management (ESM) to PCB oils, equipment and wastes held by electrical utilities in the country. The complete PowerPoint presentation can be found at**:**

http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination

4.2.b. Questions and comments

Mr. Jorge Ocaña asked if a GEF or UNIDO project was being carried out with the regional centre in Trinidad. Mr. Alfredo Cueva, in response to Mr. Jorge Ocaña, said that there were plans to ship POPs and PCB stocks to Europe. However, Jamaica was not part of that project.

4.3.a. Ms. Chen Yuan (Basel and Stockholm Convention Regional Centre in China, on behalf of PEN member Mr. Jinhui Li, China) – The challenges of eliminating PCBs in DPRK

Ms. Chen Yuan held a presentation via Skype. She said that the regional centre in Beijing has been working with North Korea (DPRK) in order to eliminate PCB. The DPRK is the only country in the world known to still produce PCB and is a party to the Stockholm Convention. Only one factory in DPRK still produces PCB.

- **Use of PCB in the DPRK:** as transformer oils, capacitors and hydraulic oils in the utility and mechanical industries

According to Ms. Chen Yuan, the DPRK is striving to introduce substitutes. She also mentioned that the country tried to develop alternatives, but failed.

A visit by the BCRC/SCRC in China to the DPRK was organized in January 2016 and a number of officials from the Ministry of the Environment, Ministry of the Chemical industry, Ministry of Agriculture, etc. and researchers received technical training. In addition, BCRC China give opportunities to the officials and researchers have technical internship in BCRC China to visit experts on POPs and wastes, PCB disposal facilities and a transformer manufacturer, and guide them to learn knowledge on PCB from all kinds of manners.

Ms. Chen Yuan mentioned that the regional centre has been in search for financial support for which purpose a proposal has been developed. Ms. Chen Yuan highlighted that a PCB inventory containing information about use and waste is of crucial importance as well as raising awareness. Ms. Chen Yuan mentioned that during the visit to North Korea, the factory that is producing PCB was visited, but that none of the workers had any protection. She finally mentioned that North Korea aims to develop alternative technologies basing on their existing equipment and the technique status of the world main of China.

4.3.b. Questions and comments

Mr. Jorge Ocaña asked Ms. Chen Yuan if there had been any GEF funding involved. Ms. Chen Yuan answered that only a proposal had been developed and that they were finding themselves in the first stage.

Mr. Alberto Capra stressed the important role of the regional centre as a non-governmental entity that could develop this type of activities without the possible conflict of interests that occurred between countries, especially when it came to the same region.

Ms. Kei Ohno said that the information shared by Ms. Chen Yuan would perhaps be interesting to share on the website of the Stockholm Convention.

Ms. Jacqueline Alvarez said that the PEN Secretariat was looking into possibilities to display case studies like the one of DPRK.

4.4.a. Ms. Sanaz Jafarzadeh (PEN members, Iran) – PCBs within South and West Asia region

Ms. Sanaz Jafarzadeh mentioned that the Basel and Stockholm Conventions Regional Centre had been established in 2005 in Iran and is responsible for Bangladesh, Pakistan, Maldives, Nepal and Iran. The centre had been organizing workshops on co-processing of hazardous wastes, PCB management, waste management with special management on POPs and the BRS conventions.

She introduced the objectives and goals of the centre, followed by some constrains and obstacles being faced:

- Limited funds and resource mobilizations
- Lack of communications and information exchange among centres and parties in the Region
- Lack of institutional or policy framework
- Lack of financial resources
- Limited human resources
- Insufficient technical capacity

Iran had been the only country known to be carrying out research, development and monitoring. Nepal had been the only country to be known receiving technical assistance. The regional centre had been involved in developing strategies toward elimination of PCB.

Finally, she shared information and data on the inventories of the different countries.

4.4.b. Questions and comments

Ms. Jacqueline Alvarez commented that the numbers seemed rather high. She asked if the numbers regarded pure PCB quantities. Ms. Sanaz Jafarzadeh responded that it also regarded amount affected by cross contamination.

Ms. Claudia Cabal asked a question about the metallic parts. Ms. Sanaz Jafarzadeh answered that those amounts were sent abroad.

Mr. Urs K. Wagner recommended to involve Universities/Students into the PCB identification process as they were the future care takers of these kind of problems.

4.5.a. Ms. Claudia Cabal (PEN member, holder of PCB) – PCB accident in Paraguay

Ms. Claudia Cabal remarked that all countries and stakeholders had similar problems and that it was important to share experiences with each other. Consequently, she elaborated on a case study written by her about storage and risk in relation to the PCB accident in Paraguay. She emphasised the fact that storage was very important in the life cycle of a transformer. Finally, she commented that PCB was not a single country problem, but a global one as historical practices were still in place.

4.5.b. Questions and comments

Ms. Jacqueline Alvarez thanked Claudia for sharing her story and brainstormed with the other participants about other possible topics for PCB stories.

The following case studies were proposed: SADC GEF project, decontamination plant in Morocco, PCB in the DPRK, PCB and mining in South America, PCB management in Nigeria, a project by UNITAR in Ghana, PCB in South Asia, and PCB in Japan and PCB in CEE.

Mr. Ovidio Espinola commented on the fact that the accident in Paraguay should be seen as an opportunity to work together on the PCB issue in the country. It was important to be aware of the issue and to share experiences. He also highlighted the issue of funding.

Ms. Rocio Vely said that many numbers mentioned by Ms. Claudia Cabal were preliminary. In reality, the amounts seem to be even higher.

Mr. Ovidio Espinola said that it should be known that in 2003 another fire close to Asunción had already taken place and that this accident had provided Paraguay already with lessons to be learnt.

4.6.a. Ms. Kei Ohno (PEN Member, Basel, Rotterdam and Stockholm Conventions Secretariat) – Stockholm Convention Effectiveness Evaluation on PCB

Ms. Kei Ohno mentioned that the Stockholm Convention Effectiveness Evaluation would take place every 6 years.

Article 16 of the Stockholm Convention mentions as follows: Evaluate effectiveness of the Convention on the basis of available scientific, environmental, technical and economic information. The first evaluation took place at COP-4 in 2009 and the **second evaluation would take place at COP-8 in 2017.**

Decisions of COP-7, SC-7/3 on PCB:

- Took note of the preliminary assessment of efforts made towards the elimination of PCB (UNEP/POPS/COP.7/INF/9)
- Took note of the report on the activities of the PEN
- Encouraged Parties to intensify efforts to meet the 2025/2028 goals
- Requested the Secretariat to prepare a consolidated report and submit it to the effectiveness evaluation committee by 31 Jan 2016

Ms. Kei Ohno outlined the conclusions and recommendations of the Effectiveness Evaluation. For recommendation two it was mentioned that it would perhaps be useful to establish a mechanism

under the Convention to review progress in PCB elimination. This mechanism could be an expert group, for example a small intersessional working group (like the one of the Basel Convention) or electing a lead country.

Summary of Effectiveness Evaluation:

1. Need to get on track to achieve the Environmentally Sound Management (ESM) of PCB by 2025/2028

- Need to strengthen national or regional capacities
- Parties should urgently define rigorous plans for the ESM of PCB throughout its life cycle

2. Need accurate inventory and more information from parties

- Undertake inventories in a systematic manner
- Parties to provide accurate information in national reports

3. Need to increase cost effectiveness and sustainability of PCB elimination projects

- Strengthen human and infrastructure capacities for PCB elimination and destruction which will last beyond the duration of the project

4.6.b. Questions and comments

Mr. Koebu Khalema stressed that national reporting and efforts for data collection should be heightened. Normally, national reporting would take place every 4 years. In addition, he pointed out that the capacity to clean PCB equipment in South Africa is very low.

Ms. Anna Ortiz provided two main reasons for poor reporting. The first reasons according to her was that the way reporting was being requested had been difficult. Secondly, in many cases the countries did not have the information. The information they reported often only regarded projections.

Mr. Koebu Khalema added to the comment by Ms. Anna Ortiz that the National Implementation Plans (NIPs) in reality did not include much data.

Ms. Sanaz Jafarzadeh added to the conversation on bad reporting and limited information by elaborating on the situation in Iran. She said that proper knowledge and laboratories had been lacking in Iran. Therefore, it had appeared difficult to create good NIPs.

Mr. Urs K. Wagner referred to Ms. Kei Ohno's presentation where she had mentioned the need for a more systematic approach. However, he argued that a more "harmonized" approach should be added to this. He further elaborated on this by explaining that many countries had been seeking to re-invent the wheel, but that we should look at a more harmonized approach under consideration of lessons learnt, approved proceedings, available and affordable equipment and tools as well as considering all potential stakeholders incl. e.g. private sector and armies.

4.7.a. Ms. Maria Cárcamo (on behalf of PEN member Mr. Jindrich Pertlik, NGO, IPEN) – Case studies

Ms. Maria Cárcamo presented a number of case studies on behalf of IPEN and PEN member Jindrich Pertlik.

- Contaminated sites in Kazakhstan, two of them were also contaminated by PCB:
    - Results of environmental sampling in Kazakhstan: mercury, methyl mercury, PCBs and OCPs contamination of the River Nura
    - Persistent Organic Pollutants in Ekibastuz, Balkhash and Temirtau

- Report on camel milk contamination at selected sites in Western Kazakhstan
- Presentation on non-combustion technologies by Lee Bell, Jindrich Petrlik and Darryl Luscombe
- Thought starter paper on the broader issue of sites contaminated by POPs

More information can be found at www.ipen.org.The documents are available on request. Please contact Ms. Maria Cárcamo or the PEN secretariat at science.chemicals@unep.org.

5. PCB in Open Applications

5.1.a. Mr. Urs K. Wagner (PEN member, technical professional) – PCB in Open Applications

Turning toward the issue of PCB and other POPs in Open Applications, Mr. Urs K. Wagner initiated his presentation by referring back to the Seveso incident (1976). A chemical plant had exploded and one of the main consequences was that many people, who had been exposed to the released chemicals, were affected by chloracne and chronical diseases. This incident, and specifically the disappearance of 42 steel drums with highly toxic dioxin waste, which was eventually found in the backyard of a former butchery in Northern France and finally incinerated in a furnace of Ciba Geigy in Basel, had brought the issue to centre of the attention and had contributed to the ratification of the Basel Convention in 1989. Nevertheless, did we learn the lesson?

During the presentation, Mr. Urs K. Wagner introduced several cases.

- For example, he mentioned that, during an incident of a non-supervised anti-corrosion protection clean-up in a dam in Switzerland in 2016, release of PCB, PAH and Pb contaminated a river and made PCB contamination become an international issue.
- Next he spoke about a case of PCB containing paint in a bio farm affecting cattle. In one case, all calves had to be slaughtered and expensive clean-up undertaken.
- According to Mr. Urs K. Wagner, the case in Ekibastuz/Kazakhstan was a good example of PCB as a forgotten legacy. A new substation was abandoned and unguarded during the Perestroika time. It resulted in the illegally removal respectively destruction of > 10'000 high voltage capacitors whereas the cooling fluids had been spilled on the ground. Local people were extracting non-ferrous metal from the capacitors to sell it. Therefore the contamination remained not only in the soil of this wide open former plant but also non-trackable via reuse of scrap metals.
- PCB in Open Applications are listed under the Stockholm Convention under Annex A, part II PCB (f). However, there was a need for good inventories and guidelines on how to handle PCB in Open Applications.
- Mr. Urs K. Wagner pointed out by showing examples that although PCB were produced in developed countries, PCB could be found everywhere in the world. Attention should be paid to developing countries and countries in transition
- Corrosion protection on electrical equipment for outdoor use could be of particular concern in countries with changes of temperatures or above average rainfall, like for example Paraguay.
- Mr. Urs K. Wagner explained the indoor fogging effect: PCB could contaminate any other material
- PCB in Open Applications had been an issue in schools. In some German Bundesländer for example, a teaching ban was imposed on pregnant women if certain limit values of PCB in the air were exceeded (> 300 ng/m^3).
- Next he mentioned a number of other examples of PCB in Open Applications: cables, ships, scraps, military equipment.

- Mr. Urs K. Wagner said that (short-chained) Chlorinated paraffins were a PCB-replacer for a certain period of time. However, they appeared to have similar negative effects as PCB, specifically regarding persistency. Some countries were at that time still producing (short-chained) chlorinated paraffins.
- He remarked that joint screening of contaminants can be of special interest as different contaminants are often found in the same place.
- Mr. Urs K. Wagner concluded his presentation by stressing that it should be emphasised during COP-8 that the clock is ticking and more focus and finances would be needed in order to meet the 2025/2028 objectives.

5.1.b. Questions and comments

Mr. Xavier Ortiz asked how PCB in Open Applications could be detected. In addition, he asked how samples should be taken. Mr. Urs K. Wagner answered that systematic and step-by-step sampling would be needed, taking under consideration the different matrices of e.g. paint and caulk. There was no reliable screening tool as for oil detection available at that time. Therefore GC lab analysis was for the time being the analytical choice. In some cases RFX could be an alternative.

5.2.a. Mr. Jorge Ocaña (UNITAR) – POPs in Open Applications, GEF Project

Mr. Jorge Ocaña shared that a GEF project proposal on POPs in Open Applications was being developed. The project was the first on Open Applications to be submitted to the GEF. The overall objective was to assess the global situation of POPs (PCBs, PCNs and SCCP) in Open Applications and to draft guidance and methodologies to identify their sources and generate reliable data that will allow the development of sound planning and policies to manage POPs in Open Applications and to develop a global strategy to address the issue.

Four project components had been outlined:

1. Global Analysis and assessment of national infrastructure and legal framework needed for the sound management of PCN, SCCPs and PCB in Open Applications
2. Development of methodologies to identify POPs in Open Applications in the construction and electrical sectors in three pilot countries. There will be three pilot countries (e.g. Ghana, Lebanon and Vietnam) and three reference countries (e.g. Sweden, Switzerland and Germany).
3. Development of a draft national legal framework to address POPs in Open applications
4. Awareness raising and dissemination of results

The project proposal was open for comments and suggestions. The project was expected to be submitted in August 2017.

5.2.b. Questions and comments

Ms. Sanaz Jafarzadeh asked if the recommendations of the effectiveness evaluation mentioned during the presentation by Ms. Kei Ohno were taken into account during the preparation of the project proposal. Mr. Jorge Ocaña answered that it should be taken into account that it was first guidance.

Ms. Jacqueline Alvarez said that the GEF had been interested in the issue of PCB in Open Applications and that this should be regarded as an important window of opportunity.

Mr. Alberto Capra highlighted the issue of endorsement for companion. Mr. Alfredo Cueva agreed with Mr. Alberto Capra and shared a case where a GEF project component on open applications in Paraguay was rejected by the GEF because UNEP was already preparing guidance.

Ms. Jacqueline Alvarez stressed the importance of the regional meetings again. Ms. Kei Ohno and Mr. Jorge Ocaña both expressed their support to put PCB forward during the regional meetings.

6.a. "Análisis de Bifenilos Policlorados en Muestras Biológicas" (PCB analysis in biological matrixes) - Ms. Mariza Insaurralde and Mr. Xavier Ortiz (Diaz Gill Laboratory)

Ms. Mariza Insaurralde said that Paraguay had experienced two main PCB incidents, which occurred in 2004 and 2015. The Diaz Gill Laboratory had provided assistance during the aftermaths of both accidents. To analyse PCB, the Diaz Gill laboratory had been taking (annual) blood and urine samples. For analysis either gas chromatography (electron capture detector) or gas chromatography with a mass spectrometry had been used. Ms. Mariza Insaurralde showed a graph (figure 1) where a high peak regarding PCB in blood and urine could be seen in the periods after the accident in 2015.

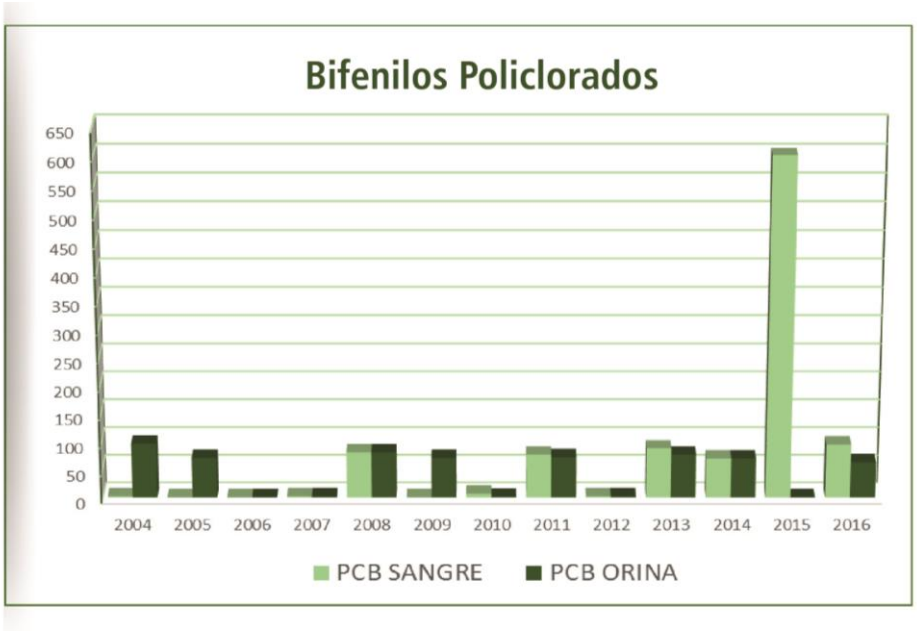


Figure 3. PCB samples in blood and urine between 2004 and 2016, Diaz Gill Laboratory

6.b. Questions and comments

Ms. Jacqueline Alvarez asked if the laboratory had results from before and after the incident. Ms. Mariza Insaurralde answered that this had been the case.

Ms. Jacqueline Alvarez asked how long the samples were generally kept by the laboratory. Ms. Mariza Insaurralde answered that the samples were normally kept for 3 to 4 months.

Mr. Urs K. Wagner commented that it would be important for the laboratory to be recognized within the region and should apply for being listed on the "World Wide POPs Laboratory Capacities" list.

Ms. Jacqueline Alvarez agreed on this and stressed the importance of inter-laboratory collaboration. As an example, she mentioned the inter-laboratory collaboration within the Global Monitoring Plan (GMP). Vanuatu, for example, has sent its samples to Europe for analysis.

7.a. “PCB Elimination by Re-refining Contaminated Oils” - Mr. Naser Reza and Mr. Mark McNamara (Hydrodec)

Mr. Naser Reza initiated his presentation by mentioning that Hydrodec commenced its first research in 1992 and since had developed a method for eliminating PCB from transformer oil that recovers the oil as new insulating oil. The process was demonstrated effective not only on PCB but on all chlorinated organic compounds. Full production at 20,000 litres per day commenced in Australia during 2005 and at 80,000 litres per day in the United States in 2009.

Catalytic hydrogenation of the form used by Hydrodec had a long history of wide usage in the oil, petrochemical and food industries

The basic chemical reaction is:

$$R\text{-}CH{=}CH_2 \; + \; H_2 \rightarrow R\text{-}CH_2\text{-}CH_3$$

When applied to PCB, Mr. Naser Reza showed a figure illustrating the reaction occurring during the process.

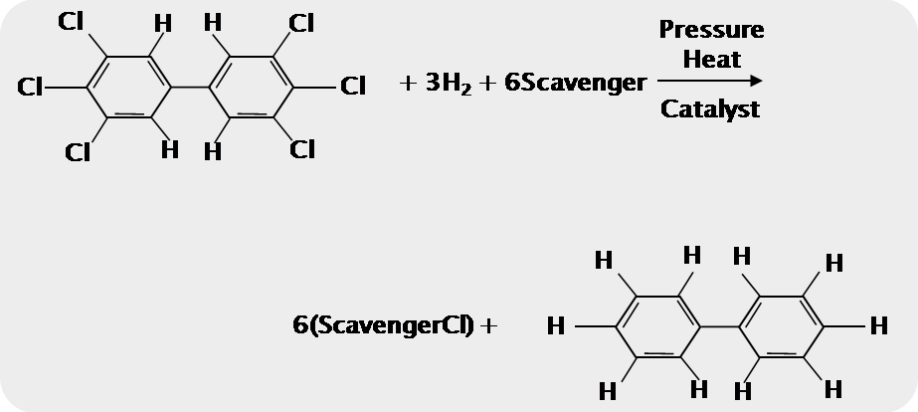


Figure 4. PCB reaction

He explained that the chemical composition of the scavenger system had been key to innovation and commercial application of the Hydrodec process.

Finally, Mr. Naser Reza mentioned advantages of Hydrodec’s technique:

- No PCB had been found after applying the technique
- No by-products or hazardous waste had been created
- CO2 emissions had been limited
- It reduced the demand for crude oil consumption
- There were no high temperature (350 degrees Celsius) or combustion processes involved

7.b. Questions and comments

Mr. Hugues Levasseur asked if the equipment could be re-used after the PCB had been taken out. Mr. Mark McNamara answered that the equipment was being purchased to re-use, and that close to 100% recovery oil was being obtained.

Mr. Alberto Capra asked if Hydrodec had a license for the technology in other countries. Mr. Mark McNamara answered that the license had been approved in Japan, but that the technology had not been applied yet.

Mr. Urs K. Wagner commented that the maximum PCB concentration that the process could take should be mentioned, too.

8.a. "The Moroccan PCB Decontamination Plant Experience" - Mr. Hugues Levasseur (PEN member, industry)

Mr. Levasseur briefed the PEN Advisory Committee on the establishment of a PCB Decontamination Plant in Morocco. On 3 March 2014, a contract was signed between UNIDO and Trédi S.A. The contract mentioned the following:

- Conditioning and export of decommissioned equipment containing or contaminated with PCBs for disposal in specialized centres abroad
- Establish a local solution for the decontamination of electrical transformers contaminated with PCBs
- Building a certified centre
    - Conditioning site for Part 1. Part 1 (Conditioning and export of equipment with PCBs for disposal) ended December 31, 2015 (286 tons of metal / 144 tonnes of oïl / 55 tons solid and porous parts. Total: 485 tons)
    - Treatment site for Part 2. Part 2 (Establish a local solution for the decontamination of electrical transformers) objectives: 1200 tons, including 400 tons of oil 31/12/2016

The plant was an operational decontamination unit with the highest level of regulatory requirements. Trédi had provided qualified staff for the design, management and control of the unit, know-how and technology transfer as part of the long lasting partnership and training of local staff.

Mr. Hugues Levasseur showed diagrams of the decontamination of an electrical transformer and of oil treatment on the Bouskoura platform (transformer <5000ppm). After, he showed another diagram of the decontamination of an irremovable energized transformer.

Based on the Trédi experience, three main solutions could be used depending of the local situation:

- **Basic solution:** Regrouping of equipment, packaging in containers and dispatch for processing abroad - *Classical solution*
- **Semi local solution:** Regrouping of equipment, provisional installation of de-chlorination equipment, local treatment of the contaminated oil (<3000ppm), packaging in containers of the rest of the equipment and dispatch for processing abroad - *Peruvian solution*
- **Local solution:** Construction of a local processing unit, including collection equipment, equipped laboratory, Oil de-chlorination equipment, oven and equipment for filtering and dewatering oil, washing and decontamination cabin in order to treat locally a maximum of equipment and dispatch the rest for processing aboard – *Morocco solution*

Mr. Hugues Levasseur concluded his presentation listing the main parameters that should be taken into account:

- The quantity of equipment to be treated
- The possibility to use a harbour near the reconditioning area.
- The policy of the neighbouring countries for obtaining trans-border transfer authorizations, taxes and levies to be paid.
- The quality of the inventory, (year of manufacturing, condition and maintenance of the equipment, quality of the oil…).

- Can the authorities impose sufficient constraints to make available the equipment to be treated?
- Is there any organization which can manage, one or two years before the contract, the management of the equipment to be decontaminated and re-plugged? Spare transformers must be available.
- The quantity of equipment in service and the local possibility to have spare equipment.
- The time required for obtaining local permits (licenses for construction, management, export...).
- The possibility of having a local specialist to intervene in support.

8.b. Questions and comments

Mr. Koebu Khalema asked for clarification about the three main possibilities. Mr. Hugues said that it was hard to say and that it depended very much on the situation.

Ms. Anna Ortiz commented that the case of Morocco showed an example of a good inventory. She continued saying that the intentions in Morocco had been really good, however progress had been slower than expected.

Ms. Sanaz Jafarzadeh asked for clarification about the ppm levels. Mr. Hugues Levasseur said that the transformer could be recovered, but the oil not. He pointed out that in every case the local conditions should be taken into account. The costs, for example, could differ.

Mr. Urs K. Wagner pointed the importance of the inventory issue out and addressed the potential regional aspect of such projects / treatment platforms.

It was asked if neighbouring countries were sending equipment to Morocco. Ms. Anna Ortiz answered that import had often been difficult. She also said that poor inventories in Latin America made it difficult to justify the construction of a plant. Ms. Anna Ortiz said that we would face many issues if we would not address this topic.

Ms. Jacqueline Alvarez commented that business approaches should be promoted more. PCB should be addressed as an opportunity instead of a liability. She informed everyone that the regional centre in Argentina would be working with UN Environment Chemicals and Waste Branch in 2017 on an economic assessment to evaluate replacement of old equipment with energy efficient equipment, considering the 2028 timeframe.

9.a. “Best Practices and Lessons Learned of a Regional Mining Project of PCB in South America” - Mr. Alberto Capra (Basel and Stockholm Convention Regional Centre in Argentina)

The regional project “Best Practices for PCB Management in the Mining Sector of South America” was financed by the GEF, implemented by UN Environment and executed by the regional centre in Argentina. The project initiated in 2010 and ended in 2014. The Republics of Chile and Peru participated in the project.

The objective of the project was to establish a coordinated regional approach to identified Best Environmental Practices (BEP) for the management of PCBs in the South American Mining Sector.

The project had five components:

1. Regional coordination and updating of national regulatory elements and procedures related to the management of the PCB life cycle in the mining sector of Chile and Peru
2. Development of partnerships with the mining industry for the environmentally sound management (ESM) of BPC
3. Identification, monitoring and analysis of PCBs in technical matrices in laboratories in the mining sector
4. Identification of good practices and reproducible elements for BPC ESM for the mining sector
5. Project management, following, monitoring and evaluation

For each component Mr. Alberto Capra elaborated briefly on the results. He also listed a number of technical products that were developed in Spanish and for easy use or adaptation to other sectors than mining:

- Decision Making Tool
- Regional Diagnosis for PCB Management in the Mining Sector
- Environmental Impact Risk Assessment, Emergency - Environmental Contingencies
- 6 procedures for PCB ESM
- Development of Environmental Management Plans and Selection of Technologies
- Regulation for Health and Environmental Management of PCB: draft legislation for countries

Next, Mr. Alberto Capra mentioned eight lessons learned from the project.

1. Projects need much more time than expected. According to Mr. Alberto Capra, the timeframe for projects has often appeared to be too short. Agreements between countries can be difficult. For example, a non-existent capacity agreement between Peru and Argentina has resulted in difficulties.
2. Celebrate agreements with local agencies to executing funds helped to implement better the project.
3. The developing countries may have a high probability of devaluation of its currency.
4. Projects should take into account the need for meetings of international experts with local consultants to enable greater interchange in the preparation of regional reports.
5. Recruitment of consultants should be conducted preferable in the region, specifically in the participating countries which know local realities and reports will be in local language. Most national consultants have been hired for the projects.
6. Participation of mining companies in Chile was not easy, they showed no interest, arguing they were already regulated or had already solved their problems with transforms containing PCB (removing them before the project). Mr. Alberto Capra said that cross contamination is a large issue.
7. Most private companies are not willing to participate in projects running by public organizations.
8. Management of PCB by the companies was not regulated in the countries so the contribution and participation resulted exclusively voluntary.
9. National targets and feasibility of management in countries are different.

10.a. “PCB Elimination Initiatives in Africa: Challenges and Outlook” - Mr. Koebu Khalema (Basel and Stockholm Regional Centre in South Africa)

Mr. Koebu Khalema provided a brief introducing into GEF projects, and more specifically the role of the GEF in Africa. Besides national GEF projects, there are two regional GEF projects: one for French West Africa (14 countries that is due in 2017 and one in Southern Africa (12 countries) that is due in 2021. He added that a number of countries have projects in preparation.

One of the main challenges Mr. Koebu Khalema pointed out is that the focus should be more on what is actually done. Mr. Koebu Khalema also stressed that is important to push stakeholders earlier. Another challenge for the region are the different languages. As an example he mentioned the Democratic Republic of Congo which speaks French but is part of SADC. Regarding South Africa, the PCB PIF is still on the line as the portfolio is left with very little money. He finally noted that diminishing commitment and passive participation has been observed in the region.

Mr. Koebu Khalema proceeded introducing the project “the disposal of PCB oils contained in transformers and disposal of capacitors containing PCB oils in Southern Africa”. The project has 4 components:

- Component 1: Legislative review and update
- Component 2: Inventory verification and capacity building
- Component 3: Collection and Disposal
- Component 4: Best practices – documentation and sharing

Subsequently, he discussed the expected outcomes, the risks and mitigation and the challenges. He presented the following as major challenges:

- Poor data/databases – lack of awareness & continuing non ESM disposal & misuse
- Porous borders and no enforcement capacity
- NIP updates focus on “new” POPs
- Limited project framework – not enough time. There is often not enough time and the expectations go beyond the project scope and activities.
- Notification Challenges/Transboundary movement
- Reluctance to replace articles/Uncertainty on destruction of articles
- No capacity to deal with Contaminated Sites
- Expectations beyond project scope/activities
- Political and security issues. As an example, he mentioned the situation around Boko Haram, which led to issues for projects.

Finally, he outlined what the PEN can do:

- Increase the PEN Voice with the BRS secretariat
- Continue to drive and keep the PCB agenda alive
- Extend the PEN as a network, through increased social media.

- Support PCB elimination projects (with experts and advocacy)

Second meeting day – 3 December 2016

11. Opening of the second meeting day - Ms. Anna Ortiz (PEN member, Costa Rica) and Mr. Sam Adu-Kumi (President to the Stockholm Convention)

Ms. Anna Ortiz welcomed all participants to the second meeting day of the Advisory Committee of the PEN. Following, she welcomed Mr. Sam Adu-Kumi to the meeting and gave the word to him.

Mr. Sam Adu-Kumi said that last year's meeting in Brno, Czech Republic was very successful. He added to this that the PEN had made significant progress since its establishment in 2009.

According to Mr. Sam Adu-Kumi, PCB was an important item on the agenda for COP-8. Therefore, Mr. Sam Adu-Kumi said that the seventh meeting of the Advisory Committee of the PEN was essential and critical. He continued stressing that it would be necessary to take concrete steps. Finally, it should be addressed during the meeting if the PEN could successfully achieve the 2025 and 2028 goals of the Stockholm Convention and the PEN would have to come up with concrete recommendations.

12. New PEN members – Ms. Jacqueline Alvarez

Ms. Alvarez proceeded to note that the PEN at that time had 439 members. Ms. Jacqueline Alvarez kindly asked those who were not a PEN member to fill out the PEN membership application form. Around eight people filled out the PEN membership form and others promised to invite colleagues to fill out the form. Afterwards a photo was taken.

The PEN membership from can be found in Annex F.

Figure 5. New PEN members, December 2016

13. Recap of the first meeting day – Ms. Anna Ortiz

Ms. Jacqueline Alvarez put the following main summary points from the first meeting day forward:

- *How does the PEN turn lessons into concrete acts?*
- *How does the PEN promote the PEN as a network, involve members and other stakeholders? How does the PEN facilitate exchange of information? How can we increase the number of PEN members?*
- *The Regional Centres as enforcement, presence of PEN at the regional preparatory meetings*

Ms. Jacqueline Alvarez said that the members of the Advisory Committee of the PEN should act as our ambassadors during the regional meeting. Brochures should be brought to the regional meetings. Mr. Sam Adu-Kumi said that he was expecting to go to the regional meetings of GRULAC and Africa. He informed the participants that the other meetings were not confirmed for him yet.

- *How does the PEN put PCB forward during COP 8?*
- *Important to following up after this meeting with the Paraguayan participants (SEAM, ANDE, Diaz Gill)*
- *There is a need for systematic and harmonized reporting*

Ms. Jacqueline Alvarez said that the data should become more accurate and could not be an estimate. It was known that many countries did not know how to report or they did not have sufficient funding

- *National and regional capacities for elimination of PCB should be strengthened*

It was agreed that something should be done in order to make elimination of PCB easier for countries. In Latin America for example, there were many small countries and border complications had led to issues for exporting PCB

- *What are the opportunities with the GEF?*

With this was especially referred to the project proposal on PCB in Open Applications. The issue of PCB in Open Applications should also be put forward during the regional preparatory meetings. Mr. Urs K. Wagner added that we should make our voice heard and look how we could bring the issue to COP-8. Ms. Jacqueline Alvarez stressed that the main documents had already been drafted, but perhaps something could be prepared to draft during the COP.

- *The PEN should address PCB as an opportunity and look into a business approach*

14.a. "Gestión de Bifenilos Policlorados" – Ms. Rocio Vely and Ms. Gloria Rivas (ANDE)

Ms. Rocio Vely started the presentation by mentioning that the objective of the presentation was to inform about the PCB accident in 2015 and to share what ANDE was already doing and how they would move forward.

She first showed a satellite photo of the site of the accident in San Lorenzo, a populated area 11 kilometres from Asunción. The site was 30 hectares. On the site, waste, transformers and capacitors were located. Before the fire took place, 20.000 transformers were located on the site. These transformers were waiting for authorization to be sold by the SEAM. In 2007, sampling had taken place at the site for the NIP.

Ms. Rocio Vely introduced a project of the Inter-American Development Bank (2006). The focus of the project was on management of PCB. As part of the project, some capacity building activities were organized in Argentina, a tracking system was developed and internal rules and procedures were established. In 2013, a second loan was approved to improve the PCB inventories.

The ANDE had a laboratory to analyse PCB and also had a database with information on equipment, analyses, inspections, donations and reparation. The database could be accessed online. It should be noted that the database had information on the full life-cycle of the transformer. The database was in its initial stage and was expected to complement other databases in Paraguay the future.

Ms. Rocio Vely said that one of the main challenges for ANDE was the availability of the right trained and well qualified people.

Next, she showed results of the PCB inventory before the fire, which included 6750 transformers. 5% of their transformers could not be analysed.

In 2015, a large number of transformers on the site of ANDE caught fire. The fire lasted four hours. An inter-constitutional committee (SEAM, Secretariat of National Emergency, the ministry of Health and the fire fighters) and international experts had evaluated the accident. The day after the accident, 8477 transformers were counted as affected by the fire. A security and health protocol went into effect after the fire.

After the fire, samples in water and soil were taken from the site by external laboratories. Several reports had been published since the accident, for example by the firefighters, and the ANDE had developed an emergency plan. It was concluded that 8500 transformers were affected during the accident, 500 tonnes with PCB free oil and 30 tonnes with PCB oil. The SEAM and the Ministry of Health had also published a report.

At the time of the meeting, sampling and analysis was still taking place. Ms. Rocio Vely mentioned that a laboratory from Argentina was going to start sampling in December 2016.

14.b. Questions and comments

Ms. Stella Mojekwu asked about the cost of the incident in 2015. Ms. Rocio Vely answered that the investigation had been given to the authorities, but that there was no official confirmation.

Ms. Sanaz Jafarzadeh asked if there was an analysis of the fire fighters and people exposed to the chemicals that were released during the fire. Ms. Rocio Vely answered that all the people affected were checked according to a protocol. The ANDE took blood samples of the people affected once, but the Ministry of health did this several times.

Mr. Sam Adu-Kumi said that it was important to address the consequences of the fire for the atmosphere as well, sampling should go beyond as PCB travels. Ms. Rocio Vely said that ANDE followed the guidelines as they were under legal pressure to sample in a certain way.

Ms. Claudia Cabal commented that she was interested in the application of the model.

Ms. Rocio Vely offered to share documents for the UNIDO-UNITAR project.

Mr. Alberto Capra, like Mr. Sam-Adu Kumi said he would aim for more geographical studies.

Mr. Alfredo Cueva elaborated on the UNIDO project. He said that during the first phase, high quality sampling would take place. A company, specialized in hydro-analysis, and a hydrologist from the SEAM would be hired for a 30-meter deep-water analysis.

Mr. Urs K. Wagner said that immediate action right after an incident would be of utmost importance, specifically to reduce the extent of consequential damages. According to him, monitoring should go beyond in soil and water and it should be precisely looked into the path of the plume. He added that it should be taken into account that not everyone reports his or her complaints/abnormalities after a fire. The focus was obviously on fire fighters but not neighbouring residential civilians.

Ms. Rocio Vely said that the ANDE had reports from before and after the incident. She also said that it would be very important to coordinate, for example with the UNIDO-UNITAR project or with the laboratory in Argentina.

Ms. Anna Ortiz suggested to put the case forward during the preparatory regional meetings and to show some materials, like the PCB story written by Claudia and other photos. Mr. Sam Adu-Kumi agreed and highlighted the importance to display the case.

Mr. Sam Adu-Kumi pointed out that this was an incident in a developing country. He asked about the international assistance for this incident.

Ms. Kei Ohno said that in such an incident many different areas of expertise and scientists were involved. She argued that the issue of ecosystems and human health had to come to the attention of international society. She continued saying the COP would be a good place to bring this to the attention, but she also said that scientific fora were very important. Ms. Anna Ortiz proposed to include the point about the academic fora in the outcomes of this PEN meeting.

Ms. Claudia Cabal said that more attention should be paid to the role of historical practices. It was also important to address how every country had been managing PCB, as they were all exposed to the same risks.

Mr. Alfredo Cueva agreed with Ms. Anna Ortiz' proposal to pay more attention to the scientific and academic issues and potential contributions. He also suggested that perhaps the COP could identify countries for bilateral cooperation in these areas.

Ms. Kei Ohno said that the BRS Secretariat and UN Environment had contacts in Japan. In October, the PCB meeting in Kobe was held. Moreover, Japan was one of the champions in PCB management. She also said that the BCRC in China had always been a very good contact to work with. Ms. Anna Ortiz supported the comment put forward by Ms. Kei Ohno and said that this would likely lead to something concrete.

15. Looking toward COP-8: Technology fair during COP-8 – Ms. Kei Ohno

For COP-8 (24 April to 5 May 2017, Geneva), PCB were listed under agenda item 5(a) (iii). The theme of the meetings and the high-level segment on 4 and 5 May 2017 would be "A future detoxified: sound management of chemicals and waste". The full overview of the draft agenda could be found in the PowerPoint presentation.

Ms. Kei Ohno said that during COP7, a science fair was held and that for COP8 had been chosen to hold a technology fair. This fair would be held from 27 to 29 April 2017. The objective would be to promote the transfer of technology for the implementation of the conventions by providing an opportunity to engage the private sector and industry, academia, research institutions, NGOs, IGOs in the implementation of the conventions:

- show casing available clean technologies for the ESM of chemicals and wastes

- promoting opportunities for developing alternatives –including non-chemical alternatives- to chemicals listed under the conventions
- developing partnerships to deal with particular issues

The Fair would be expected to be an interactive event hosted under the aegis of the COPs in the exhibition area blending both furnished booths for exhibitors to display their activities as well as a space for hosting specific interactive activities such as panel discussions, debates on ways to promote the transfer of technology, competitions and screening of videos.

Requests for booths should be submitted to the Secretariat at the latest by **Friday, 3 March 2017** to the BRS Secretariat.

Side events

During the entire COP side events would be organized. Side events were a vital component of the COP meetings, as they provided opportunities to Parties, United Nations agencies and admitted observer organizations to highlight diverse issues related to the objectives of the conventions. They had been established as a platform for participants to exchange information and present their work concerning the implementation of the conventions. They could also contribute to foster discussion on key issues being discussed at the COPs.

Requests to hold side events during the COPs should be submitted by sending a completed Side Event Application Form at the latest by **Friday, 3 March 2017** to the BRS Secretariat.

Ms. Jacqueline Alvarez expressed her concern that the fair would only work if the PEN would commit. It was put forward to have a different theme every day. For example, PCB in Open Applications could be the theme for a day and destruction technologies could be the theme for another day. Ms. Kei Ohno said that requests for a booth could already be submitted and that the deadline was 3 March 2017. The idea of the fair would be to use an interactive approach.

Questions and comments

Mr. Sam Adu-Kumi said that in order to improve research, training and scientific information, it was important to push at the national level.

It should be looked into how stakeholders could be evolved, how to put best practices forward and how to highlight the PEN, but more ideas would be needed. The idea for a survey was put forward.

Mr. Urs K. Wagner introduced the idea of organizing a PEN booth instead or in addition to a side event. More people could be reached by being present over several days with an own booth. The focus could be on a clean-up encasement with samples of open applications but also tools, machinery and PPE how to decontaminate. Further ongoing (loop) Power Point Presentations could address the topics of the thematic groups and members of the PEN AC Board could be present to respond to questions of visitors.

Mr. Urs K. Wagner was asked to provide a basic budget for such an “encasement installation” until early January 2017.

Ms. Jacqueline Alvarez said that the scientific issue was of relevance. She added that through the GMP, new studies had been coming in.

For the PEN presence at COP, it was mentioned that if the PEN members would already be in Geneva, they would be expected to be present. For the technology fair, it was suggested to prepare three

different, interactive themes (per day?). Open Applications and destruction technologies were suggested as themes.

Mr. Urs K. Wagner asked about the costs of a fair booth or alternatively a booth during the first week of the COP in the entrance area of the Geneva International Conference Centre (CICG). Ms. Kei Ohno said she would follow up. She also said that ideas could already be submitted. It was noted that the technology fair would perhaps take place rather late for decision-making, but could still influence the Global Environment Facility (GEF).

Figure 6. Meeting participants, December 2016

16. Looking toward COP-8: Awareness raising materials within the theme of PCB: A Forgotten legacy? – Ms. Elsemieke de Boer

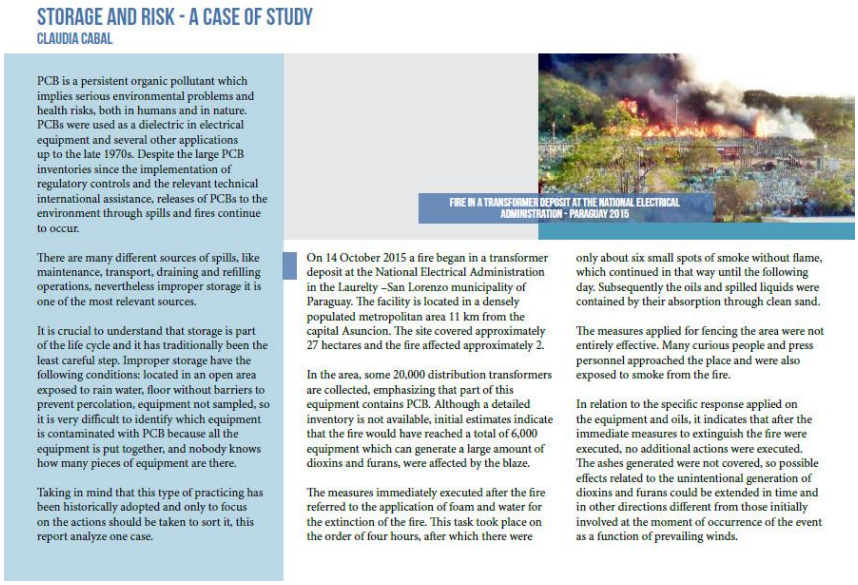
Ms. Elsemieke de Boer explained the participants of the meeting that the secretariat of the PEN had been developing new awareness raising materials within the theme of PCB – A Forgotten Legacy. The objective of the new materials was to place PCB high on the international agenda in the lead up to COP-8. She mentioned that these materials were being developed in collaboration with the communications department at UNITAR. She informed everyone that she was looking for input from and approval of the PEN members in order to move forward.

Figure 7. Overview of awareness raising materials within the theme PCB - A Forgotten Legacy?

16.a. Brochure

Ms. Elsemieke de Boer mentioned that one of the awareness raising materials was a brochure. The brochure would have a brief introduction into PCB and would contain separate factsheets on different themes. The themes that had been proposed until then regarded the thematic groups: inventories, maintenance, disposal of PCB and Open Applications. Ms. Elsemieke de Boer explained that in addition to this, a number of case studies would be developed, such as the case study by Ms. Claudia Cabal on storage and risk. Each fact sheet would be maximum two pages, and would be accompanied by photos, illustrations, graphics, etc.

The factsheet by Ms. Claudia Cabal was discussed as a concrete example. It was suggested to perhaps make the title more attractive. It was also suggested to introduce some concrete steps on what to do in such a case.



STORAGE AND RISK - A CASE OF STUDY

CLAUDIA CABAL

PCB is a persistent organic pollutant which implies serious environmental problems and health risks, both in humans and in nature. PCBs were used as a dielectric in electrical equipment and several other applications up to the late 1970s. Despite the large PCB inventories since the implementation of regulatory controls and the relevant technical international assistance, releases of PCBs to the environment through spills and fires continue to occur.

There are many different sources of spills, like maintenance, transport, draining and refilling operations, nevertheless improper storage it is one of the most relevant sources.

It is crucial to understand that storage is part of the life cycle and it has traditionally been the least careful step. Improper storage have the following conditions: located in an open area exposed to rain water, floor without barriers to prevent percolation, equipment not sampled, so it is very difficult to identify which equipment is contaminated with PCB because all the equipment is put together, and nobody knows how many pieces of equipment are there.

Taking in mind that this type of practicing has been historically adopted and only to focus on the actions should be taken to sort it, this report analyze one case.

FIRE IN A TRANSFORMER DEPOSIT AT THE NATIONAL ELECTRICAL ADMINISTRATION - PARAGUAY 2015

On 14 October 2015 a fire began in a transformer deposit at the National Electrical Administration in the Laurelty –San Lorenzo municipality of Paraguay. The facility is located in a densely populated metropolitan area 11 km from the capital Asuncion. The site covered approximately 27 hectares and the fire affected approximately 2.

In the area, some 20,000 distribution transformers are collected, emphasizing that part of this equipment contains PCB. Although a detailed inventory is not available, initial estimates indicate that the fire would have reached a total of 6,000 equipment which can generate a large amount of dioxins and furans, were affected by the blaze.

The measures immediately executed after the fire referred to the application of foam and water for the extinction of the fire. This task took place on the order of four hours, after which there were only about six small spots of smoke without flame, which continued in that way until the following day. Subsequently the oils and spilled liquids were contained by their absorption through clean sand.

The measures applied for fencing the area were not entirely effective. Many curious people and press personnel approached the place and were also exposed to smoke from the fire.

In relation to the specific response applied on the equipment and oils, it indicates that after the immediate measures to extinguish the fire were executed, no additional actions were executed. The ashes generated were not covered, so possible effects related to the unintentional generation of dioxins and furans could be extended in time and in other directions different from those initially involved at the moment of occurrence of the event as a function of prevailing winds.

Figure 8. Example of brochure sheet, "Storage and risk" by Ms. Claudia Cabal

Some discussion ensued. The participants of the meeting came up with several other ideas. Mr. Urs K. Wagner and Ms. Kei Ohno Ms. Anna Ortiz said that perhaps there could be a sheet on the work of the Advisory Committee. Mr. Alfredo Cueva and Ms. Sanaz Jafarzadeh said that maybe there could be a sheet on things that could be improved to prevent future accidents. Ms. Kei Ohno commented that the PEN magazine could perhaps be re-used. Mr. Urs K. Wagner agreed and also mentioned that other

materials could be reused, for example the materials on PCB in Open Applications (case study Switzerland). Mr. Alberto Capra suggested to include the names of the PEN members. Ms. Maria Cárcamo asked who the target audience would be. It was answered that the COP participants, Focal Points and decision makers were regarded as the main target audience.

Ms. Jacqueline Alvarez said that it was important to bring story elements into the texts and that each story should focus on one element. She also mentioned that the idea was to translate several sheets.

It was decided that the Committee members would contribute to PCB stories on selected topics. The following PCB stories were agreed:

PCB Story	**Person Responsible**
Storage and risk	Ms. Claudia Cabal
PCB in Rwanda	Mr. Aloys Kamatari
PCB in North Korea	Ms. Chen Yuan
PCB in Nigeria	Ms. Stella Mojekwu
SADC GEF Project	Mr. Koebu Khalema
Case study Morocco	Mr. Hugues Levasseur
PCB in Japan	Ms. Kei Ohno
PCB in Iran	Ms. Sanaz Jafarzadeh
PCB Project UNITAR in Ghana	Mr. Jorge Ocaña
PCB mining project in South America	Mr. Alberto Capra
PCB in Central and Eastern Europe?	?

It was also discussed to perhaps create a separate sheet for PCB in Open Applications and to look into a map of a where PCB could be found in the world.

16.b. Video

Another awareness raising material being developed was a video on PCB. The video aimed to inform the general public, and in particular the parties to the Stockholm Convention, about the issue of PCB and the reality of possibly not achieving the 2025 and 2028 goals of the Stockholm Convention. The video would have a length of about four minutes, would be animated and have subtitles in English, French and Spanish. Ms. Elsemieke de Boer explained that the final draft of the script had been finished and was at that time available for comments.

The following comments were provided:

- PCB are no longer produced → PCB can no longer be produced
- Consistent use of PCB or PCBs
- Mention the sources
- Create an animation of transformers

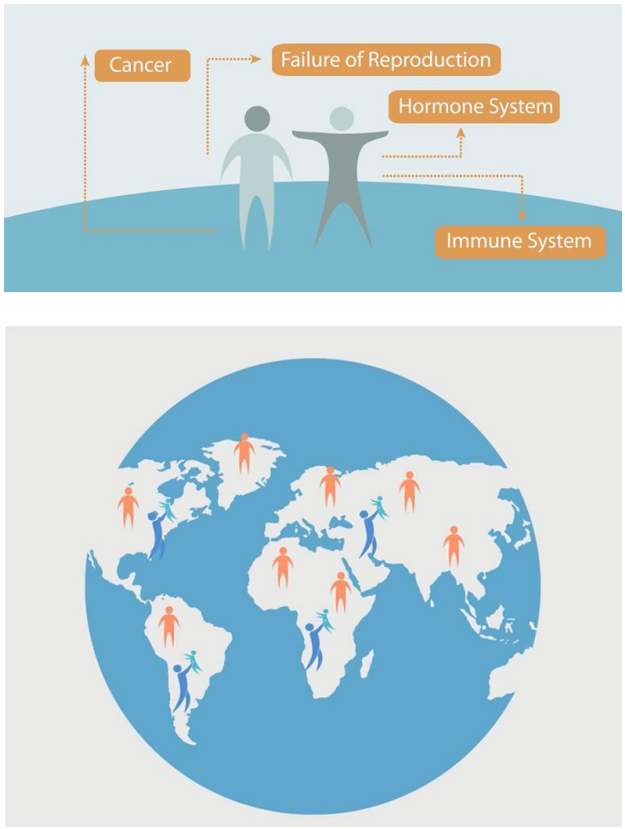


Figure 9. Example of animation for PCB video

16.c. Webinars

Ms. Elsemieke de Boer informed the participants of the meeting that a series of three webinars was held during the months of October and November. The focal points of the Stockholm and Basel conventions as well as of SAICM were invited. In each webinar, around 25 people participated. The first webinar covered topics regarding elimination of PCB and PCB in North Korea, the second webinar covered topics regarding the effectiveness evaluation and analysis of POPs and the third webinar covered topics regarding storage and risk, the PCB management guidance and PCB in Open Applications. After the presentations, there was an opportunity for the participants of the webinar to ask questions. The notes and presentations of the webinars can be found at:

http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination

It was discussed among the PEN members how participation in the webinars could be improved. It was noted that for the next webinar series, the PEN members should be invited. Ms. Anna Ortiz also proposed that each PEN member would personally invite a number (10) of colleagues to participate in the webinar series. It was also suggested to invite a number of companies. Ms. Anna Ortiz pointed the time zone issue out and suggested to have the different webinars at different times adequate for each time zone. Ms. Kei Ohno said that perhaps the webinars could be recorded in order to always be accessible. She also suggested to organize an online Q&A. Ms. Anna Ortiz suggested to consult the website statistics for information about participation. Mr. Hugues Levasseur recommended informing people about the webinars more beforehand. Mr. Alberto Capra suggested inviting people from universities. Ms. Anna Ortiz also said that the webinar series should be better promoted in public, for example on the website, in newsletters, etc. Ms. Kei Ohno said that the webinars could be announced in the BRS newsletter (published every month online). Finally, Ms. Kei Ohno shared a good example

of the webinars by the OECD and she said that it was perhaps a good idea to link the webinars with other topics that would interest a wide public.

16.d. Website

Finally, Ms. Elsemieke de Boer informed the participants of the meeting that a new UN Environment website was under preparation and would soon be live. This website renewal would also create an opportunity to update the PCB and PEN website.

The new PCB website can be found at:

http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb

The new PEN website can be found at:

http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination

16.e. Social media account?

It was suggested to promote the PEN through social media to make it function better as a network. Means such as Facebook, Twitter, Instagram, etc. were suggested. Ms. Kei Ohno said that the BRS had a twitter account that could post tweets on behalf of the PEN[1]. BRS also had a Facebook page named Safe Planet[2].

17.a. Consolidated Assessment: Next steps - Ms. Anna Ortiz

Ms. Anna Ortiz mentioned that the information of the consolidated assessment came from the National Implementation Plans (NIPs) and from the Global Environment Facility (GEF). Some of the conclusions that came out of the consolidated assessment were:

- **Amount eliminated:** estimated ca. 4 million tonnes, 20% of total
- **Amount to be eliminated:** estimated ca. 14 million tonnes, 80% of total

Ms. Anna Ortiz pointed the issue of cross-contamination out and stressed that there was a need for good inventories. She said that the information collected until that time did not tell us enough.

It was also mentioned by Ms. Anna Ortiz and Mr. Urs K. Wagner that data on PCB on Open Applications had been scarce and that guidelines were inexistent.

Mr. Koebu Khalema pointed out that Angola was a country without data and that GEF funding for the country was complicated: a clear plan would be needed. He also stressed that within some large regional projects in Africa, Focal Points sometimes did not function.

Mr. Alberto Capra said that the regional centre in South America had experienced that sometimes people did not know how to report.

Mr. Sam Adu-Kumi suggested to contact Focal institutions for data.

[1] **Twitter BRS :** https://twitter.com/brsmeas?lang=en
[2] **Facebook BRS :** https://www.facebook.com/safe.planet/

It was suggested to organize physical meetings with authorities that have to report. Mr. Hugues Levasseur said that his company would be willing to assist if such a workshop would be organized. He also said that companies often had good reporting.

Ms. Anna Ortiz said that laboratories were not making investments to improve technology. Legislation would be needed.

Ms. Sanaz Jafarzadeh said that step-by-step guidelines were important for developing countries. This was a pre-requirement for good reporting according to her.

Ms. Jacqueline Alvarez said that guidance existed, but was perhaps limiting.

It was mentioned that best estimates had not been sufficient. Accountable scientific data was needed. Finally, it was decided that the reporting issue should be raised during COP-8.

Ms. Jacqueline Alvarez said that reporting needed to be enhanced. In addition, countries needed to address how to turn work into business cases. She said that the reporting issue also would go beyond. The data that would go into the final information would be important, such as data on the conditions, oil, inventories, maintenance, etc.

Ms. Jacqueline Alvarez remarked that the GMP is not addressing PCB in oil.

Mr. Koebu Khalema shared an experience where a project failed because it was impossible to send the equipment to Europe.

Ms. Anna Ortiz said that advantage should be taken of regional opportunities. She also said that there were many PCB projects worldwide, and that this information was crucial. Finally, she said that capacity building should be improved.

Mr Sam Adu-Kumi agreed and said that attention should be paid to capacity building in Africa. Regional and sub-regional capacities should not be forgotten. He added that it was important to bring scientists on board.

Ms. Stella Mojekwu commented that it was of high importance to upgrade laboratories.

Finally, Mr. Urs K. Wagner said that we should not forget to pass knowledge on to the next generation: the POPs would always stay, whereas the experts would not.

18. Revision of Terms of Reference

The Advisory Committee of the PEN had the mandate to modify the terms of reference. The Bureau to the Conference of the Parties of the Stockholm Convention should be notified about any changes made. Ms. Jacqueline Alvarez argued that the Advisory Committee of the PEN at that time was functioning well and that the little time toward the 2025 and 2028 deadlines of the Stockholm Convention should be taken into account. Little changes on the terms of reference were adapted mainly considering sustainability aspects and progress made.

18.a. Revision of Advisory Committee membership

It was suggested to create two new membership positions for the Regional Centres. UNITAR indicated its interest in participating in the PEN Advisory Committee.

The membership of the PEN would be as follows:

An Advisory Committee was established to oversee the operation of the network. It consists of 19 members drawn from the following groups:

(a) Parties:	
African States	(2)
Asian and Pacific Sates	(2)
Central and Eastern European States	(2)
Latin American and Caribbean States	(2)
Western European and Other States	(2)
(b) Industry	(1)
(c) Polychlorinated biphenyls holders	(1)
(d) Non-governmental organizations	(1)
(e) Experts	(1)
(f) Basel, Rotterdam and Stockholm Conventions Secretariat	(1)
(g) Intergovernmental organizations	(2)
(h) Stockholm and/or Basel Conventions Regional Centres	(2)

The representatives of the regional centres should be nominated by the PEN Secretariat after an indication of interest from the centres through a letter. For nomination, relevant experience and regional distribution should be taken into account.

18.b. Revision of selection of members for the Advisory Committee

Text proposed by the PEN Advisory Committee:

Parties are invited to submit to the PEN Secretariat, no later than 2 months after each meeting of the Conference of the Parties to the Stockholm Convention, a nomination of an expert, along with curricula vitae, to serve as a member of the Advisory Committee. The PEN Secretariat, in consultation with the Bureau of the Conference of the Parties to the Stockholm Convention, taking due regard to a balance between different types of expertise and between genders, identifies two members per region, for a term of four years. The members from Parties may be re-elected.

The PEN Secretariat confirms the membership of the Advisory Committee no later than 3 months after each meeting of the Conference of the Parties to the Stockholm Convention.

It was also suggested to include a sentence about inviting experts to the annual meetings of the Advisory Committee of the PEN and that regions should encourage identification of new members and that rotation should be supported.

The final revised Terms of Reference can be found in Annex E.

19. Revision of the workplan of the PEN 2014-2017

Ms. Jacqueline Alvarez discussed the workplan and explained the proposed changes. When no comments were provided by the participants, the proposed changes were adopted.

- Ms. Jacqueline Alvarez said that the timeframe of the workplan 2014-2017 would be kept
- I.1.4. The translation into UN languages would only be possible if funds would be available
- I.1.5. The status of the executive summary of the inventory guidance would be discussed with Ms. Chen Yuan
- I.2.4. The translation into UN languages would only be possible if funds would be available
- I.6.2. The United Nations Institute for Training and Research (UNITAR) would establish a help desk to assist in and promotion national reporting as part of an information exchange platform
- II.1.6. The Regional Centre Argentina would make an analysis of existing guidance in Spanish
- IV.1. Mr. Urs K. Wagner would assist, factsheets would be revised
- IV.4. The translation of the materials would have to take place before the preparatory regional meetings
- IV.4. Dates had been changed
- Core and overarching activities, 14. The materials were being developed at that time.

New points:

10. Establish a global information exchange platform that highlights activities on PCB in support of implementation of the Stockholm Convention and facilitates communication and exchange of information among members of the PCB Elimination Network and other interested stakeholders, such as parties to the Stockholm Convention and regional centres

15. Survey on available scientific information and laboratory and analytical capacity

16. Business Approaches for PCB?

17. Facilitate exchange of information on analytical methods and existing infrastructure

The final revised workplan can be found in Annex D.

20. Next steps toward COP-8

Activity	Action	Responsible	Timeframe
1. PEN presence at regional preparatory meeting	1. Development and translation of factsheets on: - Incidents: Paraguay & Japan - Successful stories: BCRC Argentina - Open Applications	Chair BRS Secretariat PEN Secretariat Ms. Claudia Cabal Ms. Kei Ohno Mr. Alberto Capra Mr. Urs K. Wagner UNITAR	February 2017
	2. Set of videos – showcase at COP 8?	PEN Secretariat and UNITAR in consultation with PEN AC members	February 2017
	3. Liaising with Focal Points prior to meeting/ or to regional coordinators	Chair through PEN Secretariat	January 2016
	4. PEN AC members to come back to their constituency and bring the issue to their attention	PEN AC members	Before March 2017
	5. Prepare a joint message from PEN including a suggestion on language to address open applications	PEN Secretariat in consultation with PEN AC members	Prepare and draft during COP-8
2. Prepare exchange of information platform	1. Develop the structure of the platform 2. Showcase during side event/technology fair at COP 8	UNITAR	March 2017
3. Dissemination of activities to PEN broad audience	1. Communicate via e-mail what has happened 2. Enhance use of websites 3. Consider the creation of a Facebook and Twitter page 4. Putting stories in main pages	PEN Secretariat, BRS Secretariat, all	Continuous
4.Webinars	1. Organize a new set of webinars on PCB and Prepare themes	PEN Secretariat, PEN AC members	February – March 2017

Activity	Action	Responsible	Timeframe
5. PEN presence at COP-8	1. Side event I. What do we want? II. Logistics III. Agenda (PCB in Open Applications, technology destruction, other) IV. Materials (awareness raising) V. Funding Presence of PEN AC members	PEN AC members	By COP-8
	2. Technology fair?		

21. Conclusions and recommendations

From the 6th PEN Advisory Committee Meeting

- Existing data, although limited, is sufficient to confirm that most of the Parties to the Stockholm Convention **are currently not on track to meet the 2028 goal**. The situation is most alarming in developing countries and countries with economies in transition. Expert judgement suggests that the estimates presented in the assessment are conservative, under-estimating the actual amounts that still need to be eliminated.
- Meanwhile, it is beyond doubt that **the Stockholm Convention did have a significant, tangible impact** as compared to a hypothetical alternative scenario without the Convention. In evaluating progress, not only quantitative (the focus of the assessment) but also qualitative indicators should be assessed. For example, the Convention raised awareness and placed the issue on the international agenda, which resulted in concrete follow-up actions.
- Notwithstanding the above, it is important to **applaud past efforts** that had an important beneficial impact in drawing attention to the PCB issue, in raising awareness, in building capacity and in eliminating liquids and equipment. This includes projects financed by the Global Environment Facility (GEF) as well as other initiatives. Meanwhile, such projects could be improved in terms of cost-efficiency.
- Disposal of certain amounts of PCB equipment is not the only indicator of progress towards the 2025 and 2028 objectives. **The GEF should adjust its strategy accordingly and account to a higher degree for benefits from wider capacity-building efforts.**
- Existing data gaps need to be urgently closed. For this purpose, it is **necessary to undertake or refine inventories**, as applicable, and to improve reporting. Responsibilities rest both with the Parties to provide less ambiguous and more accurate data and with stakeholders such as the BRS Secretariat and UNEP Chemicals and Waste Branch, most notably through the PEN, to provide additional assistance and facilitate reporting schemes.
- Inventories form the basis of any action to be taken; yet, they are preliminary in most countries. Often, projects are based on wrong baselines. **Inventories need to be undertaken in a systematic and harmonized manner.** This can form part of the NIP review/update process.

Countries may need to consider the establishment and periodic updating of a national database. Guidance on inventories as well as other aspects related to PCB management is available and should be relied upon as appropriate.

- The basis of any effective action to be is the existence of **appropriate regulatory frameworks and national action plans.** Countries should be encouraged to **define progressive plans for the environmentally sound management of PCB**, including its elimination, with strict timelines as part of national hazardous waste management plans and to ensure continuous monitoring of progress toward the Stockholm Convention targets. Strategies may vary and each country should explore the optimal and most cost-effective solution given its specific domestic background and circumstances.
- It is necessary to **expedite and intensify efforts, including through increased technology transfer,** provision of targeted trainings (in many cases, the wrong staff has been trained and/or the trained staff left shortly after the project without having trained successors), financial assistance, and better use of existing resources. Projects can be designed in a sustainable way with country ownership, so as to strengthen human and infrastructure capacities in the long term, beyond the duration of the project. If appropriately designed, initiatives to manage PCB in an environmentally sound manner will have a positive spill-over effect across hazardous waste management issues.
- The **Democratic People's Republic of Korea** is still producing PCB and may need assistance to phase out such production.
- Assistance should not only target final disposal, but all stages throughout the **life-cycle**.
- **Technologies and capacities for the elimination or irreversible transformation of PCB** are available.
- Linking the **sound management of PCB with the SDGs** and integrating it in new national development plans may prove a successful strategy to place the issue on the agenda and attract funding.
- In order to allow for **informed decision-making**, it may prove useful to compile information on the costs of elimination (including from completed and on-going GEF projects) and the cost-effectiveness of available technologies as well as to identify steps that can be taken to reduce such costs or increase financial leverage.
- **Awareness raising continues to be an important task,** in particular for open applications, which has not yet received the attention that is warranted given the significant effects on human health and the environment. It is necessary to develop appropriate guidance on identification, removal and disposal of open applications containing or contaminated with PCB. Contaminated sites will also need to be addressed. There are also some sectors that have not been sufficiently taken into account, for example the military.
- A large share of the PCB New that was produced has already been released to the environment. **Handling and storage practices** that are not sufficiently sound and not in line with the Basel technical guidelines may trigger further accidents and releases, with severe consequences on human health and the environment. In light of its toxicity and the large quantities of PCB still in use or in stockpiles for disposal, the environmentally sound management and elimination of PCB should be made a priority.
- **The assessment should be updated periodically on a 4-year basis.** Such updating should be synchronized with the PCB reviews that are undertaken under the Stockholm Convention (the third PCB review is scheduled for the ninth meeting of the COP in 2019).

From the 7th PEN Advisory Committee Meeting

- The significance of addressing **cross-contamination**, the need to include **open applications** in national PCB management plans, and the advantages of having **comprehensive national**

databases needs to be acknowledged. While some countries, including developing countries and countries with economies in transition, have made considerable progress, others still have not completed essential initial steps.

- **New guidance on identification of other articles** containing more than 0.005 per cent polychlorinated biphenyls (e.g. cable-sheaths, cured caulk and painted objects) needs to be available for countries to understand their national situation and their impact on human health and the environment.
- **A realistic strategy to meet the Stockholm Convention target**, including to avoid cross-contamination and to increase the rate of final disposal of PCB, are necessary at global and national levels to achieve the 2028 deadline. In this regard, it is suggested to develop an overarching strategy to address this issue and a road map for its implementation. Activities to be considered can include the establishment of dedicated national working groups, reviews of regulatory frameworks, completion of preliminary and final inventories, undertaking of trainings, development of sound management plans, implementation of disposal options etc. The need to include open applications in national PCB management plans, and the advantages of having comprehensive national databases should also be considered for the strategy.

22. Recap and final remarks

Ms. Jacqueline Alvarez emphasised that the outcomes of COP-8 on PCB would be crucial and determinative for the future of the PEN. Ms. Anna Ortiz said that if the PEN would not act, PCB *would* become a forgotten legacy. Mr. Sam Adu-Kumi added that PCB was one of the major deadlines under the Stockholm Convention. Ms. Kei Ohno pointed out that the PEN and the Global Alliance on Alternatives to DDT had been very important functioning and existing networks under the Stockholm Convention which include scientific aspects to their work. Finally, Ms. Jacqueline Alvarez said that in addition to issues regarding funding, the functionality of the PEN remained an issue.

23. Closure of the meeting – Ms. Jacqueline Alvarez and Ms. Anna Ortiz

Ms. Jacqueline Alvarez thanked all the participants, and the Ms. Anna Ortiz as the chair of the meeting in particular, for their contributions, commitment and active participation. She expressed her satisfaction with the outcomes of the meeting.

Annexes

Annex A. List of PEN Advisory Committee members (December 2016)

Advisory Committee of the PCB Elimination Network (PEN)				
Party-Nominated Members			**Other Stakeholders**	
Region	**Country**	**Name**		**Name**
Africa (2)	Nigeria	Stella Uchenna Mojekwu	**Industry (1)**	Hugues Levasseur, Hazardous Waste Europe
	Rwanda	Aloys Kamatari	**PCB holders (1)**	Claudia Cabal, Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)
Asia and Pacific (2)	China	Jinhui Li	**Non-Governmental Organizations (NGO) (1)**	Jindrich Petrlik, International POPs Elimination Network (POPs)
	Iran	Sanaz Jafarzadeh	**Experts (1)**	Urs K. Wagner, Environmental Technology International (ETI)
Eastern European Group (2)	Moldova	Ion Barbarasa	**Basel, Rotterdam and Stockholm (BRS) Conventions Secretariat:**	Kei Ohno, BRS Secretariat
	Romania	Mihaela Claudia Paun	**Intergovernmental Organizations (IGO) (2)**	Alfredo Cueva, United Nations Industrial Development Organization (UNIDO)
Group of Latin American and Caribbean Countries (GRULAC) (2)	Costa Rica	Anna Ortiz		Vacant
	Jamaica	Tara Dasgupta	**Stockholm and/or Basel Conventions Regional Centres (SCRC/BCRC) (2)**	Vacant
Western Europe and Other Groups (WEOG) (2)	Vacant			Vacant
	Vacant			
Secretariat of the PEN	UN Environment		Jacqueline Alvarez	

Annex B. Agenda

Provisional agenda

Seventh meeting of the Advisory Committee of the PCB Elimination Network (PEN)

Dates:	2 to 3 December 2016
Time:	9:00-17:00
Location:	El Gran Hotel del Paraguay, salón Jazmin
	De la Residenta 902, Esquina Padre Pucheau
	Asunción, Paraguay
Proposed Chair:	Anna Ortiz (PEN Advisory Committee Member, Costa Rica)
Contact:	For any information with regard to the organizational issues, please kindly contact Elsemieke de Boer. E-mail: Elsemieke.DEBOER@unitar.org

Day 1 - Friday 2 December 2016

08:30 - 09:00: Registration of participants

9:00: Opening of the meeting

10:15 – 10:45: Coffee break

- Group photo before the coffee break

12:30 – 13:30: Lunch break

15:15 – 15:45: Afternoon break

17:00: End of day 1

1. Opening remarks	United Nations Environment Programme Basel, Rotterdam and Stockholm (BRS) Conventions Secretariat Stockholm Convention Conference of the Parties (COP) Secretaria del Ambiente del Paraguay (SEAM)
2. Organization of the meeting a) Adoption of the agenda b) Election of the chair of the meeting c) Introducing new PEN members, PEN membership vacancies d) Introduction round	Chair
3. Objectives of the meeting and expected outcomes	Ms. Jacqueline Alvarez
4. Contributions from PEN members: the status of the work plan, thematic groups and case studies	All participants
5. POPs in Open Applications	Mr. Jorge Ocaña, Mr. Urs K. Wagner

6. ***"Análisis de Bifenilos Policlorados en muestras biológicas (PCB analysis in biological matrixes)"*** **-**	Ms. Mariza Insaurralde and Mr. Xavier Ortiz (Diaz Gill Laboratory, Paraguay)
7. ***"The Moroccan PCB Decontamination Plant Experience"***	Mr. Hugues Levasseur
8. ***"Best Practices and Lessons Learned of a Regional Mining Project of PCB in South America"***	Mr. Alberto Capra (Regional Centre Argentina)
9. ***"PCB Elimination by Re-defining Contaminated Oils"***	Mr. Naser Reza and Mr. Mark McNamara (Hydrodec)
10. ***"PCB Elimination Initiatives in Africa: Challenges and Outlook"***	Mr. Koebu Khalema (Regional Centre South Africa)

Day 2 - Saturday 2 December 2016

9:00: Start of day 2

10:15 – 10:45: Coffee break

12:30 – 13:30: Lunch break

15:15 – 15:45: Afternoon break

17:00: Closure of the meeting

1. Recap of day 1, structure of day 2	Chair
2. Looking toward COP 8 Theme: "PCB – A forgotten legacy?" a) Preparations for COP 8 (side event and technology fair) b) Awareness raising materials (brochure, video, etc.) c) Discussion	Ms. Kei Ohno, Ms. Jacqueline Alvarez, Ms. Elsemieke de Boer
3. Consolidated Assessment: Next steps	Ms. Anna Ortiz
4. Revision of Terms of Reference	All participants
5. Revision of the workplan of the PEN 2014-2017	All participants
6. Next steps toward COP-8	All participants
7. Conclusions and recommendations	All participants
8. Recap and final remarks	Ms. Jacqueline Alvarez and Ms. Anna Ortiz
9. Closure of the meeting	Chair

Annex C.

Participant list

Seventh meeting of the Advisory Committee of the PCB Elimination Network (PEN)

A. PEN Members – UN Region Representatives

▪ **AFRICA**
Nigeria **- Ms. Stella Mojekwu** Deputy Director/National Project Coordinator Environmentally Sound Management and Disposal of PCBs in Nigeria Federal Ministry of Environment 1b, Mao-Tse Tung Street, off Jimmy Carter Street, Asokoro Abuja, Nigeria +234 8059649475 Email: sumojekwu@yahoo.com
Rwanda – Mr. Aloys Kamatari Associate Professor Institute of Agriculture Technology and Education of KIBUNGO (INATEK) Faculty of Rural Development, Department of Agricultural Engineering 06 Kibungo, Rwanda E-mail: Aloys.kamatari@gmail.com

- **ASIA AND PACIFIC**

***China* – Ms. Chen Yuan**

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Iran – Ms. Sanaz Jafarzadeh

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- **GROUP OF LATIN AMERICAN AND CARIBBEAN COUNTRIES (GRULAC)**

Costa Rica – Ms. Anna Ortiz

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Fax: +506-22896603
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B. PEN members – Other stakeholders¨

Non-Gouvernmental Organization (IPEN) – Ms. Maria Cárcamo
On behalf of Jindrich Petrlik – PEN member representative of NGO (IPEN)

Coordinator RAPAL Uruguay
Vice-president for Latin America of the World Alliance for Mercury Free Dentistry
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Technical professional - Mr. Urs K. Wagner

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Holder of PCB – Ms. Claudia Cabal

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Annex D.

Revised Work plan 2014-2017

Revision date: 3 December 2016

Activities	Actions	Responsible	Timeframe	Notes
I. Thematic Group on Inventories				
1. Revise and finalize the guidance on PCB inventory including standardized inventory procedures based on compilation of experiences, lessons learned, and existing guidelines on PCB inventories, taking into account regional variations (60 p.)	1. Develop a revised draft based on comments	Chairs, PEN Secretariat	Completed	
	2. Invite comments from the Committee members	PEN Secretariat	Completed	
	3. Finalize a draft based on comments for presentation to the next meeting of the PEN and the next SC COP.	Chairs	Completed	
	4. Translate into UN languages. Make the final document available online	PEN Secretariat with Regional Centres	December 2017, subject to availability of resources	
	5. Draft and disseminate an executive summary of the inventory guidance	Jinhui Li / Chen Yuan	October/November 2016	To consult with Chen Yuan
2. Develop a factsheet on information requirements to support information management and the reporting process under paragraph (g), Part II, Annex A	1. Develop a first draft of the factsheet	Chairs	Completed	
	2. Invite comments from the Committee members	PEN Secretariat	Completed	
	3. Finalize the document	Chairs	Completed	
	4. Translate into UN languages. Make the final document available online	PEN Secretariat with Regional Centres	March 2017	Spanish, French, Chinese, assistance needed for other UN languages
3. Identify the needs of the Stockholm Convention Parties in the development of PCB inventories and information processing	1. Identify the parties that require assistance with PCB inventories and processing of the information on PCB	BRS Secretariat	February 2017	
4. Based on the needs assessment, use the guidance documents on PCB inventories in technical assistance activities	1. Organize webinars on specific sections of the guidance in the language of the target region/sub region	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centres	Continuous	Series of webinars undertaken and planned
	2. Facilitate exchange of lessons learned between countries with “good” and “bad” inventories	PEN Secretariat with Advisory Committee	January 2017 onwards	
6. Set up a help desk to assist in and promote national reporting	1. Develop TORs	PEN Secretariat and BRS Secretariat	November 2016 Completed	GEF project under development on NIPs and national reporting
	2. Establish and maintain the help desk (as part of the information exchange platform)	UNITAR and PEN secretariat	March 2017	

	3. Engage in outreach to inform relevant stakeholders about the help desk	PEN Advisory Committee Members, PEN Secretariat, BRS Secretariat	March 2017 onwards	
II. Thematic Group on Maintenance, Handling, and Interim Storage of Equipment Containing PCB				
1. Revise and finalize the guidance on maintenance, handling and interim storage of equipment containing PCB	1. Develop a revised draft based on comments	Chairs, PEN Secretariat	Completed	
	2. Invite comments from Advisory Committee members	PEN Secretariat	Completed	
	3. Finalize draft based on comments	Chairs	Completed	
	4. Translate into UN languages (30 p.), make final document available online	PEN Secretariat with Regional Centres	December 2017, subject to availability of resources	
	5. Draft and disseminate an executive summary of the maintenance guidance	Anna Ortiz	February 2017	
	6. Analysis of existing guidance in Spanish	BCRC Argentina	February 2017	
2. Use the guidance documents on PCB maintenance in technical assistance activities	1. Organize webinars on specific sections of the guidance in the language of target region/sub region	PEN Secretariat with BRS Secretariat and support of Regional Centres	Completed	
	2. Organize additional webinars on specific sections of the guidance in the language of the target region/sub region	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centres	2016-2017	
III. Thematic Group on Disposal of PCB and Remediation of Contaminated Sites				
1. Assessment of the need for guidance material in the identification and assessment of sites contaminated by PCB	1. Review of existing UNIDO guidelines on assessment of contaminated sites relevant to PCB	Chairs	March 2017	
2. Encourage information exchange on the amount of PCB disposed of and methods used in PCB disposal, experiences and lessons learned	1. Initiate discussions on POPs Social to exchange information on the amount of PCB disposed of and methods used in PCB disposal, experience and lessons learned by stakeholders (developed and developing countries, industry, NGOs, etc.)	Lead by Advisory Committee member (Mr. Barbarasa)	Completed	
	2. Request GEF to make available PCB projects mid-term and final evaluations	PEN Secretariat	March 2017	
	3. Prepare and translate factsheets on lesson learned for PCB projects	Chairs together with Regional Centres	April 2017	

IV. Thematic Group on Open Applications				
1. Revise and finalize the awareness raising materials (1 photo booklet, 2 fact sheets and the presentation)	1. Revise the awareness raising materials based on comments and include the criteria above in the material	Chairs	First series completed Next round: February 2017	*In progress*
	2. Invite second comments and additional input from the AC and PEN members on the photo booklet	PEN Secretariat	First series completed Next round: February 2017	*In progress*
	3. Finalize awareness raising materials based on comments and additional information and publication	Chairs, PEN Secretariat	First series completed Next round: February 2017	*In progress*
	4. Translate the materials into UN languages	PEN Secretariat with Regional Centres	February 2017	Spanish, French, Chinese, assistance needed for other UN languages
2. Awareness raising activities, communicate the message to the stakeholders	1. Organize webinars on PCB in open applications in the language of the target region/sub region	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centres	2016 – 2017	
3. Compile information to evaluate further needs for guidance and/or activities to assist parties in implementing paragraph (f) of Part II of Annex A to the Stockholm Convention	1. Request from implementing agencies to consider the assessment of open applications in NIP update projects and make available guidelines materials	PEN Secretariat	Completed	
	2. Information analysis and response to request from the implementing agencies	Chairs and AC	February 2017	
4. Develop a GEF-funded project on open applications	1. Develop a concept note	PEN secretariat, UNITAR, Ion Barbarasa and Mihaela Paun	March 2017	
	2. Develop a project proposal	PEN secretariat, UNITAR, PEN AC members	March 2017	
	3. Submit project proposal	PEN secretariat, UNITAR, PEN AC members	August 2017	
Core and Overarching Activities of the Advisory Committee				
1. Develop outreach materials on the Advisory Committee outputs	Electronic material, posters, videos, etc.	PEN Secretariat in cooperation with Chairs of Thematic Groups	2014-2017	
2. PEN participation in implementing agency regional PCBs workshops	Each workshop for 5 days (4 UN regions)	PEN Secretariat with Chairs of Thematic Groups, Regional Centres	2014-2017	
3. Compile lessons learned and good practices (bi-ennially)	Put compilation report on the website and present it to the PEN and COP	PEN Secretariat with Chairs of Thematic Groups	December 2015 December 2017	
4. Prepare progress report on an annual basis	Put progress report on the website and present it to the PEN and COP	PEN Secretariat in cooperation with the Advisory Committee	January 2015 January 2016 January 2017 January 2018	

5. Undertake assessment of PCB implementation activities to support other evaluation processes	Review of documents and AC participation and conduct surveys	PEN Secretariat in cooperation with chairs of Thematic Groups, and Regional Centres	2014-2017	
6. Review, revise the guidance documents and fact sheets every 3-4 years	Update the guidance documents and fact sheets, publish on the web, make available to the PEN	PEN Secretariat with Chairs of Thematic Groups	2014-2017	
7. Hold annual Advisory Committee meetings (preferential face-to-face)	Hold the meetings in 2015, 2016, 2017	PEN Secretariat to organize the meetings, AC	2015 – 2017	
8. Every second year hold the PEN/PCB information meeting in association with the SC COPs	Hold the meeting at the same time as the SC COP	PEN Secretariat to organize the meetings, AC	May 2015 May 2017	
9. Review the TORs of PEN and make recommendations to the next meeting of the PEN	PEN Secretariat with PEN Chair, AC to review, PEN Secretariat to finalize	PEN Secretariat with the members of the AC	First round Completed in 2011 Update March 2017	
10. Establish a global information exchange platform that highlights activities on PCB in support of implementation of the Stockholm Convention and facilitates communication and exchange of information among members of the PCB Elimination Network and other interested stakeholders, such as parties to the Stockholm Convention and regional centres	Develop the information exchange platform and maintain the platform	UNITAR and PEN secretariat	March 2017	
11. Outreach through forums such as the clearinghouse mechanism of BRS, including interviews with key experts		BRS, Regional Centres and UN Environment, IPEN	Ongoing	
13. Newsletters/materials (focusing on different themes) (explore if it can be coupled to the BRS newsletter and other existing newsletters) and awareness raising campaign vis a vis 2025/2028		BRS, Regional Centres and UN Environment, IPEN	Ongoing	
14. Implement the PCB awareness-raising	1. Story on how ESM of PCB translates into decreased levels of PCB in human milk	Katerina Sebkova	*October/November 2016*	*In progress*

campaign on PCB – The Forgotten Legacy	2. Draft and disseminate a story on challenges vis a vis PCB in developing countries	Sam Adu-Kumi	*October/November 2016*	*In progress*
	3. Draft a story on the PCB storage accident in Paraguay	Claudia Cabal	*October/November 2016*	*In progress*
	4. Draft a story on the PCB management plant in Morocco	Hugues Levasseur	*October/November 2016*	*In progress*
	5. Draft a story on the PCB inventory in Rwanda	Aloys Kamatari	*October/November 2016*	*In progress*
	6. Draft a story on contaminated sites	Jindrich Petrlik	*October/November 2016*	*In progress*
	7. Develop and publish an electronic publication to promote awareness of 2025/2028	Anna Ortiz, supported by the PEN Advisory Committee members	*October/November 2016*	*In progress*
	8. Develop a video on PCB	PEN Secretariat, UNITAR, Advisory Committee members	*October/November 2016*	*In progress*
	9. Develop an outreach brochure on PCB and the PEN	PEN Secretariat, UNITAR, Advisory Committee members	*March 2016*	*In progress*
15. Survey on available scientific information and laboratory and analytical capacity	1. Develop online survey	Advisory Committee members, BRS, PEN Secretariat	January 2017	
	2. Undertake the survey and prepare report	PEN Secretariat	February 2017	
	3. Submit into regional meetings	Advisory committee members	March 2017	
16. Business Approach for PCB?	1. Develop an economic assessment to evaluate replacement of old equipment with energy efficient equipment, considering the 2028 timeframe	BCRC Argentina	July 2017	
17. Facilitate exchange of information on analytical methods and existing infrastructure	1. Communicate with PEN members the existence of the POPs laboratory databank and request for their assistance in updating information	PEN Secretariat	February 2017	
	2. Include in the PEN website a reference to the POPs laboratory databank	PEN Secretariat, BRS Secretariat	February 2017	

Annex E. Revised Terms of Reference of the PEN (revision January 2017)

Terms of Reference of the Polychlorinated Biphenyls Elimination Network (PEN)

Revised after the seventh meeting of the Advisory Committee of the PCB Elimination Network (PEN), held from 2 to 3 December 2016 in Asuncion, Paraguay

Secretariat of the PEN, Chemicals and Waste Branch, Economy Division, UN Environment

Mission statement

1. The Polychlorinated Biphenyls Elimination Network (PEN) is established to promote and encourage the environmentally sound management of polychlorinated biphenyls (PCB) with a view to attaining the 2025 and 2028 goals of the Stockholm Convention with respect to PCB.

2. The network operates according to the following principles:

(a) The Network members support the environmentally sound management of polychlorinated biphenyls as prescribed by the Basel Convention "Technical Guidelines on the Environmentally Sound Management of Polychlorinated Biphenyls and Persistent Organic Pollutant Wastes" while striving to achieve the phase out goals of the Stockholm Convention;

(b) The Network is a multi-stakeholder mechanism for the exchange of information and the implementation of coordinated activities targeted to the elimination of the use of PCB, and is intended to foster transparency and openness between all sectors;

(c) The Network is intended to catalyse new initiatives and provide support for ongoing activities to achieve the environmentally sound management of polychlorinated biphenyls and their phase out, while avoiding duplication of effort.

Membership

3. Membership in the network is open to governments, intergovernmental organizations, donors, PCB holders, non-governmental organizations, industry, experts/academia, and business sectors relevant to polychlorinated biphenyls.

4. The network members enjoy equal status and shall foster collaboration, exchange information and share experiences with one another. They shall promote the network and its activities at the global, regional, national and community levels and participate in meetings and related activities, including thematic groups. They are eligible for the awards being offered by the network.

5. The members' main roles are to provide support for the implementation of the PEN's work plan, provide quality-assured information through the sharing of experiences and knowledge on the environmentally sound management of polychlorinated biphenyls and their alternatives, to provide financial support for the network's activities, as appropriate, and to participate in network meetings and discussion forums.

List of Activities

- Provide support for the implementation of the PEN work plan;
- Create incentives for and promote Environmentally Sound Management (ESM) of PCB;
- Facilitate information exchange between the members of the Network;
- Coordinate and support ongoing national and regional efforts to achieve ESM of PCB;
- Provide a link between members and promote local networking;
- Encourage research and development on suitable alternatives to PCB;
- Promote the sharing of information on technologies for the environmentally sound disposal of PCB;
- Promote the use of the Basel Convention technical guidelines on the ESM of PCB;
- Create incentives for countries to undertake and update inventories on PCB oils and equipment containing PCB and share information on inventories;
- Raise awareness on successful activities on environmentally sound management of polychlorinated biphenyls;
- Record and disseminate widely information on the activities of the PEN, *i.e.*, through the
- Clearinghouse Mechanism (CHM) of the Basel, Rotterdam and Stockholm conventions, Chemicals Branch, and others; and
- Establish awards for contribution to the ESM of PCB using donations from members.

Organizational Structure

6. The PEN was established by the Conference of the Parties to the Stockholm Convention at its fourth meeting through decision SC-4/9 in 2009. Following decision SC-5/7 of the fifth meeting of the Conference of the Parties to the Stockholm Convention, the leadership and implementation of the PEN was transferred to Chemicals Branch of UNEP's Division of Technology, Industry and Economics (DTIE). The PEN operates through its Advisory Committee, Thematic Groups therein, and a Secretariat of the PEN provided by UN Environment Chemicals and Waste Branch. The Executive Director of UN Environment will report to the United Nations Environment Assembly (UNEA) on progress and the provision of the leadership functions and implementation as appropriate.

Advisory Committee

7. An Advisory Committee was established to oversee the operation of the network. It consists of 19 members drawn from the following groups:

(a) Parties:	
African States	(2)
Asian and Pacific Sates	(2)
Central and Eastern European States	(2)
Latin American and Caribbean States	(2)
Western European and Other States	(2)

(b) Industry	(1)
(c) Polychlorinated Biphenyls holders	(1)
(d) Non-governmental organizations	(1)
(e) Experts	(1)
(f) Basel, Rotterdam and Stockholm Conventions (BRS) Secretariat	(1)
(g) Intergovernmental organizations	(2)
(h) Stockholm and or/Basel Conventions Regional Centres (SCRCs/BCRCs)	(2)

8. Nomination of a new member can be submitted along with curricula vitae to the secretariat of the PEN no later than 2 months after each meeting of the Conference of the Parties to the Stockholm Convention.

The members of the Bureau of the Conference of the Parties, representing each of the five United Nations regions, are invited to nominate from their respective regions two Parties to serve on the Advisory Committee. Regions should encourage identification of new members. The Secretariat of the PEN can nominate members from each of the other categories listed above to serve on the Advisory Committee after receiving an indication of interest through a letter. Relevant experience and regional distribution should be taken into account.

After having received the nominations, the PEN Secretariat, in consultation with the Bureau of the Conference of the Parties to the Stockholm Convention, taking due regard to a balance between different types of expertise and between genders, selects a new member for a term of four years. The members may be re-elected, however, rotation of members should be supported. The PEN Secretariat confirms the membership of the Advisory Committee no later than 3 months after each meeting of the Conference of the Parties to the Stockholm Convention.

9. The two representatives of the intergovernmental organizations shall be nominated by the Inter-organization Programme for the Sound Management of Chemicals (IOMC).

10. The Advisory Committee shall elect from among its members a Chair who shall serve for a period of two years. No Chair may serve for a period of more than four consecutive years.

11. The Parties, through their regional groups and the members of the Bureau of the COP of the Stockholm Convention from their regions, are invited to select members having the expertise necessary to enable the Advisory Committee to carry out its functions effectively. Members who are unable to attend the Advisory Committee meetings will be requested by the Chair to consider relinquishing from their seat to enable others to advise the PEN.

12. The Advisory Committee shall meet annually (preferentially face-to-face) to review the Network's activities and establish the Network's work plan and budget. These work plans and budget will be included into the report.

13. The PEN Secretariat may invite donor organizations, partners or experts to the meetings of the Advisory Committee as observers.

14. The work of the Advisory Committee shall include the following:

- Develop and periodically review the work plan and activities for the PEN;
- Endorse the establishment of Thematic Groups and nominate Chairs for each Group;
- Prepare the budget for the work of the PEN;
- Establish a strategy for the mobilisation of resources to support the work plan of the PEN; and
- Prepare the criteria and the process for the selection of awardees and other incentives.

Secretariat of the PEN

15. The Chemicals Branch of UN Environment, Economy Division, shall perform the function of Secretariat of the Network. The PEN Secretariat shall support the Network's activities. The PEN Secretariat will be managed by a Coordinator and its functions will include:

- Coordinating the work of the PEN;
- Developing and implementing an information exchange mechanism based on existing Clearing-House Mechanisms (CHM), including the BRS one;
  CHM at the global, regional and national levels;
- Facilitating the organisation of meetings of the thematic groups and administrative arrangements;
- Seeking funding for the activities of the PEN;
- Organising the annual meeting of the Advisory Committee;
- Preparing the work plan of the PEN for submission to the Advisory Committee;
- Providing annual reports to the Advisory Committee on activities of the PEN; and
- Prepare a progress report on the work and future plans of the PEN for the United Nations Environment Assembly (UNEA), the Basel and Stockholm COPs and the general membership for their information and any appropriate action in consultation with the Advisory Committee of the PEN.

Thematic Groups

16. Thematic Groups shall be established by the Advisory Committee to deal with specific issues related to the environmentally sound management of polychlorinated biphenyls and to implement activities as agreed in their work plans. The Advisory Committee members shall serve as leaders of the Thematic Groups. Members of the Network may participate in the activities of any of the Thematic Groups. The Thematic Groups' activities shall be supported by the regional centres of the Stockholm and Basel Conventions as appropriate.

Annex F. Revised PEN membership form

APPLICATION FORM FOR MEMBERSHIP IN THE PCBs ELIMINATION NETWORK (PEN)

1. Personal information

I wish to register as an: ☐ Institution ☐ Individual person

Institution			
First Name		Title *(Mr., Ms., Mrs., Dr.)*	
Family Name			
Job title			
Mailing address		Postal code	
City		Country	
Tel. number	*(please include international code)*	Mobile number	*(please include international code)*
Fax number		E-mail address	

2. Additional information

Please specify to which category of stakeholders you belong (please choose only one category):

☐ Government (ministries, governmental agencies, environmental inspectorates, etc.)

☐ PCBs related service industry (entities offering maintenance, treatment or destruction of PCBs)

☐ Holder of PCBs (private or state enterprises holding contaminated equipment or oils)

☐ International expert (consultants, interested individuals, regional centres)

☐ Intergovernmental Organization

☐ Donor organization

☐ Non-governmental organization

☐ Research institution / academia

Please e-mail, fax or mail the completed form to:

Secretariat of the PEN, Chemicals and Waste Branch, Economy Division, UN Environment

11-13 Chemin des Anémones

CH-1219 Châtelaine, Geneva, Switzerland

Fax : +41 22 797 3460, E-mail: science.chemicals@unep.org

In the field below, please briefly describe your involvement with PCBs.

I am interested in the following areas pertaining to PCBs (multiple checks possible):

☐ Inventory of PCBs ☐ Disposal of PCBs ☐ Destruction technologies

☐ Maintenance of PCBs equipment ☐ Storage of PCBs equipment ☐ Illegal use of PCBs

☐ Transboundary movement ☐ PCBs in open applications ☐ Other:_____

3. Declaration

I hereby declare that I will make determined effort toward achieving environmentally sound management (ESM) of PCBs. I accept that all information provided can be shared publicly.

Date:_____
Signature:_____

Please e-mail, fax or mail the completed form to:
Secretariat of the PEN, Chemicals and Waste Branch, Economy Division, UN Environment

11-13 Chemin des Anémones

CH-1219 Châtelaine, Geneva, Switzerland

Fax : +41 22 797 3460, E-mail: science.chemicals@unep.org

Annex G. Conclusions and recommendations

From the 6th PEN Advisory Committee Meeting

- Existing data, although limited, is sufficient to confirm that most of the Parties to the Stockholm Convention **are currently not on track to meet the 2028 goal**. The situation is most alarming in developing countries and countries with economies in transition. Expert judgement suggests that the estimates presented in the assessment are conservative, under-estimating the actual amounts that still need to be eliminated.
- Meanwhile, it is beyond doubt that **the Stockholm Convention did have a significant, tangible impact** as compared to a hypothetical alternative scenario without the Convention. In evaluating progress, not only quantitative (the focus of the assessment) but also qualitative indicators should be assessed. For example, the Convention raised awareness and placed the issue on the international agenda, which resulted in concrete follow-up actions.
- Notwithstanding the above, it is important to **applaud past efforts** that had an important beneficial impact in drawing attention to the PCB issue, in raising awareness, in building capacity and in eliminating liquids and equipment. This includes projects financed by the Global Environment Facility (GEF) as well as other initiatives. Meanwhile, such projects could be improved in terms of cost-efficiency.
- Disposal of certain amounts of PCB equipment is not the only indicator of progress towards the 2025 and 2028 objectives. **The GEF should adjust its strategy accordingly and account to a higher degree for benefits from wider capacity-building efforts.**
- Existing data gaps need to be urgently closed. For this purpose, it is **necessary to undertake or refine inventories**, as applicable, and to improve reporting. Responsibilities rest both with the Parties to provide less ambiguous and more accurate data and with stakeholders such as the BRS Secretariat and UNEP Chemicals and Waste Branch, most notably through the PEN, to provide additional assistance and facilitate reporting schemes.
- Inventories form the basis of any action to be taken; yet, they are preliminary in most countries. Often, projects are based on wrong baselines. **Inventories need to be undertaken in a systematic and harmonized manner.** This can form part of the NIP review/update process. Countries may need to consider the establishment and periodic updating of a national database. Guidance on inventories as well as other aspects related to PCB management is available and should be relied upon as appropriate.
- The basis of any effective action to be is the existence of **appropriate regulatory frameworks and national action plans.** Countries should be encouraged to **define progressive plans for the environmentally sound management of PCB**, including its elimination, with strict timelines as part of national hazardous waste management plans and to ensure continuous monitoring of progress toward the Stockholm Convention targets. Strategies may vary and each country should explore the optimal and most cost-effective solution given its specific domestic background and circumstances.
- It is necessary to **expedite and intensify efforts, including through increased technology transfer,** provision of targeted trainings (in many cases, the wrong staff has been trained and/or the trained staff left shortly after the project without having trained successors), financial assistance, and better use of existing resources. Projects can be designed in a sustainable way with country ownership, so as to strengthen human and infrastructure capacities in the long term, beyond the duration of the project. If appropriately designed, initiatives to manage PCB in an environmentally sound manner will have a positive spill-over effect across hazardous waste management issues.
- The **Democratic People's Republic of Korea** is still producing PCB and may need assistance to phase out such production.
- Assistance should not only target final disposal, but all stages throughout the **life-cycle**.

- **Technologies and capacities for the elimination or irreversible transformation of PCB** are available.
- Linking the **sound management of PCB with the SDGs** and integrating it in new national development plans may prove a successful strategy to place the issue on the agenda and attract funding.
- In order to allow for **informed decision-making**, it may prove useful to compile information on the costs of elimination (including from completed and on-going GEF projects) and the cost-effectiveness of available technologies as well as to identify steps that can be taken to reduce such costs or increase financial leverage.
- **Awareness raising continues to be an important task,** in particular for open applications, which has not yet received the attention that is warranted given the significant effects on human health and the environment. It is necessary to develop appropriate guidance on identification, removal and disposal of open applications containing or contaminated with PCB. Contaminated sites will also need to be addressed. There are also some sectors that have not been sufficiently taken into account, for example the military.
- A large share of the PCB New that was produced has already been released to the environment. **Handling and storage practices** that are not sufficiently sound and not in line with the Basel technical guidelines may trigger further accidents and releases, with severe consequences on human health and the environment. In light of its toxicity and the large quantities of PCB still in use or in stockpiles for disposal, the environmentally sound management and elimination of PCB should be made a priority.
- **The assessment should be updated periodically on a 4-year basis.** Such updating should be synchronized with the PCB reviews that are undertaken under the Stockholm Convention (the third PCB review is scheduled for the ninth meeting of the COP in 2019).

From the 7th PEN Advisory Committee Meeting

- The significance of addressing **cross-contamination**, the need to include **open applications** in national PCB management plans, and the advantages of having **comprehensive national databases** needs to be acknowledged. While some countries, including developing countries and countries with economies in transition, have made considerable progress, others still have not completed essential initial steps.
- **New guidance on identification of other articles** containing more than 0.005 per cent polychlorinated biphenyls (e.g. cable-sheaths, cured caulk and painted objects) needs to be available for countries to understand their national situation and their impact on human health and the environment.
- **A realistic strategy to meet the Stockholm Convention target**, including to avoid cross-contamination and to increase the rate of final disposal of PCB, are necessary at global and national levels to achieve the 2028 deadline. In this regard, it is suggested to develop an overarching strategy to address this issue and a road map for its implementation. Activities to be considered can include the establishment of dedicated national working groups, reviews of regulatory frameworks, completion of preliminary and final inventories, undertaking of trainings, development of sound management plans, implementation of disposal options etc. The need to include open applications in national PCB management plans, and the advantages of having comprehensive national databases should also be considered for the strategy.