



## Stockholm Convention on Persistent Organic Pollutants

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### Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants Eighth meeting

Geneva, 24 April–5 May 2017

Item 5 (a) (iii) of the provisional agenda\*

**Matters related to the implementation of the Convention:  
measures to reduce or eliminate releases from intentional  
production and use: polychlorinated biphenyls**

## Report by the United Nations Environment Programme on the activities of the Polychlorinated Biphenyls Elimination Network

### Note by the Secretariat

As referred to in the note by the Secretariat on polychlorinated biphenyls (UNEP/POPS/COP.8/6), the annex I to the present note contains a report by the United Nations Environment Programme (UNEP) on the activities of the Polychlorinated Biphenyls Elimination Network (PEN). Annexes II, III and IV set out the report of the expert meeting on the effectiveness evaluation of implementation of the Stockholm Convention for PCB and sixth meeting of the advisory committee of the PEN held in Brno, Czech Republic from 14 to 16 December 2015, the report of the online meeting with the advisory committee of the PEN held on 14 October 2016 and the report of the seventh meeting of the advisory committee of the PEN held in Asuncion, Paraguay from 2 to 3 December 2016, respectively. The formatting of the reports in those annexes has been modified from the original publication which can be found on the website of the UNEP.<sup>1</sup> The present note, including its annexes, has not been formally edited.

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\* UNEP/POPS/COP.8/1.

<sup>1</sup> <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>.

## Annex I



# Report by UN Environment regarding the activities of the Polychlorinated Biphenyls Elimination Network (PEN)

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## Table of Contents

### Acronyms and Abbreviations

### Executive summary

#### 1. Introduction

#### 2. Structure of the PEN

2.1. Membership

2.2. Advisory Committee

2.3. Thematic Groups

#### 3. Financial issues and workplan

#### 4. Meetings

4.1 Expert meeting on the effectiveness Evaluation of Implementation of the Stockholm Convention for PCB and Sixth Meeting of the Advisory Committee of the PEN in Brno, Czech Republic (14 to 16 December 2015)

4.2 Online meeting of the Advisory Committee of the PEN (14 October 2016)

4.3 Seventh Meeting of the Advisory Committee of the PEN in Asuncion, Paraguay (2 to 3 December 2016)

#### 5. Other PCB and PEN related activities

5.1 PCB - and PEN - related activities of UN Environment and other PEN members

## Acronyms and Abbreviations

BRS Secretariat	Secretariat of the Basel, Rotterdam and Stockholm Conventions
COP	Conference of the Parties
GEF	Global Environment Facility
IGO	Intergovernmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs
PAH	polyaromatic hydrocarbons
PCB	Polychlorinated Biphenyls
PEN	PCB Elimination Network
POPs	Persistent Organic Pollutants
RECETOX	Research Centre for Toxic Compounds in the Environment
ToRs	Terms of Reference
UN Environment	United Nations Environment
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research

## Executive summary

Since the seventh meeting of the Conference of the Parties of the Stockholm Convention (COP-7), the PCB Elimination Network (PEN), has been very active and providing tools to assist in PCB identification, inventory and phase out. The PEN has updated and revised guidance documents, developed project concepts, obtained new PEN members (18) and Advisory Committee members (1). Within the theme of *PCB - A Forgotten Legacy*, a set of materials has been prepared to highlight to parties the need to continue making efforts towards PCB phase out. In addition, to strengthen regional delivery and support, two new membership positions within the Advisory Committee have been included in the Terms of Reference of the PEN for regional centres of the Stockholm and Basel Conventions.

Moreover, the PEN Advisory Committee has actively participated in the development of the report entitled “Consolidated Assessment of Efforts made toward the Elimination of PCB” prepared by UN Environment Chemicals and Waste Branch in joint efforts with the Basel, Rotterdam and Stockholm Secretariat. This report, submitted to the Effectiveness Evaluation Committee under the Stockholm Convention, provided sufficient information and data on the progress towards eliminating PCB and can thus be used to evaluate the effectiveness of the Stockholm Convention with regard to PCB.

During the expert meeting on the effectiveness evaluation of implementation of the Stockholm Convention for PCB and the Sixth Meeting of the Advisory Committee of the PCB Elimination Network (14 to 16 December 2015) the concern was raised that the global community was not on track to meet the 2025-2028 commitment on PCB. Special attention was paid to the need for systematic and harmonized inventories, insufficiently sound handling and storage practices and the continuous need of efforts to maintain the right level of awareness.

The seventh meeting of the Advisory Committee of the PEN highlighted that countries are far from achieving the 2025 and 2028 goals of the Stockholm Convention, as substantiated in the “Consolidated Assessment of Efforts made toward the Elimination of PCB”. Approximately 17 % of the total amount of PCB has been eliminated to date, whereas about 83 % remain to be eliminated. In addition, that at the current stage the need of having comprehensive national databases should be acknowledged. The seventh meeting of the Advisory Committee emphasised that the outcomes of COP-8 on PCB and stakeholder involvement, including donors, would be crucial and determinative for meeting the 2025 and 2028 goals of the Stockholm Convention. If actions are insufficient, PCB will remain as a long lasting legacy. The Advisory Committee concluded that to achieve the 2025 and 2028 deadlines set by the Stockholm Convention, realistic and urgent global and national strategies must be launched as soon as possible.

## 1. Introduction

Pursuant to decisions SC-5/7, SC-6/6, SC-7/3 on polychlorinated biphenyls of the Conference of the Parties (COP) to the Stockholm Convention on Persistent Organic Pollutants, the UN Environment Chemicals and Waste Branch has been serving as the PCB Elimination Network Secretariat and undertaking activities to assist the network members and the parties to the Stockholm Convention to fulfil their mandates on this topic. At COP-7, the Secretariat of the PEN was invited to inform the COP at its next meeting regarding activities of the PEN. The following gives an overview of the activities undertaken to date and explains the current status of the PEN.

## 2. Structure of the PEN

### 2.1 Membership

**New members:** Eighteen new members to the PEN were welcomed since the seventh meeting of the Conference of the Parties to the Stockholm Convention. As of January 2017, the PEN has 451 members compared to 433 in February 2015 and 423 in 2013.

**Revised PEN membership form:** The PEN membership form was revised in October 2016. An example of the English version is set out in [Annex F](#) to the report of the Seventh Meeting of the Advisory Committee of the PEN. The form is available in all UN languages and can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>

### 2.2 Advisory Committee

**Revised Terms of Reference of the PEN Advisory Committee:** The Terms of Reference of the PEN were revised and approved by the Advisory Committee of the PEN during its seventh meeting in December 2016 taking into account regional delivery needs. It was decided to establish one new membership position (2 seats) for the Regional Centres of the Basel and Stockholm Conventions. 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. UN Environment will remain as a member in its role of Secretariat of the PEN. The Terms of Reference are set out in [Annex E](#) to the report of the Seventh Meeting of the Advisory Committee of the PEN and can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>

**New PEN Advisory Committee member:** The Advisory Committee of the PEN has welcomed one new PEN member, Ms. Claudia Cabal, who represents PCB holder. That seat remained vacant.

The status of the PEN Advisory Committee is as follows:

Advisory Committee of the PCB Elimination Network (PEN)				
Party-Nominated Members			Other Stakeholders	
Region	Country	Name	Category	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 Petrlík, 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	

In accordance with the new Terms of Reference, five seats still remain vacant: two for Western Europe and Other Groups (WEOG), two for the regional centres and one for Intergovernmental Organizations (IGO). UNITAR has indicated its interest in participating in the Advisory Committee of the PEN.

**Chair of the Advisory Committee:** At its sixth meeting, the PEN Advisory Committee agreed that Ms. Anna Ortiz would continue to serve as Chair and she continued in that role during the seventh meeting of the Advisory Committee of the PEN.

**Revised and updated workplan:** The PEN Secretariat revised the 2014-2017 workplan of the PEN in consultation with the Advisory Committee during its sixth meeting and updated it during its seventh meeting. The revised and updated workplan is set out in Annex D to the report of the Seventh Meeting of the Advisory Committee of the PEN, which can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>.

### 2.3 Thematic Groups

The Thematic Groups of the PEN and its leads and co-leads have remained unchanged as follows:

- Thematic Group on Inventories: Lead - Mr. Jinhui Li, co-leads - Mr. Ion Barbarasa and Mr. Aloys Kamatari.
- Thematic Group on Maintenance, Handling, and Interim Storage of Equipment Containing PCB: Lead - Ms. Anna Ortiz, co-leads - WEOG representative invited.
- Thematic Group on Disposal of PCB and Remediation of Contaminated Sites: Lead - Mr. Hugues Levasseur, co-lead Ms. Sanaz Jafarzadeh.
- Thematic Group on Open Applications of PCB: Lead - Ms. Mihaela Claudia Paun, co-lead - Mr. Urs K. Wagner.

### 3. Financial issues and workplan

The financial basis for the operation of the PEN and the implementation of the workplan remains weak. No specific contributions to the work on PCB and the PEN have been received since May 2013. During 2015 and 2016, UN Environment allocated a total of USD 57,000 from Norway and Sweden contributions received by the organization. As of 17 January 2017, there are no remaining funds. The UN Environment Chemicals and Waste Branch, the BRS Secretariat and the members of the Advisory Committee have supported the PEN with substantial in-kind contributions.

Existing funds available for the PEN's work were used as follows:

- Contributions from Norway (USD 40,000) and Sweden (USD 17,000): to organize the seventh meeting of the PEN Advisory Committee (meeting facilities, travel, DSA), consultants to support PEN activities, development of project proposal in open applications, webinars, webpage update and awareness raising materials including video, brochures and case studies, development of the "Consolidated Assessment of Efforts made toward the Elimination of PCB";
- Contributions from UN Environment, (Senior Programme Officer at P5 level – 5 % of the time): staff to coordinate the PEN, supervise outputs, and provide PEN Secretariat;
- Contribution from BRS Secretariat to jointly (USD 45,000) organize with UN Environment the sixth meeting of the PEN Advisory Committee including travel and daily subsistence allowances (DSA).

At its seventh meeting, the Advisory Committee of the PEN revised its 2014-2017 workplan. The revised and updated workplan relies mainly on in-kind contributions from UN Environment, the PEN Advisory Committee (including BRS Secretariat, UNIDO and UNITAR) and the regional centres. Resource mobilization is one activity identified. The revised workplan is presented as Annex D to the report of the seventh meeting of the PEN Advisory Committee that is attached as Annex IV to this report and is also available at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb>.

### 4. Meetings

#### 4.1 Expert meeting on the effectiveness Evaluation of Implementation of the Stockholm Convention for PCB and Sixth Meeting of the Advisory Committee of the PCB Elimination Network (14 to 16 December 2015)

The 'Expert Meeting on the Effectiveness Evaluation of Implementation of the Stockholm Convention for PCB' and the 'Sixth Meeting of the Advisory Committee of the Polychlorinated Biphenyls (PCB) Elimination Network (PEN)' (hereinafter referred to as the '6<sup>th</sup> meeting of the Advisory Committee of the PEN') were held back to back from 14 December 2015 until 16 December 2015. The meetings were held in Brno, Czech Republic, at the facilities of the Stockholm Convention Regional Centre (SCRC) in the Czech Republic, hosted by Research Centre for Toxic Compounds in the Environment (RECETOX), Faculty of Science, Masaryk University. They were jointly organized by the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS Secretariat) and the Science and Risk Unit of the Chemicals and Waste Branch of the Economy Division of UN Environment.

In terms of concrete outputs, the Committee put a set of recommendations forward to the COP and agreed to work closely with the PEN Secretariat and the Basel, Rotterdam and Stockholm Conventions (BRS) Secretariat to finalize the Consolidated Assessment, before submission to the Effectiveness Evaluation Committee under the Stockholm Convention. Moreover, throughout 2016, as foreseen in the revised workplan, awareness-raising materials would be prepared and a campaign implemented using the slogan of "PCB- A Forgotten legacy?" The participants also agreed to further work on the idea of developing a PCB Roadmap, as a concern was raised by the fact that the global community was not on track to meet the 2025-2028 commitment on PCB.

The meeting report and its conclusions and recommendations are set out in Annex II to this document and can be found at <https://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>

#### 4.2 Online meeting of the Advisory Committee of the PEN (14 October 2016)

An online meeting of the Advisory Committee of the PEN was held on 14 October 2016 in order to take stock on work that had been undertaken by the different members, organize a set of webinars and prepare for the seventh meeting of the Advisory Committee of the PEN and COP-8. The decisions of COP-7, the way forward to COP-8, new documents by the Secretariat of the PEN, a project proposal on POPs in Open Applications, awareness raising materials and upcoming activities were introduced and discussed during this online meeting.

The notes of the online meeting are set out in Annex III to this document and can be found at <https://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>

### 4.3 Seventh Meeting of the Advisory Committee of the PEN in Asunción, Paraguay (2 to 3 December 2016)

The seventh meeting of the Advisory Committee of the PEN was held during 2 and 3 December 2016 in Asunción, Paraguay. It was organized by the Chemicals and Waste Branch of the Economy Division of UN Environment that functions as the Secretariat of the PEN. The meeting was hosted by the Paraguayan Ministry of Environment, Secretaria del Ambiente (or SEAM, its Spanish acronym).

The meeting concluded that; addressing cross-contamination is critical; including open applications in national PCB management plans is needed; and that having comprehensive national databases should be acknowledged. New guidance on identification of other articles containing PCB needs to be available, and realistic and urgent global and national strategies must be launched as soon as possible to meet the Stockholm Convention targets on PCBs at the agreed deadlines. The PEN needs to be promoted as a network, and it should focus on concrete activities and, increase its collaboration with the regional centres. The PEN should ensure its presence during the preparatory meetings and during COP-8 to help strengthen the national, regional and global capacities for elimination of PCB and contribute on awareness raising.

It was emphasised that the outcomes of COP-8 on PCB and stakeholder involvement, including donors, would be crucial and determinative for meeting the 2025 and 2028 goal. PCB elimination is one of major deadlines under the Stockholm Convention and if actions are insufficient, PCB *would* become a long lasting legacy. In addition, it was pointed out that the PEN and the Global Alliance on Alternatives to DDT were very important functioning and existing networks under the Stockholm Convention which include scientific aspects to their work. Finally, it was noted that in addition to issues regarding funding, the functionality of the PEN remained an issue. Realistic and urgent global and national strategies must be launched as soon as possible.

The report of the meeting and its annexes are set out in [Annex IV](#) to this document. Further meeting documents, such as PowerPoint presentations, can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>

## 5. Other PCB and PEN related activities

### 5.1 PCB and PEN- related activities of UN Environment and other PEN members

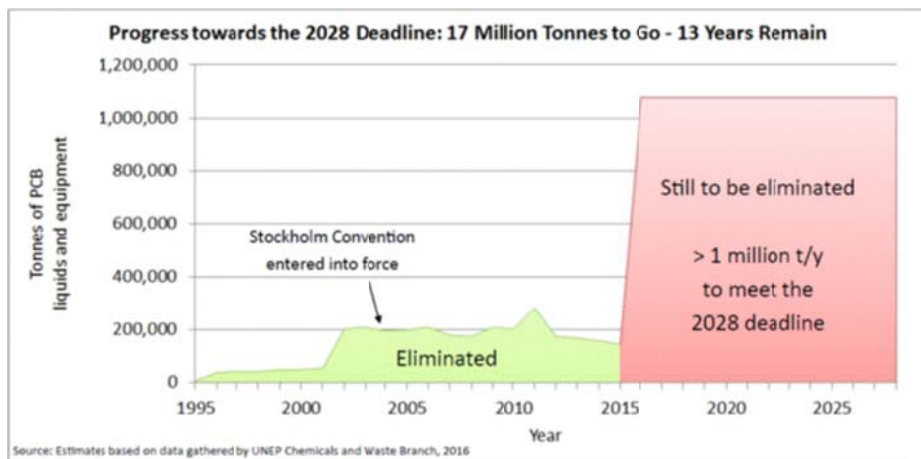
In its function as the Secretariat of the PEN, UN Environment Chemicals and Waste Branch has, among other things, coordinated and facilitated the activities of the Thematic Groups, provided substantive feedback and input for their products, organized webinars, the sixth (held jointly with the BRS Secretariat) and the seventh meetings of the PEN Advisory Committee (2015 and 2016 respectively), managed membership applications and the web page of the PEN.

- *Consolidated Assessment of Efforts made toward the Elimination of Polychlorinated Biphenyls (January 2016)*

UN Environment, in a joint effort with the BRS Secretariat and the PEN Advisory Committee, prepared and submitted a report entitled “Consolidated Assessment of Efforts made toward the Elimination of polychlorinated biphenyls” to the Effectiveness Evaluation Committee under the Stockholm Convention. This document was prepared following the request by the COP pursuant decision SC-7/3 on polychlorinated biphenyls. The objective of the consolidated assessment was to summarize available information on the amounts of PCB produced, the amounts that have been eliminated to date, and the amounts that still need to be eliminated in order to determine how much progress has been made towards the elimination of PCB.

The report indicates that data was found to be preliminary and limited in scope and coverage and that cross-contamination has increased the amount of equipment containing or contaminated with PCB. It was concluded that “while some progress has been made towards the elimination of PCB, the majority of parties are not on track to achieve the goals of the Stockholm Convention, and the scope of the challenge of eliminating the use of PCB by 2025 and achieving the environmentally sound management of PCBs by 2028 has been severely underestimated”. The report estimates that between 1 and 1.5 million tonnes of technical grade PCB have been produced since the late 1920s. It is estimated that approximately 17 % (ca. 3 million tonnes) of the total amount of PCB has been eliminated to date – about 83 % (ca. 14 million tonnes) remain to be eliminated. It should be noted that progress in eliminating PCB varies considerably across the UN regions.





**Figure 1.** Progress towards the 2028 deadline. Source: *Consolidated Assessment of Efforts made toward the Elimination of Polychlorinated Biphenyls (2016)*

The consolidated assessment was submitted on 31 January 2016 to the First Meeting of the Effectiveness Evaluation Committee held in Geneva, Switzerland from 16 February to 18 February 2016. The main findings, conclusions and recommendations pertaining to PCB may be found in paragraphs 65–72 of the executive summary of the report on the effectiveness evaluation of the Convention.<sup>1</sup>

The consolidated assessment can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb>

- **Webinar series within the theme “PCB – A Forgotten Legacy?” (October and November 2016)**

A series of three webinars within the theme of “PCB – A Forgotten Legacy?” was hosted by UN Environment with presentations by the PCB Elimination Network Advisory Committee members, recognized experts on monitoring, the BRS Secretariat, UN Environment and the United Nations Institute for Training and Research (UNITAR). The webinars took place in October and November 2016. The topics presented were:

- ✓ **Webinar on 25 October 2016:** (1) Efforts toward the elimination of PCB and (2) A Perspective on the phasing out of PCB from the Stockholm and Basel Conventions Regional Centre in China for Asia and the Pacific.
- ✓ **Webinar on 1 November 2016:** (1) Stockholm Convention Effectiveness Evaluation, decisions of COP-7 and looking toward COP 8 and (2) Capacity Building for PCB Analysis around the world.
- ✓ **Webinar on 8 November 2016:** (1) PCB Storage and Risks, (2) The PCB Management Guidance and (3) PCB in Open Applications.

All materials, including notes and the recordings, can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb>

A second and third series of webinars are scheduled for February 2017 hosted by the BRS Secretariat and in April 2017 hosted by UN Environment. The topics to be addressed will complement each other and provide a general overview on guidance as well as to keep the theme on the Forgotten Legacy.

- **GEF projects on PCB implemented by UN Environment**

Several projects have been implemented and reported to the Stockholm Convention COP by UN Environment in former reports<sup>2</sup> (e.g. Chile and Peru PCB mining project, PCB Reduction In Cameroon Through The Use Of Local Expertise And The Development Of National Capacities). At this moment, as an example, UN Environment Chemicals and Waste Branch is the implementing agency for a PCB-related project in Southern African countries. This third regional project was launched in October 2016 and aims at final disposal of PCB oils contained in transformers as well as capacitors containing PCB. The execution of the projects being implemented by UN Environment is being undertaken by different organizations and institutions such as UNITAR and the Basel and Stockholm Regional Centres.

Other GEF implementing agencies are also developing GEF projects. Important to highlight is a project being developed by UNIDO to address PCB issues in Paraguay after 7,500 transformers containing PCB caught fire in October 2015 in a field nearby the capital Asunción.

<sup>1</sup> UNEP/POPS/COP.8/22/Add.1.

<sup>2</sup> UNEP/POPS/COP.7/INF/10.

- ***GEF project proposal on POPs in Open Applications***

UN Environment with the support of UNITAR is developing a project proposal on POPs in Open Applications (PCB as one of the POPs) for the Global Environment Facility (GEF). The overall objective is to assess the global situation of POPs in Open Applications, 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. The project proposal is expected to be submitted mid-2017.

- ***Global Monitoring Plan (GMP)***

UN Environment Chemicals Branch coordinated the third Biennial Global Inter-laboratory Assessment on POPs, which was carried out in 2016 with funds from the GEF. The purpose was to assess the performance of POPs laboratories, including those analysing PCB, in standard solutions and naturally contaminated test samples. More information about the Global Monitoring Plan is available at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/pops-monitoring>.

Furthermore within the Global Monitoring Plan projects and aiming at providing information to the Stockholm Convention Parties, UN Environment has engaged 43 countries within 4 UN regions to undertake sampling every 3 months during two years (2017-2019), monitoring air and one pool of human breast milk. PCB is one of the POPs being analysed.

- ***Guidance development and/or update***

The following reports and guidance documents have been prepared by the Secretariat of the PEN in collaboration with the members of the Advisory Committee of the PEN:

**PCB Management Guidance (June 2016).** The PCB Management Guidance can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb>

**PCB Inventory Guidance (February 2016).** The PCB Inventory Guidance can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb>

- ***Awareness Raising Materials***

Awareness raising materials within the theme of “PCB – A Forgotten Legacy?” are under preparation and will be ready before COP-8. The materials include:

**Brochure** containing an introduction, information on themes such as PCB in Open Applications, Efforts Made Toward Elimination of PCB and on case studies such as on the PCB Accident in Paraguay (2015), the PCB mining project in South America and the situation of PCB in the Democratic People's Republic of Korea (DPRK).

**Video** providing a general introduction into the global issue of PCB and the progress made toward elimination of PCB. The video will be English spoken and have English, French and Spanish subtitles.

- ***New PCB and PEN pages on UN Environment website (January 2017)***

A new UN Environment website for PCB and PEN has been launched in January 2017. The web address is:

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

- ***The Basel, Rotterdam and Stockholm Conventions Secretariat and UN Environment support in emergencies***

In November 2015, an electrical station of the National Electricity Administration (ANDE) in Paraguay caught fire. Around 20,000 transformers were stored at the station, of which some contained persistent and highly toxic polychlorinated biphenyls (PCB). It is estimated that around 6,000 units were completely destroyed in the fire which also generated around 3,000 tons of hazardous waste from equipment, as well as an estimated 5,000 tons of contaminated soil. Humans, especially the firefighters, were directly exposed to the pollutants during the fire.

Following the request of the Ministry of Environment of Paraguay, the Secretariat of the Basel, Rotterdam and Stockholm Conventions and the Joint UNEP/OCHA Environment Unit (JEU) organized a mission to provide technical assistance and guidance to assess the impact of the fire. The objective of the mission was to evaluate the extent of the environmental risk to the fire-affected sites, including the associated runoff, leaks, spills and waste, and provide recommendations for the management of the waste resulting from the incident. The released pollutants mentioned in the report by UNEP/OCHA PCB were dioxins, furans and PAH spread.

- ***Information Exchange Platform***

An information exchange platform is under preparation by UNITAR in collaboration with the Secretariat of the PEN. The platform is expected to be launched in March 2017. The platform will highlight 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 PCB holders, parties to the Stockholm and Basel Conventions and regional centres.

- ***Presence of the PEN at different meetings regarding PCB***

- ✓ **Online presentation 9<sup>th</sup> PCB Workshop, Kobe, Japan, October 2016:** UN Environment delivered online presentations for the 9th PCB workshop that was held in Kobe, Japan from 9 to 13 October 2016. Presentations on the Consolidated Assessment (“Efforts Toward the Elimination of PCB”) and on Open Applications (“PCB in Open Applications”) were given to a broad audience of scientists and regulators working on halogenated compounds. This time the conference focus was on PCB.
- ✓ **Preparatory meetings:** It was agreed during the seventh meeting of the Advisory Committee of the PEN that PEN representatives would be present during the preparatory meetings for COP-8, materials on PCB would be facilitated by the secretariat of the PEN and the issue of the need to address PCB in Open Applications would be put forward for parties present at the meetings.

## Annex II



### EXPERT MEETING ON THE EFFECTIVENESS EVALUATION OF IMPLEMENTATION OF THE STOCKHOLM CONVENTION FOR PCB

AND

### SIXTH MEETING OF THE ADVISORY COMMITTEE OF THE PCB ELIMINATION NETWORK

*Meeting Report*

*Brno, Czech Republic, 14-16 December 2015*



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CHEMICALS AND WASTE BRANCH

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## Table of Contents

1. PCB Expert Meeting.....	
1.1. Opening and Introduction of Participants.....	
1.2. PCB and the Stockholm Convention.....	
1.3. The Draft Consolidated PCB Assessment .....	
1.4. Conclusions, Recommendations and Next Steps .....	
1.5. PCB Management in Central Asia.....	
1.6. Proposal for a Road Map Towards the Elimination of PCB .....	
2. 6th Meeting of the PEN Advisory Committee .....	
2.1. Opening .....	
2.2. UNEP Update on PCB and the PEN.....	
2.3. Contributions from the PEN Advisory Committee Members.....	
2.4. Workplan and Future Strategy of the PEN .....	
3. Follow-up and Closure of the Meetings .....	
Annex A –Agenda .....	
Annex B –List of Participants .....	
Annex C – Revised Workplan 2014-2017 .....	

## Acronyms and abbreviations

BAT	Best Available Techniques
BCRC	Basel Convention Regional Center
BEP	Best Environmental Practices
BRS Secretariat	Secretariat of the Basel, Rotterdam and Stockholm Conventions
COP	Conference of the Parties
DPRK	Democratic People's Republic of Korea
DTIE	Division of Technology, Industry and Economics (DTIE)
GEF	Global Environment Facility
HWE	Hazardous Waste Europe
INATEK	Institute of Agriculture, Technology and Education of Kibungo
IPEN	International POPs Elimination Network
MSP	Mediums-sized project
NGO	Non-governmental organization
NIP	National Implementation Plan
PEN	PCB Elimination Network
PBB	Polybrominated biphenyls
PCB	Polychlorinated biphenyls
PCTs	Polychlorinated terphenyls
POPs	Persistent Organic Pollutants
RECETOX	Research Centre for Toxic Compounds in the Environment
SC	Stockholm Convention
SCRAP	Stockholm Convention Regional Centre for Capacity-building and the Transfer of Technology in Asia and the Pacific
UN Comtrade	United Nations Commodity Trade Statistics Database
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
US	United States
WEOG	Western Europe and Others Group

## 1. PCB Expert Meeting

### 1.1. Opening and Introduction of Participants

The 'Expert Meeting on the Effectiveness Evaluation of Implementation of the Stockholm Convention for PCB' (hereinafter referred to as the 'Expert Meeting') and the 'Sixth Meeting of the Advisory Committee of the Polychlorinated Biphenyls (PCB) Elimination Network (PEN)' (hereinafter referred to as the 'Advisory Committee Meeting') were held back to back on Monday, 14 December 2015, until Wednesday, 16 December 2015. The meetings were held in Brno, Czech Republic, at the facilities of the Stockholm Convention Regional Centre (SCRC) in the Czech Republic, hosted by Research Centre for Toxic Compounds in the Environment (RECETOX), Faculty of Science, Masaryk University. They were jointly organized by the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS Secretariat) and the Science and Risk Team of the Chemicals and Waste Branch of the Division of Technology, Industry and Economics (DTIE), United Nations Environment Programme (UNEP). The agenda of both meeting is attached as Annex A.

Following registration of the participants, the Expert Meeting was opened on Monday, 14 December 2015 at 09:00 a.m. by Ms. Kei Ohno on behalf of the BRS Secretariat. Ms. Ohno welcomed the participants and invited for a brief round of self-introduction. The meeting was attended by Ms. Chen Yuan, Department of Environmental Science and Engineering, Tsinghua University, China; Ms. Anna Ortiz, Independent Expert, Costa Rica; Mr. Sam Adu-Kumi, Chemicals Control and Management Centre, Environmental Protection Agency, Ghana; Mr. Ion Barbarasa, POPs Sustainable Management Office, Ministry of Environment, Moldova; Mr. Aloys Kamatari, Institute of Agriculture, Technology and Education of Kibungo (INATEK), Faculty of Rural Development, Department of Agricultural Engineering, Rwanda; Ms. Claudia Cabal, Independent Expert, Uruguay; Mr. Urs Wagner, ETI Umwelttechnik AG, Switzerland; Mr. Jindrick Petrlík, International POPs Elimination Network (IPEN), Czech Republic; Mr. Hugues Levasseur, Hazardous Waste Europe (HWE), France; Ms. Katerina Sebkova, Research Centre for Toxic Compounds in the Environment (RECETOX); Mr. Ivan Holoubek, RECETOX; Ms. Jacqueline Alvarez, Science and Risk Team, UNEP Chemicals and Waste Branch; and Mr. Jost Dittkrist, Science and Risk Team, UNEP Chemicals and Waste Branch. The detailed list of participants is attached in Annex B.

Next, Ms. Ohno explained the overall objectives of the Expert Meeting, while also highlighting the interfaces with the Advisory Committee meeting. As regards the former, the aim was to consolidate the 'Preliminary assessment of efforts made towards the elimination of PCB'<sup>1</sup> and to develop a road map towards the elimination of PCB.

### 1.2. PCB and the Stockholm Convention

Ms. Ohno provided an overview of the PCB issue in the context of the Stockholm Convention on Persistent Organic Pollutants (POPs), thereby recalling relevant Articles and noting important decisions taken by the Conference of the Parties (COP) at its various meetings. In particular, she stressed that progress towards elimination of PCB is to be reviewed on a four-yearly basis along with national reporting under Article 15, with the second review undertaken at the seventh meeting of the COP in 2015 and the next review schedule for the ninth meeting of the COP in 2019. For this purpose, UNEP Chemicals and Waste Branch, upon invitation from the BRS Secretariat, had prepared the preliminary assessment. The COP, through Decision SC-7/3, had taken note of the assessment and had requested the Secretariat to consolidate the preliminary assessment in accordance with the framework for the effectiveness evaluation. Ms. Ohno proceeded to elaborate on the effectiveness evaluation of the Stockholm Convention, which is to be undertaken every four years. She explained that the next evaluation was due at COP-8 in 2017. Ms. Ohno stressed that the consolidated assessment was an essential component of this upcoming evaluation. Once finalized, the consolidated assessment would be presented to the Effectiveness Evaluation Committee, scheduled for 31 January 2016.

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<sup>1</sup> UNEP/POPS/COP.7/INF/9.

### 1.3. The Draft Consolidated PCB Assessment

Moving to the next item on the agenda, Mr. Dittkrist provided a detailed explanation of the draft 'consolidated assessment of efforts made towards the elimination of PCB', including the compilation of data, which had been disseminated to the participants prior to the meeting. Following a quick recapitulation of the background of the assessment, Mr. Dittkrist explained that the objective of the assessment was to summarize available information on the amounts of PCB produced, eliminated to date, and still in need of elimination in order to determine how successful the efforts made by Parties have been in eliminating PCB. He explained the methodology, data compilation and relevant assumptions and adjustments made to allow for meaningful statistical analysis. In particular, accurate data was scarce and the estimates therefore made with a relatively high degree of uncertainty.

According to the draft report, it was estimated that between 1 and 1.5 million tonnes of technical grade PCB have been produced by a small number of countries and companies since the late 1920s. According to available information presented in the draft assessment, ca. 5.4 million tonnes of equipment or materials containing or contaminated with PCB had been eliminated. Meanwhile, an estimated 11.1 million tonnes were still in need of elimination (mostly transformers), with progress varying considerably across regions. Mr. Dittkrist closed his presentation by highlighting some of the conclusions and recommendations provided in the draft. Among others, it was stressed that inventories remained incomplete, that open applications (as well as other issues) remained largely unaddressed to date and that progressive PCB elimination plans with strict timelines and continuous monitoring still remained to be drafted and adopted in most countries. The final version of the consolidated assessment is available on the webpage of UNEP Chemicals and Waste Branch<sup>2</sup>.

Following some initial comments on the challenges implied in providing accurate estimates as well as the importance of providing an assessment of the situation for the purpose of raising attention and placing the issue back on the international agenda, the experts discussed a number of themes with specific questions related to the draft consolidated assessment, thereby considering potential ways of improving the document. These had been provided to the experts prior to the meeting.

#### 1.3.1. Theme 1: Improving Existing Data

First, the group discussed ways of improving the existing data gathered and summarized in the report. Addressing a number of sub-questions, the following conclusions and observations were provided, amongst others:

- A small, but notable number of countries stands out in terms of accurate reporting performance. These also include a few developing countries. Other countries could use these as an example to follow.
- It is difficult to judge with a high degree of certainty whether the amount reportedly eliminated is realistic. However, overall and considering existing destruction capacity (the participants discussed some concrete numbers and examples, e.g. the approximate amount of PCB waste destroyed in France), the estimate stands the test of expert judgement.
- In cases where countries report large amounts of equipment or material suspected, but not confirmed to contain or be contaminated with PCB, several considerations need to be taken into account in order to determine whether or not the amount should be included in the estimate. Such considerations include whether initial density tests have been performed and the electricity infrastructure in the country. In case of doubt, it is better to over- rather than to under-estimate. Along similar lines, where countries do not report the concentration, it is reasonable to assume that it is above the thresholds specified in the Convention.
- Some countries may be tempted to report lower amounts for financial reasons.
- As regards the special case of Japan (which reported very large amounts compared to other countries), the experts agreed that the large amounts reported compared to other countries

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<sup>2</sup> <http://www.unep.org/chemicalsandwaste/POPs/ChemicalsManagementandReduction/PhasingoutPCB>.



could be explained by the fact that Japan maintained very accurate inventories. This implies that the amounts reported by other countries significantly underestimate the situation. Meanwhile, it was also noted that the threshold specified in Japanese legislation was lower than in most other countries and the Convention, resulting in higher than average amounts.

- It is not advisable to extrapolate based on samples taken by countries, unless there are very strong indications vis-a-vis the unknown variables. In case of doubt, only confirmed amounts should be reported. Where applicable, the use of extrapolations should be clearly indicated.
- Potential double-counting is an important issue to be addressed through various means. For example, trade data reported by several sources should be cross-checked and, where applicable, adjusted. Particular attention should be paid to avoid situations where amounts reported in the past as stockpiles are (mistakenly) included in amounts reported as destroyed at a later point.
- Data reported under the United Nations Commodity Trade Statistics Database (UN Comtrade) show some unexpected results, including a number of developing countries reporting imports of waste oils containing PCB/polychlorinated terphenyls (PCTs)/polybrominated biphenyls (PBBs) From developed countries. For this as well as some other reasons, the experts agreed that the UN Comtrade data was not to be included in the assessment's overall estimates.

### 1.3.2. Theme 2: Basic Methodology

Next, the participants turned towards the basic methodology used for the assessment. Some highlights included the following:

- As regards the use of conversion factors to calculate the overall mass of equipment and material containing or contaminated with PCB, though not an optimal solution, it can help to arrive at approximations. These are important in order to highlight the insufficient progress made to date in eliminating PCB and to draw attention to the topic. The experts also discussed in some detail the precise means of calculating and using the conversion factors. Transparency in terms of the methodology used is critical.
- Though the categorization of the various types of equipment and materials (transformers, capacitors etc.) is sub-optimal, it can help to identify the most significant challenges and thus set priorities at the national level.
- The main variable of interest is the total mass of equipment and material containing or contaminated with PCB. In practical terms, this variable is more relevant than others, such as the volume of oil contained in a transformer.
- Data on concentrations of POPs in human and in the environment should not form an integral part of the assessment, since it is already addressed elsewhere (notably within the framework of the Global Monitoring Plan for POPs). It is sufficient to note the importance of such data for the purpose of assessing progress and to provide references, as appropriate.

### 1.3.3. Theme 3: Filling the Gaps

The experts proceeded to discuss potential strategies to fill the remaining gaps in existing data. Here, the following conclusions were drawn:

- The focus should be on data reported by the countries, rather than estimating amounts for countries where no data is available. Meanwhile, such gaps need to be clearly highlighted in order to urge relevant stakeholders to close such gaps in the future.
- The lack of data for some countries implies that the overall estimate provided in the assessment is conservative, meaning that the actual amounts eliminated and to be destroyed are likely to be (much) higher than suggested in the assessment.
- It is important to follow-up by assessing countries' capacity to undertake inventories and report relevant data.

- It can be expected that new data will be available in the near future within the context of the National Implementation Plan (NIP) updating currently undertaken by a number of Parties.
- Where no data is available, countries should be directly contacted through official channels in order to urge the provision of lacking information.
- While potentially a useful means of estimating total amounts in countries where only preliminary inventories were undertaken, extrapolations based on, for example data on historic electricity consumption or a comparison of the country in question with countries having a similar structure (in particular in terms of electricity use and infrastructure) is beyond the scope of this assessment.
- Given the transboundary dimension of PCB, data for non-Parties (most notably the United States (US) and Italy) is relevant and should be presented in the assessment. A clear distinction should however be made.
- Very little data is available on open applications, meaning that the assessment fails to address a potentially very significant sector, in terms of both the amounts and human health effects. Similarly, lack of data means that landfills and contaminated sites cannot be included in the assessment, though these issues are also worth highlighting.

#### 1.3.4. Theme 4: Life-cycle Assessment

Lastly, the group discussed whether a life-cycle assessment could be undertaken in order to understand the fate of technical grade PCB. This could also help in estimating the amounts of equipment containing PCB produced, the amounts released to the environment, the amounts stockpiled etc. The following conclusions were drawn:

- While in principle such a life-cycle assessment is possible and though accurate data exists on the production of technical grade PCB, thorough and accurate estimates of the next steps in the life-cycle is not feasible. Among others, an important limitation is the lack of information on how much (and which types of) material containing PCB was produced.
- As a consequence, it is also not possible to provide a good estimate with regard to cross-contamination. It can safely be assumed that cross-contamination and dilution are very important issues. Each ton of technical grade PCB generated multiple tons of equipment or material containing or contaminated with PCB.

### 1.4. Conclusions, Recommendations and Next Steps

Recalling that the consolidated assessment was to inform the next effectiveness evaluation under the Stockholm Convention, Mr. Dittkrist invited the participants to discuss and, where possible, agree on a set of key conclusions and recommendations to be included in the assessment report and to be communicated, through the Effectiveness Evaluation Committee, to the COP. Among others, the participants highlighted the points listed below. It was noted that these should also be considered in designing future projects.

- 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 ongoing 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 sector that have not been sufficiently taken into account, for example the military.

- A large share of the PCB 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).

Following this in-depth discussion, the participants discussed the next steps. Ms. Alvarez and Mr. Dittkrist explained that a revised draft of the consolidated assessment, taking into account the suggestions made during the meeting, would be disseminated by mid-January for final comments. Thereafter, the final version of the report would be submitted to the BRS Secretariat. Moreover, the consolidated assessment and the PCB Expert Meeting report would be presented to the COP at its eighth meeting, scheduled for May 2017, as information documents. Ms. Ohno further explained that the consolidated assessment would feed into the summary report that was to be submitted to the Effectiveness Evaluation Committee by the end of January.

## 1.5. PCB Management in Central Asia

The next item on the agenda was a remote presentation by Mr. Maksim Surkov, United Nations Development Programme (UNDP), on the UNDP's PCB management work in Central Asia, with a focus on experiences gained and lessons learned during country projects in Kazakhstan and Kyrgyzstan.

Mr. Surkov started by highlighting the fundamental waste management principles, namely the identification of stockpiles, the management of stockpiles in an environmentally sound manner, and the undertaking of actions so that wastes are handled and disposed in accordance with the Basel Technical Guidelines. Turning towards the situation in Central Asia, Mr. Surkov noted that Kazakhstan, Kyrgyzstan and Tajikistan had ratified SC convention, while Uzbekistan and Turkmenistan had not done so. Two full-sized GEF-funded projects were implemented in Kazakhstan and Kyrgyzstan.

In Kazakhstan, the main challenge encountered related to the export of the PCB waste. Surface exports were not possible due to a lack of consent from the potential transit countries. Therefore, airlifting was opted for; this option increased disposal costs substantially. Due to public opposition, domestic disposal had not been possible. The project succeeded in improving the domestic situation and national capacities: The regulatory framework was strengthened, storage options were identified (including training of national waste management companies), the inventory was expanded and several laboratories were accredited for oil, soil and food sampling. As an important lesson learned vis-à-vis inventories, Mr. Surkov highlighted that the more you look, the more you find. Cooperation with partners, including the private sector and government officials, was good.

In Kyrgyzstan, the initial inventory was very limited. The updated inventory also remained preliminary. PCB holders were reluctant to cooperate, most notably due to the residual value of outdated equipment. Political challenges were also encountered. The project succeeded in training two laboratories, although frequent staff changes resulted in a loss of capacity, which was not adequately addressed. One of the key objectives, namely improvement of the regulatory framework, was only achieved after closure of the project. Mr. Surkov also noted that the project was designed in such a way as to learn from the experiences gained in Kazakhstan, most notably the transit issues. Notwithstanding, it was not possible to find airlifting options within the budget. Environmentally sound storage of identified equipment could also not be ensured due to institutional changes.

In closing, Mr. Surkov highlighted that:

- The wider political and socio-economic domestic background is an important factor determining project success.
- Economic arguments are critical in convincing stakeholders to engage in PCB management activities.
- Transit issues may pose significant challenges; however, airlifting is not considered a cost-effective method. Customs unions may provide a way forward.
- Additional initiatives and projects will be necessary in the region.

## **1.6. Proposal for a Road Map Towards the Elimination of PCB**

The last topic for discussion in the PCB Expert Meeting covered the proposal for the development of a 'road map towards the elimination of PCB'. Mr. Dittkrist explained that the purpose of the Road Map was to outline a strategy and workplan defining who would need to do what and when in order to meet the 2025 and 2028 deadlines for PCB under the Stockholm Convention. The Road Map would define national activities, regional activities, global activities, milestones and critical dates.

The participants discussed the initial activities listed in the draft road map, including for example 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 experts proposed some additions, discussed the feasibility of the timeline and explored potential alternative strategies. Among others, they repeatedly highlighted 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. It was also noted that it was important to take into account the variations in terms of national circumstances. While some countries, including developing countries and countries with economies in transition, had made considerable progress, others still had not completed essential initial steps.

There was general agreement that a clear strategy with measurable milestones was needed to outline a strategy for achieving the 2025 and 2028 deadlines. The participants decided to follow up on the idea for a Road Map or a similar tool after the meeting. Following some concluding remarks provided by Ms. Alvarez and Ms. Ohno, the PCB expert meeting was closed.

## 2. 6<sup>th</sup> Meeting of the PEN Advisory Committee

### 2.1. Opening

The sixth PEN Advisory Committee Meeting, organized in close cooperation with the BRS Secretariat and hosted by RECETOX, was opened by Ms. Alvarez on behalf of UNEP Chemicals and Waste Branch, in its function as Secretariat of the Polychlorinated Biphenyls Elimination Network (PEN). Following some introductory remarks, Ms. Alvarez explained that the participants of the PCB expert meeting who were not also PEN Advisory Committee members were kindly invited to participate in the meeting, since their expertise was valued for the topics of discussion. The detailed list of participants is attached as Annex B.

Ms. Alvarez outlined the agenda, noting that the objective was to provide an update on past activities by the Secretariat and the Advisory Committee Members, discuss relevant outcomes of the seventh meeting of the COP of the Stockholm Convention, and discuss the future strategy of the PEN, including the workplan and budget. The detailed agenda is attached as Annex A.

### 2.2. UNEP Update on PCB and the PEN

As the first item on the agenda of the Advisory Committee Meeting, Ms. Alvarez provided an update on recent developments related to PCB, elaborated on activities that had been carried out by the PEN Secretariat, explained the status of the PEN, and presented ideas for future activities.

Key decisions relevant for the PEN taken by the COP were recapitulated, including decision SC-5/5 of 2009, which established the PEN, decision SC-6/7 of 2011, which facilitated the transfer of the PEN Secretariat from the BRS Secretariat to UNEP, and decision SC-6/6 of 2013, which invited UNEP to inform COP-7 about the activities of the PEN. The Chemicals and Waste Branch had submitted two Information Documents to COP-7, namely the 'Preliminary Assessment of Efforts Made Toward the Elimination of PCB' (UNEP/POPs/COP.7/INF/9) and the 'Report by UNEP on progress in the implementation of the PEN' (UNEP/POPs/COP.7/INF/10). In response, through Decision SC-7/3 on PCB, the COP:

- took note of the Preliminary Assessment;
- invited UNEP to inform the COP of the activities of the PEN at its eighth meeting;
- requested Parties to improve their reporting performance;
- encouraged Parties to intensify efforts to meet the 2025 and 2028 goals;
- requested the Secretariat to consolidate the Preliminary Assessment; and
- invited stakeholders to provide technical and financial resources to support the PEN.

Following a quick summary of the objectives of the PEN, Ms. Alvarez proceeded to note that the PEN now had 439 members. She then presented the current composition of the Advisory Committee, noting that Mr. Petrlik of IPEN had replaced Mr. Alan Watson as non-governmental (NGO) representative. Ms. Stella Mojekwu (Federal Ministry of Environment, Nigeria), one of the two representatives for the African Region, Ms. Sanaz Jafarzadeh (Ministry of Energy, Islamic Republic of Iran), co-representing the Asia-Pacific Group, Mr. Alfredo Cueva, United Nations Industrial Development Organization (UNIDO), and Mr. Jinhui Li (BCCC, China), co-representing the Asia-Pacific Region, were unable to attend. Mr. Li was represented by Ms. Yuan. Ms. Alvarez also stressed that three seats remained vacant: 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. Moreover, the seat for the holder of PCB had not yet been filled. The participants discussed potential strategies to fill these seats. Among others, it was decided that renewed attempts would be made to fill the WEOG vacancies, including with the help of Mr. Adu-Kumi, President of the Stockholm Convention Bureau. As regards the PCB holder, the PEN Advisory Committee Members suggested that Ms. Cabal could occupy this seat, given her profound expertise and experience related to PCB and since she worked with the National Administration of Power Plants and Electrical Transmissions of Uruguay. There were no objections and Ms. Cabal accepted the invitation.

The Advisory Committee had met five times between 2010 and 2014. During the fifth meeting, held on 26-27 November 2014 in Geneva, Switzerland, participants had provided updates on activities undertaken, had reviewed and revised the workplan and budget, had discussed and endorsed the Preliminary Assessment, and had adopted a set of conclusions and recommendations. As Mr. Dittkrist highlighted, an important outcome of this meeting was a revised strategy with a more pronounced focus on in-kind contributions from the Advisory Committee members and increased efforts to seek synergies with existing initiatives and projects in order to respond to the continued lack of funding. The Conclusions and Recommendations adopted at the meeting were also submitted to COP-7 as part of the Information Document on progress in implementing the PEN.

Ms. Alvarez then gave an overview of the activities undertaken by the Secretariat since the last meeting of the Advisory Committee. Highlights included the following: During COP-7, a side event had been organized under the title 'Towards the Elimination of PCB'. The side event, which had a large number of participants, had served as an opportunity to learn about and discuss recent activities undertaken in relation to PCB and the PEN, present the Preliminary Assessment, share expert insights on PCB management, and present success stories on identification and disposal of PCB from national and regional perspectives. Moreover, information materials had been exposed during the science fair. The latter had also featured an 'in-booth' event on the Preliminary Assessment. As another key activity, the Chemicals and Waste Branch, in close cooperation with and upon invitation from the BRS Secretariat, had prepared the Consolidated Assessment (as discussed in more detail in the previous section on the PCB Expert Meeting). Ms. Alvarez also briefed the Committee members on the preparation of a GEF project proposal on open applications containing PCB. As she and Mr. Dittkrist explained, the project would cover the following components:

- preparation and dissemination of awareness-raising and guidance materials;
- development of a rapid screening test;
- training of relevant stakeholders in the identification, regulatory framework and ESM of open applications containing PCB;
- development of inventories of open applications containing PCB, including establishment of national information management systems, preparation of risk assessments and establishment of appropriate regulatory frameworks; and
- development of sustainable national action plans for the ESM of open applications.

The Committee Members discussed the concept note in some detail, thereby providing a set of recommendations on how to further improve it. Among others, the Members agreed that the project should not only seek to identify, but also dispose, at least in a pilot demonstration, some open applications. For this purpose, the project would need to take the form of a full-sized project, rather than a medium-sized project (MSP). The development of a rapid screening test for open applications was also discussed; here, some concern was raised as to whether the identified potential industry partner would be willing to participate in the project. All Members emphasized the importance of including socio-economic considerations and linkages with the sustainable development goals, among other interfaces and synergies. It was agreed that the PEN Secretariat would incorporate the comments and then circulate the concept note for a final round of feedback.

## 2.3. Contributions from the PEN Advisory Committee Members

Next on the agenda were several presentations by PEN Advisory Committee members and the other experts present, covering a range of topics relevant to the environmentally sound management of PCB, including inventories, open applications, storage and disposal.

### 2.3.1. Claudia Cabal on the Storage Accident in Paraguay

Ms. Cabal briefed the participants on a fire accident that had taken place in October 2015 at the PCB equipment storage site maintained by the National Electricity Administration in San Lorenzo, Paraguay. Large amounts of transformers, capacitors and other PCB containing equipment had caught fire, resulting

in large amounts of releases of dioxins and furans. As Ms. Cabal explained, the equipment had not been properly stored and safety measures had not been adequate, including the emergency protocol. Illustrating the incident with a video, Ms. Cabal also noted that the fire brigade had not been adequately informed about relevant health risks.

The participants discussed the incident in some length and emphasized the importance of drawing appropriate lessons. Most importantly, the accident should serve as a strong reminder of the need for appropriate storage arrangements and safety protocols. There was consensus that it was of utmost importance to avoid such incidents from happening in the future. Moreover, there was agreement that the accident should be used in the context of the awareness-raising strategy of the PEN.

### **2.3.2. Chen Yuan on Activities Undertaken by the Thematic Group on Inventories**

On behalf of Mr. Li, Ms. Yuan provided the activity report of the Thematic Group on Inventories of PCB, led by the Basel Convention Regional Centre (BCRC)/ Stockholm Convention Regional Centre for Capacity-building and the Transfer of Technology in Asia and the Pacific (SCRCAP) China. As highlights, the BCRC had:

- provided feedback to the PEN Secretariat to finalize the PCB Inventory Guidance;
- attended and contributed to the PCB side event at COP-7;
- contributed to POPs Social by uploading news and recent achievements on PCB;
- established and maintained a regional information exchange platform on PCB; and
- undertook an informal visit to the Democratic People's Republic of Korea (DPRK).

Ms. Yuan explained that the DPRK was still producing PCB and that it had communicated the need for technical assistance in order to phase out production and introduce alternatives. The other Advisory Committee members and experts agreed that necessary steps should be taken in order to ensure that no production of PCB was forthcoming and that this issue should be raised at the next COP.

### **2.3.3. Hugues Levasseur on PCB Disposal in Morocco**

Mr. Levasseur briefed the PEN Advisory Committee on UNIDO's GEF-funded project 'Safe PCB Management Programme in Morocco, Pillar II', which aimed to establish the in-the-country capacity to treat and dispose of 3,000 tons of PCB-contaminated oils and 2,000 tons of PCB-contaminated electrical equipment and related PCB wastes.

In cooperation with 'Séché Environnement', the project had been successful in establishing a local large capacity plant for PCB management as a joint venture with a local specialist company. The plant, which went operational in late 2015, also featured a laboratory dedicated to analysis of PCB content and other relevant parameters, a sound storage area, decontamination equipment, a shipping platform etc. The project followed a mixed approach, whereby PCB wastes with low contamination (less than 50 ppm) were treated locally, while other contaminated material was exported for environmentally sound disposal. Mr. Levasseur emphasized that, in addition to the technology transfer and training, the initiative also offered economic benefits, insofar as a significant share of the equipment would be repaired and refurbished after depollution. Mr. Levasseur also explained the technical aspects of the decontamination of different types of transformers as well as oil treatment in some detail.

Some discussion ensued, whereby the participants emphasized that the project could serve as a good example for other countries to follow in terms of technology transfer, establishment of local capacity etc. The project showed that subject to certain enabling conditions, including financial resources and political will, the technology and the private sector partners needed for successful PCB elimination were readily available. The participants also discussed the question of when dechlorination was the preferred option as compared to destruction, including from an economic point of view. Another topic of concern was the advantages and disadvantages of relying on mobile plants. While these could provide a good short-term solution in many cases, it was noted that there was significant resistance against this solution from a number of stakeholders. A major challenge noted in this context was that there was little economic incentive to dispose of small amounts of PCB waste.



#### 2.3.4. Urs Wagner on Inventories and Progress Towards the 2028 Deadline

Mr. Wagner gave a presentation in which he critically evaluated the status of PCB inventories and progress towards achieving the 2028 objective of the Convention. First, he outlined the various steps to be taken in moving towards the 2025 and 2028 goals in a strategic manner, ranging from preliminary inventories over priority setting to the phase out and environmentally sound management of PCB. He remarked that contrary to a widespread assumption, even the initial stage – the development of PCB inventories during the first NIP phase – had not been completed in many, if not most, countries in a satisfactory manner.

Even where preliminary inventories were available, these had many shortcomings. Most importantly, only fractions of existing equipment had been randomly sampled, screened and analyzed, with total PCB quantities often calculated based on incomplete data. As regards the screening and analysis, a common mistake was the use of rapid screening kits absent subsequent laboratory analysis using appropriate instruments. In this context, Mr. Wagner and several of the other participants emphasized that rapid screening tests could only determine chlorine content, rather than PCB content, resulting in a potentially large number of ‘false positives’. Another fundamental shortcoming was that typically important sectors with PCB equipment were not considered, such as the army, the shipbuilding industries, railways and commercial buildings. In almost all cases, open applications were also not considered. Mr. Wagner emphasized the resulting need for updated and harmonized guidance and protocols, implemented by dedicated and well-trained experts.

As regards the treatment and disposal of PCB equipment, the expert noted that approved technologies were commercially available at reasonable costs. The challenge, however, could be found in high transport costs and bureaucratic hurdles for transboundary movement of PCB wastes, as also evidence in the GEF-funded project implemented in Kazakhstan. Each country would therefore have to find targeted solutions against the specific domestic background. Concerning the export of PCB wastes, it was noted that illegal trafficking was still a common phenomenon, including from developed to developing countries. Furthermore, Mr. Wagner emphasized the importance of delivering well-structured training using modern methodologies. He also explained why investments in best available practices (BEP) and best available techniques (BAT) were critical and would result in significant cost-savings. As the recent accident in Paraguay showed, prevention was technically speaking easier and cheaper than remediation.

In closing, Mr. Wagner summarized some key findings and lessons learned, including the following:

- Reliable inventories are the basis for every disposal and treatment decision, but in most countries it seems too late to re-do national inventories. Thus, each PCB project should include a PCB assessment as a first component;
- It is essential to know the extent of a specific PCB problem in order to choose appropriate BATs/BEPs and disposal options;
- PCB Inventory proceedings must be globally harmonized worldwide – county reports must, if necessary, be re-submitted; and
- Another priority is the availability of environmentally sound management options, including interim storage.

#### 2.3.5. Urs Wagner on Open Applications

Turning towards the issue of open applications, Mr. Wagner first provided a quick recap of the relevant provisions under the Stockholm Convention. Next, he explained the different types of open applications (for example cable sheaths, caulks/sealants and paints) and noted their widespread use in a wide range of structures and buildings, including residential and commercial ones. Contrary to a widespread assumption, open applications containing PCB were not only an important issue in developed countries, but also in the developing world. Neither had sufficiently addressed open applications; in fact, almost no countries had initiated appropriate strategies. This was despite the very significant health risks from open applications, with the PCB easily being diffused. He noted that due to cross-contamination of the surrounding structures, remediation and disposal costs were very high.

Having provided an introduction to the challenge of open applications, Mr. Wagner proceeded to propose adequate steps and solutions to address open applications, including their identification. In this context, he also referred to the planned project on open applications. He explained that decontamination would be a more appropriate solution for large volumes with low concentrations of PCB, while disposal was the preferred option for small volumes at large concentration. To illustrate the way forward, some pilot projects were discussed. These were used to illustrate some consideration steps, for example for the decontamination of anti-corrosion coatings containing PCB on machinery and pipelines:

- define appropriate and environmentally sound decontamination methods;
- take measures to protect personnel and the environment and monitor regularly;
- check the effectiveness of the decontamination; and
- dispose sludge and paint particles as PCB waste.

#### 2.3.6. Aloys Kamatari on CB Management and Disposal in Rwanda

Mr. Kamatari presented the GEF-funded 'Management and Disposal of PCB' project that is currently being undertaken in Rwanda. He noted that the objective of the project was to introduce cost-effective solutions for the environmentally sound management of PCB oils, equipment and wastes held by electrical utilities in the country. For this purpose, the project partners worked to:

- regularly update the existing PCB inventory;
- establish a sound regulatory framework;
- build capacity for environmentally sound handling and storage of obsolete equipment; and
- dispose equipment, oil and waste material in an environmentally sound manner.

## 2.4. Workplan and Future Strategy of the PEN

Next, the Advisory Committee discussed the budget and workplan of the PEN, thereby taking the workplan and budget agreed upon during the fifth meeting of the PEN Advisory Committee as a basis. Ms. Alvarez explained that funds from the Governments of Sweden and Finland had already been used in previous years and that very little funding (ca. USD 7,000) was currently available. It was therefore not possible to fully implement the already less ambitious workplan for 2014-2017 (planned budget: USD 457,650). Against this background, the participants discussed possible strategies to address the gap in funding. In terms of fundraising, the PEN Advisory Committee shared some concrete ideas and decided to follow up on these after the meeting.

As at the prior meeting, the participants decided to increase their in-kind contributions, to focus on no-cost activities and to seek synergies with existing projects and initiatives. For example, existing guidance documents could be translated, webinars on open applications and inventories could be delivered, good practices and lessons learned could be compiled etc.

The Committee members also decided to initiate a PCB awareness raising campaign with the objective of placing PCB high on the international agenda in the lead up to COP-8, scheduled for spring 2017. There was consensus that this campaign would constitute the focus of the PEN's activities over the next year. The group engaged in a brainstorming session on potential slogans for the campaign and decided on 'PCB: The Forgotten Legacy'. This slogan would convey the observation that while PCB, one of the initial twelve POPs, had initially received widespread attention, including in the media and among policy-makers, attention had now shifted to other issues, notwithstanding that the issue was still far from having been resolved. Other slogans were also proposed and discussed.

As part of the campaign, it was decided that the Committee members would each make a contribution, including a number of PCB stories on selected topics, for example on contaminated sites (during the meeting, Mr. Petrlik reference and provided materials on this topic developed by IPEN), on PCB levels in human milk, on the establishment of a plant in Morocco (see above), on a recent accident in Paraguay (see above) etc. The campaign would also feature publications of other outreach materials, including

brochures, factsheets, interactive info-graphics and, subject to available funding, a video. Moreover, there was consensus that existing workshops and conferences should be used to promote the PCB agenda. The participants agreed on a timeline for the deliverables and the distribution of work. The detailed revised workplan is attached as Annex C<sup>3</sup>.

Some general discussion on communication challenges and opportunities also ensued. For example, it was noted that journalists would also need to be trained in order to be capable of understanding the issue and translating it for a wider audience. For such purposes, as well as for fundraising, it was key to link the PCB issue with topics such as climate change or electronic waste. Moreover, if wider benefits, including socio-economic ones would be highlighted, proposals had a higher chance of being accepted. Thus, PCB management should not be viewed in isolation, but rather seen as one element of a wider hazardous waste management strategy. The PEN would need to increasingly convey these messages and focus its activities accordingly.

As regards COP-8, the participants explored potential outcomes and how to best achieve them. As at COP-7, it was expected that the COP would again take note of the PEN progress report and the consolidated assessment. However, the participants agreed that more was needed in order to create renewed commitment and efforts. Among others, the following was considered as potentially desired decisions: The COP could

- acknowledge the need to take immediate action to meet the 2025 and 2028 deadlines;
- request regular updates of the consolidated assessment;
- include activities related to PCB in the regular budget; and
- request the development and/or implementation of a roadmap towards the elimination of PCB.

It was decided to explore this in more depth in the course of 2016.

### 3. Follow-up and Closure of the Meetings

Before closing, the group discussed the next steps and immediate follow-up to the meetings. It was decided that all potential channels should be used to disseminate the messages discussed during the meeting. For this purpose, the Stockholm Convention Focal Points would need to be directly contacted and involved as much as possible, in particular in the months prior to COP-8. The Advisory Committee Members as well as the PCB experts present would also use their own personal networks to communicate as widely as possible.

In terms of concrete outputs, the PEN Secretariat and the BRS Secretariat would work closely to prepare a final draft of the Consolidated Assessment, which would then be circulated for a final round of comments. Subsequently, it would be submitted to the Effectiveness Evaluation Committee. Moreover, throughout 2016, awareness-raising materials would be prepared and the campaign implemented as foreseen in the revised workplan. The participants also agreed to further work on the idea of developing a PCB Roadmap.

Ms. Ohno, on behalf of the BRS Secretariat, Ms. Alvarez, on behalf of UNEP Chemicals and Waste Branch, and Ms. Sebkova, on behalf of RECETOX thanked the participants for their active participation and useful contributions. After the usual exchange of courtesies, the PCB Expert Meeting and the Advisory Committee Meeting were closed at 17:30 p.m. on Wednesday, 16 December 2015. The participants then had an opportunity to visit the facilities of RECETOX.

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<sup>3</sup> The workplan has been adapted during the drafting of this meeting report to account for changes in the timeline.

## Annex A – Agenda

Time slot	Item	Lead
<b>Day 1: Monday, 14 December 2015</b>		
8:30-9:00	<i>Registration</i>	
09:00-09:15	Opening remarks: The Stockholm Convention and PCB	Kei Ohno
09:15-09:30	Round of self-introduction	All
09:30-10:00	Overview: effectiveness evaluation on PCB	Kei Ohno
10:00-10:30	<i>Coffee break</i>	
10:30-11:45	Detailed presentation of the Consolidated PCB Assessment	Jost Dittkrist
11:45-12:30	Initial discussion and feedback on the Consolidated Assessment	All
12:30-13:30	<i>Lunch</i>	
13:30-14:30	Theme 1 of the Consolidated Assessment	All
14:30-15:30	Theme 2 of the Consolidated Assessment	All
15:30-16:00	<i>Coffee break</i>	
16:00-17:30	Theme 3 of the Consolidated Assessment	All
17:30	<i>End of day 1</i>	
<b>Day 2: Tuesday, 15 December 2015</b>		
09:00-09:15	Recap of day 1 and structure of day 2	Kei Ohno
09:15-10:30	Theme 4 of the Consolidated Assessment	All
10:30-11:00	<i>Coffee break</i>	
11:00-12:30	Theme 5 of the Consolidated Assessment	All
12:30-13:30	<i>Lunch</i>	
13:30-15:30	Wrap up of the Consolidated Assessment: Conclusions, recommendations and next steps	All
15:30-16:00	<i>Coffee break</i>	
16:00-16:30	Outlook on PCB Management in the Eastern Europe and Central Asia Region	Maksim Surkov
16:30-17:30	Proposal for a road map towards the elimination of PCB	Jost Dittkrist
17:30	<i>End of day 2</i>	
<b>Day 3: Wednesday, 16 December 2015</b>		
09:00-09:15	Recap of day 2 and structure of day 3	Jacqueline Alvarez
09:15-10:30	Open discussion on a road map towards the elimination of PCB and drafting of its key elements	All
10:30-11:00	<i>Coffee break</i>	
11:00-12:00	Open discussion on a road map towards the elimination of PCB and drafting of its key elements (continued)	All
12:00-12:30	Update from the Secretariat of the PEN: SC COP7, status of the workplan, budget etc.	Jacqueline Alvarez Jost Dittkrist
12:30-13:30	<i>Lunch</i>	
13:30-14:30	Reports from the members of the Advisory Committee on activities carried out since last AC meeting	PEN AC Members
14:30-15:30	Open discussion on the strategy of the PEN; review of the workplan and budget	All
15:30-16:00	<i>Coffee break</i>	
16:00-17:00	Next steps for the PEN, the assessment and the road map	Jacqueline Alvarez
17:00-17:30	Recap and final remarks	Kei Ohno and Jacqueline Alvarez
17:30	<i>End of meetings</i>	

## Annex B – List of Participants

#	Country/ Organization	Name	Institution	Status
1	China	Mr. Jinhui Li	Department of Environmental Science and Engineering , Tsinghua University (China)	PEN Advisory Committee Member – Asia-Pacific
2	Costa Rica	Ms. Anna Ortiz	Ministry of Environment and Energy (Costa Rica)	PEN Advisory Committee Member – GRULAC
3	Ghana	Mr. Sam Adu-Kumi	Chemicals Control and Management Centre, Environmental Protection Agency (Ghana)	PCB Expert – Africa
4	Moldova	Mr. Ion Barabasa	Procurement Office, POPS Sustainable Management Office, Ministry of Environment (Moldova)	PEN Advisory Committee Member – CEE
5	Rwanda	Mr. Aloys Kamatari	Institute of Agriculture, Technology and Education of KIBUNGO (INATEK), Faculty of Rural Development, Department of Agricultural Engineering (Rwanda)	PEN Advisory Committee Member – Africa
6	Uruguay	Ms. Claudia Cabal	(Uruguay)	PCB Expert – GRULAC
7	ETI Umwelttechnik AG	Mr. Urs Wagner	ETI Umwelttechnik AG (Switzerland)	PEN Advisory Committee Member – Expert
8	IPEN	Mr. Jindrich Petrlik	IPEN (Czech Republic)	PEN Advisory Committee Member – NGO
9	RECETOX	Ms. Ivan Holoubek	Research Centre for Toxic Compounds in the Environment	Host and OCB Expert
10	RECETOX	Ms. Katerina Sebkova	Research Centre for Toxic Compounds in the Environment	Host and PCB Expert
11	Tredi (Industry)	Mr. Hugues Levasseur	Hazardous Waste Europe (France)	PEN Advisory Committee Member – Industry
12	UNEP Chemicals and Waste Branch	Ms. Jacqueline Alvarez	Science and Risk Team, UNEP Chemicals and Waste Branch (Switzerland)	PEN Secretariat
13	UNEP Chemicals and Waste Branch	Mr. Jost Dittkrist	Science and Risk Team, UNEP Chemicals and Waste Branch (Switzerland)	PEN Secretariat
14	BRS Secretariat	Ms. Kei Ohno Woodall	Conventions Operations Branch and Scientific Support Branch, BRS Secretariat (Switzerland)	PEN Advisory Committee Member – BRS Secretariat

## Annex C – Revised Workplan 2014-2017

Activities	Actions	Responsible	Timeframe
<b>I. Thematic Group on Inventories</b>			
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 Centers	December 2016
	5. Draft and disseminate an executive summary of the inventory guidance	Jinhui Li / Chen Yuan	October/November 2016
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 Centers	December 2016
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/subregion	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centers	November – December 2016
	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
	2. Establish and maintain the help desk	PEN Secretariat and BRS Secretariat	March 2017 onwards
	3. Engage in outreach to inform relevant stakeholders about the help desk	PEN Advisory Committee Members, PEN Secretariat, BRS Secretariat	March 2017 onwards
<b>II. Thematic Group on Maintenance, Handling, and Interim Storage of Equipment Containing PCB</b>			
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 Centers	February 2017
	5. Draft and disseminate an executive summary of the maintenance guidance	Anna Ortiz	February 2016
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/subregion	PEN Secretariat with BRS Secretariat and support of Regional Centers	Completed
	2. Organize additional webinars on specific sections of the guidance in the language of the target region/subregion	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centers	2016-2017

<b>III. Thematic Group on Disposal of PCB and Remediation of Contaminated Sites</b>			
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 PEN Secretariat to make available PCB projects mid-term and final evaluations	PEN Secretariat	November 2016
	3. Prepare and translate factsheets on lesson learned for PCB projects	Chairs together with Regional Centers	April 2017
<b>IV. Thematic Group on Open Applications</b>			
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	Completed
	2. Invite second comments and additional input from the AC and PEN members on the photo booklet	PEN Secretariat	Completed
	3. Finalize awareness raising materials based on comments and additional information and publication	Chairs, PEN Secretariat	Completed
	4. Translate the materials into UN languages	PEN Secretariat with Regional Centers	March 2017
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/subregion	PEN Secretariat with Advisory Committee in cooperation with BRS Secretariat and support of Regional Centers	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	October 2016
	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	Completed
	2. Develop a project proposal	PEN Secretariat, UNITAR, PEN AC members	December 2016
	3. Submit project proposal	PEN Secretariat, UNITAR, PEN AC members	Early 2017
<b>Core and Overarching Activities of the Advisory Committee</b>			
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 Centers	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	January 2015 January 2016

		Advisory Committee	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 Centers	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	Completed
10. Establish a technical assistance platform in Regional Centres to respond on PCB matters for implementation of the SC	Regional Centres and PEN Secretariat	PEN Secretariat with Regional Centers	December 2016
11. Propose the concept note for a GEF project on open applications	Prepare the concept document	Ion Barbarasa and Mihaela Paun, Urs and UNEP	January 2016
12. Outreach through forums such as the clearinghouse mechanism of BRS, including interviews with key experts		BRS, Regional Centres and UNEP, 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 UNEP, IPEN	Ongoing
14. Implement the PCB awareness-raising campaign on PCB – The Forgotten Legacy	1. Story on how ESM of PCB translates into decreased levels of PCB in human milk	Katerina Sebkova	October/November 2016
	2. Draft and disseminate a story on challenges vis a vis PCB in developing countries	Sam Adu-Kumi	October/November 2016
	3. Draft a story on the PCB storage accident in Paraguay	Claudia Cabal	October/November 2016
	4. Draft a story on the PCB management plant in Morocco	Hugues Levasseur	October/November 2016
	5. Draft a story on the PCB inventory in Rwanda	Aloys Kamatari	October/November 2016
	6. Draft a story on contaminated sites	Jindrich Petrlik	October/November 2016
	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
	8. Develop a video on PCB	PEN Secretariat, UNITAR, Advisory Committee members	October/November 2016
	9. Develop an outreach brochure on PCB and the PEN	PEN Secretariat, UNITAR, Advisory Committee members	March 2016



## Annex III



### Online meeting with the Advisory Committee of the PCB Elimination Network (PEN)

14 October 2016, 11:00 – 13:00 (Geneva time, GMT +02:00)

In preparation for the seventh PEN Advisory Committee meeting

**Notes by:** Elsemieke de Boer (Elsemieke.DEBOER@unitar.org)

**Participants:** Claudia Cabal (Holder of PCB), Anna Ortiz (Costa Rica), Hugues Levasseur (Industry), Mihaela Paun (Romania), Yuan Chen (On behalf of Jinhui Li, China), Kei Ohno-Woodall (BRS Secretariat), Jorge Ocaña (UNITAR), Ester Hermosilla (UNITAR), Elsemieke de Boer (UNITAR), Jacqueline Alvarez (UNEP).

#### Agenda:

1. Opening of the meeting and adoption of the agenda
2. Decisions of and developments from the seventh meeting of the Conference of the Parties (COP7) and looking at COP 8
3. New documents: ‘Consolidated Assessment of Efforts Made towards the Elimination of PCB’, ‘PCB Inventory Guidance’ and ‘PCB Maintenance’
4. Discuss progress on PCB in Open Applications and GEF proposal
5. Discuss progress on Awareness Raising Materials
6. Opportunity to share information and comments (including taking stock of work plan)
7. Upcoming activities:
  - (a) **Two webinars: “PCB – A forgotten legacy?”** (25 October and 1 November, 13:00 Geneva time, GMT +02:00)
  - (b) **Seventh Meeting of the Advisory Committee of the PEN** (tentative dates 2-3 December 2016 - Paraguay)
  - (c) **COP 8**, April/May 2017 (documents and side event?)
8. Closure of the online meeting.

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#### 1. Opening of the meeting and adoption of the agenda

By *Jacqueline Alvarez*

Opening remarks were provided and they included the objectives of the online meeting and perspectives on future activities of the PEN.

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#### 2. Decision of and Developments from the seventh meeting of the Conference of the Parties (COP7) and looking at COP 8

By *Kei Ohno-Woodall*

##### SC COP-7: decision SC-7/3 on PCB

- Took note of the preliminary assessment of efforts made towards the elimination of PCB
- 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 consolidate the information in the preliminary assessment, national reports and others and submit the consolidated report to the effectiveness evaluation committee by 31 Jan 2016

**Report on effectiveness evaluation:**

1. **Conclusion:** The Stockholm Convention, through the development of NIPs, as well as the many GEF-funded projects, had a beneficial impact on raising awareness of PCB, building national capacity and in eliminating PCB-containing liquids and equipment, but progress toward PCB elimination is slow. **Recommendation:** There is a need, in particular for developing countries and countries with economies in transition, to strengthen their national or regional capacities for the elimination or irreversible transformation of PCB congeners and formulations.
2. **Conclusion:** While some progress has been made towards the elimination of PCB, the majority of Parties are currently not on track to achieve the ESM of PCB by 2025/2028 and the number of tonnes to be disposed of globally remains daunting. A strong argument can be made that the scope of the challenge of achieving the elimination of use of PCB by 2025 and the ESM of PCB by 2028 has been severely underestimated at least in part due to poor reporting. **Recommendation:** Parties should urgently define rigorous plans for the ESM of PCB throughout its life cycle, including its elimination and destruction, and explore the optimal and most cost-effective solutions given the specific domestic background and circumstances of each individual country.
3. **Conclusion:** Most national inventories of PCB are preliminary in scope and provide a fragmented picture. Even for closed applications, comprehensive data are often lacking. Currently no mechanism is available under the Convention to review progress in implementation of the PCB provisions. **Recommendation:** PCB inventories need to be undertaken in a systematic manner, in accordance with the existing guidance, and cover all types of equipment, sectors and geographical areas. Each Party should ensure that their national reports contain comprehensive, clear, reliable and well-structured data on the amounts of PCB already eliminated and most importantly the amounts still to be eliminated. It may be useful to establish a mechanism under the Convention to review progress in PCB elimination.
4. **Conclusion:** The costs of eliminating the large amounts of PCB which remain are significant. Despite the current level of financing to this issue, substantial additional funding will be necessary to eliminate and destroy the amounts of PCB in use or stored if the objective of the Convention is to be met. **Recommendation:** GEF projects should be designed to strengthen human and infrastructure capacities for PCB elimination and destruction which will last beyond the duration of the project. Initiatives to manage PCB in an environmentally sound manner should also be designed to develop sustainable infrastructure, processes and techniques that can be used for the transportation, storage and destruction of other hazardous wastes, particularly POPs wastes.

**COP 8:** 24 April until 5 May, Geneva. The schedule of the week will be decided during the joint bureaux meeting in November 2016. PCB is agenda item 5(a)(iii).

**COP 8 draft decision:** **a)** Takes note of the consolidated assessment and the report on the activities of the PEN, **b)** Invites UNEP C&W to report on the PEN activities at COP-9, **c)** Decides to undertake a review of progress towards elimination of PCB in accordance with paragraph (h) of part II of Annex A, **d)** Recognizes the need for (or encourages Parties to) urgently define and implement rigorous plans for the ESM of PCB...to meet 2025/2028 goals, **e)** Requests the Secretariat to continue to participate in PEN and assist Parties in addressing the need recognized including by developing guidance and roadmap for the implementation.

**Technology theme for the COP 8 fair:** This is an important theme for PCB as well and it would therefore be a good opportunity.

**Effectiveness Evaluation:** The UNEP Chemicals and Waste Branch will provide support to review the progress report.

**Kei Ohno-Woodall:** Ms. Ohno-Woodall also mentioned the idea of small working groups. The Secretariat will ask the PEN to participate.

**Chen Yuan:** Ms. Yuan asked if PCB GEF funds could be used for North Korea. Ms. Yuan further explained that the Tsinghua University recently had two interns from North Korea. The interns have written a proposal on Elimination of PCB in North Korea and North Korea has requested their support.

**Ms. Ohno-Woodall (answer to Ms. Yuan):** Yes, that would be possible because North Korea is a party to the Stockholm Convention.

**Ms. Alvarez (answer to Ms. Yuan):** There is a window under the GEF. It should be discussed if it is feasible under GEF 7 (might not be possible under the current GEF 6 – to be discussed with GEF). Ms. Alvarez recommended Ms. Yuan to get in touch with the GEF IA, and highlighted that UNEP Chemicals and

Waste Branch could assist in this. Ms. Alvarez added that since North Korea is still producing PCB, the GEF is likely to be interested in this proposal.

**The energy component:** Ms. Alvarez introduced another topic, the energy component. She explained that when countries consider substituting equipment (e.g. transformers), ministries should consider lower energy consumption equipment. This could be an interesting option for elimination of PCB in the long-term. She suggested that this would maybe also be an interesting topic to discuss during the seventh PEN Meeting in December. She continued mentioning that energy effectiveness has been very useful for mercury, for example. Therefore, it would not be something new for the Ministries of Energy.

**Hugues Levasseur (answer to Ms. Alvarez):** Mr. Levasseur explained that it should be taken into account that the cost of substituting equipment is very high and this might not be an economically feasible way forward.

**Mihaela Paun:** Ms. Paun posed a question regarding the PCB technical assistance budget of the Stockholm Convention for the next biennium.

**Kei Ohno-Woodall (answer to Ms. Paun):** The funds are not specifically allocated to PCB, but there is special funding for the report on progress on elimination. The technical assistance budget could be an option.

**Jacqueline Alvarez:** Ms. Alvarez discussed the vacancies within the Advisory Committee of the PEN.

Party-nominated Members			Other Stakeholders
Region	Country	Name	
Africa	Nigeria	Stella <u>Uchenna</u> <u>Mojekwu</u>	<b>NGO:</b> <u>Jindrich Petrlík</u> - International POPs Elimination Network (IPEN)
	Rwanda	Aloys Kamatari	<b>Technical Professional:</b> Urs Wagner - Environmental Technology Limited (ETI)
Asia and Pacific	China	Jinhui Li	<b>Industry:</b> Hugues Levasseur - <u>Tréci/Séché Environnement</u>
	Iran	Sanaz Jafarzadeh	<b>Holder of PCB:</b> Claudia Cabal - Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)
Eastern European Group	Moldova	Ion Barbarasa	<b>IGO:</b> <i>TBD</i>
GRULAC	Romania	Mihaela Claudia Paun	<b>MEA:</b> Kei Ohno-Woodall - BRS Secretariat
	Costa Rica	Anna Ortiz	
WEOG	Jamaica	Tara Dasgupta	
	<i>TBD</i>	<i>TBD</i>	

There are currently three vacancies:

- Two for Western Europe and Other Groups
- One for Inter-Governmental Organization (IGO)

### 3. New documents: ‘Consolidated Assessment of Efforts Made towards the Elimination of PCB’, ‘PCB Inventory Guidance’ and ‘PCB Maintenance’

Only highlights were mentioned for this agenda item. The document was already known by the AC members and no significant difference in the conclusions and recommendation.

Anna Ortiz from Costa Rica indicated that from the report certain activities could be important to consider for inclusion in the AC work plan. She mentioned as well that she has already identified some and that she will be taking the lead on discussions during the face to face meeting in Paraguay.

### 4. Discuss progress on PCB in Open Applications and GEF proposal

By Jacqueline Alvarez and Jorge Ocaña

**Jorge Ocaña:** UNITAR and UNEP have been working together on a proposal on Open Applications which should be ready in January 2017. PCB in Open Applications is an important topic, also in comparison to PCB in transformers.

**Jacqueline Alvarez:** The proposal goes beyond just addressing PCB, also other POPS, such as PCN, will be targeted. The proposal is also based on many elements that were discussed during the 6<sup>th</sup> PEN meeting. The initial draft should be ready by December.

**Jorge Ocaña:** Mr. Ocaña stressed that capacity development is a very important element. He also pointed out that there is no guidance available and that therefore guidance on preliminary inventories should be developed.

Mr. Ocaña mentioned the following four gaps:

1. Global Analysis and assessment
2. Inventories
3. Legal framework
4. Awareness Raising

**Anna Ortiz:** Ms. Ortiz asked if it is similar to the GEF proposal of two years ago to which Urs and Mihaela contributed as well.

**Jacqueline Alvarez (answer to Ms. Ortiz):** Ms. Alvarez explained that it is the same continuing activity. Ms. Alvarez added to this that the proposal could lead to increased future work of parties on Open Applications

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## 5. Progress on PCB in Open Applications and GEF proposal

*By Elsemieke de Boer*

**Elsemieke de Boer:** UNEP Chemicals and Waste Branch is implementing an awareness-raising campaign to push PCB back on the international agenda and to make it a key topic for the upcoming COP-8. The slogan 'PCB – The Forgotten Legacy' will be used. UNEP has engaged UNITAR, the United Nations Institute for Training and Research, to develop the awareness raising materials.

**Video on PCB:** The video on PCB is coming along and we are finalizing the script. The video should be simple, clear, well-structured, visually attractive and catch people's attention. It will have a catchy opening, introduce PCB, explain why we should care, introduce the Stockholm Convention, progress made so far and outline how we are going to achieve the 2025 and 2028 goals. The video will mostly be animated, will have a voice over and subtitles and we would like to use some very short interviews. The upcoming PEN meeting might be a moment to conduct some short interviews with the PEN members and discuss progress on the video.

**PCB portfolio-brochure (with separate factsheets):** So far, the following topics have been considered:

- PCB Inventories
- Identification and Environmentally Sound Management of Open Applications Containing PCB
- Environmentally Sound Management and Disposal of PCB
- Case Study: Global Environmental Facility (GEF) Project
- Case Study: PCB Accident in Paraguay (2015)
- Progress and challenges - A preliminary assessment of efforts made toward the elimination of PCB

The draft portfolio-brochure should be ready before the seventh PEN meeting, in order to be discussed during the meeting.

**New website:** The UNEP website as well as the PCB and PEN pages are being updated.

**Webinars:** The upcoming webinars are another opportunity to raise awareness. Participation in the webinars is open to representatives of the Stockholm and Basel Conventions Focal Points as well as to the members of the Advisory Committee of the PEN and other stakeholders.

**Your input is very important.** We would be very happy to receive any ideas you may have on topics, materials such as photos, PCB stories or ideas on awareness raising approaches.

**Anna Ortiz:** Ms. Ortiz mentioned that perhaps some topics can be refined. Maintenance for example is a big topic.

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**6+7. Upcoming activities and opportunity to share information and comments (work plan)**

By *Jacqueline Alvarez*

For the webinars, the following was decided:

- Anna Ortiz and Yuan Chen will help presenting during the webinar of 25 October 2016, Anna Ortiz will address maintenance (scope to be shared to be further discussed) and Yuan Chen will provide some information on the North Korea situation
- It was decided to postpone the webinar of 27 October to 1 November. Mihaela Paun, Claudia Cabal and Kei Ohno offered their help for this webinar. The themes to be presented will have to be discussed. A proposal from UNEP Chemicals and Waste Branch will be developed and shared with presenters.

**Jacqueline Alvarez:** The seventh PEN meeting is expected to be held in Paraguay from Friday 2 December to Saturday 3 December. We are looking into visiting the site of the accident in 2015, but there might be some difficulties regarding time and safety. Among others, the work plan, awareness raising and updates by everyone will be discussed.

**Anna Ortiz:** Ms. Ortiz will aimed to finish the executive summary in December 2016.

**Claudia Cabal:** Ms. Cabal mentioned that she is working on a story on PCB accidents in Paraguay.

**Yuan Chen:** Ms. Chen will aims to prepare a story about North Korea in December.

**Jacqueline Alvarez:** Ms. Alvarez asked Ms. Ohno-Woodall about a deadline for organizing the side event for COP 8. Ms. Ohno-Woodall assured there should not be any problem. Ms. Alvarez suggested an interactive approach and stressed that a good approach to attract attention is very important, as side events usually have competition among themselves.

**Mihaela Paun:** If and how the Bureau members will be involved in promoting the campaign 'PCB – The Forgotten Legacy'? It would be great if the Bureau members will play an active role in their constituencies in order to raise awareness on the PCBs issue (which is somehow forgotten due to the new added POPs) prior to the 8th COP meeting. Maybe we can prepare a message on the matter so they (Bureau members) circulate it in their region prior to the COP meeting and eventually include it in the upcoming regional COP preparation meeting's agenda.

**Kei Ohno-Woodall (answer to Ms. Paun):** Ms. Ohno-Woodall responded that this indeed will be an item. The joint bureau meetings will take place soon in November.

**Jacqueline Alvarez (answer to Ms. Paun):** Ms. Alvarez added to this that Sam Adu-Kumi, President of the Conference of the Parties to the Stockholm Convention, will be invited for the upcoming PEN meeting in December in Paraguay.

**Jacqueline Alvarez:** Ms. Alvarez mentioned that the COP documents will be ready soon.

**Anna Ortiz:** Ms. Ortiz mentioned that the 'Consolidated Assessment of Efforts Made towards the Elimination of PCB' has some weaknesses. She has marked elements in yellow.

**Jacqueline Alvarez (answer to Anna Ortiz):** Ms. Alvarez asked if Ms. Ortiz could take the lead in this. Ms. Ortiz accepted this.

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**8. Closure of the online meeting.**

By *Jacqueline Alvarez*

The online meeting discussion was very useful and many items identified, further involvement of PEN AC members is of extreme importance to carry on.

## Annex IV

PCB Elimination  
Network (PEN)  
2028



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

2 to 3 December 2016, Asunción, Paraguay

Meeting report, January 2017

**Report prepared by:**

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**Report published:**

January 2017

## Table of contents

### First meeting day, 2 December 2016

#### 1. Opening Remarks

1.1. Ms. Anna Ortiz (PEN member, Costa Rica and meeting Chair) and Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch)

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

1.3 Mr. Fernando Brites (Ministry of Environment Paraguay, SEAM)

#### 2. Organization of the meeting

2.1 Adoption of the agenda and election of the Chair of the meeting

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

2.3 Introduction round

#### 3. Objectives of the meeting and expected outcomes

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

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

3.3 Objectives of the meeting and expected outcomes

3.4 Questions and comments

#### 4. Contributions from PEN members: 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”*

4.1.b Questions and comments

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

4.2.b Questions and comments

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”*

4.3.b Questions and comments

4.4.a. Ms. Sanaz Jafarzadeh (PEN member, Iran) – *“PCBs within South and West Asia region”*

4.4.b. Questions and comments

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

4.5.b. Questions and comments

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

4.6.b. Questions and comments

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

#### 5. PCB in Open Applications

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

5.1.b. Questions and comments

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

5.2.b. Questions and comments

6. *“Análisis de Bifenilos Policlorados en muestras biológicas (PCB analysis in biological matrixes)”* - Ms. Mariza Insaurralde and Mr. Xavier Ortiz (Diaz Gill Laboratory)

7. *“PCB Elimination by Re-defining Contaminated Oils”* - Mr. Naser Reza and Mr. Mark McNamara (Hydrodec)
8. *“The Moroccan PCB Decontamination Plant Experience”* - Mr. Hugues Levasseur (PEN member, industry)
9. *“Best Practices and Lessons Learned of a Regional Mining Project of PCB in South America”* - Mr. Alberto Capra (Basel Convention Regional Centre in Argentina)
10. *“PCB Elimination Initiatives in Africa: Challenges and Outlook”* - Mr. Koebu Khalema (Basel and Stockholm Regional Centre in South-Africa)

## **Second meeting day, 3 December 2016**

11. **Opening of the meeting** - Ms. Anna Ortiz (PEN member, Costa Rica and Chair) and Mr. Sam Adu-Kumi (President to the Stockholm Convention)
12. **New PEN members** – Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch)
13. **Recap of the first meeting day** – Ms. Anna Ortiz (PEN member, Costa Rica)
14. *“Gestión de Bifenilos Policlorados”* – Ms. Rocio Vely and Ms. Gloria Rivas (National Electricity Company, ANDE)
15. **Looking toward COP-8: Technology fair during COP-8** – Ms. Kei Ohno
16. **Looking toward COP-8: Awareness raising materials within the theme of PCB: A Forgotten legacy?** – Ms. Elsemieke de Boer
  - 16.a. Brochure
  - 16.b. Video
  - 16.c. Webinars
  - 16.d. Website
  - 16.e. Social media account?
17. **Consolidated Assessment: Next steps** - Ms. Anna Ortiz
18. **Revision of Terms of Reference**
  - 18.a. Revision of Advisory Committee membership
  - 18.b. Revision of selection of members for the Advisory Committee
19. **Revision of the workplan of the PEN 2014-2017**
20. **Next steps toward COP-8**
21. **Conclusions and recommendations**
22. **Recap and final remarks**
23. **Closure of the meeting** – Ms. Jacqueline Alvarez (UN Environment Chemicals and Waste Branch) and Ms. Anna Ortiz (PEN member, Costa Rica and meeting Chair)
  - Annex A:** List of PEN Advisory Committee members (December 2016)
  - Annex B:** Agenda
  - Annex C:** List of participants
  - Annex D:** Revised workplan of the PEN 2014-2017 (Revision date 3 December 2016)
  - Annex E:** Revised Terms of Reference of the PEN (revision January 2017)
  - Annex F:** Revised PEN membership form
  - Annex G:** Conclusions and recommendations for COP-8

**Note:** All other meeting documents, such as PowerPoint presentations, can be found at: <http://web.unep.org/chemicalsandwaste/what-we-do/science-and-risk/persistent-organic-pollutants-pops/phasing-out-pcb/pcb-elimination>



## 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 Environment	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

## **7<sup>th</sup> 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 2. 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			Other Stakeholders
Region	Country	Name	
Africa	Nigeria	Stella Uchenna Mojekwu	<b>NGO:</b> Jindrich Petrlik - International POPs Elimination Network (IPEN)
	Rwanda	Aloys Kamatari	<b>Technical Professional:</b> Urs Wagner - Environmental Technology Limited (ETI)
Asia and Pacific	China	Jinhui Li	<b>Industry:</b> Hugues Levasseur - Trédi/Séché Environnement
	Iran	Sanaz Jafarzadeh	<b>Holder of PCB:</b> Claudia Cabal - Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)
Eastern European Group	Moldova	Ion Barbarasa	<b>IGO:</b> Alfredo Cueva, United Nations Industrial Development Organization (UNIDO)
	Romania	Mihaela Claudia Paun	<b>MEA:</b> Kei Ohno-Woodall - BRS Secretariat
GRULAC	Costa Rica	Anna Ortiz	
	Jamaica	Tara Dasgupta	
WEOG	TBD		
	TBD		

Figure 3. 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. Rocío 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 constraints 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](http://www.ipen.org). The documents are available on request. Please contact Ms. Maria Cárcamo or the PEN Secretariat at [science.chemicals@unep.org](mailto: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 chronic 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<sup>3</sup>).
- 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. “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.

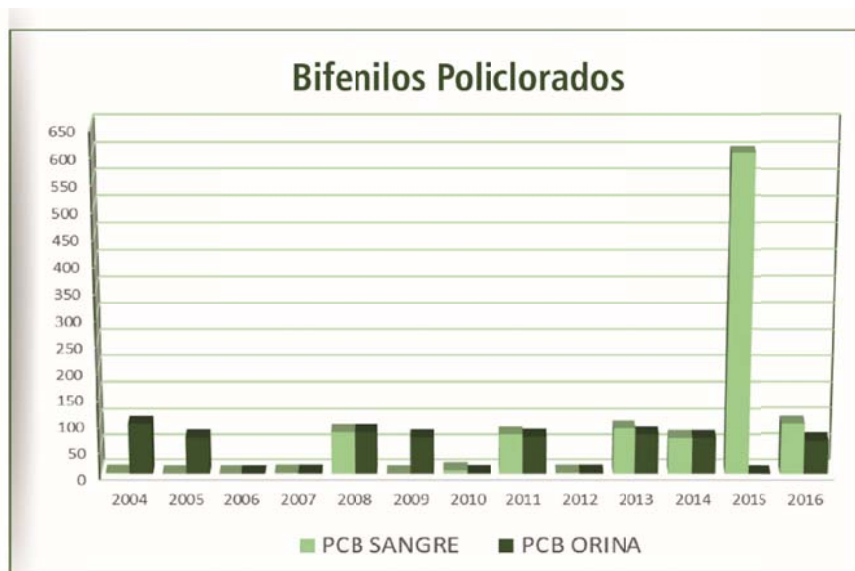


Figure 4. PCB samples in blood and urine between 2004 and 2016, Diaz Gill Laboratory

### 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.

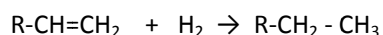
Ms. Jacqueline Alvarez agreed on this and stressed the importance of inter-laboratory collaboration. As an example, she mentioned the inter-laboratory collaboration within the Global Monitoring Plan (GMP). Vanuatu, for example, has sent its samples to Europe for analysis.

## 7. “PCB Elimination by Re-defining 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:



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

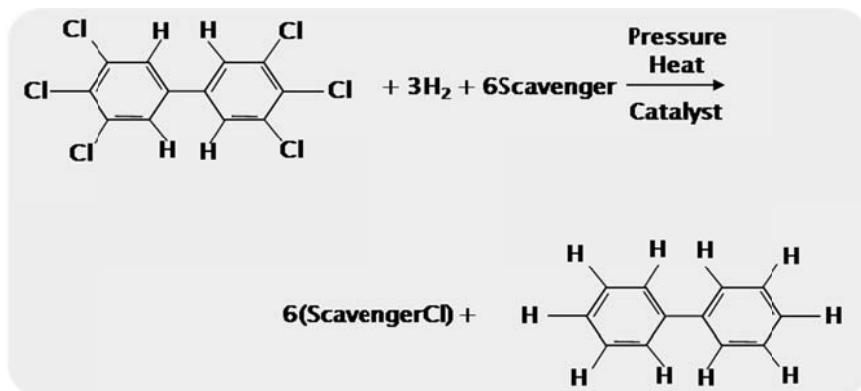


Figure 5. PCB reaction

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;
- CO<sub>2</sub> emissions had been limited;
- It reduced the demand for crude oil consumption;
- There were no high temperature (350 degrees Celsius) or combustion processes involved.

#### 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. "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 oil / 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.

### 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. “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. “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 form can be found in [Annex F](#).



Figure 6. 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. “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.

### **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 7. 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 8. 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.

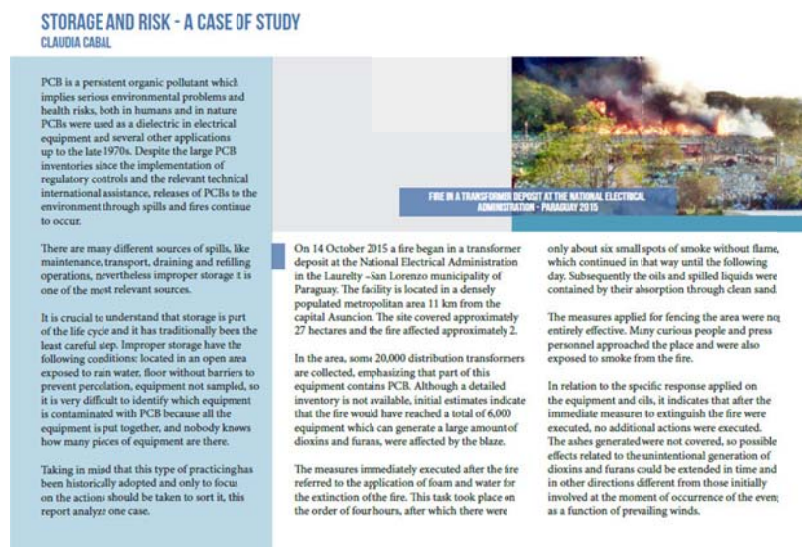


Figure 9. Example of brochure sheet, "Storage and risk" by Ms. Claudia Cabal

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.

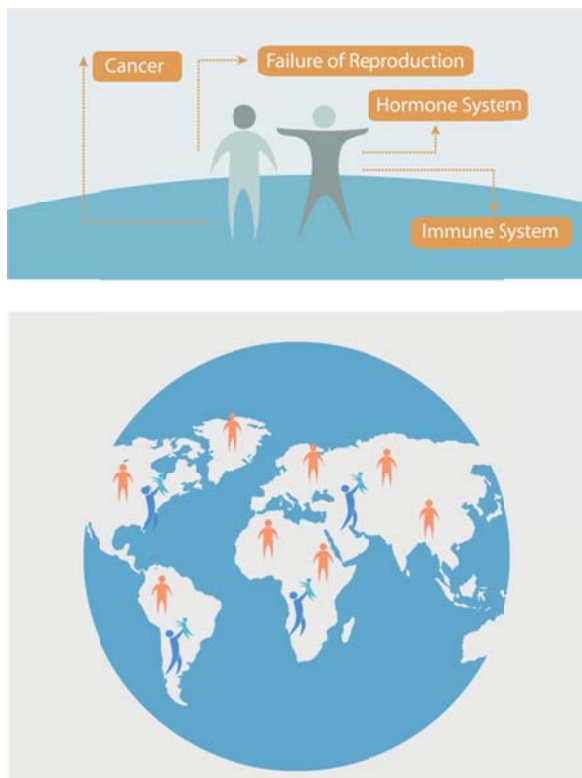


Figure 10. Example of animation for PCB video

### 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<sup>1</sup>. BRS also had a Facebook page named Safe Planet<sup>2</sup>.

### 17. 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.

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.

<sup>1</sup> Twitter BRS : <https://twitter.com/brsmeas?lang=en>.

<sup>2</sup> Facebook BRS : <https://www.facebook.com/safe.planet/>.

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 States (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:

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*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.*

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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 version of the 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	PEN AC members	Before March 2017

	come back to their constituency and bring the issue to their attention		
	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 6<sup>th</sup> 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 7<sup>th</sup> 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.

**Annex A.**

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

**Annex B.**

## 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](mailto: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	Chair

c) Introducing new PEN members, PEN membership vacancies d) Introduction round	
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. <i>“Análisis de Bifenilos Policlorados en muestras biológicas (PCB analysis in biological matrixes)”</i> -	Ms. Mariza Insaurralde and Mr. Xavier Ortiz (Diaz Gill Laboratory, Paraguay)
7. <i>“The Moroccan PCB Decontamination Plant Experience”</i>	Mr. Hugues Levasseur
8. <i>“Best Practices and Lessons Learned of a Regional Mining Project of PCB in South America”</i>	Mr. Alberto Capra (Regional Centre Argentina)
9. <i>“PCB Elimination by Re-defining Contaminated Oils”</i>	Mr. Naser Reza and Mr. Mark McNamara (Hydrodec)
10. <i>“PCB Elimination Initiatives in Africa: Challenges and Outlook”</i>	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

<ul style="list-style-type: none"> <li>▪ AFRICA</li> </ul>
<p><u>Nigeria - Ms. Stella Mojekwu</u> 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: <a href="mailto:sumojekwu@yahoo.com">sumojekwu@yahoo.com</a></p>
<p><u>Rwanda – Mr. Aloys Kamatari</u> Associate Professor Institute of Agriculture Technology and Education of KIBUNGO (INATEK) Faculty of Rural Development, Department of Agricultural Engineering 06 Kibungo, Rwanda E-mail: <a href="mailto:Aloys.kamatari@gmail.com">Aloys.kamatari@gmail.com</a></p>
<ul style="list-style-type: none"> <li>▪ ASIA AND PACIFIC</li> </ul>
<p><u>China – Ms. Chen Yuan</u> Programme Officer Basel Convention Coordinating Centre for Asia and the Pacific Room 805, School of Environment, Tsinghua University, Haidian District Beijing 100084, China E-mail: <a href="mailto:bccc@tsinghua.edu.cn">bccc@tsinghua.edu.cn</a></p>
<p><u>Iran – Ms. Sanaz Jafarzadeh</u> Environment Specialist Ministry of Energy, Environment Department Tavanir Co., Yasemi st., Kordestan Exp. Way, 14155-6467 Tehran, Iran (Islamic Republic of) Tel: +98-912-1009646 E-mail: <a href="mailto:Sanaz.jafarzadeh@yahoo.com">Sanaz.jafarzadeh@yahoo.com</a></p>
<ul style="list-style-type: none"> <li>▪ GROUP OF LATIN AMERICAN AND CARIBBEAN COUNTRIES (GRULAC)</li> </ul>
<p><u>Costa Rica – Ms. Anna Ortiz</u> Environmental Consultant Ministry of Environment and Energy P.O Box 640-1250, 1250 San José Costa Rica Tel: +506-83856839 Fax: +506-22896603 E-mail: <a href="mailto:ortianna@gmail.com">ortianna@gmail.com</a></p>

**B. PEN members – Other stakeholders**

<p><i>Non-Governmental Organization (IPEN) – Ms. Maria Cárcamo</i>  <i>On behalf of Jindrich Petrlík – PEN member representative of NGO (IPEN)</i>                  Coordinator RAPAL Uruguay                  Vice-president for Latin America of the World Alliance for Mercury Free Dentistry                  Colorado 2127                  Montevideo 11800, Uruguay                  E-mail: <a href="mailto:coord@rapaluruguay.org">coord@rapaluruguay.org</a></p>
<p><i>Technical professional - Mr. Urs K. Wagner</i>                  Owner                  ETI Environmental Technology Ltd.                  Kalchbühlstrasse 18                  P. O. Box 176                  CH-7007 Chur                  Tel: +41 +81 253 54 54                  Mobile: +41 +79 611 34 34                  Skype : wagnerursk                  E-mail: <a href="mailto:wagner@eti-swiss.com">wagner@eti-swiss.com</a>                  Website: <a href="http://www.eti-swiss.com">www.eti-swiss.com</a></p>
<p><i>Industry – Mr. Hugues Levasseur</i>                  Vice-Chairman                  Hazardous Waste Europe                  60-64 avenue du General Leclerc                  92100 Boulogne-Billancourt, France                  Tel : +33141314195                  Mobile : +33614695562  <a href="mailto:h.levasseur@hazardouswasteeurope.eu">h.levasseur@hazardouswasteeurope.eu</a></p>
<p><i>Holder of PCB – Ms. Claudia Cabal</i>                  Environmental Manager                  Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)                  Paraguay 2431, Piso 8, Oficina 803                  Montevideo, Uruguay  <a href="mailto:ccabal@ute.com.uy">ccabal@ute.com.uy</a></p>
<p><i>Inter-governmental Organization – Mr. Alfredo Cueva</i>                  Industrial Development Officer                  Environmental Management Department                  Stockholm Convention Division                  United Nations Industrial Development Organization (UNIDO)                  Wagramerstrasse 5                  P.O. Box 300                  1400 Vienna, Austria                  E-mail: <a href="mailto:a.cueva@unido.org">a.cueva@unido.org</a></p>
<p><i>Basel, Stockholm and Rotterdam Conventions Secretariat – Ms. Kei Ohno Woodall</i>                  Programme Officer                  Basel, Rotterdam and Stockholm Conventions Secretariat                  Maison Internationale de l'Environnement I                  11-13 Chemin des Anémones                  CH - 1219 Châtelaine                  Geneva, Switzerland                  E-mail: <a href="mailto:kei.ohno-woodall@brsmeas.org">kei.ohno-woodall@brsmeas.org</a></p>

**C. Other stakeholders**

<p><u>President of the Conference of the Parties to the Stockholm Convention – Mr. Sam Adu-Kumi</u>  Director  Chemicals Control and Management Centre, Environmental Protection Agency  Starlet 1991 Street, Ministries, P.O. Box 326  Accra, Ghana  E-mail: <a href="mailto:sam.adu-kumi@epa.gov.gh">sam.adu-kumi@epa.gov.gh</a></p>
<p><u>Basel and Stockholm Conventions Regional Centre in Africa – Mr. Koebu Khalema</u>  Program Officer  Basel and Stockholm Conventions Regional Centre for English speaking countries in Africa  Africa Institute  473 Environment House  Cnr Steve Biko &amp; Soutpansberg  Private Bag X447  Pretoria 0001, South Africa  E-mail: <a href="mailto:Kkhalema@environment.gov.za">Kkhalema@environment.gov.za</a></p>
<p><u>Basel Convention Regional Centre for the South American Region – Mr. Alberto Capra</u>  Regional Coordinator  Basel Convention Regional Centre for the South American Region in Argentina  Instituto Nacional de Tecnología Industrial (INTI)  Avda. Leandro N. Alem 1067 – 7th Floor  1001 Buenos Aires, Argentina  E-mail: <a href="mailto:ascapra@hotmail.com">ascapra@hotmail.com</a></p>
<p><u>Paraguayan Consultant – Ms. Patricia Sacco Calvo</u>  Consultant  Asuncion, Paraguay  Tel: +595 981536944  E-mail: <a href="mailto:pipa.sacco@gmail.com">pipa.sacco@gmail.com</a></p>
<p><u>Paraguayan Consultant – Mr. Guillermo Ale Pineda Atet</u>  Consultant, Chemical Engineer  Solid Waste Management and Chemical Risk Assessment  Petereby N° 986 c, San Fernando  Lambare, Paraguay  Tel: +981164127  E-mail: <a href="mailto:pinedaatet@gmail.com">pinedaatet@gmail.com</a></p>
<p><u>Diaz Gill Laboratory – Ms. Mariza Insuarralde</u>  Technical direction, ToxiForense  Diaz Gill Medicina Laboratorial S.A.  Eligio Ayala 1384  Asunción, Paraguay  E-mail : <a href="mailto:toxiforense@diazgill.com.py">toxiforense@diazgill.com.py</a>  Website : <a href="http://www.diazgill.com.py/">http://www.diazgill.com.py/</a></p>
<p><u>Diaz Gill Laboratory – Mr. Xavier Ortiz</u>  Coordinator  Diaz Gill Medicina Laboratorial S.A.  Eligio Ayala 1384  Asunción, Paraguay  E-mail : <a href="mailto:xavierortiz@diazgill.com.py">xavierortiz@diazgill.com.py</a></p>
<p><u>SEAM – Mr. Fernando Britez</u>  Director of Environmental Quality Control and Focal Point of the Stockholm Convention  Secretaria del Ambiente (SEAM)  Avenida Madame Lynch N° 3500  Esquina Reservista de la Guerra del Chaco</p>

<p>Asunción, Paraguay                  E-mail: <a href="mailto:fernandobritez1982@gmail.com">fernandobritez1982@gmail.com</a>                  Website : <a href="http://www.seam.org.py">www.seam.org.py</a></p>
<p><u>SEAM – Mr. Ovidio Espinola</u>                  Head of the Department of Norms and Standards and Alternative Focal Point of the Stockholm Convention                  Secretaria del Ambiente (SEAM)                  Avenida Madame Lynch N° 3500                  Esquina Reservista de la Guerra del Chaco                  Asunción, Paraguay                  E-mail: <a href="mailto:ovidioespinola@yahoo.com.ar">ovidioespinola@yahoo.com.ar</a></p>
<p><u>SEAM . Mr. Patricio Ortiz</u>                  Head of the Department of Chemical Substances and Focal Point Head of the Minamata Convention                  Secretaria del Ambiente (SEAM)                  Avenida Madame Lynch N° 3500                  Esquina Reservista de la Guerra del Chaco                  Asunción, Paraguay                  E-mail: <a href="mailto:patriorgua@hotmail.com">patriorgua@hotmail.com</a></p>
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<p><u>United Nations Environment – Ms. Jacqueline Alvarez</u>                  Science and Risk Unit Leader                  PEN Secretariat                  Chemicals and Waste Branch, Economy Division                  UN Environment                  International Environment House 1 (MIE1)                  11-13 Chemin des Anémones                  CH - 1219 Châtelaine                  Geneva, Switzerland                  Tel: +41 22 917 8350                  Fax: +41 22 797 3460                  E-mail: <a href="mailto:jacqueline.ALVAREZ@unep.org">jacqueline.ALVAREZ@unep.org</a>                  Skype ID: Jacqueline.alvarez.mourelle</p>
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## Annex D.

### Revised Work plan 2014-2017

Revision date: 3 December 2016

Activities	Actions	Responsible	Timeframe	Notes
<b>I. Thematic Group on Inventories</b>				
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	
<b>II. Thematic Group on Maintenance, Handling, and Interim Storage of Equipment Containing PCB</b>				
1. Revise and finalize the guidance on	1. Develop a revised draft based on comments	Chairs, PEN Secretariat	Completed	

maintenance, handling and interim storage of equipment containing PCB	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	
<b>III. Thematic Group on Disposal of PCB and Remediation of Contaminated Sites</b>				
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	
<b>IV. Thematic Group on Open Applications</b>				
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	<i>In progress</i>
	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	<i>In progress</i>
	3. Finalize awareness raising materials based on comments and additional information and publication	Chairs, PEN Secretariat	First series completed Next round: February 2017	<i>In progress</i>
	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	1. Organize webinars on PCB in open applications in the language	PEN Secretariat with Advisory Committee in	2016 – 2017	

the message to the stakeholders	of the target region/sub region	cooperation with BRS Secretariat and support of Regional Centres		
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	
<b>Core and Overarching Activities of the Advisory Committee</b>				
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	Develop the information exchange platform and maintain the platform	UNITAR and PEN Secretariat	March 2017	

PCB Elimination Network and other interested stakeholders, such as parties to the Stockholm Convention and regional centres				
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 campaign on PCB – The Forgotten Legacy	1. Story on how ESM of PCB translates into decreased levels of PCB in human milk	Katerina Sebkova	October/November 2016	In progress
	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.**

## **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**

- (a) Provide support for the implementation of the PEN work plan;
- (b) Create incentives for and promote Environmentally Sound Management (ESM) of PCB;
- (c) Facilitate information exchange between the members of the Network;
- (d) Coordinate and support ongoing national and regional efforts to achieve ESM of PCB;
- (e) Provide a link between members and promote local networking;
- (f) Encourage research and development on suitable alternatives to PCB;

- (g) Promote the sharing of information on technologies for the environmentally sound disposal of PCB;
- (h) Promote the use of the Basel Convention technical guidelines on the ESM of PCB;
- (i) Create incentives for countries to undertake and update inventories on PCB oils and equipment containing PCB and share information on inventories;
- (j) Raise awareness on successful activities on environmentally sound management of polychlorinated biphenyls;
- (k) Record and disseminate widely information on the activities of the PEN, *i.e.*, through the
- (l) Clearinghouse Mechanism (CHM) of the Basel, Rotterdam and Stockholm conventions, Chemicals Branch, and others; and
- (m) 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 States (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.

9. 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.

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

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.

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

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

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

### **Secretariat of the PEN**

18. 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:

- (a) Coordinating the work of the PEN;
- (b) Developing and implementing an information exchange mechanism based on existing
  - (i) Clearing-House Mechanisms (CHM), including the BRS one;
  - (ii) CHM at the global, regional and national levels;
- (c) Facilitating the organisation of meetings of the thematic groups and administrative arrangements;
- (d) Seeking funding for the activities of the PEN;
- (e) Organising the annual meeting of the Advisory Committee;
- (f) Preparing the work plan of the PEN for submission to the Advisory Committee;
- (g) Providing annual reports to the Advisory Committee on activities of the PEN; and
- (h) 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**

19. 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.



## 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 ( <i>Mr., Ms., Mrs., Dr.</i> )	
Family Name			
Job title			
Mailing address		Postal code	
City		Country	
Tel. number	<i>(please include international code)</i>	Mobile number	<i>(please include international code)</i>
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

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

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

- |                                                        |                                                    |                                                   |
|--------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> Inventory of PCBs             | <input type="checkbox"/> Disposal of PCBs          | <input type="checkbox"/> Destruction technologies |
| <input type="checkbox"/> Maintenance of PCBs equipment | <input type="checkbox"/> Storage of PCBs equipment | <input type="checkbox"/> Illegal use of PCBs      |
| <input type="checkbox"/> Transboundary movement        | <input type="checkbox"/> PCBs in open applications | <input type="checkbox"/> 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 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  
E-mail: science.chemicals@unep.org

## Annex G.

### From the 6<sup>th</sup> 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 7<sup>th</sup> 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.
-