



Regional Workshop on the Environmentally Sound Management polychlorinated Biphenyl (PCBs)

29 March 2015, Alexandria , Egypt

The Final Report

The Report Sections

- Acknowledgments
- Preface
- The Workshop Summary
- Recommendations
- Appendix
 - 1. Agenda
 - 2. Evaluation Sheets and its results
 - 3. List of Participants

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- ***BCRC-Egypt Staff***, for their professional and efficient efforts in organizing and running all BCRC-Egypt local and regional activities.

PREFACE

BCRC-Egypt with the assistance of SBC organised a one day Regional workshop for the Arab states. The main objective of the workshop is to raise awareness on the environmentally sound management of Polychlorinated Biphenyl (PCBs).

The aims of the workshops were as follow:

- 1- To provide an overview on PCBs
- 2- To present the procedures for inventory and auditing
- 3- To present the procedures for sampling and analysis
- 4- To present the health hazards of PCBs
- 5- To represent a successful clean-up case study

The workshop targeted the National technical officials responsible for or involved in hazardous Waste Management. 8 participants from 7 Arab countries attended this workshop: Republic of Djibouti, Arab Republic of Egypt, Kuwait, Lebanese Republic, Kingdom of Morocco, Palestinian Authority and the Republic of Sudan.

The Opening Ceremony:

The opening ceremony and the presentation of the workshop by the journalist **Mahmoud Bakry**, Chief Editor of *Elaosboa* Newspaper

The First Session:

Dr. Mohamedy Eid, Member of the National Disciplinary Councils, Environmental Consultant, BCRC-Egypt focused on the role of management in dealing with hazardous waste. To have sound management Dr. Mohamedy recognized three factors which are important when we are dealing with hazardous waste (prevention, reducing, treatment):

- 1-the availability of geographic information,
- 2-environmental risk assessment and
- 3- the presence of clear regulations.

This was followed by the presentation of **Dr. Ashraf Sami**, Deputy Head of POPs section- Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food. He presented the world's production of PCBs and its global consumption, as well as the estimated global emission. Furthermore, he pointed out to the bio-accumulation of PCBs and its toxicity. He explained that it is not only one component, but a group of components that number up to 209. Beside this, he presented the bio-monitoring of PCBs in human milk as well as the human risk from PCBs exposure.

The Second Session:

Dr. Ashraf Sami presented the importance of sampling, and analysis. He started out by providing an overview of sampling processes. He laid down the steps for sampling different elements whether it is air, water or sediments. Afterwards, he provided an overview of analytical processes with a focus on quantitative determination, data validation of analytical methods and quality control of analytical methods. He emphasized how accurate analysis lead to accurate decision.

This was then followed up by **Dr. Yasser Badr El-Din** Director of Hazardous Wastes Department and National Focal Point of SAICM - the Egyptian ministry of environment. The lecture covered several points:

- 1- The characteristics of PCBs and its trade names as well as its concentration in the environment
- 2- The legislations in regards to PCBs
- 3- The importance of sound environmental management which requires the presence of alternative solutions as well as procedures for advanced technology for treatment and disposal

Afterwards, he presented a successful clean up case in several sites of electric power stations. Which was conducted through the detection and analysis of the sites most polluted with PCBs.

Third session

This session was then followed with **Dr. Mahmoud Amr Professor** of Occupational and Environmental Diseases in Faculty of Medicine, Cairo University -Founder of National Center for Clinical and Environmental Toxicology. He presented statistics for the status of Egypt in regards to PCBs, as well as the sites where it is heavily present. In addition, he pointed out to the means of exposure as well as the negative health impact. Examples of the health impacts are cancer, sterility, disruption of the liver enzymes, skin problems as well as disruption in the nervous and immune systems. He also presented the disasters that came about from PCBs.

This session was concluded with **Dr. Hesham El-Kassas**, Prof. of Soil and Water Environment – Dean of the Institute of Environment Studies and Research (IESR)- Ain Shams University. His presentation was titled “Green Clean-up for PCBs Polluted Sites”. He presented the global PCB pollution map and its presence and concentration in the environment. Furthermore, he displayed an overview of the bio treatment as well as Phytoremediation which is used in water, air and sediments. He displayed the benefits of using the Phytoremediation as well as the plants used to conduct it.

Fourth session

Presentations by the Representatives of the Arab Countries on their Status:

1- Amimi Taha - representative Morocco:

The country has a national strategy for the inventory of PCBs. There are also clear legislations particularly regarding the safe disposal of hazardous waste. In addition, a guide categorizing hazardous waste has been published in the national newspaper. He stated that in 1998 there was a 10 million dollar fund to dispose the PCB components in North Africa. The digging for disposal was on a depth of two meters, and the WHO on supervision found that the containers with the PCB components are clearly visible on the desert land due to the environmental conditions.

2- Mrs. Rehab Osman, representative of Sudan:

The country has a clear national strategy that includes a) comprehensive inventory of the PCBs, b) training on environmentally sound management and c)

the development of legal instruments. Mrs. Rehab reviewed some of what has been achieved, a sample of 10% of the total number of transformers were examined and extrapolated from a total number of 15,000, and the results displayed a pollution rate of 2-3%. The country, however, is in need of improving the qualities of their labs as well as building capacity and raising awareness.

3- Mr. Amgad Ibrahim, representative of Palestine

The heavy use of pesticides is reflected through the high rates of cancer. The country is in need of training sessions on the means to dispose PCBs.

4-Hanna Abo-Habib, representative of Lebanon

The problem of PCBs is near disappearance, there is only a small number of transformers left and are now being dealt with. He mentioned that there are not any institutions that are registered to be able to dispose PCBs in a sound manner. Accordingly, the oils found in the power stations are exported to France where they are capable of environmentally sound disposal.

Discussion Panel:

The main focus of the discussion was to put forward the challenges faced in each country, and the possible means to deal with them. The main highlights were: a) the deficiency of lab facilities as well as the human capital needed, b) the lack of communication does not make it possible to exchange experience and c) the need for a database of the expertise in the field. Afterwards there was a small session made up of:

- 1- Amgad Ibrahim, representative of Palestine
- 2- Hanna Abo-Habib, representative of Lebanon
- 3- Rehab Osman, representative Sudan
- 4- Dr. Mohammdy Eid,
- 5-A representative from BCRC-Egypt,
- 6-A representative of Arab League
- 7-Dr.Mahmoud Amr
- 8-Dr.Hesham El-Kassas
- 9-Dr. Ashraf Sami

10-Dr. Yasser Badr El Din

Their goal was to finalize the recommendations of the workshop.

The Closing Session

This session started with a brief speech delivered by Prof. Mostafa Kamal, in which he expressed his happiness for the clear success of the workshop and thanked the participants and the lecturers for their effective participation. Finally, he presented the recommendations of the workshop.

Recommendations

Regional Workshop for the Environmental Management Sound of polychlorinated biphenyl (PCBs)

1. The importance of specialized training programs in the field of analyzing PCBs
2. Review and analysis of the utilization of advanced machines to confirm the accuracy of the previous results in the polluted sites
3. Renovating the labs that deal with the analysis of PCBs and supplying it with advanced machinery.
4. Inventory and ranking of the labs in the region in accordance to the United Nations Environmental Program
5. Suggesting the possibility of specialized training sessions to inform about the safe disposal of the pollutants using the Phytoremediation(the green clean-up of the environment), which was confirmed as successful experiment
6. Specialized training sessions for workers in the fire department as they are exposed to dealing with exploding generators
7. Awareness programs for the youth and the children to inform about PCBs, how they can be dealt with, their health hazards and the international agreements in the field
8. Formulating a regional database with the experts in the field of analysis/ treatments/environmental management
9. Suggesting a project for detecting and analyzing PCBs in the countries that lack technical xperience in the field



Regional Workshop on the Environmentally Sound Management of Polychlorinated Biphenyls (PCBs)
29 March, 2015 , Alexandria ,Egypt

8:30-9:00	Registration
Opening session	
9:00-9:30	Opening Remarks
9:30-9:40	<i>Break</i>
Session I	
9:40-10:00	Key Note Speaker ESM of Polychlorinated Biphenyls (PCBs) , Prof. El Mohamady Eid, Member of the National Disciplinary Councils. Environmental Consultant, BCRC-Egypt
10:00-10:30	PCBs in the Environment “Sources, Distribution , Impact and Risk Management “ Dr. Ashraf Mohamed Sami-Deputy Head of POPs section Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food
10:30-11:00	<i>Coffee break</i>
Session II	
11:00-12:00	PCBs Analysis Dr. Ashraf Mohamed Sami-Deputy Head of POPs section Central Lab of Residue Analysis of Pesticides and Heavy Metals in Food
12:00-1:00	PCBs Inventories Clean –Up Success Stories Example of Contaminated Sites that have been clean up
1:00-2:00	Process used for cleaning up the site Dr. Yasser Badr El Din- Director of Hazardous Wastes Department and National Focal Point of SAICM - the Egyptian ministry of environment <i>Lunch break</i>
Session III	
2:00-2:30	Impact of PCBs on the Human Health Dr. Mahmoud Amr- Professor of Occupational and Environmental Diseases in Faculty of Medicine, Cairo University -Founder of National Center for Clinical and Environmental Toxicology.
2:3-3:30	Green Clean Up Of PCBs Polluted Environment (Phytoremediation) Dr. Hesham El-Kassas, Prof. of Soil and Water Environment , Dean-Institute of Environment Studies and Research (IESR)-Ain Shams University
3:30-4:00	<i>Coffee break</i>
Session IV	

4:00- 5:00	<p>Presentation by the Arab Countries’ Representatives on the Current Status of PCBs Inventories</p> <ul style="list-style-type: none"> - Amimi Taha - representative Morocco -Mrs. Rehab Osman, representative of Sudan - Mr. Amgad Ibrahim, representative of Palestine -Hanna Abo-Habib, representative of Lebanon
5:00- 6:30	<p>Round –Table Discussion made up of</p> <p>Amgad Ibrahim, representative of Palestine Hanna Abo-Habib, representative of Lebanon Rehab Osman, representative Sudan Dr. Mohammdy Eid, A representative from BCRC-Egypt, A representative of Arab League Dr.Mahmoud Amr Dr.Hesham El-Kassas Dr. Ashraf Sami Dr. Yasser Badr El Din</p> <p>Their goal was to finalize the recommendations of the workshop.</p>
6:30- 7:00	<p><i>Closure of Workshop</i></p>



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2015 March , 29 , Alexandria ,Egypt

ورشدة العمل الاقليمية للادارة السليمة بيئيا لمركبات ثنائي الفينيل متعدد الكلور (PCBs)
مدينة الاسكندرية - جمهورية مصر العربية 29 مارس 2015
تقييم استمارة

الاسم رباعي :	الموقع الوظيفي:
قطاع / قسم / إدارة :	هيئة / وزارة / أخرى:
رقم الهاتف الشخصي :	البريد الإلكتروني:
الدولة:	
عنوان المراسلات (تفصيليا):	

البيان	ممتاز	جيد جدا	جيد	متوسط	ضعيف
محتوى ورشة العمل					
المادة العلمية المعروضة خلال ورشة العمل .					
تقييمك العام على محاضرين ورشة العمل					
تنظيم وسهولة محتوى المادة العلمية					
تحقيق اهداف ورشة العمل					
مستوى تنظيم ورشة العمل .					
التجهيزات والوسائل المستخدمة					
مدة ورشة العمل					
مكان ورشة العمل					
التوقيت					
تقييمك العام لورشدة العمل					

الاقتراحات والملاحظات:

Evaluation Sheet and Results Analysis

Total Number of Completed Evaluation Sheets = 8

Evaluation of the workshop:

Category	Excellent	Very Good	Good	Mediocre	Weak
The content of the workshop	5	3			
The workshop scientific material distributed	4	4			
General rating on the lecturers workshop	5	2	1		
The organization and the ease of scientific material	4	3	1		
Achieving the goals of workshop	3	2	3		
The level of organization	5	3			
The presentation equipment and the means of presentation	5	2	1		
The period of the workshop	3	2	3		
The location of the workshop	4	2	2		
The timing of the workshop	5	1	2		
The general evaluation	4	2	2		

The analysis

The results showed that the workshop had achieved main goals..

List of Participants:

Title	Name	Country	Job
Mr	Mohamed Konnah	Arab league	Diplomatic Tel :01287224460 E-mail : Mohamed-konna@hotmail.com
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Mr.	Mahmoud Bakry	Egypt	Chief Editor of Elaosboa Newspaper
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Mrs.	Gehan Hussein	Egypt	Journalist
Mrs.	Sara Kandeel	Egypt	Journalist
Mr.	MontaserEl shatby	Egypt	Journalist
Mr.	Ahmed Abdel Rehim	Egypt	Journalist