



**Stockholm Convention
on Persistent Organic
Pollutants**

Distr.: General

26 April 2023

English only

**Conference of the Parties to the Stockholm
Convention on Persistent Organic Pollutants
Eleventh meeting**

Geneva, 1–12 May 2023

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**

**Draft strategy for Parties to meet the 2025 and 2028 goals of the
Stockholm Convention**

Note by the Secretariat

As is mentioned in the note by the Secretariat on polychlorinated biphenyls (UNEP/POPS/COP.11/6), the annex to the present note sets out a draft strategy for Parties to meet the 2025 and 2028 goals of the Stockholm Convention prepared by the Secretariat in consultation with the small intersessional working group on polychlorinated biphenyls re-established in paragraph 6 of decision SC-9/3. The present note, including its annex, has not been formally edited.

* UNEP/POPS/COP.11/1.

Annex

Draft strategy for Parties to meet the 2025 and 2028 goals of the Stockholm Convention

Table of contents

1.	Introduction.....	3
2.	Actions required and challenges to meet the 2025 and 2028 goals.....	5
2.1	Elimination of the use of PCB in equipment	5
2.2	Environmentally sound disposal of PCB waste	6
3.	Strategic guidance to Parties	6
3.1	PCB inventories	6
3.2	PCB use phase-out.....	7
3.3	PCB waste disposal.....	7
3.4	Sustainable funding.....	8
3.5	Development of a national strategy	8
4.	Possible useful actions at the regional and global levels.....	8
	Appendix: Template for developing a national strategy for PCB elimination	9

1. Introduction

1. Polychlorinated biphenyls (PCB) are a group of organic compounds that were widely used in electrical equipment, industrial machinery, and construction materials in the past. Due to their persistence in the environment and potential health effects, PCB have been banned or severely restricted in many countries. However, PCB continue to be a concern in many parts of the world, and their environmentally sound management is necessary to protect human health and the environment.
2. In accordance with paragraph 1 (a) of Article 3 and Annex A to the Stockholm Convention, Parties to the Convention are not allowed to produce, import or export PCB for intentional use. In line with paragraph (c) of part II of Annex A, notwithstanding paragraph 2 of Article 3, Parties shall ensure that the equipment containing PCB shall not be exported or imported except for the purpose of environmentally sound waste management.
3. According to part II of Annex A, with regard to the elimination of the use of PCB in equipment (e.g. transformers, capacitors or other receptacles containing liquid stocks) by 2025, subject to review by the Conference of the Parties, Parties should take action in accordance with the following priorities:
 - (a) Make determined efforts to identify, label and remove from use equipment containing greater than 10 per cent PCB and volumes greater than 5 litres;
 - (b) Make determined efforts to identify, label and remove from use equipment containing greater than 0.05 per cent PCB and volumes greater than 5 litres;
 - (c) Endeavour to identify and remove from use equipment containing greater than 0.005 percent PCB and volumes greater than 0.05 litres.
4. Part II of Annex A also provides that each Party shall make determined efforts designed to lead to environmentally sound waste management of liquids containing PCB and equipment contaminated with PCB having a PCB content above 0.005 per cent, in accordance with paragraph 1 of Article 6, as soon as possible but no later than 2028, subject to review by the Conference of the Parties.
5. According to paragraph (g) of part II of Annex A to the Convention, each Party shall provide a report every five years on progress in eliminating PCB and submit it to the Conference of the Parties pursuant to Article 15. Following decision SC-2/18, the intervals of the review as well as the submission of the information have been set to four years, as part as the national reports pursuant to Article 15.
6. The first national reports (31 December 2006, extended to 31 July 2007); second national reports (31 October 2010); third national reports (31 August 2014); fourth national reports (31 August 2018); and fifth national reports (31 August 2022) submitted by Parties are available for viewing at the Stockholm Convention website.¹
7. At its ninth meeting, the Conference of the Parties undertook its third review pursuant to paragraph (g) of part II of Annex A on the basis of the report developed by the small intersessional working group on PCB.² In decision SC-9/3, the Conference of the Parties urged Parties to step up their efforts by urgently implementing actions to eliminate the use of PCB in equipment by 2025 and to achieve the environmentally sound management as waste of liquids containing PCB and equipment contaminated with PCB having a content above 0.005 per cent by 2028 and encouraged Parties to report on progress towards the elimination of PCB. In the same decision, the Conference of the Parties decided to undertake, at its eleventh meeting, the fourth review of the progress towards elimination of PCB.
8. In response to the request by the Conference of the Parties in decision SC-9/3, the Secretariat prepared, in consultation with the small intersessional working group on PCB, a report on progress towards the elimination of PCB,³ guidance on a standardized approach to developing inventories of PCB and to analysis for the identification and quantification of PCB,⁴ and a draft strategy for Parties to meet the 2025 and 2028 goals of the Stockholm Convention.⁵

¹ <http://chm.pops.int/tabid/3668>.

² UNEP/POPS/COP.9/INF/10.

³ UNEP/POPS/COP.11/INF/11.

⁴ UNEP/POPS/COP.11/INF/12.

⁵ UNEP/POPS/COP.11/INF/13.

9. The report on progress towards the elimination of PCB⁶ was developed on the basis of the information contained in the third, fourth and fifth national reports pursuant to Article 15 of the Stockholm Convention, the Basel Convention national reports pursuant to Article 13 from 2001 to 2020, and other official sources of information.
10. According to the report, the total production of PCB worldwide has been estimated to be around 1.5 million tons of PCB. This is the total amount of pure PCB produced worldwide. Based on the consolidated guidance on PCB in open applications,⁷ about 48% of the 1.5 million tons of PCB produced were used as dielectric fluid in electrical transformers and power correction capacitors and about 21% in small capacitors used in fluorescent light ballasts and other applications.
11. The quantitative analysis showed a continuous increase of the amounts of PCB eliminated locally and exported for elimination. A total of 593,000 tons elimination have been reported, corresponding to 260,000 tons eliminated locally and 330,000 tons exported for elimination. Despite the absence of accurate information of the total amount of PCB destroyed, it is generally accepted that the elimination of PCB needs to be accelerated in order to meet the 2025 and 2028 goals of the Stockholm Convention.
12. Regarding the presence of PCB in the environment, the global monitoring report presents the current findings on POPs concentrations at the global scale under the global monitoring plan (GMP).⁸ In general, concentrations of PCB in the different media and regions are declining and are starting to level off. Most congeners have low and acceptable levels, whereas PCB-118 is close to or exceeds the environmental assessment criteria (EAC) in three out of five assessment areas in the North Atlantic by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), PCB concentrations exceeded the threshold in some areas of the Baltic Sea (EC: 75 µg/kg ww with 5% lipid normalization), and ΣPCB is still above the target of 0.1 µg/g ww in whole fish in some fish species in some of the Great Lakes. Dioxin-like PCB levels in Mediterranean sperm-whales are the highest for this species worldwide, and PCB in Arctic top predators are still high and associated with negative effects.
13. All those results show that, even if levels of PCB in the environment are decreasing in many regions, there is still a need to eliminate primary and secondary sources of releases of PCB to the environment from intentional and un-intentional production. It is expected that the proper elimination of PCB from known sources such as electrical equipment and other closed and open applications will prevent additional PCB being emitted into the environment and therefore, its concentration on the different media would continue to reduce slowly.
14. The present document provides a strategy for Parties and outlines a framework for the environmentally sound management of PCB, considering existing guidance and lessons learned from past action. The strategy includes elements and actions required to meet the 2025 and 2028 goals (chapter 2), strategic guidance (chapter 3), and possible further actions at the regional and global levels (chapter 4).
15. This strategy does not cover actions to address PCB in open applications. Nevertheless, similar approaches could be established to take the necessary measures to ensure the environmentally sound management of articles containing PCB.
16. Parties, in particular developing countries and countries with economies in transition are invited to use this strategy along with relevant guidance documents to develop their own programs as part as their national implementation plans.⁹

⁶ UNEP/POPS/COP.11/INF/11.

⁷ UNEP/CHW.13/6/Add.4/Rev.1.

⁸ UNEP/POPS/COP.11/INF/38.

⁹ <http://www.pops.int/tabid/565>.

2. Actions required and challenges to meet the 2025 and 2028 goals

2.1 Elimination of the use of PCB in equipment

17. Paragraph (a) of Part II of Annex A to the Stockholm Convention provides that Parties shall make determined efforts to identify, label and remove from use equipment (e.g., transformers, capacitors or other receptacles containing liquid stocks) containing PCB by 2025, prioritizing the environmentally sound management of highly concentrated PCB.

18. In order to fulfil this, each Party should consider taking following action:

(a) Develop and enforce regulations to prohibit the production, import, and use of PCB and PCB-containing products and the regulatory framework to establish the obligations and requirements at the national and local levels for identifying, labelling and removing of PCB contaminated equipment in use. Key considerations related to this action include the following:

- (i) Ensuring that stakeholders' interests and needs are considered when developing new regulations;
- (ii) Undertaking periodic review and update of the regulations;
- (iii) Considering technical and economic resources and assess impact when establishing new obligations;

(b) Develop national and local capacities for the identification, sampling and testing of PCB following international quality standards. Key considerations related to this action include the following:

- (i) Ensuring quality standards for taking samples and analysis in laboratories;
- (ii) Accessibility and costs of screening and confirmation methods;
- (iii) Testing strategies for sampling and classifying big pools of equipment;

(c) Establish national and local schemes for environmental control and enforcement to oversee implementation of the regulations, inspect and monitor compliance. Key considerations related to this action include the following:

- (i) Enhancing national and local capacities for inspection and enforcement of environmental legislation;
- (ii) Developing schemes for law enforcement, including incentives and sanctions;
- (iii) Promoting awareness and information sharing from PCB owners;

(d) Develop a national inventory for the registration and monitoring of PCB-containing equipment and materials, where information on the status and quantities of contaminated equipment is collected and updated periodically. Key considerations related to this action include the following:

- (i) Identifying PCB ownership;
- (ii) Preparing, updating and maintaining PCB inventories with accurate information;

(e) Establish provisions for taking out of use and temporary storage of contaminated equipment including equipment out of use intended for decontamination and hazardous waste previous to its disposal. Key considerations related to this action include the following:

- (i) Undertaking cost-benefit analysis;
- (ii) Developing standards and technical specifications of temporary storage facilities;
- (iii) Ensuring that storage is a temporary solution and guarantee the disposal and elimination of PCB waste.

2.2 Environmentally sound disposal of PCB waste

19. Paragraph (e) of part II of Annex A to the Stockholm Convention provides that Parties shall make determined efforts to manage in an environmentally sound manner PCB waste no later than 2028 by ensuring the proper elimination and disposal of this wastes.

20. In order to fulfill this, each Party should consider taking following action:

(a) Set up and enforce regulatory schemes for the environmentally sound management of PCB waste, as a type of hazardous waste, including provisions for hazardous waste transportation and licensing of disposal facilities. Key considerations related to this action include the following:

- (i) Whether to develop specific PCB regulations or hazardous waste regulations in general;
- (ii) Establishing control measures for PCB waste transport and transboundary movements;
- (iii) Conducting environmental impact assessments and new technologies licensing for disposal facilities, including mobile facilities and emerging technologies;

(b) Develop local capacities for the disposal, including treatment, recycling and elimination of different types of PCB waste, where possible. Key considerations related to this action include the following:

- (i) Assessing technical and economic feasibility;
- (ii) Ensuring public participation and risk communication during the licensing process;
- (iii) Ensuring optimal operational conditions and reducing risks;
- (iv) Ensuring environmentally sound management of highly concentrated PCB waste;

(c) Establish national and local schemes for environmental control and enforcement to oversee the management of PCB done by waste owners, transporters and disposal facilities. Key considerations related to this action include the following:

- (i) Training and maintaining inspectors for building enforcement capacities;
- (ii) Managing a large number of facilities;

(d) Mainstream funding for ensuring sufficient resources to conduct the necessary actions to achieve the targets. Key considerations related to this action include the following:

- (i) Implementing the polluter pays principle;
- (ii) Ensuring sustainable funding;

(e) Periodically review the implemented strategy to adjust as necessary. Key considerations related to this action include the following:

- (i) Continuous monitoring;
- (ii) Timing for review strategies and programmes.

3. Strategic guidance to Parties

3.1 PCB inventories

21. Developing a complete inventory is essential for fulfilling the 2025 and 2028 goals. It should be prepared using clear definitions and goals since errors or gaps in the estimation of the PCB amount could result in insufficient characterization of the problem.

22. The small intersessional working group on PCB has developed guidance for development of PCB inventories and analysis of PCB.¹⁰ The following items highlight some of the steps and activities needed to establish and maintain an accurate PCB inventory.

¹⁰ UNEP/POPS/COP.11/INF/12.

PCB identification

23. Steps for PCB identification in target locations include the following:
- (a) Determine all possible target locations for PCB inspection;
 - (b) At the target locations, determine potential PCB-containing applications;
 - (c) For all transformers, capacitors and other electric equipment, inspect equipment for the initial indication of PCB;
 - (d) At the target locations, determine potential PCB waste;
 - (e) Test the identified closed, partially closed, open applications and wastes for determining the presence of PCB;
 - (f) Determine the possible options for interim safe storage and disposal of PCB waste.

Determination of PCB content

24. The PCB determination approach, including sampling and chemical analytical procedures, should be agreed upon and documented. Screening test kits have been helpful to have quick information for decision making, but only laboratory analyses of PCB can provide accurate information to determine compliance with Annex A part II and subpoints contained therein.

Ensuring quality standards

25. Accreditation of laboratories or other types of certifications ensure that analyses are undertaken competently in the respective matrix. The credibility of laboratory data that results from accreditation and from successful participation in interlaboratory assessments for PCB waste oils is essential. Standardized methods should be used across country borders and time periods to make results comparable. Alternatively, other criteria can be used to check the quality of the reporting laboratory. The ultimate criterion would be the certificate for a successful participation in an interlaboratory assessment on PCB in dielectric fluids.

3.2 PCB use phase-out

26. PCB phase-out aims to eliminate all measurable discharges of PCB into the environment from equipment, starting with enclosed areas, and working steadily towards the suppression of all PCB use likely to cause a discharge that might be impossible to contain. A PCB phase-out strategy should consider risks to human health and the environment, as well as economic and technical factors.

27. Several countries have included priority criteria in their regulations applicable to the elimination of the use of PCB in equipment, considering the risk factor concerning their location. There are specific public and private locations where measures should be prioritized to remove PCB equipment, including hospitals, medical centres, commercial centres, schools and universities, agro-food industries and manufacturers of food products, water and sanitation services, government offices, and buildings frequented by the public.

3.3 PCB waste disposal

28. Parties should develop a national mechanism for identifying and choosing suitable procedures, techniques and technologies for PCB management. Countries can also use the tools at their disposal by the Basel and Stockholm conventions relevant to the final elimination of PCB wastes.¹¹ In this context, once the technical options have been chosen, national needs or, possibly, regional needs, should be satisfied in the following areas: treatment capacity, treatment costs, and environmental impact.

29. Elimination of hazardous wastes should be carried out at a location as close as possible to the production site of the said wastes, even though it may be more economical and environmentally friendly to treat certain wastes in specialized centres situated some distance from the waste production site. The transboundary movement of hazardous wastes should be kept to a bare minimum. Specially for highly concentrated PCB waste, some regions have low capacities to eliminate these types of waste and have relied on exports to other regions. Developing further capacities at the national and regional levels will not only enhance the elimination of PCB but also provide solutions for other types of POPs waste.

¹¹ UNEP/CHW.13/6/Add.4/Rev.1, UNEP/CHW.15/6/Add.1/Rev.1.

3.4 Sustainable funding

30. Solutions for sustainable financing of PCB management and disposal through an integrated approach include mainstreaming, industry involvement and further dedicated external financing. The Secretariat has prepared a report on further options for addressing the needs, including funding needs, and challenges met to reach the targets related to the elimination of PCB.¹²

3.5 Development of a national strategy

31. The appendix to the present document provides a template for developing a national strategy for PCB elimination. Parties could consider using it to assess progress made towards meeting the 2025 and 2028 goals, develop a country baseline and elaborate a national strategy to enhance the implementation of the Stockholm Convention by addressing the gaps on the environmentally sound management of PCB.

32. This strategy should complement and be part of the developed national action plans and results could be informed as part of the national reporting procedures. For an effective implementation, the strategy should be evaluated against progress indicators and should be monitored, evaluated and updated periodically.

4. Possible useful actions at the regional and global levels

33. The following actions at the regional level have been identified to enhance implementation towards meeting the 2025 and 2028 goals:

- (a) Enhance information exchange and collaboration among Parties, including north-south and south-south cooperation;
- (b) Promote the development and update of regulations on PCB management;
- (c) Promote the coordination of country and regional level interventions to identify synergies and maximize impacts of ongoing interventions;
- (d) Promote laboratory capacities by strengthening quality assurance activities and promoting technology transfer;
- (e) Develop local and regional capacities for PCB waste treatment and final disposal, including the enhancement of existing technologies and assessment of new technologies;
- (f) Assist Parties on the development and implementation of national and regional action plans addressing PCB;
- (g) Support regional centres' activities on delivering capacity building and technical assistance for the environmentally sound management of PCB;
- (h) Share experiences on sustainable funding and cost-benefit analysis with Parties, especially developing countries and countries with economies in transition.

34. The following actions at the global level have been identified to enhance implementation towards meeting the 2025 and 2028 goals:

- (a) Consider inviting the Basel Convention to update the technical guidelines on the environmentally sound management of PCB;¹³
- (b) Enhance the financial mechanism of the Stockholm Convention to urgently address further needs of Parties to fulfil the 2025 and 2028 goals and provide the GEF with further guidance;
- (c) Assess global capacities for PCB waste treatment and final disposal to provide information for Parties with technologies and alternatives to dispose of their PCB waste;
- (d) Continue evaluating the progress made so far and prepare alternatives for Parties for the review of the Conference of the Parties of the 2025 and 2028 goals.

¹² UNEP/POPS/COP.11/INF/30.

¹³ UNEP/CHW.13/6/Add.4/Rev.1.

Appendix: Template for developing a national strategy for PCB elimination

Name of country:		Date of elaboration:			
Country Focal Point	Name:	Institution			Contact
Relevant authorities and stakeholders consulted to elaborate this strategy (add rows as necessary)	Name:	Institution			Contact
LEGISLATION					
Ratification of the Stockholm Convention	yes	No	date of entry into force:		
Ratification of the Basel Convention	yes	No	date of entry into force:		
National legislation on hazardous waste environmentally sound management (<i>Add rows as necessary</i>)	yes	No	Number:		link:
Description:					
National legislation on PCB environmentally sound management. (<i>Add rows as necessary</i>)	yes	No	Number:		link:
Description:					
Restrictions and controls on transboundary movements of hazardous waste (including PCB) (<i>Add rows as necessary</i>)	yes	No	Number:		link:
Description:					
Other relevant legislation: hazardous waste facilities, PCB labelling, transport, export, etc. (<i>Add rows as necessary</i>)	yes	No	Number:		link:
Description:					
Provisions regarding the elimination of the use of PCB in equipment by 2025	yes	No	Remarks:		
Provisions regarding the environmentally sound waste management of liquids containing PCB and equipment contaminated with PCB by 2028	yes	No	Remarks:		
PCB Inventory					
National PCB Inventory developed	Yes	No	Under development	Partial	Date of last update:
Link to PCB inventory (or attach inventory):					

Amounts of PCB inventoried (tons)	in use:		in storage:		
Sectors covered in PCB inventory:					
Electric Energy Producers, transporters and distributors	Yes	No	Remarks:		
Local distributors, municipalities etc.	Yes	No	Remarks:		
Public buildings and institutions: ports, airports, military bases, universities, etc.	Yes	No	Remarks:		
Medium and Large private electricity consumers	Yes	No	Remarks:		
Others	Yes	No	Remarks:		
Last presented national implementation plan (NIP)	date:				
PCB inventory presented in NIP?	Yes	No	Remarks:		
NIP being updated?	Yes	No	Expected year to present next updated NIP:		
Reports to the Stockholm Convention:	1st Report - 2006	Yes / No	PCB Inventory included?	Yes / No	
	2nd Report - 2010	Yes / No	PCB Inventory included?	Yes / No	
	3rd Report - 2014	Yes / No	PCB Inventory included?	Yes / No	
	4th Report - 2018	Yes / No	PCB Inventory included?	Yes / No	
	5th Report - 2022	Yes / No	PCB Inventory included?	Yes / No	
SAMPLING AND ANALYTICAL CAPACITIES					
Legal provisions for PCB sampling and identification	Yes	No	Remarks:		
Laboratories for PCB analysis (Add rows as necessary)					
Name of laboratory	location		Technologies	Certification/accr editation	Remarks
Name of laboratory	location		Technologies	Certification/accr editation	Remarks
DISPOSAL FACILITIES					
Country disposal facilities for PCB (add rows as necessary)	Yes	No	Remarks:		
Name of disposal facility	Location		technologies (chemical, incineration, landfill, etc.)	Basel operation (D5, D9, D10, R1, R2, R3, R4, etc.)	Remarks

Name of disposal facility	Location	technologies (<i>chemical, incineration, landfill, etc.</i>)	Basel operation (<i>D5, D9, D10, R1, R2, R3, R4, etc.</i>)	Remarks
Strategy to meet 2025 and 2028 goals under the Stockholm Convention				
Projects on PCB environmentally sound management (<i>Add rows as necessary</i>)				
Project title (implemented or planned)	Donor	End Date	Expected results on the environmentally sound management of PCB waste	
Project title (implemented or planned)	Donor	End Date	Expected results on the environmentally sound management of PCB waste	
Total amounts of PCB eliminated so far (tons)	Locally eliminated:		Exported for elimination:	Date of update:
Planned actions to enhance PCB elimination:				
Awareness raising activities	yes	no	Describe:	
New or revised legislation	yes	no	Describe:	
Enhancement of analytical capacities	yes	no	Describe:	
Enhancement of disposal capacities	yes	no	Describe:	
Elimination of use of PCB	yes	no	Describe:	
Elimination of PCB waste stocks	yes	no	Describe:	
Funding for PCB elimination	yes	no	Describe:	
Integration with energy efficiency/clean energy programs	yes	no	Describe:	
others (<i>Add rows as necessary</i>)	yes	no	Describe:	
Final remarks:				