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SUMMARY OF THE NINTH MEETING OF THE PERSISTENT ORGANIC POLLUTANTS REVIEW COMMITTEE OF THE STOCKHOLM CONVENTION: 14-18 OCTOBER 2013

The ninth meeting of the Persistent Organic Pollutants Review Committee (POPRC-9) of the Stockholm Convention on Persistent Organic Pollutants (POPs) took place from 14-18 October 2013 in Rome, Italy. Over 110 participants attended the meeting, including 28 of 31 Committee members, 51 government and party observers, three representatives of intergovernmental organizations, and 27 representatives from non-governmental organizations.

POPRC-9 adopted nine decisions on: the commercial mixture of decabromodiphenyl ether (c-decaBDE); pentachlorophenol and its salts and esters (PCP); chlorinated naphthalenes (CNs); hexachlorobutadiene (HCBD); the approach to the evaluation of chemicals in accordance with Annex E; guidance on how to assess the possible impact of climate change on the Committee's work; effective participation in the work of the POPRC; guidance on alternatives to perfluorooctane sulfonic acid (PFOS), its salts, perfluorooctane sulfonyl fluoride (PFOSF) and their related chemicals; and the process for evaluation of PFOS, its salts and PFOSF for acceptable uses.

POPRC-9 also established three intersessional working groups to address: PCP; the process for evaluation of PFOS, its salts and esters; and decaBDE. All of these working groups will report back at POPRC-10, which is scheduled for October 2014. In addition, the intersessional working group on short-chained chlorinated paraffins (SCCPs) established at POPRC-2, and temporarily suspended after POPRC-8, will resume its work in this intersessional period, with the aim of reconsidering SCCPs at POPRC-11.

The challenges posed by review of "live" chemicals were prominent at POPRC-9, as the Committee considered proposals to list the flame retardant decaBDE and the pesticide dicofol, both of which are globally produced and used. The Committee's experience in dealing with challenging substances facilitated discussions, but also raised concerns among some members about the coming influx of new members, as 17 veteran members prepare to complete their tenure on the POPRC. Notably, this includes the departure of the Chair Reiner Arndt (Germany), who has led the Committee since its inception.

A BRIEF HISTORY OF THE STOCKHOLM CONVENTION AND THE POPS REVIEW COMMITTEE

During the 1960s and 1970s, the use of chemicals and pesticides in industry and agriculture increased dramatically. In particular, a category of chemicals known as persistent organic pollutants (POPs) attracted international attention due to a growing body of scientific evidence indicating that exposure to very low doses of POPs can lead to cancer, damage to the central and peripheral nervous systems, diseases of the immune system, reproductive disorders and interference with normal infant and child development. POPs are chemical substances that persist in the environment, bioaccumulate in

IN THIS ISSUE

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living organisms, and can have adverse effects on human health and the environment. With further evidence of the long-range environmental transport (LRET) of these substances to regions where they have never been used or produced, and the consequent threats they pose to the global environment, the international community called for urgent global action to reduce and eliminate their release into the environment.

In March 1995, the United Nations Environment Programme's Governing Council (UNEP GC) adopted Decision 18/32 inviting the Inter-Organization Programme on the Sound Management of Chemicals, the Intergovernmental Forum on Chemical Safety (IFCS) and the International Programme on Chemical Safety to initiate an assessment process regarding a list of 12 POPs. The decision also invited IFCS to develop recommendations on international action on POPs. The IFCS *Ad Hoc* Working Group on POPs concluded that sufficient information existed to demonstrate the need for international action to minimize risks from the 12 POPs, including a global legally-binding instrument. The IFCS forwarded a recommendation to the UNEP GC and the World Health Assembly (WHA) that immediate international action be taken on these substances.

In February 1997, the UNEP GC adopted Decision 19/13C endorsing the conclusions and recommendations of the IFCS. The GC requested that UNEP, together with relevant international organizations, convene an intergovernmental negotiating committee (INC) with a mandate to develop, by the end of 2000, an international legally-binding instrument for implementing international action, beginning with the list of 12 POPs. In May 1997, the WHA endorsed the recommendations of the IFCS and requested that the World Health Organization participate actively in the negotiations.

The INC met five times between June 1998 and December 2000 to elaborate the convention, and delegates adopted the Stockholm Convention on POPs at the Conference of the Plenipotentiaries, which convened from 22-23 May 2001 in Stockholm, Sweden.

Key elements of the treaty include the provision of new and additional financial resources by developed countries and obligations for all parties to eliminate production and use of intentionally produced POPs, eliminate unintentionally produced POPs where feasible, and manage and dispose of POPs wastes in an environmentally-sound manner. Precaution is cited throughout the Convention, with specific references in the preamble, the objective and the provisions on identifying new POPs.

The Stockholm Convention entered into force on 17 May 2004 and currently has 179 parties.

The Convention can list chemicals in three annexes: Annex A contains chemicals to be eliminated; Annex B contains chemicals to be restricted; and Annex C calls for the minimization of unintentional releases of listed chemicals. When adopted in 2001, 12 POPs were listed in these annexes. These POPs include 1) pesticides: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene; 2) industrial chemicals: hexachlorobenzene and polychlorinated biphenyls (PCBs); and 3) unintentionally produced POPs: dioxins and furans.

When adopting the Convention, provision was made for a procedure to identify and list additional POPs. At the first meeting of the Conference of the Parties (COP-1), held in Punta del Este, Uruguay from 2-6 May 2005, the POPRC was established to consider additional candidates nominated for listing under the Convention.

The Committee is comprised of 31 experts nominated by parties from the five United Nations regional groups and reviews nominated chemicals in three stages. The Committee first determines whether the substance fulfills the screening criteria detailed in Annex D of the Convention, relating to the chemical's persistence, bioaccumulation, potential for LRET, and toxicity. If a substance is deemed to fulfill these requirements, the Committee then drafts a risk profile according to Annex E to evaluate whether the substance is likely, as a result of its LRET, to lead to significant adverse human health and/or environmental effects and therefore warrants global action. Finally, if the POPRC finds that global action is warranted, it develops a risk management evaluation according to Annex F, reflecting socio-economic considerations associated with possible control measures. Based on this, the POPRC decides whether to recommend that the COP list the substance under Annex A, B and/or C to the Convention. The POPRC has met annually since its establishment. The first eight meetings of the POPRC were held in Geneva, Switzerland.

POPRC-1: The first meeting of the POPRC (POPRC-1) was held from 7-11 November 2005. The Committee considered five chemicals proposed for inclusion in the Convention and agreed that intersessional working groups would develop risk profiles on these chemicals, to be assessed at POPRC-2. POPRC-1 also reviewed the Committee's role and mandate and took decisions on several operational issues, including developing procedures for handling confidential information, work plans for intersessional activities, and criteria and procedures for inviting additional experts.

POPRC-2: POPRC-2 was held from 6-10 November 2006. The Committee adopted the risk profiles for commercial pentabromodiphenyl ether (c-pentaBDE), chlordecone, hexabromobiphenyl (HBB), lindane, and perfluorooctane sulfonic acid (PFOS), and agreed that intersessional working groups would develop draft risk management evaluations for these chemicals, to be assessed by POPRC-3. The Committee also agreed to consider five newly proposed chemicals for inclusion in the Convention: alpha hexachlorocyclohexane (alphaHCH), beta hexachlorocyclohexane (betaHCH), pentachlorobenzene (PeCB), commercial octabromodiphenyl ether (c-octaBDE) and short-chained chlorinated paraffins (SCCPs), and agreed that intersessional working groups would develop risk profiles on these chemicals to be assessed at POPRC-3.

POPRC-3: This meeting took place from 19-23 November 2007. The Committee approved the risk management evaluations for five chemicals and recommended that COP-4 consider listing under Annexes A, B, and/or C: lindane; chlordecone; HBB; c-pentaBDE; and perfluorooctane sulfonic acid (PFOS), its salts, and perfluorooctane sulfonyl fluoride (PFOSF). Risk profiles were approved for four chemicals, and POPRC-3 adopted a work programme to prepare draft risk management evaluations for those chemicals, namely: c-octaBDE, PeCB, alphaHCH and betaHCH. The Committee decided that a proposal by the

European Community to consider endosulfan for inclusion in Annexes A, B, and/or C would be considered at POPRC-4.

POPRC-4: This meeting convened from 13-17 October 2008. POPRC-4 considered several operational issues, including: conflict-of-interest procedures; toxic interactions between POPs; and activities undertaken for effective participation of parties in the POPRC's work. The Committee approved the risk management evaluations for four chemicals, and recommended that COP-4 consider listing under Annexes A, B, and/or C: c-octaBDE, PeCB, alphaHCH and betaHCH. A draft risk profile for SCCPs was discussed and the Committee agreed to forward it to POPRC-5 for further consideration. POPRC-4 also evaluated a proposal to list endosulfan under the Convention and agreed, by vote, that it met the Annex D criteria for listing and that a draft risk profile should be prepared for consideration by POPRC-5. POPRC-4 also began an exchange of views on a proposal to list hexabromocyclododecane (HBCD).

COP-4: The fourth meeting of the Conference of the Parties (COP-4) was held from 4-8 May 2009 in Geneva, Switzerland. Parties adopted 33 decisions on a variety of topics, including financial resources and technical assistance and the listing of nine new substances under Annexes A, B, and/or C of the Convention, namely: c-pentaBDE; chlordecone; HBB; alphaHCH; betaHCH; lindane; c-octaBDE; PeCB; and PFOS, its salts and PFOSF. The amendment to list additional POPs under Annexes A, B and/or C entered into force on 26 August 2010. This amendment did not apply to those 20 parties that had declared, in their original ratification, that any amendment to Annexes A, B and/or C shall enter into force only upon deposit of their instruments of ratification with respect to such amendments. One party also provided a notification that it was unable to accept the amendments. Countries that have become parties to the Stockholm Convention following adoption of amendments to Annexes A, B, and/or C are bound to the entire Convention as amended. To date, the COP-4 amendments have entered into force for 162 parties.

POPRC-5: POPRC-5 met from 12-16 October 2009 and addressed several operational issues, including: work programmes on new POPs; substitutions and alternatives; toxicological interactions; and activities undertaken for effective participation in the POPRC's work. POPRC-5 agreed that HBCD met the Annex D criteria for listing and that a draft risk profile should be prepared. Draft risk profiles for endosulfan and SCCPs were considered. SCCPs were kept in the Annex E phase for further consideration at POPRC-6 and the Committee, through a vote, decided to move endosulfan to the Annex F phase, while inviting parties to submit additional information on adverse effects on human health.

Ex-COP1: The first simultaneous extraordinary Conferences of the Parties to the Basel, Rotterdam and Stockholm Conventions were held from 22-24 February 2010 in Bali, Indonesia. Delegates adopted an omnibus synergies decision on joint services, joint activities, synchronization of the budget cycles, joint audits, joint managerial functions, and review arrangements. Jim Willis was appointed as the Joint Head of the Basel and Stockholm Convention Secretariats and the UNEP part of the Rotterdam Convention Secretariat in April 2011.

POPRC-6: POPRC-6 met from 11-15 October 2010 and addressed several operational issues, including: support for effective participation in the POPRC's work; work programmes on new POPs; and intersessional work on toxic interactions. POPRC-6 adopted the risk profile for HBCD and established an intersessional working group to prepare a draft risk management evaluation on HBCD. The POPRC also agreed, by a vote, to adopt the risk management evaluation for endosulfan and recommend listing endosulfan in Annex A, with exemptions. The Committee considered a revised draft risk profile on SCCPs, and agreed to convene an intersessional working group to revise the draft risk profile on the basis of an intersessional discussion of the application of the Annex E criteria to SCCPs and of information arising from a proposed study on chlorinated paraffins by the intersessional working group on toxic interactions. The Committee agreed to consider the revised draft risk profile at POPRC-8.

COP-5: COP-5 was held from 25-29 April 2011 in Geneva, Switzerland. Parties considered several reports on activities within the Convention's mandate and adopted over 30 decisions on, *inter alia*: listing technical endosulfan and its isomers in Annex A of the Convention with exemptions for specified crop-pest complexes; financial and technical assistance; synergies; and endorsing seven new Stockholm Convention regional centres, in Algeria, Senegal, Kenya, South Africa, Iran, India and the Russian Federation. The COP-5 amendment to list endosulfan under Annex A entered into force for most parties on 27 October 2012. To date, the COP-5 amendment has entered into force for 158 parties. COP-5 also requested the POPRC to: assess alternatives to endosulfan; develop terms of reference for a technical paper on the identification and assessment of alternatives to the use of PFOS in open applications; and assess alternatives to DDT.

POPRC-7: POPRC-7 met from 10-14 October 2011 and addressed several issues, including: advancing chlorinated naphthalenes (CNs) and hexachlorobutadiene (HCBD) to the risk profile stage; recommending that parties consider listing HBCD in Annexes A, B, and/or C of the Convention; effective participation in the Committee's work; assessment of alternatives to PFOS in open applications, DDT, and endosulfan; and the impact of climate change on POPs. The Committee also established nine intersessional working groups to address HBCD, HCBD, CNs, pentachlorophenol (PCP) and its salts and esters, alternatives to endosulfan and DDT, alternatives to PFOS in open applications, the draft risk profile on SCCPs, consideration of toxic interactions, and the impact of climate change on the Committee's work.

POPRC-8: POPRC-8 met from 15-19 October 2012 and adopted 12 decisions, including on: advancing PCP, its salts and esters to the risk profile stage; advancing CNs and HCBD to the risk management evaluation stage; and amending POPRC-7's decision on HBCD to recommend that parties consider listing it in Annex A with specific exemptions. POPRC-8 established six intersessional working groups to address: CNs; HCBD; PCP, its salts and esters; the impact of climate change on the POPRC's work; issues and common practices in the application of Annex E criteria; and the guidance on alternatives to PFOS, its salts

and PFOSF. The Committee also established an intersessional working group to continue revising the draft risk profile for SCCPs. This group will begin working after POPRC-9.

COP-6: COP-6 convened from 28 April -10 May 2013 in Geneva, Switzerland, in a joint meeting with COP-11 of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and COP-6 of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the second simultaneous extraordinary meetings of the COPs to the three Conventions (ExCOPs-2). The COP, *inter alia*: decided to list HBCD in Annex A with specific exemptions for production and use in expanded and extruded polystyrene in buildings; continued negotiations on establishment of a compliance mechanism; adopted a methodology for reviewing regional centres; and adopted a revised framework for effectiveness evaluation.

POPRC-9 REPORT

On Monday, 14 October 2013, Jim Willis, Executive Secretary of the Basel, Rotterdam and Stockholm Conventions, opened the ninth meeting of the Persistent Organic Pollutants Review Committee (POPRC-9), welcoming participants to Rome and noting that the back-to-back and joint meetings of the POPRC and the Rotterdam Convention's Chemical Review Committee (CRC) would facilitate broader discussion on the technical work underpinning the global chemicals conventions. He highlighted the recent adoption of the Minamata Convention on Mercury, predicting that it would provide new opportunities for cooperation among and coordination of the technical work of the four global chemicals and wastes conventions.

POPRC Chair Reiner Arndt (Germany) welcomed participants, emphasizing the role of members in decision-making and the importance of observers in providing technical information to improve the POPRC's outputs. He then introduced the provisional agenda (UNEP/POPS/POPRC.9/1), which was adopted without amendment, and reviewed the proposed organization of work for the week (UNEP/POPS/POPRC.9/INF/2). Chair Arndt proposed moving the discussion on Item 8(c) (Approach to the evaluation of chemicals in accordance with Annex E to the Stockholm Convention) to Monday afternoon in order to have that discussion in connection with Item 6 (Consideration of a draft risk profile on pentachlorophenol and its salts and esters). The schedule was approved as orally amended.

The Committee met in plenary throughout the week. Contact groups, open to observers, and drafting groups, limited to POPRC members, convened on a variety of topics. Some items were also addressed in Friends of the Chair groups, which often included both members and observers. The summary of this meeting is organized according to the order of the agenda.

The current members of the POPRC are Argentina, Brazil, Cameroon, Canada, China, Colombia, Costa Rica, Cuba, Czech Republic, Egypt, Finland, France, Germany, India, Indonesia, Japan, Jordan, Kenya, Kuwait, Madagascar, the Netherlands, New Zealand, Nigeria, Norway, Republic of Korea, Former Yugoslav Republic of Macedonia, Sudan, Tanzania, Thailand, Ukraine and Zambia. The members from Nigeria, Thailand and the Former Yugoslav Republic of Macedonia were unable to attend POPRC-9.

REVIEW OF COP-6 OUTCOMES RELEVANT TO THE COMMITTEE'S WORK

On Monday, the Secretariat reported on the relevant outcomes of the sixth meeting of the Conference of Parties to the Stockholm Convention (COP-6) and the second simultaneous extraordinary meetings of the COPs to the Basel, Rotterdam and Stockholm Conventions (ExCOPs-2) (UNEP/POPS/POPRC.9/INF/3), highlighting that COP-6 agreed to list hexabromocyclododecane (HBCD) in Annex A of the Convention with a specific exemption for expanded and extruded polystyrene in buildings. She also noted that ExCOPs-2 had requested the POPRC to report on its experience at the joint meeting with the CRC. Chair Arndt said that the POPRC should be satisfied that the COP adopted the Committee's recommendations.

ROTATION OF MEMBERSHIP

On Monday, the Secretariat reported that the parties nominated to designate POPRC experts with terms beginning in 2014 (UNEP/POPS/POPRC.9/INF/4) include: Australia, Austria, Belarus, Canada, Czech Republic, Ecuador, Gabon, Iran, Lesotho, Mauritania, Oman, Pakistan, St. Vincent and the Grenadines, Senegal, Sri Lanka, Sweden, and Venezuela. Chair Arndt said he would consult informally with current and incoming members to identify possible new Chairs for intersessional work.

On Wednesday, the Committee elected Estefânia Gastaldello Moreira (Brazil) and Azhari Abdelbagi (Sudan) as interim Chair and Vice-Chair of the POPRC, respectively, effective 5 May 2014.

CONSIDERATION OF DRAFT RISK MANAGEMENT EVALUATIONS

CHLORINATED NAPHTHALENES: On Monday, the Secretariat introduced the documents related to the draft risk management evaluation for chlorinated naphthalenes (CNs) (UNEP/POPS/POPRC.9/4 and UNEP/POPS/POPRC.9/INF/5). Svitlana Sukhorebra (Ukraine), Chair of the intersessional working group on CNs, reviewed the chemical identity of CNs, their status under other international agreements, national actions, and sources and proposed control measures. She highlighted the working group's proposal that the POPRC recommend the listing of CNs in Annexes A and C.

Canada highlighted the importance of accurately distinguishing between "stockpiles" and "wastes" in the draft risk management evaluation.

China expressed concern about the cost of reducing CNs, especially for developing countries, and highlighted the lack of capacity for monitoring reductions.

India called for separate consideration of intentional production, unintentional production and stockpiles or wastes, noting that different technologies are used for each, and underscored the challenges of funding and monitoring CN reductions. He added that the data on technology were not readily available and should be collected before adoption of the

risk management evaluation. Chair Arndt explained that adoption of the draft risk management evaluation would initiate a process to collect such data at a later stage, and that this work would be the responsibility of the Expert Group on Best Available Techniques (BAT) and Best Environmental Practices (BEP).

An observer from Gabon noted many of the activities listed in the draft risk management evaluation occur in free trade zones and suggested including a reference to this issue. Egypt called attention to the release of chemicals such as CNs at uncontrolled disposal sites near large industrial zones in developing countries. Kuwait queried, *inter alia*, the methods used to estimate the quantities of CNs contained in stockpiles of fluids containing polychlorinated biphenyls (PCBs). Chair Arndt said that the exact quantities were irrelevant because the risk management evaluation simply informs parties that CNs are present in PCBs and will be destroyed when PCBs are destroyed.

Tanzania and Sudan called for assistance for developing countries to identify materials containing CNs. Colombia emphasized the role of governments in allocating resources for effective action on these substances.

Indonesia noted the draft risk evaluation used both "CNs" and polychlorinated naphthalenes ("PCNs") and suggested using "PCNs" consistently. An observer from Belarus noted that the list of commercial trade names in the draft risk management evaluation might not be exhaustive and said this should be clarified.

Several members, including from the Republic of Korea, Tanzania, Zambia, Kenya and Sudan, supported listing CNs in Annexes A and C of the Stockholm Convention. India reiterated that he could not support the listing of CNs with the information currently provided, and suggested deleting a reference to the possible formation of low concentrations of CNs through the chlorination of drinking water. Egypt urged the POPRC to agree on possible concentration levels before addressing water chlorination. Chair Arndt said it was unnecessary to delete the reference to water chlorination, since the risk management evaluation itself noted that recent studies did not support this finding.

Noting general support for a recommendation to list CNs, Chair Arndt suggested that a drafting group be established to address all comments, consider whether the existing source categories listed in Annex C of the Convention are sufficient, and specify whether new source categories should be included.

On Wednesday, Sukhorebra introduced the draft decision and the draft risk management evaluation on CNs. She highlighted bracketed text in the draft decision specifying that "developing countries and countries with economies in transition require technical and financial capacity to monitor emissions of PCNs." Chair Arndt noted that such statements would normally be included in the draft risk management evaluation rather than in the draft decision. China, supported by India, favored keeping the statement in the draft decision, emphasizing that the cost of monitoring CNs is a significant challenge for developing countries. Chair Arndt suggested including the statement in the letter to the parties notifying them of the recommendation to list CNs. The Committee agreed to delete the brackets in the draft decision, thereby retaining the suggested text, and also to highlight this issue in the letter to parties.

Canada asked why the draft decision included a description of compounds based on the naphthalene ring system, suggesting this could exceed the scope of the POPRC's review and set a negative precedent. France clarified that the approach was similar to that of PCBs and dioxins. Kuwait called for a more specific listing, and several members stressed the importance of clearly and correctly identifying the chemicals recommended for listing in the Convention. Chair Arndt suggested listing "PCNs" and including a footnote specifying the listing of chlorinated naphthalene congeners containing from two to eight chlorine atoms. The Committee established a small drafting group to prepare text on this issue.

On the revised draft risk management evaluation, Sukhorebra noted bracketed text stating that there is no PCN production in China. The Committee agreed to remove the brackets and revise the text to clarify this point.

On Wednesday afternoon, the Secretariat presented the revised text suggested by the small drafting group, which called for listing of the congeners from di- to octa-CN. The Committee accepted this text and agreed to amend a reference to monitoring challenges in the preamble of the decision to specify only those congeners identified as POPs.

With these oral amendments, the POPRC adopted the revised risk management evaluation and the draft decision on CNs.

Final Decision: In the decision (UNEP/POPS/POPRC.9/CRP.1), the POPRC adopts the risk management evaluation for chlorinated naphthalenes, deciding, in accordance with paragraph 9 of Article 8 of the Convention, to recommend to the COP that it consider listing dichlorinated naphthalenes, trichlorinated naphthalenes, tetrachlorinated naphthalenes, pentachlorinated naphthalenes, hexachlorinated naphthalenes, heptachlorinated naphthalenes, and octachlorinated naphthalenes in Annexes A and C to the Convention.

HEXACHLOROBUTADIENE: On Monday, Floria Roa-Gutiérrez (Costa Rica) introduced the draft risk management evaluation on hexachlorobutadiene (HCBD), explaining that while the substance is not known to be currently produced or used, recent monitoring data suggest that intentional production or unintentional generation and release have continued "until at least recently." Noting that HCBD is under review for listing in the Rotterdam Convention, she said the draft risk management evaluation recommends listing HCBD in Annexes A and C without specific exemptions.

China asked if carbon tetrachloride, which can lead to unintentional production of HCBD, was still used. Japan expressed concern about the lack of references in sections of the document regarding alternatives to the use of chlorinated solvents. India requested clarification on which sections of the report considered the aluminum industry and said the availability of alternatives should be taken into consideration for some uses, such as dry cleaning. The World Chlorine Council said the conclusions on alternatives to chlorinated solvents are not supported by evidence and suggested removing some of these conclusions. The International POPs Elimination Network (IPEN) underscored that the Stockholm Convention's value lies in its ability to deal with substances in use, saying this is not a theoretical exercise and that data derived from substitution exercises are available.

Zambia said that the Committee should consider all the isomers and clarify which chemical structures are included in the draft risk management evaluation. Egypt asked about the incineration technology required to avoid the unintentional production of HCBD during ethylene production. Roa-Gutiérrez responded that, with the correct technology that uses high temperatures, HCBD would be incinerated.

Stressing that there was not enough data on unintentional releases of HCBD, China said he could not support listing HCBD in Annex C. He called for information on the sources of release and the costs of implementing measures to prevent unintentional releases, and said such information could be collected intersessionally and reviewed at POPRC-10. France explained that the intersessional working group had requested countries to submit data on production processes for chlorinated solvents in developing countries, but because no information had been received after one year, it was unclear whether additional time would yield more data.

Argentina, supported by India, said that addressing unintentional releases of HCBD at this time would put an undue burden on developing countries. India said information on socio-economic impacts is insufficient. An observer from China stated that research is available in his country on environmental and socio-economic impacts of controlling HCBD releases.

Stressing that developing countries lack the capacity to collect this information, Tanzania suggested addressing data gaps in the implementation stage and, with Costa Rica and the Netherlands, supported listing HCBD in Annex C. Kuwait stated there is "no doubt" on the need to control releases of HCBD and noted that listing chemicals in Annex A or C creates different obligations for parties. Noting that almost all of the source categories currently listed in the draft risk management evaluation are already listed in Annex C, Norway suggested that the costs of controlling unintentional HCBD releases might be low. The Netherlands agreed, saying that normal techniques used to remove dioxins, such as activated carbon, will also remove HCBD.

Chair Arndt noted general support for listing HCBD in Annex A but concerns about listing it in Annex C, particularly due to costs. The POPRC established a Friends of the Chair group to revise the draft risk management evaluation and draft a decision.

On Thursday morning in plenary, the Secretariat introduced the revised draft risk management evaluation on HCBD and the draft decision. Gutiérrez outlined changes introduced to the draft risk management evaluation, including: deletion of references to carbon tetrachloride as a substitute, since this substance is banned under the Montreal Protocol; a reference to additional HCBD monitoring costs; and a statement recognizing that alternatives to certain HCBD-releasing processes are not always cost-effective or feasible.

China called for significantly improving the quality of the text in the risk management evaluation before submitting it to the COP. France said the drafters had received only four comments on the draft during the intersessional period and lamented the limited input from developing countries into risk management evaluation dossiers. China said the problems with the draft were mostly about inconsistencies and fact checking, rather than technical matters.

Noting that HCBD is no longer intentionally produced, Indonesia proposed inserting a sentence to clarify that HCBD could be unintentionally produced as a by-product of chlorinated chemicals manufacturing processes. Chair Arndt agreed it is important to distinguish between unintentional releases from industrial production and unintentional production through thermal processes. He suggested, and Indonesia agreed, that the draft risk management evaluation already made this distinction. Egypt queried whether the POPRC should address industrial processes, and Chair Arndt said the POPRC should identify and address all sources of HCBD.

On Thursday afternoon, Roa-Gutiérrez outlined revisions, including the addition of text on reducing unintentional production of HCBD by using alternatives for specific uses of perchloroethylene and trichloroethylene where safer, technically feasible and cost effective. She highlighted that the conclusion text now includes separate sections for listing in Annex A and in Annex C.

The POPRC then adopted the draft decision and the revised draft risk management evaluation of HCBD.

Final Decision: In the final decision (UNEP/POPS/POPRC.9/CRP.12), the POPRC adopts the risk management evaluation for HCBD and decides to recommend to the COP that it consider listing HCBD in Annexes A and C of the Convention.

CONSIDERATION OF THE DRAFT RISK PROFILE ON PCP, ITS SALTS AND ESTERS

On Monday, the Secretariat introduced the draft risk profile for pentachlorophenol (PCP), its salts and esters (UNEP/POPS/POPRC.9/6), supporting information on the chemical (UNEP/POPS/POPRC.9/INF/7), and comments on the draft risk profile submitted intersessionally by parties and observers (UNEP/POPS/POPRC.9/INF/9). Estefânia Gastaldello Moreira (Brazil), Chair of the intersessional working group on PCP, presented the draft risk profile, noting that questions remained regarding the persistence of PCP and pentachloroanisole (PCA) and that issues discussed included whether PCA and PCP should be considered together. She said that the group had not reached consensus on concluding statements, explaining two alternative recommendations remained in brackets: one bracketed recommendation states that global action is warranted to deal with PCP, while the other concludes that it is not. Chair Arndt said that assessing the chemicals together would not present a problem, as the POPRC had adopted a similar approach in reviews of other substances.

Norway expressed concern that key data were not included in the risk profile and were instead cited in a lengthy supporting document. Canada explained that the working group had sought to produce a concise risk profile, as per POPRC guidelines, while also producing a supporting document that included the large volume of data available on PCP.

India inquired about levels of persistence for PCP and PCA. China requested clarification regarding references to continued production and use of PCP in China, saying he understood these were no longer valid. Japan suggested that efforts to collect additional information should focus on PCA, rather than PCP, noting that information on bioaccumulation on PCA was insufficient and imprecise.

Wood Preservation Canada said that the dataset is difficult to evaluate and additional time should be allowed for its consideration.

France, supported by Norway, stated the available information was sufficient for the Committee to decide that PCP and PCA meet Annex E criteria.

Alaska Community Action on Toxics (ACAT) and IPEN stated that there is sufficient information available to show that PCA and PCP meet the Annex E criteria. Pesticide Action Network (PAN) suggested that the Committee consider endocrine disruption as an indicator, in addition to hepatoxicity. She noted that endocrine disruptors frequently exert effects at low doses and can display non-monotonic response curves.

The Committee agreed to establish a contact group on this issue. Chair Arndt reminded members that they had already agreed that this "team of chemicals" meets Annex D criteria and noted that the guidance on toxicological interactions could be useful to this work. The contact group convened on Monday and Tuesday to address comments on the draft risk profile, and a drafting group convened on Tuesday and Wednesday evenings to revise the text.

On Thursday morning, Gastaldello Moreira presented the revised draft risk profile. She cited three areas in which consensus was lacking, including: the usefulness of considering critical body burdens for PCP; the comparisons between the environmental levels outlined for PCA and PCP with the levels necessary to induce environmental effects; and the applicability of risk assessments conducted by the US Environmental Protection Agency (EPA) for the purposes of this risk management evaluation. The drafting group converted to a Friends of the Chair group to allow an incoming POPRC member with relevant expertise to participate and convened over the lunch break to continue work on the draft risk profile.

On Thursday afternoon, Gastaldello Moreira presented the revised document, reporting that the group agreed that, while the PCP molecule itself does not meet all the criteria specified in Annex E, PCP and its salts and esters meet the criteria specified in Annex E, taking into account PCP's transformation product, PCA.

Japan expressed disagreement with a paragraph referencing PCP residues in polar bear lipids as evidence of biomagnification, stating that the methodology used may not have differentiated between PCP and PCA. ACAT emphasized the high levels of exposure of Arctic Inuit communities to PCP and PFOS and stressed that both PFOS and perfluorooctanoic acid (PFOA) strengthen the cytotoxicity and hepatoxicity of PCPs.

On Friday morning, Gastaldello Moreira presented the draft decision on PCP, noting that it adopts the risk profile for PCP, its salts and esters. She added that the draft risk profile had been revised to include an executive summary and several additional references.

Citing a paragraph in the draft risk profile stating that reported environmental monitoring concentrations of PCP and PCA were "generally lower than those levels expected to cause an environmental effect," Japan opposed moving PCP to the Annex F stage of review. Chair Arndt responded that other paragraphs described several adverse effects of PCP and PCA. Japan queried whether these risks were the result of LRET, stressing that this is a requirement of Annex E. Canada cautioned against looking at one paragraph in isolation and highlighted all of the evidence provided in the risk profile. Interested members were invited to convene during the lunch break to address these concerns and finalize the draft decision.

On Friday afternoon, Gastaldello Moreira reported that the group addressed Japan's concerns by clarifying that, given that measurable levels of PCP/PCA are found in biota, environmental effects are possible. With that clarification, the Committee adopted the draft decision and the revised draft risk profile on PCP.

Final Decision: In the decision (UNEP/POPS/POPRC.9/CRP.14), the POPRC:

- adopts the risk profile for PCP, its salts and esters;
- decides, in accordance with paragraph 7(a) of Article 8 of the Convention, that PCP, its salts and esters are likely, as a result of their LRET, to lead to significant adverse human health and environmental effects such that global action is warranted;
- decides to establish an *ad hoc* working group to prepare a risk management evaluation that includes an analysis of possible control measures for PCP, its salts and esters in accordance with Annex F of the Convention; and,
- invites parties and observers to submit to the Secretariat information specified in Annex F before 10 January 2014.

CONSIDERATION OF CHEMICALS NEWLY PROPOSED FOR INCLUSION IN ANNEXES A, B AND/OR C TO THE CONVENTION

DECABROMODIPHENYL ETHER: On Tuesday, the Secretariat introduced a proposal submitted by Norway to list the commercial mixture of decabromodiphenyl ether (c-decaBDE) in Annexes A, B and/or C to the Convention (UNEP/POPS/POPRC.9/2) and verification that the proposal contains the information specified in Annex D (UNEP/POPS/POPRC.9/INF/8). Georg Becher, Norwegian Institute of Public Health, presented the proposal, which he said is based on both previous assessments of decaBDE and new data from peer-reviewed scientific studies. Becher said that decaBDE fulfills the criteria for persistence, bioaccumulation, LRET and adverse environmental and health effects, and stated that additional reasons for concern include: its ubiquitous presence in the environment; increasing levels in the Arctic environment and biota; continued production and use; and debromination to BDEs already listed in Annex A to the Stockholm Convention.

Japan queried how a molecule of such a large size could bioaccumulate and noted that the POPRC had agreed previously that including debromination in the Annex D evaluation process was premature. Becher replied that the conclusion on bioaccumulation and bioconcentration was based on peer-reviewed scientific papers that reflected new knowledge. He further noted that the proposal had not focused on reductive debromination, but had highlighted it as a minor additional reason for concern. Japan said that other papers indicating that decaBDE is not bioaccumulative should also be included in the proposal. Becher replied that some scientific papers are controversial and said it is essential to select all papers carefully.

Indonesia highlighted that while the notification is for commercial mixtures of decaBDE, the text of the proposal refers more broadly to decaBDE. Chair Arndt explained that the focus of the review is on decaBDE and, if the Committee decides it is a POP, then commercial mixtures would be listed.

Jordan noted potential difficulties in identifying products containing decaBDE and suggested further studies may be required. Chair Arndt noted that a COP decision on decaBDE would not be taken before 2017, thus allowing time if additional collection of information is necessary.

China queried whether decaBDE has significant adverse effects on human health or the environment and asked if new information on debromination was available. Becher responded that there is evidence of both endocrine disruption and effects on the thyroid system. On debromination, Chair Arndt advised members that Ian Rae (Australia), a former POPRC member and expert on this issue, had been invited to provide input and had subsequently submitted a report to support the Committee's review.

Norway stated that recent evidence of bioaccumulation shows "active uptake" of decaBDE through diet. She also cited evidence that decaBDE debrominates to more toxic forms. Canada observed that Annex D criteria on bioaccumulation includes "evidence that a chemical presents other reasons for concern" and said that transformation to chemicals that bioaccumulate represent a reason for concern. He also noted that decaBDE could be an important source of the lower bromodiphenyl ethers. France agreed that debromination should be considered, and suggested Committee members refer to previously developed guidance on bioaccumulation (UNEP/POPS/POPRC.3/INF/8).

Finland and Norway stated that there is sufficient information that the chemical meets Annex D criteria, and Finland observed that while there is room for further debate, such discussions should occur at the Annex E stage of review.

IPEN said that evidence was clear that decaBDE meets all the criteria for listing in the Convention, and noted that the use of flame retardants had been driven by fire codes that do not actually serve to protect people. Sweden suggested clarifying that it is possible to have stringent fire regulations that do not require the use of flame retardants.

The Bromine Science and Environmental Forum (BSEF) said decaBDE does not meet the criteria for bioaccumulation or adverse effects and that the evidence is insufficient to warrant an Annex E review.

The Netherlands requested clarification of the difference between commercial decaBDE and decaBDE-209, queried whether the bioaccumulation criterion is fulfilled, and questioned the suitability of the references on endocrine disruption. Becher responded that a recent World Health Organization/UNEP report provides evidence of endocrine disruption.

An observer from Japan emphasized that clearly identifying the substances to be listed is important to regulators.

An observer from Gabon asked if studies of decaBDE in breast milk have been conducted, and Becher responded that some studies show concentrations are related to neurodevelopmental outcomes in children.

The POPRC agreed to establish a contact group, chaired by Peter Dawson (New Zealand), to further address this issue. The contact group met on Tuesday and converted to a drafting group on Wednesday. On Thursday, Dawson presented the draft decision on c-decaBDE, noting that the group could not agree that the proposal met the Annex D bioaccumulation criteria. He said the group had begun to discuss the debromination of decaDBE but had not reached a conclusion on this issue.

Chair Arndt suggested the drafting group reconvene to examine all the data provided in a "flexible and transparent" manner in order to draft agreed text on bioaccumulation and, if necessary, to consider debromination. Dawson said the group needed to discuss only bioaccumulation for decaBDE, and supported considering debromination subsequently, noting that Decision POPRC-3/11 on PFOSF demonstrated the importance of looking at transformation products when assessing Annex D criteria. France said Decision POPRC-8/4 on PCP and its salts and esters was also relevant and, with the Netherlands, supported discussing debromination.

Japan said reconvening the drafting group would not be fruitful because there were studies demonstrating and rejecting evidence of bioaccumulation, and said debromination is relevant only when connected to toxicity. Chair Arndt said that if there were evidence for each side, the group could agree that there was uncertainty about the chemical fulfilling the bioaccumulation criterion and describe the reasons for disagreement.

Norway said recent studies indicate that decaBDE bioaccumulates and biomagnifies. BSEF said that decaBDE does not bioaccumulate or biomagnify, raised concerns about defining the chemical as a mixture rather than as a substance with impurities, and urged consideration of the rates, and environmental implications, of debromination.

Chair Arndt requested the group to reconvene as a contact group to try to reach an agreement on bioaccumulation, then convert to a drafting group to draft text on this issue, and to subsequently reconvene as a contact group to discuss debromination.

On Thursday afternoon, Dawson reported that the decaBDE contact group had discussed bioaccumulation and the drafting group was close to finalizing the decision on decaBDE. He then read key changes to the proposed text, including a conclusion that while there is uncertainty about the bioaccumulation and biomagnification potential of decaBDE, consideration of the evidence in a balanced manner indicates that the chemical is "likely" to meet the Annex D screening criteria, as well as an overall conclusion that decaDBE meets all of the criteria specified in Annex D. Japan said that the drafting group had not discussed the overall conclusion. Chair Dawson explained that he had drafted the conclusion because it flowed from the conclusion on bioaccumulation, adding that the general conclusion was still in brackets.

China said that, based on current literature and the POPRC's past decisions on bioaccumulation, decaBDE did not meet the bioaccumulation criteria. Chair Arndt explained the POPRC was not making a decision on bioaccumulation but on whether the proposal would be set aside or moved to the Annex E stage of review, where bioaccumulation would be further discussed

in preparing the risk profile. He asked the drafting group to reconvene to finalize the decision and invited China to participate in the group's work.

Noting the need to continue the discussion of debromination, Chair Arndt proposed, and the POPRC agreed, to invite an expert on debromination to attend POPRC-10.

On Friday, the Secretariat introduced the draft decision on decaBDE. She said the draft decision contained no brackets but new text had been added, including: references to several studies in sediments and in soils and plants indicating the debromination of decaBDE to lower BDE congeners; removal of brackets around the conclusion that decaBDE is "likely to meet the criteria on bioaccumulation;" and removal of brackets around the conclusion that while there is uncertainty about decaBDE's bioaccumulation potential, the Committee concludes that decaBDE meets the Annex D screening criteria.

Japan sought the views of Committee members, emphasizing that this would be the first time that the POPRC would move a substance to the Annex E stage when there was uncertainty about bioaccumulation. France, the Netherlands, New Zealand, Norway, Republic of Korea, Indonesia, Finland, Canada supported moving decaBDE to the Annex E stage.

India said there were data gaps regarding decaBDE's bioaccumulation potential, and Jordan suggested staying at the Annex D stage to remove uncertainty around bioaccumulation. Norway said that the Committee had more evidence on bioaccumulation on decaBDE than had been available during the POPRC's review of octa- and pentaBDE.

Chair Arndt reminded the POPRC that Annex D is a screening phase that seeks to determine whether a substance is a "suspected POP" and to set in motion a process to clarify whether those suspicions are correct.

Japan agreed that there is some evidence of debromination to lower BDEs, but stressed it is essential to take into account the rate of debromination and its environmental implications. However, he said he was prepared to join a consensus to move the substance to the Annex E phase of review. Jordan, India and China also said they could agree to move the chemical to the next phase. China said that he did not believe that decaBDE meets Annex D criteria but was ready to compromise, given the potential for debromination and the text of Article 8(3) of the Stockholm Convention, which requires the Committee to examine proposals in "a flexible and transparent" manner and to take into account all information provided in an integrative and balanced way.

With this agreement, the Committee reviewed and adopted the revised draft decision on decaBDE.

The Secretariat then introduced the draft work plan for all intersessional work, including on decaBDE (UNEP/POPRC.9/12), noting that it specified work be carried out during the intersessional period on the draft risk profile. Chair Arndt noted that the work plan was the standard process, with the exception of an additional week in the intersessional period, due to the scheduling of POPRC-10. France proposed using the additional week to enable the drafters to write the second draft of the risk profile on the basis of comments received. Norway agreed to draft the risk profile. The Committee agreed to the proposed work plan as orally amended.

Final Decision: In the decision on c-decaBDE (UNEP/POPS/POPRC.9/CRP.17), the POPRC:

- decides that it is satisfied that the screening criteria have been fulfilled for decaBDE as described in the annex to the decision;
- decides to establish an *ad hoc* working group to review the proposal further and to prepare a draft risk profile in accordance with Annex E to the Convention; and
- invites parties and observers to submit to the Secretariat the information specified in Annex E before 10 January 2014.

DICOFOL: On Tuesday, the Secretariat introduced a proposal submitted by the European Union to list dicofol in Annexes A, B and/or C to the Convention (UNEP/POPS/POPRC.9/3) and the Secretariat's verification that the proposal contains the information required by Annex D (UNEP/POPS/POPRC.9/INF/8). Katinka Van Der Jagt, European Commission, presented the European Union's (EU) proposal, noting that dicofol is an organochloride pesticide related to DDT and is used on a wide variety of fruit, vegetables, and ornamental and field crops.

India and Kuwait said that the proposal did not sufficiently demonstrate the persistence of dicofol, noting that the conclusion was based on water pH levels that could apply to freshwater but might not be applicable to oceans and other bodies of water. India added that the evidence of adverse effects was insufficient, and suggested that the POPRC set aside the proposal.

Tanzania cautioned against contradicting the work of POPRC-8, which had informally identified dicofol as a possible POP during its evaluation of PFOS alternatives. Chair Arndt said that the persistence of dicofol is based not only on water but also on sediments data, and urged participants to look at the full range of information contained in the proposal. Van Der Jagt recommended consideration of the sediment data indicating that dicofol is persistent.

Canada asked if transformation products were a concern, and Van Der Jagt replied that the EU had found evidence of endocrine disruptor properties for p,p'-dichlorobenzophenone. Kuwait queried whether the POPRC should consider degradation products of a chemical, and Chair Arndt explained that the Committee has looked at "all situations" in its past reviews. An observer from Austria highlighted an EU assessment detailing the toxicological effects of two metabolites, noting that it identifies very high toxicity for one of them.

Quoting a 1998 report from the US EPA, an observer from India said available scientific evidence indicates that dicofol is not a POP. Chair Arndt responded that the Committee must take into account the development of science in the intervening years. An observer from China noted that dicofol is an effective pesticide used in many developing countries and called for clear referencing throughout the proposal.

PAN expressed support for the nomination and offered to provide additional information on endocrine disruption, bioaccumulation and other matters.

France queried whether the secretariat had received any notifications for use of DDT as an intermediary in the production of dicofol in a closed system, and Chair Arndt said that India had submitted such a notification.

A contact group chaired by Francisca Katagira (Tanzania) was established and met on Tuesday and Wednesday, before converting to a drafting group on Wednesday evening.

On Thursday morning, Katagira presented the draft evaluation of dicofol against Annex D criteria, highlighting bracketed text in the sections on chemical identity, persistence, and bioaccumulation. She also said consensus had not been reached within the group on whether dicofol meets the Annex D criteria, and noted that one member had left the drafting group before the work was complete.

Noting that dicofol is a mixture of two isomers, Chair Arndt asked why the chemical identity should be in doubt. India explained the brackets were intended to indicate that the notification was inadequate as a whole, and did not refer only to the chemical identity. India also expressed concern that information submitted on studies of bioaccumulation in rats was not included.

Chair Arndt suggested removing the brackets around chemical identity and instead putting brackets around the full document. France asked if the drafting group could be reopened as a contact group. Chair Arndt agreed, but stressed the need for members to develop a draft for discussion in plenary and asked them to focus on the substance necessary for decision-making. Zambia asked members to "rise above personal differences" and consider the well-being of those who use this chemical on a regular basis. The drafting group reopened as a contact group during the lunch break on Thursday to enable the participation of observers.

On Thursday afternoon, Katagira reported that, following the lunch meeting of the contact group, brackets had been added to the decision. She suggested considering the decision in plenary in order to remove all brackets. The Committee asked the drafting group to reconvene that afternoon with the aim of achieving agreed text. When plenary reconvened in the early evening, Katagira reported that, due to the inability to reach consensus, the drafting group had produced two draft decisions, explaining one draft decision reflected the agreement of all but one member that dicofol meets the screening criteria contained in Annex D, and the other stated that dicofol does not meet Annex D criteria and should be set aside. Citing the need for transparency, Chair Arndt asked the drafting group to reconvene on Thursday evening to identify the reasons behind the two alternative decisions and explain how each conclusion had been reached.

On Friday, the Secretariat introduced the draft decisions on dicofol, and the outcome of the discussion on dicofol. Noting agreement on the chemical identity, Chair Arndt suggested discussing the outcome document, focusing on each screening criterion, before moving to the draft decision.

On persistence, France said that dicofol fulfills the criteria because it is persistent in water with acidic pH levels, and emphasized that these waters are found throughout the world. Indonesia agreed, stating that 10% of northern European waters have a pH of 5, meaning dicofol would be persistent in these waters. India expressed concern that these references were not provided in the contact group and France responded that they had indeed been provided.

Chair Arndt noted that a reference for persistence in soil and sediment was missing. Chair Arndt requested Canada to provide the full reference for dicofol's half-life in soil sediment, stressing that the source, "Canadian Technical Comments on Dicofol Dossier 2009," was insufficient. Canada responded that he would follow up with the reference. He explained that there is "not really" a discrepancy between the Canadian data indicating that dicofol has a half-life of less than 60 days in soil and other data in the text reporting a half-life of 313 days, because the latter includes dicofol and its degradation products. He stated that the findings are consistent when this is considered. India claimed that data on dicofol metabolites were limited and cautioned against including references to transformation products.

On bioaccumulation, Japan said that the data provided on the bioconcentration factor of dicofol is reliable and shows that dicofol fulfills the criteria. India highlighted data on rats indicating that dicofol does not bioaccumulate, and urged the Committee to look at the "larger perspective" by considering the effects on humans. Japan explained that bioaccumulation refers to increased concentrations in aquatic organisms such as fish and crustaceans, and studies in rats and terrestrial species refer to metabolism, not bioaccumulation. India said there is divergence of opinion on this issue, noting that rats are a "standard animal" used for testing. Argentina urged respect for the Convention text, which she said is very clear about bioaccumulation and bioconcentration factors in aquatic species. Chair Arndt proposed, and the Committee agreed, to reflect in the POPRC-9 meeting report that all but one member agreed that the bioaccumulation criterion for aquatic species was met.

On potential for LRET, Chair Arndt proposed deleting a reference to a 2009 study by UN Economic Commission for Europe that had found no evidence of LRET for dicofol, noting that more recent data proved otherwise. India urged keeping the reference, so the Committee decided to record in the report that all but one member supported deleting the reference, and that all but one member agreed that dicofol meets the criteria for LRET.

On adverse effects, India said there are data gaps around endocrine disruption and other effects. Chair Arndt proposed noting in the report that all but one member agreed that the adverse effects criteria have been met. France objected, requesting India to provide a scientific explanation of why he believed that the toxicological information, including the value obtained in fish, were not valid. India said that he needed time to explain. The Secretariat drew attention to Article 8(3) of the Convention, which requires the POPRC to apply the screening criteria to proposals provided for review, and noted that the proposal had been made available to all members five months in advance of POPRC-9. The Committee agreed to record that all but one member agreed that dicofol meets the criteria for adverse effects.

Chair Arndt noted broad agreement that dicofol fulfills the Annex D screening criteria, and said the POPRC could conclude that it was unable to move the dicofol proposal to the Annex E stage of review due to the opposition of one member. Japan said the POPRC's decisions should be based on scientific evidence and supported voting to move the proposal forward to the Annex E stage.

India asked members to respect his "minority view" and said he would provide additional data and peer-reviewed references to support his position. Kenya said that enough information had been provided to move dicofol to the Annex E stage, and France said that the Annex E stage of review would enable India to provide more data. Japan said that any mistakes made in the Annex D screening review could be corrected at the Annex E stage. The Republic of Korea, the Netherlands, Costa Rica, New Zealand, Norway, the Czech Republic, Finland and Indonesia expressed support for moving dicofol to the Annex E stage, stressing that the Annex D criteria had been met. The Republic of Korea said that lack of full scientific certainty should not prevent the chemical from moving forward and urged the POPRC to adopt a decision to move the substance to Annex E by consensus. India said he could not support moving dicofol to the Annex E stage.

France suggested suspending plenary for ten minutes to consider next steps, stressing that deferring the discussion for one year would be unlikely to yield different results, and Chair Arndt agreed to a short break. When the plenary reconvened, Chair Arndt proposed attaching the revised document on dicofol to the meeting report for discussion at POPRC-10. Zambia urged moving the chemical to the Annex E phase, noting that dicofol had significant effects on the people and environment of his country, and said it was important to flag the substance as a potential POP in order to collect more information.

Chair Arndt urged India to make an effort to better understand Annex D screening criteria during the intersessional period, in order to come closer to the understanding of all other POPRC members. India noted that he would not only provide data but also "bridge data gaps." Chair Arndt closed the agenda item, noting that India would have to "close gaps that no one else sees."

Final Outcome: The POPRC agreed to postpone a decision until POPRC-10.

TECHNICAL WORK

PROCESS FOR EVALUATION OF PFOS, ITS SALTS AND PFOSF PURSUANT TO PARAGRAPHS 5 AND 6 OF PART III OF ANNEX B TO THE CONVENTION: On Tuesday, the Secretariat introduced the process for the evaluation of PFOS, its salts and PFOSF for the various acceptable purposes and specific exemptions (UNEP/POPS/POPRC.9/7) and the draft format for collection of information on alternatives (UNEP/POPS/POPRC.9/INF/10).

A government observer from Canada noted his country is working to reduce the number of exemptions available to industry and suggested some changes to the document, including modifying some proposed activities and taking note of existing information on PFOS. Noting a few ongoing uses in his country, the Netherlands suggested the form be amended to allow notation of continuing applications of PFOS. IPEN said the format is easy to understand and suggested moving forward with a drafting group.

The Committee established a drafting group, chaired by Mohammed Khashashneh (Jordan), to address these suggestions and develop a draft decision. On Wednesday afternoon, Khashashneh summarized the changes to the Terms of Reference for assessment of alternative to PFOS, its salts and PFOSF and to the draft format for collection of information on alternatives, noting two changes of dates for the work plan and no significant changes to the format.

Kuwait emphasized the importance of simplifying the format as much as possible in order to encourage parties to submit information. India said the POPRC is becoming too ambitious in trying to collect information that is not readily available, and Chair Arndt emphasized that this information would be collected by any government implementing an alternative. A small drafting group convened to further revise the text.

On Thursday morning, Chair Arndt invited the POPRC to review the revised draft format. Canada questioned the need for a footnote defining related chemicals as those that "are and were produced with one of PFOS, its salts and PFOSF as an intermediate or starting material," noting that some PFOS-related chemicals may not use these as starting materials. The Netherlands noted that this text is drawn from similar Annex B text on acceptable purposes for PFOS. Noting that the PFOS guidance also contains similar text, Chair Arndt said the reference is correct and agreed that the degradation issue is difficult to capture.

France said he did not understand what information is required by paragraph 3(b) in Section III, which requests parties to indicate if the alternative is being used as an intermediate in the production of other chemicals. Chair Arndt suggested deleting the text. Egypt and the Netherlands explained that 3(b) relates to the use of PFOS as an intermediate. Chair Arndt suggested bracketing the text and discussing it further outside of plenary.

In the draft decision, Chair Arndt proposed deleting a paragraph requesting the Secretariat to revise the format, suggesting the text was unnecessary, and no members objected. Kuwait suggested adding a request to the Secretariat to develop activities such as a webinar to support parties in filling out the form. Chair Arndt suggested this issue would be better addressed in the decision on effective participation in the work of the Committee.

On Thursday afternoon, Chair Arndt introduced a revised version of the draft format for the collection of information on alternatives to the use of PFOS, its salts, PFOSF and their related chemicals. The Secretariat explained that the revised format used language consistent with the revised related guidance on alternatives, which referred to "their related chemicals" rather than "PFOS-related chemicals." The Secretariat then introduced the terms of reference for the assessment of alternatives to PFOS, its salts and PFOSF and preparation of a report and the draft format for the collection of information. The Committee adopted both documents.

On the draft decision, the Secretariat reminded members they had previously agreed to delete the paragraph requesting the Secretariat to revise the format for collecting information, as Committee members had agreed to undertake this work during POPRC-9. Chair Arndt suggested deleting relevant text. With this amendment, the POPRC adopted the decision.

Final Decision: In the final decision (UNEP/POPS/POPRC.9/7), the POPRC:

- decides to establish an *ad hoc* working group to undertake the activities requested in paragraph 3 of decision SC-6/4 and

paragraph 5 (d) (ii) of decision SC-6/7 and agrees to work in accordance with the terms of reference;
- endorses the terms of reference for the preparation of a report by the Secretariat for the evaluation of information of PFOS, its salts and PFOSF;
- encourages the Secretariat and the *ad hoc* working group to collaborate to ensure that both the assessment and the report on information are prepared in a manner to facilitate the evaluation by COP-7 on the continued need for PFOS, its salts and PFOSF; and
- invites parties and observers in a position to do so to provide technical and financial support to the Secretariat to engage a consultant to assist in undertaking activities requested in paragraph 6 of the process for the evaluation of PFOS, its salts, and PFOSF set out in the annex to decision SC-6/4.

GUIDANCE ON ALTERNATIVES TO PFOS, ITS SALTS, PFOSF AND THEIR RELATED CHEMICALS: On Tuesday, the Secretariat introduced the revised draft guidance on alternatives to PFOS, its salts, PFOSF and their related chemicals (UNEP/POPS/POPRC.9/8 and INF/11) and comments and responses to the revised draft guidance (UNEP/POPS/POPRC.9/INF/12/Rev.1). Samuel Banda (Zambia), Chair of the intersessional working group, invited Stefan Posner, Swerea IVF, to present the revised guidance. Posner highlighted changes to the earlier version of the guidance including, *inter alia*: improvement of existing information on alternatives, including information on market volumes, cost effectiveness, usability, chemical composition, hazards and brand issues; and improved information on the efficacy and suitability of alternatives to PFOS and its related substances.

Norway asked how the recommendations resulting from the evaluation process would be used, and Chair Arndt asked the Secretariat to confirm if it would produce a report to guide parties in using the POPRC's evaluation of PFOS alternatives. The Secretariat confirmed it would do so.

Emphasizing the guidance documents are useful only if they are used, Finland called for consideration of ways to ensure they reach the relevant audience and asked whether industry had contributed to the content. Posner said that several companies had provided comments.

IPEN welcomed the guidance but noted there were significant data gaps on the environmental and health impacts of many alternatives and cautioned that some of the listed fluorine-based substances could later be found to be POPs. An observer from Japan asked about proposed amendments that he had presented in the pre-meeting and agreed to submit the comments to the Secretariat to ensure they were incorporated into the guidance. The Committee decided to take up the proposed decision on Wednesday, following inclusion of these amendments.

On Wednesday, Banda reported that the drafting group had incorporated all comments to the draft guidance. He noted that changes were made to the guidance, not the decision. The POPRC agreed to endorse the revised guidance on alternatives to PFOS, its salts, PFOSF and their related chemicals.

Final Decision: In the decision (UNEP/POPS/POPRC.9/8), the POPRC endorses the revised guidance on PFOS, its salts, PFOSF and their related chemicals and requests the Secretariat to make it available to parties and observers. The POPRC decides to review the guidance at POPRC-10, taking into account the outcomes of the assessment of alternatives by the Committee and the information contained in the technical paper on alternatives to PFOS, its salts, PFOSF and their related chemicals in open applications.

APPROACH TO THE EVALUATION OF CHEMICALS IN ACCORDANCE WITH ANNEX E TO THE CONVENTION: On Monday, noting that the work on Annex E criteria had been undertaken as a result of the POPRC's ongoing consideration of short-chained chlorinated paraffins (SCCPs), Robert Chénier (Canada), Chair of the intersessional working group on this issue, outlined the POPRC's past review of SCCPs, noting that information received intersessionally had been posted on the Stockholm Convention website and that POPRC would address SCCPs at its eleventh meeting. Chénier reviewed the documents on application of the Annex E criteria (UNEP/POPS/POPRC.9/9, INF/13 and INF/14), noting that INF/13 contains three sections: the background of the evaluation of chemicals in accordance with Annex E; examples of practices used and decisions made in the evaluation of chemicals by the Committee in accordance with Annex E; and views on open issues in the evaluation of chemicals in accordance with Annex E. He outlined open issues, including: accounting for uncertainties in exposure and effects; defining "significant" adverse effects; the use of environmental modeling for chemicals newly introduced to the global market; and endocrine disruptors.

France described the approach contained in UNEP/POPS/POPRC.9/9 as a purely factual summary and said he was prepared to adopt it without modification. Norway, supported by an observer from Zambia, called for further review of the benchmarking approach.

The Indian Chemical Council said significant adverse effects must be "practically significant" and "ascertainable in the real world." The International Council of Chemical Associations expressed concern that the paper does not adequately reflect the role of risk and called for further development of the paper. An observer from Canada noted significant international debate about the definition of endocrine disruption and suggested the concept should not be included in the paper.

Characterizing Section 3 as "an interesting and incomplete collection of different opinions," Chair Arndt, supported by Argentina, proposed excluding this section from the document and making it available as an informal document for future reference. A drafting group was established to revise the different sections of the paper.

On Wednesday, the Secretariat introduced the discussion paper on the evaluation of chemicals in accordance to Annex E, a discussion paper on open issues on the evaluation of chemicals in accordance with Annex E, and a draft decision on the approach to the evaluation of chemicals in accordance with Annex E.

On the first discussion paper, Chénier highlighted that the section on benchmarking included information on comparisons of candidate POPs with listed POPs that was not, strictly speaking, benchmarking. He explained that references to benchmarking were removed in these cases. He drew attention to a new section on guidance documents developed by the Committee, such as the guidance on toxicological interactions, and noted that the guidance on climate change could be added

once the Committee approves the document. On the open issues paper, Chénier said that the Committee could discuss these issues in the future.

On Wednesday afternoon, the Committee considered the draft decision stating that the POPRC would: take note of the document on open questions; endorse the examples of POPRC practices and decisions made in accordance with Annex E; take into account these examples in future evaluations of chemicals; and update the examples document as additional experience is gained.

On the discussion paper on open issues, Chair Arndt proposed rewording references to climate change impacts, and Norway proposed inserting a reference to the impacts of climate change on adverse effects, as it makes organisms more susceptible to POPs. Chair Arndt explained that his proposal was to delete the text on climate change because a separate outcome on that issue was expected at POPRC-9. The Committee agreed to defer its decision, pending finalization of the documents.

On Thursday, Chénier presented the revised discussion paper on the evaluation of chemicals in accordance with Annex E. He highlighted that the changes add references to other guidance documents of the Committee, specifically on bioaccumulation evaluations under Annex D and the potential impacts of climate change on the Committee's work.

The Secretariat introduced the draft decision on this issue, and the POPRC adopted it without amendment.

Final Decision: In its decision (UNEP/POPS/POPRC.9/CRP.5), the POPRC:

- endorses the document outlining examples of practices used and decisions made in the evaluation of chemicals by the POPRC in accordance with Annex E to the Stockholm Convention;
- decides to take into account the examples in the guidance document in its future evaluation of chemicals proposed for listing in Annexes A, B and/or C to the Stockholm Convention;
- takes note of the paper on views on open issues in the evaluation of chemicals in accordance with Annex E to the Stockholm Convention; and,
- decides to consider adding further examples to the guidance document in light of future experience.

GUIDANCE ON HOW TO ASSESS THE POSSIBLE IMPACT OF CLIMATE CHANGE ON THE WORK OF THE COMMITTEE: On Wednesday, the Secretariat introduced a revised draft guidance on how to assess the possible impact of climate change on the POPRC's work (UNEP/POPS/POPRC.9/INF/15), a corresponding draft decision (UNEP/POPS/POPRC.9/10), and a compilation of comments on the draft guidance (UNEP/POPS/POPRC.9/INF/16).

Azhari Abdelbagi (Sudan), Co-Chair of the *ad hoc* working group on climate change and POPs, noted that the group had produced three documents:

- a revised draft guidance that considered comments provided on the guidance during POPRC-8 and the intersessional period;
- a draft simplified approach (UNEP/POPS/POPRC.9/10, Annex I) that included a three-step scheme to consider climate change interactions with chemicals and involved: i) collection of relevant data, ii) integration of these data into the various stages of POPRC reviews, and iii) application of data to decision-making; and
- guidance to the COP (UNEP/POPS/POPRC.9/10, Annex II), including to invite parties to take note of the scientific findings of climate change impacts on POPs and to encourage them to consider the guidance when drafting proposals for listing chemicals in Annexes A, B and/or C.

Chair Arndt suggested that the POPRC test the revised draft guidance before updating it and proposed amending the last item in the list of recommendations in Annex II of the draft guidance accordingly. IPEN expressed support for the guidance and the simplified, step-by-step document, noting that she looked forward to seeing it applied in the examination of new chemicals. Canada welcomed the guidance but noted the POPRC's ability to apply all elements to all chemicals is limited by information gaps. Norway said that the proposed approach does not require the POPRC to assess climate change effects on every chemical, but to consider the effects of climate change when data are available. The Committee agreed to request the Secretariat to amend the draft decision, as proposed by Chair Arndt.

On Wednesday afternoon, the Secretariat read out the revised draft recommendation, which recommends that the COP invite the POPRC to update the draft guidance "based on its experience in applying the guidance" and new relevant information. India questioned how the guidance would be implemented if the POPRC was often relying on old data. Chair Arndt explained that climate-related information would be evaluated by the POPRC if and when the data were provided. The draft recommendations were adopted as orally amended.

Final Decision: In the decision (UNEP/POPS/POPRC.9/10), the POPRC:

- adopts the guidance on how to assess the possible impact of climate change on the POPRC, the approach to the consideration of climate change interactions with the chemicals proposed for listing in Annexes A, B and/or C to the Convention, and the recommendations developed on the basis of the guidance as amended at POPRC-9;
- decides to use the guidance and approach for its future evaluation of chemicals proposed for listing in Annexes A, B and/or C; and
- decides to forward the recommendations developed on the basis of the guidance on how to assess the possible impact of climate change on the work of the POPRC to COP-7 for consideration.

REPORT ON ACTIVITIES FOR EFFECTIVE PARTICIPATION IN THE WORK OF THE COMMITTEE

On Tuesday, the Secretariat introduced its note on activities for effective participation in the work of the Committee and the draft decision (UNEP/POPS/POPRC.9/11), highlighting a series of webinars it had organized. She invited members to provide new ideas to the Secretariat from the Technical Assistance Branch, which would be in Rome on Thursday and Friday.

Sudan suggested conducting orientation workshops for incoming POPRC members. The Secretariat explained that the CRC and the POPRC had taken different approaches thus far and, while the CRC offered orientation workshops for

incoming members prior to their first meeting, the POPRC had used voluntary contributions to support incoming member participation during the final session of their predecessors.

Jordan proposed establishing a programme to increase awareness among regional centres and research institutes of the documents POPRC produces that are related to its evaluation of chemicals.

An observer from Zambia requested that the Secretariat request funding for training new POPRC members at the next COP. Argentina queried whether new and incoming members from each region could meet at the margins of POPRC-9 to share experiences, and suggested incoming and outgoing members from each region meet for lunch on Wednesday. Chair Arndt encouraged members to take up this suggestion.

Zambia suggested reviewing the current approach to rotation, saying that the expected replacement of over half of current members at POPRC-10 could affect the quality of the discussions. He also wondered whether lack of interpretation in working groups affected participation by some members. Chair Arndt said that having interpretation in several parallel working groups was not feasible, and noted that unlike the CRC, which operates only in English, the POPRC has the advantage of having interpretation during plenary sessions and translation of all meeting documents.

Kuwait suggested using the clearinghouse mechanism on the Convention's website, documenting the experience of outgoing members, and acknowledging outside experts in the POPRC's documents to encourage their participation. The Secretariat reported that the Convention's website now functions as a portal to allow parties to post information and highlighted a social network developed for POPRC participants.

The Netherlands suggested webinars on phasing out certain substances and on effective participation during the intersessional period. IPEN suggested a webinar on endocrine disruption based on the recent WHO/UNEP report on the issue. India urged the Secretariat to arrange webinars at convenient times to enable participation from all regions.

Egypt noted that little research seems to come from southern regions. Chair Arndt responded that the information in developed countries emerged from regulation of producers and expressed hope that other countries now producing chemicals would collect and disseminate similar information.

On Thursday, the Secretariat noted that a small drafting group of interested members, chaired by Norma Sbarbati-Nudelman (Argentina), would prepare a revised draft decision.

On Friday, the Secretariat introduced the revised draft decision on effective participation and highlighted several changes, including: aligning the preambular text to previous POPRC decisions on effective participation; updating the handbook on effective participation; inviting regional centres to participate; and inviting former POPRC members to participate in the future work of the Committee.

India asked why references to the regional centres of the Stockholm and Basel Conventions did not include the Rotterdam Convention and suggested a reference to common but differentiated responsibilities regarding support for regional centres. Chair Arndt clarified that the Rotterdam Convention does not have regional centres. Executive Secretary Willis expressed reticence to adjust the mandates of regional centres that exist under other conventions and noted that not all regional centres support developing countries or countries with economies in transition. Sbarbati-Nudelman reported that the small drafting group intended to make regional centres aware that they could participate in the work of the POPRC. An observer from South Africa relayed that the drafting group identified regional centres as possible sources of support for POPRC members who are responding to requests for information from the Committee.

Chair Arndt suggested referring to regional centres generally in order to include all regional centres willing to support Committee members. India noted this general term would exclude the role of experts under the Rotterdam Convention. Chair Arndt suggested, and the Committee agreed, to remove specific reference to regional centres of the Stockholm and Basel Conventions, and instead refer to regional centres generally, and to add text referring to experts from the Rotterdam Convention in relevant areas of the draft decision text.

Zambia requested that the Secretariat report, at future meetings, on the activities conducted in regional centres. Chair Arndt suggested that this request be included in the report of the meeting and added to future agendas under effective participation.

The POPRC agreed to the draft decision as orally amended.

Final Decision: In the final decision (UNEP/POPS/POPRC.9/CRP.16), the POPRC:

- invites the Secretariat to continue its activities related to supporting effective participation in the Committee's work, subject to the availability of resources, including: organizing webinars, training and online meetings; using web-based platforms to facilitate the intersessional work; organizing face-to-face meetings, with support from current and former members, the regional centres of the Basel and Stockholm Conventions and regional networks and regional offices of the FAO; facilitating, in cooperation with regional centres and experts from the Rotterdam Convention, the development of pilot projects; and revising the handbook for effective participation to include terminology regularly used in meetings;
- invites current and former members, on a voluntary basis, to be actively involved in activities to promote effective participation of parties in the Committee's work; to support regional centres and experts of the Rotterdam Convention; and to disseminate the activities being undertaken by the Committee within their countries and regions;
- encourages regional centres and experts of the Rotterdam Convention, subject to the availability of resources, to play an active role in providing assistance to facilitate effective participation in the Committee's work, including through the exchange of information and expert knowledge in their areas of expertise and with support from current and former Committee members; and,
- invites parties and observers in a position to do so to contribute to the Committee's work and to provide financial support for the implementation of activities in support of effective participation by parties in that work.

COORDINATION AND COLLABORATION WITH OTHER SCIENTIFIC SUBSIDIARY BODIES

On Wednesday, the Secretariat introduced its note on coordination and collaboration with other scientific subsidiary bodies (UNEP/POPS/POPRC.9/INF/17), highlighting key activities including: the organization of the back-to-back and joint meetings of the POPRC and the Rotterdam Convention's Chemical Review Committee (CRC); activities related to effective participation, such as webinars; a synergies workshop to be held in Dakar, Senegal, in November 2013; and the involvement of POPRC members in the review of the technical guidelines for environmentally-sound management of POP-containing wastes under the Basel Convention's Open-ended Working Group..

Argentina expressed support for coordination and collaboration between the POPRC and other bodies. IPEN expressed hope that the synergies process would extend the POPRC's "culture of cooperation and participation" to other bodies. Sudan suggested that the synergies process could make it easier for countries to meet their responsibilities under both the Stockholm and Rotterdam Conventions.

WORKPLAN FOR THE INTERSESSIONAL PERIOD BETWEEN THE NINTH AND TENTH MEETINGS OF THE COMMITTEE

On Friday, the Secretariat introduced the document outlining the workplan for the intersessional period between the POPRC's ninth and tenth meetings (UNEP/POPS/POPRC.9/12), noting that POPRC-10 will be held from 27-31 October 2014, and reviewed the deadlines for work prior to this meeting. She highlighted an extra week in the intersessional period, due to the timing of POPRC-10. France suggested this week be used to lengthen the period between the deadlines for submission of comments and completion of the second drafts of risk profiles and risk management evaluations. The Secretariat explained that the workplan would be included as an annex to the POPRC-9 meeting report. She said that all POPRC-9 participants were invited to participate in the working groups, and encouraged members to get involved in intersessional work by joining the working groups on decaBDE and PFOS. Stressing that all intersessional work was carried out electronically, she noted that if participants wished to invite others to participate in this work, they should notify the Secretariat so they could be added to the mailing list.

The POPRC agreed and adopted the workplan as orally amended.

DATES AND VENUE OF POPRC'S TENTH MEETING

On Friday, the POPRC agreed that POPRC-10 would be held from 27-31 October 2014, with meetings of the intersessional working groups on 26 October 2014, at FAO headquarters in Rome, Italy. The Secretariat noted that this meeting will follow the meeting of the Chemical Review Committee to the Rotterdam Convention, emphasizing that back-to-back meetings are cost-effective and facilitate communication between the Chairs of the CRC and POPRC.

OTHER MATTERS

On Friday, Chair Arndt reminded participants of China's request, earlier in the week, for discussion of the quality of risk management evaluations. He proposed, and members agreed, that all those with experience with drafting risk management evaluations and ideas for improving the quality of the documents submit those ideas to the Secretariat, and requested the Secretariat to compile the comments. He also said that Ousmane Sow, an incoming member from Senegal, would support the Secretariat in this work.

CLOSURE OF THE MEETING

On Friday, the Committee reviewed the draft report of the meeting (UNEP/POPS/POPRC.9/L.1, L.1/Add.1 and L.1/Add.2). Norway expressed concern that a comment on decaBDE she made orally and submitted in writing was not reflected. She agreed to work with the Secretariat to incorporate the comment. The Committee then adopted the report with that understanding.

At the close of the meeting, outgoing Chair Reiner Arndt thanked a long list of people who have contributed to the work of the POPRC since its inception. Noting that they had worked together in various global chemicals bodies for nearly 20 years, Executive Secretary Jim Willis said that under Chair Arndt's leadership the POPRC had made "phenomenal progress" and "stood head and shoulders above" comparable committees. Speaking on behalf of the public interest NGOs, Mariann Lloyd-Smith, IPEN, thanked Chair Arndt for establishing a culture of inclusiveness within the Committee, and presented him with an album of pictures documenting his nine-year tenure as Chair of the POPRC.

Chair Arndt gaveled the meeting to a close at 6:03 pm.

A BRIEF ANALYSIS OF POPRC-9

The ninth meeting of the POPs Review Committee marked a turning point in the leadership and composition of the Committee, with the election of a new Chair and Vice-Chair and significant membership turnover expected in 2014. Aside from adopting decisions to guide its future work, the Committee returned to its core work—screening new chemicals to determine if they are a potential persistent organic pollutant (POP), gathering socio-economic information about chemicals identified as POPs, and recommending POPs for listing in Annexes A, B and/or C to the Stockholm Convention. In this area, POPRC-9 adopted a number of important technical decisions, including on moving a new POP candidate, decabromodiphenyl ether (decaBDE), to the risk profile stage, preparing a risk management evaluation on pentachlorophenol (PCP), and recommending the listing of hexachlorobutadiene (HCBD) in the Stockholm Convention.

The agenda of POPRC-9 was dominated by "live" chemicals. In the past, the review of chemicals that are still in broad use and for which effective and affordable alternatives may not be readily available, such as endosulfan and perfluorooctane sulfonic acid (PFOS), has proved challenging to the POPRC. At POPRC-9, the Committee was again called upon to demonstrate that it is up to the task of ensuring that politics do not interfere with the POPRC's science-based review process. This brief analysis looks

at how the POPRC assessed two newly nominated chemicals and considers the future of the Committee's work, given new challenges and new membership.

TWO NEW "LIVE" SUBSTANCES PUT THE POPRC TO THE TEST, WITH DIFFERENT RESULTS

As many participants had predicted, the proposals by Norway and the EU to list two new potential POPs, dicofol and decaDBE respectively, led to protracted discussions at POPRC-9 as both substances are still widely used in many countries. Despite members' differing opinions on decaBDE, POPRC members demonstrated flexibility and were able to reach consensus to move this substance to the Annex E stage of review and initiate preparation of a risk profile. In stark contrast, the entrenched position of a single member impeded such a consensus on dicofol.

Dicofol, an organochlorine pesticide structurally similar to DDT, is used in many countries on a wide variety of fruits, vegetables, and ornamental and field crops. A significant part of the discussion focused on dicofol's persistence in water at various pH levels. Some saw this is as an irrelevant discussion, emphasizing that available evidence shows that dicofol is persistent in certain natural conditions found in northern and Arctic waters. They noted that the Stockholm Convention is indifferent as to whether persistence occurs in all regions, and underscored that an original motivation for the creation of the treaty was to protect indigenous Arctic communities from POPs contamination.

Ultimately, despite the agreement of 27 of the 28 members present that the substance meets Annex D criteria, and palpable frustration on the part of some members, the Committee agreed to defer a decision on this issue to POPRC-10. Many veteran participants expressed a sense of déjà vu during these discussions, noting that the same tactics were used in the POPRC's contentious review of endosulfan from 2008-2010.

At that time, the implacable and continuously changing objections of one member led the POPRC to resort to voting in order to move endosulfan through the review process, to date these have been the only instances of the POPRC voting on a substantive issue. At that time, members who supported voting cited the importance of protecting POPRC's science-based review process from the influence of political or economic interests.

While a few members at POPRC-9 expressed tentative willingness to vote on dicofol, the POPRC ultimately decided that the value of consensus-based decision-making outweighed the need to move forward immediately. To ensure transparency, the POPRC agreed to carefully document India's reasons for disagreement. Some participants expressed hope that meticulous recording of the arguments put forward both against and in favor of moving to the risk profile stage would protect the integrity of the Committee's science-based review process, and that India will reconsider its approach and gain a better understanding of what the Annex D process entails when POPRC-10 convenes.

The contentious discussions of dicofol stood in contrast to the POPRC's consideration of decaBDE, a brominated flame retardant used in textiles and plastics, including in electronic and electrical equipment. Despite broader disagreement among members on whether decaBDE meets the screening criteria, after extensive discussions the Committee reached consensus to draft a risk profile on the substance. Notably, industry sources report that major producers have agreed to voluntarily phase out decaBDE in all applications by the end of 2013, prompting some to suggest that this validates concerns about the chemical. However, industry observers at POPRC-9 were convinced that decaBDE does not meet the Annex D criteria and were concerned that advancing the chemical despite uncertainties would set a negative precedent for future reviews.

The two key areas of disagreement were decaBDE's bioaccumulation and debromination. At this meeting, discussions of the former led a few delegates to fear that the lack of conclusive evidence of bioaccumulation could be used as an excuse for inaction. As members carefully considered the evidence, some eventually accepted the information provided. Others agreed to go along with the majority view at this early stage of review, reassured by the knowledge that new data could be presented at the Annex E stage, at which point the review of evidence required to decide whether a substance warrants global action is more stringent. Suggestions that decaBDE could debrominate into BDEs already listed under the Stockholm Convention also convinced some members that the POPRC needs to take a closer look at the substance.

The decision on decaBDE displays members' willingness to observe Article 8(3) of the Stockholm Convention, which requires the Committee to apply the Annex D screening criteria "in a flexible and transparent way," taking into account all information provided in an "integrative and balanced manner." The consensus also demonstrates that members hold a common understanding that the screening phase of Annex D allows room for scientific uncertainty. Yet, some noted this flexibility was lacking in the dicofol discussions. Deliberations at POPRC-10 are likely to be challenging, and some expressed concern that dicofol may meet a fate similar to that of short-chained chlorinated paraffins (SCCPs), which have now spent several years at the draft risk profile stage. Nevertheless, some expressed hope that the thorough documentation of the Committee's discussions at POPRC-9 and the broad agreement that dicofol meets the Annex D criteria would, together with the energy brought by new members, facilitate the flexibility needed to move forward on this issue.

THE CHALLENGES OF MEMBERSHIP ROTATION

While any group can benefit from the energy and enthusiasm of new participants, some members expressed concern that the significant turnover in membership in the coming year could affect the institutional memory of the POPRC. Not only do the 17 departing members represent over half of the Committee's membership, many of these experts have served on the POPRC since its first session. Affectionately called the "dinosaurs" by some POPRC participants, this group includes Chair Arndt, who was involved in the negotiations that created the POPRC and has skillfully steered the Committee through its childhood and into adolescence.

The POPRC initially cut its teeth on chemicals that are effectively "dead," as they are no longer widely produced or used. By working on these less contentious chemicals, such as chlordecone and hexabromobiphenyl, early POPRC members

were able to refine the POPRC's processes, developing the tools and practices required to assess less straightforward cases that would emerge in subsequent years.

At POPRC-9, there were several efforts to document, and preserve, this institutional memory and relay these tools and practices to newer members. The guidance document on approaches to evaluating chemicals in accordance with Annex E, drafted by several outgoing members, including Chair Arndt, represented an effort to document the experience gained by the Committee in applying and interpreting the Convention.

However, the conclusions of this document did not meet with universal agreement; some observers expressed concern with how the document portrays the Committee's evaluation of risk. Some industry observers stated that a substance that meets the Annex D criteria requires clear evidence that it presents a risk to the environment and human health in order to pass the Annex E review. The guidance document on Annex E, however, documents the Committee's application of the Convention's precautionary approach, which underscores that "lack of full scientific certainty" that a chemical is likely to lead to significant environmental and health effects as a result of long-range environmental transport should not, by itself, preclude a chemical from moving from the risk profile to the risk management stage. This and other guidance documents, such as on bioaccumulation, represent a legacy of the Committee's work that will help incoming members with the important task ahead.

LOOKING FORWARD TO POPRC-10

It remains to be seen whether the influx of "new energy" the 17 new Committee members bring will change the dynamics on issues such as SCCPs, dicofol and decaBDE. Many members and observers were impressed with incoming Chair Estefânia Gastaldello Moreira's deft steering of the PCP group. She led the Committee towards a consensus that this challenging "team of chemicals" warrants global action and that POPRC-10 will consider a draft risk management evaluation to be prepared by the intersessional *ad hoc* working group on PCP, its salts and esters. Returning members will also be assuming demanding responsibilities associated with work on SCCPs and decaBDE, as well as tasks new to the POPRC, such as assessing alternatives for acceptable uses of PFOS. However, the valuable guidance on Annex E, as well as the transparent and thorough documentation of the Committee's past decision making, means that new members will be building on a solid foundation as they move forward.

UPCOMING MEETINGS

Ninth Meeting of the Rotterdam Convention Chemical Review Committee: The Chemical Review Committee (CRC) is a subsidiary body of the Rotterdam Convention that reviews chemicals and pesticide formulations according to the criteria set out by the Convention in Annexes II and IV, respectively, and makes recommendations to the COP for listing these chemicals in Annex III. **dates:** 21-25 October 2013 **location:** Rome, Italy **contact:** Rotterdam Convention Secretariat **phone:** +41-22-917-8296 **fax:** +41-22-917-8082 **email:** pic@pic.int **www:** http://www.pic.int/

25th Meeting of the Parties (MOP) to the Montreal Protocol: MOP 25 is scheduled to consider a number of issues, including nominations for critical- and essential-use exemptions and climate benefit of the accelerated phase-out of hydrochlorofluorocarbons and phasing down of hydrofluorocarbons. **dates:** 21-25 October 2013 **location:** Bangkok, Thailand **contact:** Ozone Secretariat **phone:** +254-20-762-3851 **fax:** +254-20-762-4691 **email:** ozoneinfo@unep.org **www:** http://ozone.unep.org

Eighth International Conference on Waste Management and Technology (ICWMT8): Organized by the Basel Convention Coordinating Centre for Asia and the Pacific, and sponsored by UNEP, the Stockholm Convention Regional Centre for Capacity-Building and the Transfer of Technology in Asia and the Pacific, China's Ministry of Environmental Protection and others, ICWMT aims to promote exchange and cooperation on management policy, technology and experiences on solid and hazardous waste. Under the theme of "Towards Ecological Civilization," ICWMT8 will discuss: waste electrical and electronic equipment management policy and technology; hazardous waste management and safe disposal; industrial solid waste utilization and disposal; contaminated sites regulation and governance; circular economy and urban mining exploitation and utilization; persistent organic pollutants waste management and disposal; scrapped vehicle recycling management and processing; biomass comprehensive utilization; and waste plastic utilization. **dates:** 23-25 October 2013 **location:** Beijing, China **contact:** BCRC Beijing **phone:** +86-10-62794351 **fax:** +86-10-62772048 **email:** icwmt@tsinghua.edu.cn **www:** http://conf.bcrc.cn/english/

45th Meeting of the GEF Council: The Global Environment Facility (GEF) Council meets twice per year to approve new projects with global environmental benefits in the GEF's focal areas, and to provide guidance to the GEF Secretariat and agencies. Among the topics for discussion at the 45th meeting are guidelines for enabling activities of the Minamata Convention on Mercury. A consultation with civil society will take place on Monday, and the GEF Council meeting will open on Tuesday, 5 November. **dates:** 4-7 November 2013 **location:** Washington D.C., US **contact:** GEF Secretariat **phone:** +1-202-473-0508 **fax:** +1-202-522-3240 **email:** secretariat@thegef.org **www:** http://www.thegef.org/gef/events/council-meeting

First meeting of the Environmental Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE): ENFORCE seeks to promote parties' compliance with the provisions of the Basel Convention pertaining to preventing and combating illegal traffic in hazardous wastes and other wastes through the better implementation and enforcement of national law. The first meeting of the network is expected to: elect a Chair and a Vice-Chair; consider accepting additional members; exchange information on activities and identify activities that would benefit from being coordinated or jointly planned and implemented; and deliberate on the modalities for the operation of the network. **dates:** 18-19 November 2013 **location:** Bangkok, Thailand **contact:** Secretariat of the Basel Convention **email:** brs@unep.org **phone:** +41-22-917-8218 **fax:** +41-22-917-8098 **www:** http://www.basel.int

5th African regional meeting on the Strategic Approach to International Chemicals Management (SAICM) and Related Workshops: Organized by the SAICM Secretariat, South Africa's Department of Environmental Affairs and the Africa Institute Pretoria, the 5th regional meeting will, *inter alia*: identify regional priorities, exchange experience and share information on activities undertaken at the national and regional levels, review and provide input to the draft document on the Overall Orientation and Guidance to facilitate achievement of the 2020 goal of sound chemicals management, and consult on preparations for the fourth session of the International Conference on Chemicals Management (ICCM4). A workshop on the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) toolbox for decision-makers in chemical management will be held 18 November, a workshop on endocrine disrupting chemicals on 19 November, an information sharing session on emerging issues on 20 November, followed by the regional meeting on 21-22 November. **dates:** 18-22 November 2013 **location:** Pretoria, South Africa **contact:** SAICM Secretariat **phone:** +41-22-917-8532 **fax:** +41-22-797-3460 **email:** saicm@unep.org **www:** http://www.saicm.org

Annual Joint Meeting of the Basel and Stockholm Convention Regional Centres: The directors of the regional centres for the Basel Convention (BC) and Stockholm Convention (SC) will meet to discuss development of a strategic plan for the enhanced delivery of technical assistance and technology transfer through the network of SC and BC regional centres. It will also, *inter alia*: identify new areas for joint collaboration among regional partners; exchange experience and expertise, including best practices; identify centers of excellence in thematic areas; update the plan of action for the current biennium. **dates:** 27-29 November 2013 **location:** Geneva, Switzerland **contact:** Joint Secretariat of the BRS Conventions **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** brs@unep.org **www:** http://synergies.pops.int/

26th Session of the ECOSOC Sub-Committee of Experts on the Globally Harmonized System of Classification and Labeling of Chemicals: The UN Economic and Social Council's (ECOSOC) Sub-Committee of Experts on the Globally Harmonized System (GHS) will meet to discuss corrosivity criteria, dust explosion hazards, criteria for classifying mixtures as an aspiration hazard, nanomaterials, hazard communication issues and the implementation of the GHS. **dates:** 4-6 December 2013 **location:** Geneva, Switzerland **contact:** Rosa Garcia Couto, UNECE Transport Division **phone:** +41-22-917-2435 **fax:** +41-22-917-0039 **email:** rosa.garcia.couto@unece.org **www:** http://www.unece.org/trans/main/dgdb/dgsubc4/c4age.html

Tenth Meeting of the Basel Convention Implementation and Compliance Committee (ICC-10): ICC-10 is expected to continue the consideration of its 2012-2013 work programme as well as initiate activities pertaining to its 2014-2015 work programme. A special half-day session will take place on the morning of 6 December to promote a dialogue with other compliance bodies. Chairs of the compliance bodies of the Espoo Convention, Cartagena Protocol, the Montreal Protocol, the London Protocol, the Kyoto Protocol and CITES, as well as the representatives of the Secretariats of these treaties, have been invited to attend the session. **dates:** 5-6 December 2013 **location:** Paris, France **contact:** Secretariat **phone:** +41-22-917-8218 **fax:** +41-22-917-8098 **email:** brs@unep.org **www:** http://www.basel.int/TheConvention/ImplementationComplianceCommittee/Meetings/ICC10/tabid/3355/mctl/ViewDetails/EventModID/9267/EventID/418/xmid/10712/Default.aspx

First Session of the United Nations Environment Assembly of UNEP: As a result of the June 2012 UN Conference on Sustainable Development (Rio+20), UNEP's 58-member Governing Council became the United Nations Environment Assembly of UNEP with universal membership in March 2013. **dates:** 23-27 June 2014 **location:** Nairobi, Kenya **contact:** Jamil Ahmad, Secretary of Governing Bodies **phone:** +254-20-7623431 **fax:** +254-20-7623929 **email:** unep.sgb@unep.org **www:** http://www.unep.org/about/sgb/

Tenth Meeting of the Rotterdam Convention Chemical Review Committee (CRC-10): CRC-10 will review chemicals and pesticide formulations according to the criteria set out by the Convention in Annexes II and IV respectively and make recommendations to the COP for listing these chemicals in Annex III. **date:** 20-24 October 2014 **location:** Rome, Italy **contact:** Rotterdam Convention Secretariat **phone:** +41-22-917-8296 **fax:** +41-22-917-8082 **email:** pic@pic.int **www:** http://www.pic.int/

Tenth Meeting of the Persistent Organic Pollutants Review Committee (POPRC-10): POPRC-10 will review chemicals proposed for listing in Annex A, Annex B, and/or Annex C. **dates:** 27-31 October 2014 **location:** Rome, Italy **contact:** Stockholm Convention Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** ssc@pops.int **www:** http://www.pops.int

For additional meetings and updates, go to http://chemicals-l.iisd.org/

GLOSSARY

BDEs	Brominated diphenyl ethers
CNs	Chlorinated napthalenes
COP	Conference of the Parties
CRC	Chemical Review Committee (Rotterdam Convention)
DecaBDE	Decabrominated diphenyl ether
EPA	US Environmental Protection Agency
HCBD	Hexachlorobutadiene
IPEN	International POPs Elimination Network
LRET	Long-range environmental transport
PAN	Pesticide Action Network
PCA	Pentachloroanisole
PCNs	Polychlorinated naphthalenes
PCP	Pentachlorophenol
PCBs	Polychlorinated biphenyls
PFOS	Perfluorooctane sulfonic acid
PFOSF	Perfluorooctane sulfonyl fluoride
POPs	Persistent organic pollutants
POPRC	Persistent Organic Pollutants Review Committee
SCCPs	Short-chained chlorinated paraffins