

SUMMARY OF THE THIRTEENTH MEETING OF THE PERSISTENT ORGANIC POLLUTANTS REVIEW COMMITTEE: 17-20 OCTOBER 2017

The thirteenth meeting of the Persistent Organic Pollutants Review Committee (POPRC-13) to the Stockholm Convention on Persistent Organic Pollutants (POPs) took place from 17-20 October 2017 at the headquarters of the Food and Agriculture Organization of the United Nations (FAO) in Rome, Italy. In total, over 130 participants attended the meeting, including POPRC members, and observers from governments, industry, academia and civil society.

POPRC-13 adopted four decisions, including a recommendation to the Stockholm Convention Conference of the Parties (COP) to list dicofol in Annex A of the Stockholm Convention. They agreed to establish an intersessional working group on perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF), and also established an *ad hoc* working group to prepare a draft risk profile for perfluorohexane sulfonic acid (PFHxS) and its salts and PFHxS-related compounds. The Committee engaged in protracted discussions on the draft risk management profile on pentadecafluorooctanoic acid (PFOA), its salts and PFOA-related compounds, finally adopting a recommendation to the COP to include PFOA in the Convention, albeit with intersessional work to strengthen this recommendation for listing.

POPRC-13 invited individuals from governments who will be members of the Committee in 2018 to observe the proceedings, in a bid to enrich their participation at future meetings, as well as provide continuity to ongoing discussions. The Committee was successful in addressing technical issues, particularly on the decision to list dicofol, and in setting up the groundwork necessary to include PFOS, PFHxS, and PFOA in the Convention.

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 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 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.

The negotiations for the Stockholm Convention were launched by the UN Environment Programme's Governing Council in February 1997. The Stockholm Convention was adopted in May 2001, entered into force on 17 May 2004, and currently has 180 parties.

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

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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 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 included 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.

The Stockholm Convention includes provisions 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 substances nominated for listing under the Convention.

The Committee is comprised of 31 experts nominated by parties from the five UN 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 adverse effects on human health or the environment. 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 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 to POPRC-3: The first, second and third meetings of the POPRC met between 2005 and 2007. During this time, the POPRC approved risk profiles and risk management evaluations, and recommended that COP-4 consider listing the following POPs under Annexes A, B, and/or C: lindane; chlordecone; hexabromobiphenyl (HBB); commercial pentabromodiphenyl ether (c-pentaBDE); and PFOS, its salts, and perfluorooctane sulfonyl fluoride (PFOSF). At POPRC-2, the Committee agreed to draft a draft risk profile for short-chain chlorinated paraffins (SCCPs). At POPRC-3, risk profiles were approved for: c-pentaBDE; pentachlorobenzene (PeCB); alpha hexachlorocyclohexane (alphaHCH); and beta hexachlorocyclohexane (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 of four chemicals, and recommended that COP-4 consider listing under Annexes A, B, and/or C: commercial octabromodiphenyl ether (c-octaBDE), pentachlorobenzene (PeCB), alphaHCH and betaHCH. A draft risk profile for SCCPs was discussed and the Committee agreed to forward it to POPRC-5. POPRC-4 also evaluated a proposal to list endosulfan under the Convention and agreed, by majority vote, that it met the Annex D criteria 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: This meeting was held from 4-8 May 2009. Parties adopted 33 decisions on a variety of topics, including the listing of nine new substances under Annexes A, B, and/or C of the Convention: c-pentaBDE; chlordecone; HBB; alphaHCH; betaHCH; lindane; c-octaBDE; PeCB; and PFOS, its salts and PFOSF.

POPRC-5: This meeting convened from 12-16 October 2009 and addressed 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 meets 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, by a majority vote, decided to move endosulfan to the Annex F phase, while inviting parties to submit additional information on adverse effects on human health.

POPRC-6: This meeting was held from 11-15 October 2010 and addressed 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. The POPRC also agreed, by a majority vote, to adopt the risk management evaluation for endosulfan and recommend listing the substance 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: This meeting convened from 25-29 April 2011. Parties 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. 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: This meeting was held 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.

POPRC-8: This meeting convened from 15-19 October 2012 and adopted 12 decisions, including on: advancing pentachlorophenol (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 HCBd to recommend that parties consider listing it in Annex A with specific exemptions.

COP-6: This meeting convened from 28 April to 10 May 2013, in a joint meeting with COP-11 of the Basel Convention, COP-6 of the Rotterdam Convention, and the second simultaneous extraordinary meetings of the COPs to the three conventions (ExCOPs-2). The COP, *inter alia*: decided to list HCBd in Annex A with specific exemptions for production and use in expanded and extruded polystyrene in buildings.

POPRC-9: Convening from 14-18 October 2013, POPRC-9 adopted nine decisions, including on: the commercial mixture of decabromodiphenyl ether (c-decaBDE); PCP, its salts and esters; CNs; HCBd; the approach to the evaluation of chemicals in accordance with Annex E; guidance on alternatives to PFOS, its salts, PFOA and their related chemicals; and the process for evaluation of PFOS, its salts and PFOA for acceptable uses.

POPRC-10: This meeting was held from 27-31 October 2014. The Committee adopted decisions including, *inter alia*, that: dicofol meets the Annex D criteria; c-decaBDE should move to the risk management evaluation stage; and a recommendation should be made to COP-7 for PCP, its salts and esters to be listed in Annex A to the Convention with specific exemptions for the production and use of PCP for utility poles and cross-arms. The Committee also adopted a decision on alternatives to PFOS, its salts and PFOA.

COP-7: Convened as part of a back-to-back meeting with COP-7 of the Rotterdam Convention and COP-12 of the Basel Convention from 4-15 May 2015, COP-7 agreed to list HCBd in Annex A and requested the POPRC to further evaluate HCBd on the basis of the newly available information in relation to its listing in Annex C and to make a recommendation to COP-8. COP-7 agreed to list polychlorinated naphthalenes (PCNs) in Annex A, with a specific exemption for production of those chemicals used as intermediates in production of polyfluorinated naphthalenes, and in Annex C. COP-7 also agreed, by a majority vote, to list PCP and its salts and esters in Annex A with specific exemptions for the production and use of PCP for utility poles and crossarms.

POPRC-11: This meeting was held from 19-23 October 2015. The Committee adopted eight decisions, including a decision to adopt the draft risk profile of SCCPs, which had been under review by the POPRC for nine years. The POPRC also decided, *inter alia*, that PFOA, its salts and PFOA-related compounds meet the Annex D screening criteria, and adopted the draft risk management evaluation on decaBDE. The Committee deferred its decision on a draft risk profile of dicofol to POPRC-12.

POPRC-12: This meeting took place from 19-23 September 2016, adopting six decisions, including on SCCPs; dicofol; PFOA, its salts and PFOA-related compounds; HCBd; decaBDE; and guidance on alternatives to PFOS and its related chemicals. The Committee established intersessional working groups on dicofol and PFOA, its salts and PFOA-related compounds.

COP-8: Convened as part of a back-to-back meeting with COP-8 of the Rotterdam Convention and COP-13 of the Basel Convention from 24 April to 5 May 2017, COP-8 took decisions to list: SCCPs in Annex A; HCBd in Annex C; and decaBDE in Annex A with specific exemptions for legacy vehicles.

POPRC-13 REPORT

POPRC-13 opened Tuesday morning, 17 October 2017, with David Ogden, Basel, Rotterdam and Stockholm Conventions (BRS) Secretariat, welcoming delegates to Rome. He noted the temporary absences of POPRC Chair Estefânia Gastaldello Moreira and Vice-Chair Zaigham Abbas (Pakistan), and said Maria Delvin (Sweden) had been appointed after consultation and without objections as new Vice-Chair and would therefore act as POPRC-13 Chair.

Chair Delvin opened the meeting and noted that Agus Haryono (Indonesia) would serve as rapporteur. She noted that in her 10 years at the POPRC, 19 chemicals have been nominated, a testament to the group's dedicated and transparent efforts.

Carlos Martin-Novella, BRS Deputy Executive Secretary: said the scientific and technical work of the POPRC is at the core of the Convention; welcomed the new experts appointed to serve from 2018-2022 attending POPRC-13 as observers; and highlighted that work on chemicals management will feed into the "Beat Pollution" theme of the third meeting of the UN Environment Assembly (UNEA) of the UN Environment Programme to be held in December 2017.

ORGANIZATION OF WORK

On Tuesday, Chair Delvin introduced the agenda and organization of work (UNEP/POPS/POPRC.13/1, INF/1, INF/2), which the Committee adopted. She drew attention to the outlines for risk profiles and risk management evaluations (UNEP/POPS/POPRC.13/INF/11) and noted that the agenda item on PFOA would be taken up after consideration of PFHxS.

ROTATION OF MEMBERSHIP

On Tuesday, the Secretariat introduced the document on the rotation of membership (UNEP/POPS/POPRC.13/INF.3/Rev.1). Chair Delvin noted ongoing consultations regarding appointment of the Vice-Chair and suggested suspending discussion of this agenda item until later in the week.

The current members of the POPRC are: Australia, Austria, Belarus, Brazil, Canada, China, Czech Republic, Ecuador, Gabon, Indonesia, Iran, Jamaica, Japan, Kenya, Lesotho, Luxembourg, Mali, Mauritania, Nepal, Oman, Pakistan, Poland, Saint Vincent and the Grenadines, Senegal, Sri Lanka, Swaziland, Sweden, Switzerland, the Netherlands, Tunisia, and Venezuela. On Friday, Svitlana Sukhorebra (Ukraine) was elected as new Vice-Chair for POPRC-14, beginning in May 2018, with Belarus commending the nomination.

REVIEW OF THE OUTCOMES OF STOCKHOLM CONVENTION COP-8 RELEVANT TO THE WORK OF THE COMMITTEE

On Tuesday, the Secretariat introduced the outcomes of Stockholm Convention COP-8 relevant to the POPRC's work (UNEP/POPS/POPRC.13/INF/4). The POPRC took note of the information.

TECHNICAL WORK**CONSIDERATION OF DRAFT RISK PROFILES:**

Dicofol: On Tuesday, the Secretariat introduced the draft risk management evaluation on dicofol (UNEP/POPS/POPRC.13/2) and related comments and responses (UNEP/POPS/POPRC.13/INF/5).

Marcus Richards (Saint Vincent and the Grenadines), Chair of the intersessional working group on dicofol, presented the draft risk management evaluation. On control measures, Richards highlighted that prohibition of the production, use, import and export of dicofol has been successfully implemented by many countries. He reported that there are viable chemical and non-chemical alternatives that are already in use, and in the case of non-chemical alternatives in particular, widely accessible especially in developing countries. Richards concluded that the POPRC should recommend that the COP consider listing dicofol in Annex A with no exemptions.

In the plenary discussion, Indonesia highlighted that dicofol also contains dioxins and furans. Supporting the listing of dicofol in Annex A, Belarus noted that it can still be purchased from some pesticide distributors. The Netherlands noted that dicofol is not as complex as PFOA in terms of its supply chain and applications, and stressed that the Committee's role is not "just identifying prohibition" as the most effective means to protect human health but also to evaluate whether the chemical is likely, as a result of its LRET, to lead to significant adverse human health and environmental effects warranting global action. Canada called for further discussion on the maximum residue levels used by the intersessional group, noting that these are applied in different ways when dealing with food and pesticides. Gabon noted that dicofol is also present in products used to control mosquitoes in developing countries.

In contributions from observers, Pesticide Action Network (PAN) International supported listing dicofol in Annex A with no exemptions, given that no critical uses were identified; and supported non-chemical alternatives. The US supported the adoption of the risk management evaluation. India called for more discussion on alternatives.

The Committee established a contact group, chaired by intersessional working group Chair Richards, to further discuss the draft risk management evaluation and prepare a draft decision. The contact group met on Tuesday afternoon and evening to review the draft risk management evaluation.

In the contact group on Wednesday, delegates continued discussions of the draft decision text. Among other things, they considered the reference to maximum residual levels (MRLs) for food set by individual countries and the Codex Alimentarius international food standards. One member pointed out that some countries do not set their own MRLs and simply adopt the Codex levels, but that they often also have to meet the MRLs set by individual countries when exporting food.

Delegates also discussed how to appropriately reflect the need to select dicofol alternatives that protect human health and do not have POPs characteristics. Some delegates suggested ensuring that such alternatives do not meet the Annex D screening criteria, while others noted that the Annex D criteria are used as part of a process and are not applied in an *ad hoc* manner. They noted that these alternatives would not necessarily undergo the Convention

evaluation process and so the Annex D criteria should not be referenced in this manner. Delegates went through the text, paragraph-by-paragraph.

On Thursday morning, Richards noted the dicofol contact group had prepared a draft decision. On Friday morning in plenary, Richards introduced the revised draft risk management evaluation on dicofol (UNEP/POPS/POPRC.13/CRP.2), noting all amendments had been made and comments taken into account. In his concluding statement, he announced that the group had concluded that dicofol should be considered by the COP for listing under Annex A without specific exemptions. Kenya explained that her country had developed two effective biological controls applied locally and supported the Annex A listing without exemptions.

The draft decision and risk management evaluation on dicofol was adopted without objections.

Final Decision: In its final decision (UNEP/POPS/POPRC.13/CRP.1), the POPRC adopts the risk management evaluation for dicofol, and decides to recommend to the COP that it consider listing dicofol in Annex A to the Convention without specific exemptions. UNEP/POPS/POPRC.13/CRP.2 contains the risk management evaluation on dicofol.

PFOA, its salts and PFOA-related compounds: On Tuesday afternoon, the Secretariat introduced the draft risk management evaluation on PFOA, its salts and PFOA-related compounds (UNEP/POPS/POPRC.13/3), as well as related supporting information (UNEP/POPS/POPRC.13/INF/6 and Add.1) and comments and responses (UNEP/POPS/POPRC.13/INF/7).

The drafter of the draft risk management evaluation, Katinka van der Jagt (Luxembourg), led delegates through the evaluation. On control measures, she noted that several countries already take control actions, although these actions vary from country to country. She presented various possible control measures, such as listing in Annex A, B and/or C and replacing the chemicals with alternatives.

On evaluation of efficacy, efficiency and availability of appropriate alternatives, van der Jagt noted that there are no technical and/or economically feasible alternatives for some specific uses. She proposed exemptions for certain uses including those relating to the semi-conductor industry, technical textiles with high performance requirements, certain pharmaceuticals and some other highly specialized chemicals, digital imaging, and medical devices.

She noted that agreement has not been reached regarding the recommendation to be made and the POPRC should discuss whether PFOA should be listed in Annex A, B and/or C at this meeting.

Belarus, supported by the observer from the Russian Federation, noted that the document fulfills the requirements of Annex F and was based on a lot of scientific and academic research. She lamented the number of PFOA exemptions in the draft, including exemptions where alternatives exist such as in relation to textiles and firefighting foams. Austria highlighted outstanding issues including the viability and availability of alternatives, and uncertainty surrounding unintentional PFOA sources. China noted difficulty with finding PFOA alternatives and called for more research and evidence.

Kenya drew attention to the issue of transported isolated intermediates for reprocessing purposes. Japan proposed making a presentation on exemptions for medical purposes during contact group discussions.

In contributions from observers, the International POPs Elimination Network (IPEN), speaking on behalf of those communities suffering from the effects of PFOA exposure, lamented the choice of the consultant who assisted in drafting the PFOA recommendation, and pointed to the numerous “industry-driven” exemptions, including those for use in workers’ clothing and in film photography, and stressed that the listing process is for the worst chemicals. She called for delegates to use the intersessional period to gather information that can be used to redraft the current document. In response, van der Jagt underlined that there had been no conflict of interest in the preparation of the draft risk management evaluation for PFOA.

Norway called on the Committee to strive to avoid listing in Annex B, pointing to the experience of listing PFOS. Health Care Without Harm underlined that the strategic procurement of alternatives could be used to ensure that exemptions are time-limited, and called on the Committee to tap into knowledge from small- and medium-sized enterprises in this regard.

Supporting time-limited exemptions, India called for specific exemptions for certain applications in the textile industry.

The Netherlands drew attention to his country’s “serious PFOA problem,” and, with Morocco, expressed concern that it is currently technically impossible to identify PFOA-containing articles in recycling. He called for a deeper discussion on the production process of alternatives. Japan and Suriname suggested compiling a full list of PFOA-related compounds in order to regulate imports, exports and manufacture. Swaziland suggested that the Committee consider non-halogenated alternatives, and noted the unintentional production of PFOA during incineration processes.

The Committee then established a contact group to further consider the draft, chaired by Rameshwar Adhikari (Nepal). On Wednesday morning, Adhikari reported to plenary that on Tuesday afternoon and evening the group had engaged in discussions on exemptions, unintentional releases, chemical list and trade names, and waste, requesting more time to finalize their work.

In the contact group on Wednesday, delegates discussed exemptions for semi-conductors, photo-lithography and textiles. On the semi-conductor industry, delegates sought clarity on PFOA use, discussing it as a process agent used during the manufacturing process and as residues in equipment used to manufacture semi-conductors. They also debated derogation without time limitation for photo-lithography.

Observers from industry provided details for their exemption requests, expanding on the challenges of finding alternatives and the need to have more time for research and innovation. Civil society observers on the other hand reminded participants of the impacts of the chemical and said exemptions without time limits should be avoided, providing evidence that some sections of industry have already phased out PFOA use.

On technical textiles, the group considered the different kinds of textiles and their varied uses, such as “protection for workers” textiles and filter materials. They discussed the definition of

“manufactured items,” as defined in the Canadian Environmental Protection Act, and touched upon the quantity and concentration of the chemical in textiles.

On Thursday in the contact group, delegates started by focusing on firefighting foams, discussing what exemptions, if any, should be included. One NGO observer highlighted the highly toxic nature of PFOA and cited examples of communities in Australia that are suffering from loss of livelihoods and water contamination due to PFOA in firefighting foams, with other members of the group pointing to contamination of aquifers and agricultural land by firefighting foams.

Delegates also discussed current EU exemptions and proposed exemptions related to PFOA for firefighting foams.

One observer highlighted the cost of replacing firefighting foams, saying that this should be reflected in the text. They underlined that control measures should be proportionate to cost. Other delegates said reference to cost should also include recognition of the high cost of remedial action and cleanup following use of PFOA firefighting foams, as well as human suffering, noting that the latter is difficult to quantify but is significant. Several delegates opposed any exemption to PFOA, including in relation to firefighting foams.

On short-chained fluorinated alternatives to firefighting foams, one delegate called for a conclusion about whether or not these can be used to replace PFOA firefighting foams. He said the text should be clear about whether the proposed exemptions are being permitted because there may be no alternatives, or because it would, for instance, be too expensive to replace the existing stock.

Delegates also discussed exemptions relating to the use of PFOA firefighting foams already on the market and in installed equipment.

The contact group talked about necessary transition times and the five-plus-five year time limits for exemptions, as contained in Article 4(4) and 4(7) of the Convention. They debated the extent of the proposed exemptions, differentiating between the production of new foams and the use of existing ones that are on the market and installed in airports for instance, with some noting that an exemption for the latter would be redundant if the time to use them up equates to the time it takes the COP to decide on the matter.

They discussed stocks of concentrated mixtures used to make firefighting foam, and stockpiles. An NGO observer noted that using up stocks should not be an option as alternatives are available and said the stocks should be destroyed. The Secretariat drew attention to the difference between stocks and stockpiles, with the latter considered waste and therefore not usable in the future. An observer from industry stressed that there is no need for an exemption for foams used in training exercises, as alternatives are available. There were calls for legal advice and work during the intersessional period on stocks and stockpiles.

Delegates agreed to delete the reference in the text to exemptions for items already on the market and to consider this issue during the intersessional period.

One member noted that as long as the products remain on the European Union (EU) market, they will find their way to developing countries, especially in Africa, thereby compounding the problem in those nations. He opposed an exemption for PFOA firefighting foams already on the market. One observer noted

that the duration of the exemption was for practical reasons, stressing that both government and industry need time to make the transition away from PFOA foams.

On exemptions for photo imaging, one observer said no exemptions are justified since PFOA in photo imaging is being replaced by digital imaging. An industry observer called for a time-limited exemption to enable a phase-out of PFOA used in photographic coatings applied to films. Responding to a question about the use of PFOA in photo imaging, the industry observer explained that in Europe, PFOA is used only in photographic coatings applied to films, but not in paper or printing plates. Some delegates then suggested limiting the exemption to PFOA in film but others noted that exemptions must consider the global situation and called for more information about the use of PFOA in photo imaging in other regions.

Delegates agreed to defer this discussion to the intersessional period, pending more information about the use of PFOA in photographic coatings applied to paper and printing plates in other regions, especially in developing countries.

On exemptions for medical devices, delegates called for additional information about current or anticipated uses of PFOA in medical devices. An industry observer, speaking for his company only, explained that low levels of PFOA are expected to be used in the next few years and that they are already investigating alternatives. Some delegates stressed the need for more precise information, saying exemptions granted must be specific.

Delegates agreed to defer the discussion to the intersessional period, pending more information about the current and anticipated use of PFOA in medical devices and in implantable medical devices.

The group went on to discuss spare parts, in particular an exemption pertaining to aviation, telecommunication, semi-conductors, and the information and communications technology industry, with NGO observers asking for clarification on whether the parts are already made or new. An industry observer defined the requested exemption for the semi-conductor industry as relating to replacement, maintenance and refurbished parts containing fluoropolymers and/or fluoroelastomers with PFOA residues, for legacy equipment or legacy fabrication plant infrastructure manufactured before the date of enforcement. Some asked for clarification regarding the amounts required for production and the timeframe of the request. Observers from industry provided estimated data of PFOA residues, while other delegates asked for the quantity of PFOA used to produce the spare parts.

Delegates noted that references to vehicle manufacturers reflected a Canadian industry request and agreed to provide the sector an opportunity to interact during the intersessional period. Delegates noted a difference between legacy spare parts and critical spare parts. The contact group decided to continue discussing spare parts during the intersessional period.

The group also considered: nano-coating, noting that applications might have expired; and certain inks for printing on low surface energy nonporous substrates, which are also being phased out and therefore do not warrant a derogation. They then moved on to consider paper and food packaging and short-chain fluorinated alternatives.

On Friday morning, the group concluded their discussion of the draft risk management evaluation. One observer offered additional

information on the cost of remediation in airports following the use of firefighting foams. Several delegates said any exemptions for semi-conductors, lithography, textiles and pharmaceuticals must be time-limited and very specific. The group then discussed the executive summary attached to the evaluation, and the draft decision. In their discussions of the executive summary, there was disagreement over whether the Committee needs to decide at this stage whether to list PFOA and exemptions in Annex A or B, or leave this for a later discussion.

In plenary, delegates reviewed the text of a draft decision on PFOA, discussing references to chemical identity, with some supporting inclusion of a comprehensive list. Some favored recommending listing in Annex A, noting that when alternatives are available, specific exemptions should be avoided, while others, including the observer from the Russian Federation, opposed. Belarus and the observer from Norway suggested listing in Annex A with exemptions, including a reference to intersessional work, and deferring a final decision to POPRC-14. Chair Delvin clarified that intersessional work would be considered at the next POPRC meeting and that final decisions were taken by the COP. South Africa and Ghana supported the POPRC making recommendations to the COP. Luxembourg raised concern that the text did not reflect the discussions of the past three days.

Delegates considered the time-specific exemptions, noting some would be limited to five years from the entry into force of the decision, with others possibly requiring an extra five years beyond that, as noted by industry observers. Gabon cautioned against setting 10-year time limits from the start, and IPEN supported Australia in noting that the POPRC can recommend renewable five-year exemptions. IPEN and Canada drew attention to the need to include a call for information on the availability of alternatives and socio-economic implications. Others requested information on medical devices, firefighting foams and what to ask the legal counsel. Debate followed as to how, by when and what kind of extra information to request.

The Netherlands noted, *inter alia*, that: exemptions need to be narrowed down as much as possible; data is lacking on a considerable number of areas; there is a need to hear all views and include information from the Basel Convention; and a decision on PFOA should be deferred to POPRC-14. Supported by China, he also stated that there had been pressure to come to a decision, although, as a scientist, quality is more important than speed.

Van der Jagt, supported by the Netherlands, stressed that the work in the lead up to and during POPRC-13 has been very challenging and commended the contribution of the independent consultant, BiPro, and the team involved in preparing the evaluation.

Chair Delvin suspended plenary to convene a members-only drafting group that met to finalize the draft decision on PFOA and the risk management evaluation.

When plenary reconvened at 9:13 pm, Chair Delvin introduced the revised draft risk management evaluation (UNEP/POPS/POPRC.13/CRP.4). Some delegates asked for clarification about the 10-year exemption for refurbishment parts for legacy equipment. Lesotho noted the language was misleading and seemed to extend the exemption to the manufacture of all semi-conductors or related electronic devices. Delegates then discussed and agreed on alternative language clarifying the exemptions.

The Committee adopted the draft risk management evaluation with these amendments. Chair Delvin then introduced the draft decision on PFOA, its salts and PFOA-related compounds (UNEP/POPS/POPRC.13/CRP.5). The Committee adopted the decision with minor amendments.

Final Decision: In its decision (UNEP/POPS/POPRC.13/CRP.5), the POPRC adopts the risk management evaluation for PFOA, its salts and PFOA-related compounds. The Committee decides to recommend to the COP that it consider listing PFOA, its salts and PFOA-related compounds in Annex A or B to the Convention with specific exemptions for:

- five years for the manufacture of semi-conductors or related electronic devices, legacy equipment or legacy fabrication plant related infrastructure, photo-lithography or etch processes, photographic coatings applied to films, textiles for oil and water repellency for the protection from dangerous liquids, for the protection of workers from risks to their health and safety; and
- 10 years for refurbishment parts containing fluoropolymers and/or fluoroelastomers with PFOA residues for legacy equipment or legacy refurbishment parts, and for use of perfluorooctane iodide, production of perfluorooctane bromide for the purpose of producing pharmaceutical products.

The Committee also, *inter alia*:

- invites parties and observers, including the relevant industries, to provide, by 12 January 2018, information that would assist the possible defining of specific exemptions for production and use of PFOA, in particular in membranes intended for use in medical textiles, filtration in water treatment, production processes and effluent treatment, transported isolated intermediates in order to enable reprocessing in another site than the production site, medical devices, implantable medical devices, photo-imaging sector, automotive industry, and firefighting foams;
- further invites parties and observers to provide, by 12 January 2018, information in relation to PFOA's unintentional formation and release and information on the chemical identity of a PFOA-related-compounds chemicals list;
- requests the Secretariat to prepare a document on the scope of the reference to stockpiles and make it available to POPRC-14; and
- decides to establish an intersessional working group to assess the information provided with the intention of strengthening the recommendation on the listing of the chemical for consideration by POPRC-14.

CONSIDERATION OF A PROPOSAL FOR THE INCLUSION OF PFHxS, ITS SALTS AND PFHxS-RELATED COMPOUNDS IN ANNEXES A, B AND/OR C:

On Tuesday morning, the Secretariat introduced the proposal to list PFHxS (CAS No: 355-46-4), its salts and PFHxS-related compounds in Annexes A, B and/or C to the Convention (UNEP/POPS/POPRC.13/4) and the Secretariat's verification of whether the proposal contains the information specified in Annex D (UNEP/POPS/POPRC.13/INF/8).

The drafter of the proposal, Trine Celius (Norway), led delegates through the text. She described PFHxS uses, such as in surfactants or anti-stain coatings, noting that it is produced in China and Italy for instance, as well as being unintentionally produced. She outlined the chemical identity of PFHxS, underscoring that there are 80 related compounds contained

in the group. She said it is a very persistent substance that bioaccumulates, bioconcentrates and biomagnifies, and informed that its half-life in human serum is 8.5 years, which is much longer than PFOS.

She expanded on its LRET, discussing increasing levels in polar bears, its distribution through ocean currents and air, and noted that it is detected in remote areas, in both the environment and in biota. Noting adverse effects were detected in mammals, for instance, she drew attention to *in vitro* and *in vivo* mechanistic studies, epidemiology and ecotoxicity studies. She concluded that there is sufficient evidence that PFHxS meets the screening criteria of Annex D.

Chair Delvin highlighted that the POPRC should now decide whether or not the Annex D screening criteria have been fulfilled and whether the committee should move to the Annex E stage (information requirements for the risk profile).

China and Switzerland, and several other countries called for greater clarity on and the definition of the PFHxS-related substances listed. Austria and Luxembourg supported the proposal to list PFHxS. Austria, supported by Switzerland and Canada, called for the Annex D bioaccumulation criteria to be applied in a more flexible way.

Switzerland and Canada said the Annex D criteria have been met, and Canada noted the need to include a paragraph about the "read-across approach" and the justification for including it, when drafting the Annex D conclusions. Gabon highlighted the need to consider alternatives to PFHxS before a decision is made to list it in Annex D, noting that the substance is used in Gabon as a firefighting foam. The Netherlands called for reliance on scientific literature.

In contributions from observers, Ghana described research carried out in his country, which analyzed river and tap water, and found high levels of PFHxS present. He called for application of the precautionary approach and supported listing PFHxS in Annex A, B and/or C.

IPEN said the proposal shows that PFHxS meets all the Annex D listing criteria and supported moving to the Annex E stage. South Africa urged focusing on the science to list PFHxS and considering first whether PFHxS meets the Annex D criteria, before considering alternatives. China highlighted the need to first understand PFHxS and determine whether the screening criteria have been met, before considering control measures.

The Russian Federation noted that the analysis in the proposal was conducted primarily using scientific data related to PFOS, rather than PFHxS specifically. He called for additional scientific studies, and said the Annex D screening criteria have not been met.

The US noted that there is additional information on bioaccumulation that was not included in the proposal, and also noted that in the section of adverse effects, many of the effects listed have not been established to be "adverse."

The UK called for more information on read-across and category data, and noted that the EU conclusion did not include toxicity data. Suriname highlighted her country's inventory of PFHxS-containing materials, as well as links to elevations in kidney and liver problems, and called for more data. Indonesia stressed the need for more scientific studies from Asia.

Providing clarification, Celius: noted their use of the Organisation for Economic Co-operation and Development (OECD) list to find related substances, highlighting that these

include any substance that breaks down to PFHxS, pointing to a recently published paper that had identified 80 compounds; underscored “little use” of read-across data; and noted an ongoing project identifying production and use applications, including findings indicating high PFHxS levels in furniture stores, sludge from waste water treatment, firefighting foams, and metal plating.

The Committee established a contact group, chaired by Jack Holland (Australia), to further consider this issue, and requested the Secretariat to prepare text that could be used as a basis for contact group discussions. On Wednesday, the contact group met and undertook a detailed discussion on the evaluation of PFHxS, completing a first reading of the text. On the chemical identity, delegates preferred to broaden the scope to include any substance containing the chemical moiety $[C_6F_{13}SO_2]$ rather than list the 80 chemicals outlined by Celius in the presentation of the proposal. On persistence, one POPRC member argued that the text stating that “no environmental half-lives for PFHxS are available, but based on its chemical structure, it is likely to be highly persistent” is not strong enough evidence.

Discussing bioaccumulation, delegates agreed on the need to include information on PFHxS half-life in pigs and in monkeys (713 days and 141 days, respectively), with one observer offering to provide PFHxS half-life information for women living in the Arctic. The group also discussed adverse effects, with a few requesting quantification of the neurotoxic and neurodevelopmental effects, with others advising that this information is not important at this stage. Another queried the causal relationship between exposure to PFHxS and reduced effects of vaccines in early childhood, and also called for a stronger case to be presented to prove “adverse effects.” Other delegates pointed to the adverse effects of PFHxS exposure to the liver and thyroid hormones of mice and rats.

On Thursday, the group referred to a study finding that PFHxS is detected at a frequency greater than 98% in all five human population birth cohorts. The group agreed that there is sufficient evidence that PFHxS meets the criterion on persistence

On LRET, the group discussed volatile precursors and the possibility of transporting them, and noted that there is no analytical method for detecting them. Delegates concurred that PFHxS is a “swimmer,” a chemical that is anticipated to undergo LRET in water. They also discussed epidemiological studies and endocrine-disrupting effects under adverse effects, as well as the immunosuppressive potential of PFHxS. The group agreed to: delete reference to polar bear toxicity during the fasting season, with a note that this is more pertinent to Annex E discussions; and retain reference to the influence on the neuronal development in birds. They further discussed effects at environmentally-relevant levels and endocrine effects that were present at even lower levels in frog tadpoles. The contact group concluded that PFHxS meets the screening criteria specified in Annex D. The text was forwarded to a drafting group to be finalized.

On Friday morning in plenary, delegates heard a report from PFHxS contact group Chair Holland who introduced the draft decision (UNEP/POPS/POPRC.13/CRP.3), commended the group for reaching consensus on the criteria, and thanked the drafters from Norway for having added substantive details on adverse effects. The POPRC adopted the draft decision with no amendment.

Final Decision: In its final decision (UNEP/POPS/POPRC.13/CRP.3), the POPRC:

- decides that it is satisfied that the screening criteria have been fulfilled for PFHxS, as described in the evaluation contained 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;
- decides that issues related to the inclusion of PFHxS salts and PFHxS-related compounds that potentially degrade to PFHxS should be dealt with in developing the draft risk profile;
- invites parties and observers to submit to the Secretariat the information specified in Annex E, by 8 December 2017, for PFHxS and any substance that contains the chemical moiety $[C_6F_{13}SO_2]$ as one of its structural elements and that potentially degrades to PFHxS; and
- requests the Secretariat to make available to parties and observers a non-exhaustive list of CAS numbers for PFHxS, its salts and PFHxS-related compounds when the Secretariat invites them to submit information specified in Annex E.

Chair Delvin proposed, and delegates agreed, that Jack Holland would chair the intersessional working group. Chair Delvin announced that she will be the drafter until May 2018, relinquishing her role to Rikke Donchil Holmberg (Denmark), and stated that from May 2018, the group will be chaired by Peter Dawson (New Zealand).

PROCESS FOR THE EVALUATION OF PFOS, ITS SALTS AND PFOSE PURSUANT TO PART III OF ANNEX B TO THE STOCKHOLM CONVENTION:

On Tuesday afternoon, the Secretariat introduced the process for evaluating PFOS, its salts and PFOSE pursuant to paragraphs 5 and 6 of Part III of Annex B to the Stockholm Convention (UNEP/POPS/POPRC.13/5) and draft terms of reference for the assessment of alternatives to PFOS, its salts and PFOSE (UNEP/POPS/POPRC.13/INF/9). She described the information required to draft the reports on the evaluation of PFOS and then subsequently formulate the recommendations that lead to decisions.

On the POPRC’s report on the assessment of alternatives to PFOS, its salts and PFOSE, she described the information needed before prioritization and screening, noting that the next step is to prepare a preliminary report with the help of a consultant, before the final evaluation report is published. She noted that the draft terms of reference (ToR) include a section on experts working during the intersessional period. On the second report to be prepared by the Secretariat on the evolution of PFOS, its salts and PFOSE, she defined the information needed such as on the production and use of sulfluramid and progress made in eliminating PFOS.

In the ensuing discussion, Austria commended the more formal involvement of best available technologies/best environmental practices experts and called for business and industry to share their success stories.

In comments from observers, IPEN underscored the importance of the evaluation process, raised concerns regarding the wording of the ToR, and called for consideration of the importance of the functional need of the chemical substance and non-chemical alternatives. He suggested drawing on other areas of expertise such as from the agro-ecology sector and the FAO. The US supported the transition to safe PFOS alternatives, noted the validity of the ToRs and called for further analysis of PFOS alternatives and for capacity building. PAN International supported IPEN and called for agro-ecologists to be consulted

where ecosystem approaches to pest management could be an alternative. She underscored the importance of understanding the current state of research on alternatives and where to allocate funding. China called for the evaluation of alternatives to be comprehensive to avoid replacing PFOS with equivalents.

The POPRC adopted the draft decision (UNEP/POPS/POPRC.13/5), establishing an intersessional working group, without objections. Chair Delvin proposed, and the Committee agreed, that Martien Janssen (the Netherlands) will chair this group.

Final Decision: In its final decision (UNEP/POPS/POPRC.13/5), the POPRC establishes an intersessional working group to undertake the activities for the evaluation of PFOS, its salts and PFOA, and agrees to work in accordance with the ToR for the assessment of alternatives to PFOS, its salts and PFOA.

ENHANCING EFFECTIVE PARTICIPATION IN THE WORK OF THE COMMITTEE

On Wednesday, the Secretariat introduced the report on activities for effective participation in the work of the Committee (UNEP/POPS/POPRC.13/INF/10/Rev.1), with Chair Delvin noting that effective participation is key to the work of the Committee and inviting feedback on activities undertaken to promote effective participation. She also drew attention to the handbook for effective participation in the work of the POPRC. In comments from observers, South Africa suggested having more POPRC members attend COPs so as to safeguard the work of the POPRC. POPRC-13 took note of the information provided by the Secretariat.

WORKPLAN FOR THE INTERSESSIONAL PERIOD

On Friday, the Secretariat introduced the workplan for the intersessional period between the thirteenth and fourteenth meetings of the Committee (UNEP/POPS/POPRC.13/6), which was adopted without objection.

VENUE AND DATE OF THE NEXT MEETING

On Friday, the Committee agreed that POPRC-14 will be held from 17-21 September 2018 in Rome, Italy.

OTHER MATTERS

On Friday, Chair Delvin recalled that she had proposed considering suggestions for improving how information in risk profiles and risk management evaluations is reported to support the COP. She suggested, and members agreed, to defer this discussion to POPRC-14.

CLOSURE OF THE MEETING

On Friday morning, the Committee adopted the meeting report (UNEP/POPS/POPRC.13/L.1), with minor editorial amendments, agreeing to entrust the rapporteur, Agus Haryono, to finalize the report of the work undertaken on Friday. In the afternoon, the Committee convened to discuss the draft decision related to the draft risk management evaluation for PFOA, adjourning to convene a members-only drafting group to finalize the draft decision text (as summarized above).

Having adopted the draft decision and related risk management evaluation for PFOA, Chair Delvin thanked members for their work and closed the meeting at 9:58 pm.

A BRIEF ANALYSIS OF POPRC-13

POPRC-13 had a deceptively light agenda. Some delegates less conversant with what goes into listing a new chemical may have come to the POPRC expecting early nights and easy debates. While the discussions relating to dicofol and PFOS certainly ticked these boxes, and even PFHxS was not overly difficult, the discussions of PFOA kept delegates working well into the night throughout the meeting. Driven by the obligation to protect human health and the environment from hazardous chemicals, but captivated by increased industry engagement, the Committee had more than enough on its plate at this session.

This brief analysis will review the main points of contention at POPRC-13, the context within which the meeting was held, and place the work of the Committee in the broader framework of global chemicals management.

SMOOTH SAILING FOR SOME, STICKING POINTS FOR OTHERS

On the upside, POPRC-13 sailed swiftly toward easily-reached decisions on a number of chemicals. For one, the draft risk management evaluation for dicofol (used to control mites in a variety of crops) got the thumbs up and the decision to recommend listing in Annex A without exemptions came without much friction and through a collegial discussion. Also with the wind in its sails, PFOS, its salts and PFOA moved to its next port of call, an intersessional working group on its evaluation, with delegates satisfied with the information presented in Rome.

While the new Norwegian proposal to include PFHxS, its salts and PFHxS-related compounds (used in water and stain protective coatings for carpets, paper and textiles) eventually resulted in agreement that Annex D criteria had been met, delegates expended much energy on ensuring its effects were indeed “adverse.” Some initially argued that the evidence presented was not sufficient to determine causal links between PFHxS and various neurological and epidemiological effects. Once the drafters beefed up their case with more salient study references, however, delegates were satisfied that it was indeed time to move this chemical on to the next phase of evaluation and recommended compiling an Annex E risk profile.

On the other hand, discussions on the draft risk management evaluation of PFOA, its salts and PFOA-related compounds (found for instance in non-stick frying pan coatings, photography, and stain-resistant carpets) proved a sticking point. Coming into POPRC-13, many were prepared for some level of difficulty in these discussions, with initial concerns over the evaluation’s drafting process raised by the NGO community prior to the meeting. This contention pertained to the contracting of an industry-based consultant, BiPro, as part of the team preparing the evaluation, which NGOs highlighted as having gaping “industry-sized exemption” holes as a result of “conflict of interest.” The issue was swiftly dispensed during the first plenary discussion when the drafter, Luxembourg, asserted that there had been no conflict of interest in the drafting process, and that the evaluation was the product of significant consultation with several interested stakeholders.

But as discussions on the draft risk management evaluation began in earnest, other concerns emerged. Heated exchanges in the contact group pitted industry observers against NGOs, with many Committee members watching silently, seemingly from the sidelines. Industry pushed for niche exemptions

desired by their various sectors, while NGOs did their utmost to remind participants of the stark realities of the suffering these chemicals inflict on affected communities, and of the POPRC's duty to ensure the Stockholm Convention's principles are upheld. Debate raged primarily on exemptions for industrial use in semiconductors and for firefighting foams, with many delegates out of their depth with regard to the specific industrial applications of the exemptions requested. To mitigate this, industry observers explained their requests for exemptions, going into detail on exactly how they use these chemicals, and in some cases, pushing for exemption periods longer than the five plus five years allowed by the Convention (like for instance on photolithography).

As the meeting progressed, the sense of urgency conveyed by some delegates eager to push chemicals towards restriction did not seem to be shared by all in the room. Much as POPRC-13 did not directly precede a COP (as there is another Committee meeting scheduled before COP-9), the immense work needed to push PFOA through was evident. And, with 18 months before the next COP, the Netherlands cautioned against speed at the cost of scientific rigor, preferring to gather more evidence from experts (on issues such as transboundary wastes, and PFOA used for medical devices) before taking a decision. Indeed, the Committee did leave some of the more contentious issues under the PFOA discussion for the intersessional period, including work on unintentional releases and waste streams. Many, however, still believed that this was the time for urgent action. The latter opinion seemed to hold greater sway in the contact group discussions, illustrated by intense discussions on time-limited versus open-ended derogations. As anticipated from previous listing discussions (for instance on decaBDE at POPRC-11), NGO observers pressed for few, if any exemptions, and industry, such as SEMI (a global industry association serving the manufacturing supply chain for the micro- and nano-electronics industries), pushed for numerous exemptions, some of them open-ended in nature.

Delegates were nevertheless determined to get it right, both because of the seriousness of the chemical under consideration and also to reassert the importance of the POPRC's scientific and technical role. With this meeting coming six months after the last Stockholm Convention COP, some veterans recalled that COP delegates had listed decaBDE and SCCPs with broad exemptions for continued production and use, even in cases where available, affordable and accessible alternatives had been identified by the POPRC. The Committee was determined to make its recommendations to the COP as "airtight" as possible, with one veteran observing that, "we are here to do our absolute best and hope that the COP takes up the recommendations as prescribed." This perhaps contributed to the choice to spend more time going through the evaluation on PFOA, working both through the intersessional period and during POPRC-14 to address all its uses and the various industries that could be affected.

THE INDUSTRY EFFECT

The now commonplace exchanges about the speed of accomplishing tangible results also called into play the nature of the tabled proposals moving from "dead" to "live" chemicals, with some delegates recounting that the initial POPRC meetings moved faster as they were dealing mostly with chemicals that

were no longer in use and therefore easier to ban. At that time, industry had no interest in engaging, as in many cases these chemicals had already been replaced.

This POPRC meeting, as its more recent predecessors, was dealing with substances that are still on the market and used daily in some parts of the world in particular applications. As such, certain delegates mused over the idea of "rewarding" industry innovation in finding alternatives, noting that refusing exemptions could promote greater efforts to find alternatives to the banned chemicals. Others, however, professed that it was not the objective of the Stockholm Convention to recompense companies that find ways around using POPs, but that industry should nevertheless be applauded for its participation in the POPRC, and that all the stops should be pulled out to encourage them to phase out hazardous chemicals.

NEXT STEPS

As delegates left FAO headquarters in Rome late on Friday night, it was clear that there is a lot to be done on PFOA, PFOS and PFHxS during the upcoming intersessional period. The role of the POPRC remains to safeguard human health and the environment. Amidst heavier industry participation, it was evident at this session that scientific engagement through the contribution of POPRC members (with their diverse technical expertise) is crucial. POPRC-14 will be the next stage in balancing the practical realities of industry's need for time to innovate and develop alternatives with the urgency to phase out these chemicals.

UPCOMING MEETINGS

Thirteenth Meeting of the Rotterdam Convention Chemical Review Committee: The Chemical Review Committee (CRC13) will review chemicals and pesticide formulations for possible listing under Annex III of the Rotterdam Convention. **dates:** 23-27 October 2017 **location:** Rome, Italy **contact:** BRS Secretariat **phone:** +41-22-917-8218 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** www.pic.int

38th SETAC North American Annual Meeting: The theme of the 38th SETAC North American Annual Meeting is "Toward a Superior Future: Balancing Chemical Use and Ecosystem Health." This meeting will consist of lectures and presentations on landmark scientific research, professional training opportunities, and networking to promote new collaborations. Conference participation is expected to be a mix of academia, industry and government agencies. **dates:** 12-16 November 2017 **location:** Minneapolis, Minnesota, US **contact:** SETAC North America Office **phone:** +1-850-469-1500 **fax:** +1-888-296-4136 **email:** setac@setac.org **www:** https://msp.setac.org/

29th Meeting of the Parties to the Montreal Protocol: The Joint 11th Meeting of the Conference of the Parties to the Vienna Convention and the 29th Meeting of the Parties to the Montreal Protocol is scheduled to consider HFC management, implementation, and other matters. **dates:** 20-24 November 2017 **location:** Montreal, Canada **contact:** Ozone Secretariat **phone:** +254-20-762-3851 **fax:** +254-20-762-0335 **email:** ozone.info@unep.org **www:** http://ozone.unep.org

53rd Meeting of the GEF Council: The GEF Council will approve projects to realize global environmental benefits in the GEF's focal areas, provide guidance to the GEF Secretariat and implementing agencies, and to discuss its relations with

the conventions for which it serves as the financial mechanism. In addition, the 23rd Least Developed Countries Fund and the Special Climate Change Fund Council Meeting will be held on Thursday, 30 November. On Monday, 27 November, there will be a consultation with Civil Society Organizations. **dates:** 28-30 November 2017 **location:** Washington DC, US **contact:** GEF Secretariat **phone:** +1-202-473-0508 **fax:** +1-202-522-3240/3245 **email:** secretariat@thegef.org **www:** www.thegef.org/events/53rd-gef-council-meeting

UN Environment Assembly (UNEA): The third meeting of the Assembly, with the overarching theme of pollution, aims to deliver a number of tangible commitments to end the pollution of air, land, waterways, and oceans, and to safely manage chemicals and waste. Four events will take place in Nairobi in conjunction with the Assembly, including the Global Major Groups and Stakeholders Forum (27-28 November), the Open-ended Meeting of the Committee of Permanent Representatives (29 November - 1 December), Science, Policy and Business Forum (2-3 December), and Sustainable Innovation Expo (4-6 December). **dates:** 4-6 December 2017 **location:** Nairobi, Kenya **contact:** UN Environment Secretariat **phone:** +254-20-762-1234 **email:** beatpollution@unenvironment.org **www:** www.unep.org/environmentassembly/assembly

SAICM Asia-Pacific Regional Meeting for the 2nd Meeting of the Intersessional Process: This regional meeting of the Strategic Approach to International Chemicals Management (SAICM) is tentatively scheduled to convene in 2018 in preparation for the second meeting of the SAICM intersessional process on the sound management of chemicals and waste beyond 2020. **dates:** 23-26 January 2018 **location:** to be announced **contact:** SAICM Secretariat **phone:** +41-22-917-8273 **fax:** +41-22-797-3460 **email:** Brenda.koekkoek@unep.org **www:** www.saicm.org

SAICM Latin America and the Caribbean Regional Meeting for the 2nd Meeting of the Intersessional Process: This regional meeting is tentatively scheduled to convene in 2018 in preparation for the second meeting of the SAICM intersessional process on the sound management of chemicals and waste beyond 2020. **dates:** 29 January-1 February 2018 **location:** Panama City, Panama **contact:** SAICM Secretariat **phone:** +41-22-917-8273 **fax:** +41-22-797-3460 **email:** Brenda.koekkoek@unep.org **www:** www.saicm.org

SAICM African Regional Meeting for the 2nd Meeting of the Intersessional Process: This regional meeting is tentatively scheduled to convene in 2018 in preparation for the second meeting of the SAICM intersessional process on the sound management of chemicals and waste beyond 2020. **dates:** 6-9 February 2018 **location:** Abidjan, Ivory Coast **contact:** SAICM Secretariat **phone:** +41-22-917-8273 **fax:** +41-22-797-3460 **email:** Brenda.koekkoek@unep.org **www:** www.saicm.org

Second meeting for SAICM intersessional process and the sound management of chemicals and waste beyond 2020: This meeting is tentatively scheduled to convene in 2018 in advance of the second meeting of the SAICM Open-ended Working Group (OEWG). **dates:** March 2018 (tentative) **location:** to be announced **contact:** SAICM Secretariat **phone:** +41-22-917-8273 **fax:** +41-22-797-3460 **email:** saicm.chemicals@unep.org **www:** www.saicm.org

12th International Conference on Waste Management and Technology: The 12th International Conference on Waste Management and Technology (ICWMT) is an important platform for specialists and officials to discuss scientific problems related to solid waste management, exchange experiences, and look for innovative solutions. Initiated by Basel Convention Regional Centre for Asia and the Pacific and approved by the Ministry of Environmental Protection of the People's Republic of China, ICWMT has been held 11 times since 2005. With the theme of "Overall Control of Environmental Risks," national and international participation are expected from government, research institutions, academia, and industry and business interests. **dates:** 21-24 March 2018 **location:** Beijing, China **contact:** Shi Xiong, Basel Convention Regional Centre for Asia and the Pacific **phone:** +86-10-82686410 **fax:** +86-10-82686451 **email:** icwmt@tsinghua.edu.cn **www:** http://2017.icwmt.org

Fourteenth Meeting of the Persistent Organic Pollutants Review Committee: The Persistent Organic Pollutants Review Committee (POPRC-14) will review the possible listing of hazardous chemicals under the various annexes of the Stockholm Convention. **dates:** 17-21 September 2018 **location:** Rome, Italy **contact:** BRS Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** http://www.pops.int

Fourteenth meeting of the COP to the Basel Convention, the ninth meeting of the COP to the Rotterdam Convention and the ninth meeting of the COP to the Stockholm Convention: These meetings are scheduled to convene back-to-back in 2019. **dates:** 29 April-10 May 2019 **location:** Geneva, Switzerland **contact:** BRS Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** brs@brsmeas.org **www:** www.basel.int, www.pic.int, www.pops.int, synergies.pops.int

For additional meetings, see sdg.iisd.org

GLOSSARY

COP	Conference of the Parties
decaBDE	Decabromodiphenyl ether
FAO	Food and Agriculture Organization of the UN
IPEN	International POPs Elimination Network
LRET	Long-range environmental transport
PAN	Pesticide Action Network
POPRC	Persistent Organic Pollutants Review Committee
POPs	Persistent organic pollutants
PFHxS	Perfluorohexane sulfonic acid
PFOA	Pentadecafluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PFOSF	Perfluorooctane sulfonyl fluoride
SCCPs	Short-chain chlorinated paraffins
ToR	Terms of reference