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REPORT OF THE SECOND SESSION OF THE CRITERIA EXPERT GROUP FOR PERSISTENT ORGANIC POLLUTANTS: 14-18 JUNE 1999

The second session of the Criteria Expert Group (CEG-2) for persistent organic pollutants (POPs) met from 14-18 June 1999 at the Vienna International Center. Approximately 140 participants representing 60 countries attended the meeting to build upon the work of CEG-1 in the development of scientific criteria and a procedural process for adding other POPs to the initial list of 12 identified for global action. In the warm climes and high culture of host city Vienna, delegates to CEG-2 found the inspiration they needed to undertake their work in what was by and large a harmonious and well-orchestrated performance. The CEG succeeded in completing its work in two rather than three sessions, well ahead of its deadline, as agreement was quickly reached on many key issues. The final report will b forwarded to the third session of the Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants (INC-3), which will meet from 6-11 September 1999 in Geneva.

A BRIEF HISTORY OF THE POPS NEGOTIATIONS

During the 1960s and 1970s, the use of certain chemicals in industry and as pesticides increased dramatically. Many of these chemicals are important to modern society but they can also pose a serious threat to human health and the environment. In particular, a certain category of chemicals known as persistent organic pollutants has recently attracted international attention due to a growing body of scientific evidence indicating that exposure to very low doses of certain POPs can lead to cancer, damage to the central and peripheral nervous systems, immune system diseases, reproductive disorders, and interference with normal infant and child development. POPs ar chemical substances that persist, bioaccumulate and pose a risk of causing adverse effects to human health and the environment. With the further evidence of the long-range transport of these substances to regions where they have never been used or produced and the consequent threats they now pose to the environment worldwide, the international community has called for urgent global action to reduce and eliminate their release into the environment.

Prior to 1992, international action on chemicals primarily involved developing tools for risk assessment and conducting international assessments of priority chemicals. For example, in 1989 UNEP amended its London Guidelines for the Exchange of Information on Chemicals in International Trade and the FAO established the International Code of Conduct for the Distribution and Use of Pesticides. In 1992, the UN Conference on Environment and Development (UNCED) adopted Agenda 21. Chapter 19 of Agenda 21, "Environmentally Sound Management of Toxic Chemicals Including Prevention of Illegal International Traffic in Toxic and Dangerous Products," called for the creation of an Intergovernmental Forum on Chemical Safety (IFCS). Agenda 21 also called for the establishment of the Inter-Organization Programme on the Sound Management of Chemicals (IOMC) to promote coordination among international organizations involved in implementing Chapter 19.

In March 1995, the UNEP Governing Council (GC) adopted Decision 18/32 inviting the IOMC, the IFCS and the International Programme on Chemical Safety (IPCS) to initiate an assessment process regarding an initial list of 12 POPs, grouped into three categories: 1) pesticides: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene; 2) industrial chemicals: hexachlorobenzene and polychlorinated biphenyls (PCBs); and 3) unintended byproducts: dioxins and furans. In response to this invitation, the IFCS convened an *Ad Hoc* Working Group on POPs that developed a work-

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plan for assessing these substances. The assessments of the chemicals included available information on the chemistry, sources, toxicity, environmental dispersion and socioeconomic impacts of the 12 POPs. In June 1996, the *Ad Hoc* Working Group convened a meeting of experts in Manila, the Philippines, which concluded that sufficient information existed to demonstrate the need for international action to minimize the risks from the 12 specified POPs, including a global legally binding instrument. The meeting forwarded a recommendation to the UNEP GC and the World Health Assembly (WHA) that immediate international action be taken.

In February 1997, the UNEP GC adopted Decision 19/13C, which endorsed the conclusions and recommendations of the IFCS. The GC requested that UNEP, together with relevant international organizations, prepare for and convene an intergovernmental negotiating committee (INC) with a mandate to prepare, by the year 2000, an international legally binding instrument for implementing international action, beginning with the 12 specified POPs. The first meeting of the INC was also requested to establish an expert group for the development of science-based criteria and a procedure for identifying additional POPs as candidates for future international action. Also in February 1997, the second meeting of the IFCS decided that the IFCS *Ad Hoc* Working Group would continue to assist in preparations for the negotiations. In May 1997, the WHA endorsed the recommendations of the IFCS and requested that the World Health Organization (WHO) participate actively in negotiations of the international instrument.

INC-1: The first session of the Intergovernmental Negotiating Committee (INC-1) was held from 29 June-3 July 1998 in Montreal, Canada. Delegates from approximately 90 countries met with a clear spirit of cooperation, mutual purpose and shared responsibility, and voiced their determination to tackle what is universally acknowledged as a very real and serious threat to human health and the environment. INC-1 elected bureau members, and considered the programme of work for the INC, as well as the possible elements for inclusion in an international legally binding instrument. INC-1 also established a Criteria Expert Group (CEG), an open-ended technical working group, as well as a working group on implementation aspects of a future instrument, such as issues related to technical and financial assistance.

Delegates met in two contact groups to discuss terms of reference for the CEG and technical information needs. INC-1 mandated the CEG to present to the INC proposals for science-based criteria and a procedure for identifying additional POPs as candidates for future international action. INC-1 directed the CEG to incorporate criteria pertaining to persistence, bioaccumulation, toxicity and exposure in different regions taking into account the potential for regional and global transport, including dispersion mechanisms for the atmosphere and the hydrosphere, migratory species and the need to reflect possible influences of marine transport and tropical climates. The CEG was mandated to complete its work and submit its results to the INC at or before its fourth session.

CEG-1: The first session of the Criteria Expert Group (CEG-1) was held from 26-30 October 1998 in Bangkok, Thailand. Over 100 delegates from approximately 50 countries gathered to consider the CEG's programme of work, including the development of science-based criteria for identifying additional POPs as candidates for future international action. Concurrently, delegates considered the development of a procedure for identifying additional POPs, including the information required at different stages of the procedure and who would nominate, screen and evaluate a substance as a potential future POP under the convention.

INC-2: The second session of the Intergovernmental Negotiating Committee (INC-2) was held from 25-29 January 1999 in Nairobi. Delegates from over 100 countries, as well as representatives from U agencies, environmental non-governmental organizations (NGOs), intergovernmental organizations (IGOs) and industry, convened to further consider possible elements of an international legally binding instrument. After general discussions in Plenary on the Secretariat-prepared expanded outline of an international legally binding instrument, delegates divided into Negotiation and Implementation Groups. In the Negotiation Group, delegates completed preliminary discussions on measures to reduce or eliminate releases of POPs into the environment, identified by many as the pivotal article of the future POPs convention. The general discussions held in the Implementation Group resulted in an initial consensus on possible capacity-building activities requiring technical and financial assistance that will provide the basis for developing articles on these issues. A contact group on annexes also met to begin placing the 12 POPs into annexes for prohibited production and use, chemicals with restricted production and use, and chemicals subject to certain release reporting and release reduction or elimination measures.

REPORT OF THE MEETING

CEG Co-Chair Fatoumata Jallow Ndoye (The Gambia) opened the meeting on Monday, 14 June, thanking the Governments of Austria and Germany for providing financial assistance for the meeting. Heinz Schreiber, Executive Director of the Austrian Ministry of Environment, Youth and Family, addressed CEG-2 on behalf of Austrian Environment Minister Martin Bartenstein. He noted an increased awareness of hazards linked with the use of certain chemicals in Austria, especially with regard to pesticides. He identified risks posed by POPs as a transboundary challenge and wished the CEG a successful meeting.

Jim Willis, Director, UNEP Chemicals, speaking on behalf of UNEP Executive Director Klaus Töpfer, recalled the INC's mandate to negotiate a legally binding agreement by the year 2000. Willis drew attention to the increasing threat to human health and the environment from POPs and the importance of a successful negotiation for sustainable development. He hoped participants would avoid detail and legal complexity and focus on general concepts. Co-Chair Jallow Ndoye thanked CEG-2's hosts and contributors. She highlighted the CEG's mandate, its wide representation, the progress made at CEG-1 and certain outcomes to be considered, and her confidence that there would be determined efforts and commitment at CEG-2.

Jallow Ndoye then introduced the provisional agenda (UNEP/POPS/INC/CEG/2/1), which was adopted by the Plenary. Co-Chair Reiner Arndt (Germany) highlighted the considerable progress made at CEG-1 as reflected in its report, noted his expectation that the CE could complete its work at this session, and outlined some aspects of the programme of work. Bo Wahlström, UNEP Chemicals, reported on information gathered by the INC from the International Maritime Organization (IMO), at the request of CEG-1, on the IMO's activities to address tributyl tin (TBT) and other organo-tin compounds. He noted the information document on this distributed at INC-2 and the IMO's intention to put in place a global legally binding instrument that will ensure a global prohibition on the application of organo-tin compounds that act as biocides in anti-fouling systems on ships by 1 January 2003 and a complete prohibition on the presence of organo-tin compounds that act as biocides in anti-fouling systems on ships by 1 January 2008.

The US reported on the analysis undertaken at the request of CEG 1 on availability of and access to test data for pesticides and high production volume chemicals (UNEP/POPS/INC/CEG/2/CRP.8). H noted information was obtained on 4620 chemicals. DENMAR outlined work done on use of quantitative structure activity relationships (QSARs) for the selection of POPs (UNEP/POPS/INC/CEG/2/CRP.4).

The NETHERLANDS highlighted a report reviewing state-of-the-art methods for estimating missing data on persistence, toxicity and bioaccumulative potential of substances. GERMANY presented a study on test methods for POPs screening. Co-Chair Arndt presented an analysis of data availability undertaken by Germany. He said some 2000 chemicals had been surveyed and that while sufficient data exists for simple screening material, there is very little data providing more sophisticated information, such as half-life in water and air. He called for the development of a concrete strategy to follow up on indicators to identify potential new POPs and to avoid their use.

The US highlighted its experience in analyzing new chemicals and a proposed policy to regulate development of test data for chemicals meeting the criterion of persistence greater than two months and bioaccumulation greater than 1000. He said any new suspicious chemicals can be subjected to testing to determine risks. He noted limitations in test methods used to provide information to allow discrimination between persistence of two-six months.

The floor was then opened for general remarks. FINLAND underscored the need for more detailed study of industrial chemicals. SENEGAL asked whether a coordinating body exists to look at the results of these various studies. She underscored the importance of developing reliable criteria for pesticides. The RUSSIAN FEDERATION noted the methodological and legal complexity of identifying and regulating POPs and highlighted a POPs identification system submitted by Russia. He emphasized the need for full and comprehensive knowledge in order to make a decision on legal regulation.

ETHIOPIA questioned the applicability of data gathered in temperate zones in tropical regions. On generating test data for different climatic conditions, INDONESIA, supporting ETHIOPIA, stressed differences with regard to persistence and bioaccumulation and the need for further investigation. The US added that such test data and recommendations have come out of a number of international meetings, additional work is needed, and test methods for reliable assessment are needed, with the OECD as a recommended forum for developing these test methods.

DEVELOPMENT OF CRITERIA AND A PROCEDURE FOR IDENTIFYING ADDITIONAL PERSISTENT ORGANI POLLUTANTS AS CANDIDATES FOR FUTUR INTERNATIONAL ACTION

On Monday, 14 June, the Plenary resumed discussions initiated at CEG-1 on the development of criteria and a procedure for identifying additional POPs as candidates for future international action. Bo Wahlström introduced the primary working document for the meeting, Development of Science-Based Criteria and a Procedure for Identifying Additional Persistent Organic Pollutants as Candidates for Future International Action (UNEP/POPS/INC/CEG/2/2). This document consolidated the outcomes of CEG-1 on criteria and procedures into a more elaborate draft proposal to form part of a future POPs convention. This draft proposal includes two articles and three annexes and various definitions regarding scientific criteria. The first article addresses the procedure for the listing of chemicals in the annexes to the convention and the second article addresses the Conference of the Parties. The annexes address: information requirements and criteri for the proposal and screening of proposed POPs; information requirements for the review of Party proposals by the POPs review committee; and information on socioeconomic considerations. The final section of the document addresses definitions.

The Plenary held general discussions on these topics and established two contact groups, one on procedure and the other on criteria, to further discussions. The contact group on procedure, chaired by David Egilson (Iceland), met from Monday, 14 June, toWednesday, 16 June, and considered the article on procedure for listing of chemicals under the annexes of the convention and guidance for the article on th Conference of the Parties. The contact group on criteria, co-chaired by Andrew Gilman (Canada) and Ines Toro Suarez (Colombia), met from Tuesday, 15 June, to Thursday, 17 June, to discuss information requirements and criteria for the proposal and screening of proposed POPs (Annex D), information requirements for the risk profile (Annex E) and definitions. The contact group on criteria also discussed test methods, data generation and environmental fate properties and data. The contact groups reported on the progress of the work to Plenary on several occasions throughout the week. This report summarizes the discussions by topic.

LISTING OF CHEMICALS IN ANNEXES A, B OR C (ARTICLE F): This proposed article of the convention outlines the procedure for identifying additional POPs as candidates for future international action and their listing under one or more of the following proposed annexes that address: chemicals with prohibited production and use (Annex A); chemicals with restricted production and use (Annex B); and chemicals subject to certain release reporting and release reduction or elimination measures (Annex C). The CEG discussed this article in Plenary and in the contact group on procedure in order to finalize the text to forward to the INC for further discussion.

This article includes provisions for *inter alia*, information verification, forwarding to the review committee, application of screening criteria, review of the proposal and preparation of a risk profile, preparation of a risk management evaluation, recommending to the COP whether the substance should be considered for listing under the convention, and communication to the Parties once the COP decides whether the proposed POP shall be listed and under which annex.

In initial discussions held in Plenary on Monday, 14 June, CANADA said text providing for a proposed chemical to be forwarded to the "POPs Review Committee" for criteria screening was too specific. He called for more generic text in order to accommodate the possible need for the COP to decide on more than one technical committee. Responding to this point, but in terms of the review stage, AUSTRALIA, supported by the NETHERLANDS and ICELAND, underscored that the tasks of risk assessment and risk management evaluation are distinct in that the former is based on science and the latter on policy. AUSTRALIA noted that separate committees would avoid bias and overburdening one committee. The US supported a committee composed of named countries rather than named individuals in order to allow different and appropriate expertise on risk assessment and risk management evaluation.

JAPAN, supported by ICELAND and others, advocated the inclusion of a feedback mechanism to notify the COP on whether proposals have fulfilled information and screening criteria requirements. IRA requested specifying a timeframe regarding verification of information requirements and forwarding proposals to the review committee. JAPAN proposed deleting reference to a flexible, transparent and integrative manner with respect to the application of criteria, and requested guidance on the confidentiality of information that will come befor the review committee. NORWAY supported explicit reference to th

precautionary approach regarding the application of criteria. On the request for information prior to the review of the proposal, the NETHERLANDS proposed deleting reference to the annex on socioeconomic considerations. CANADA said a clause should be included indicating that information from this annex could be collected at a later date.

GERMANY proposed adding that the review committee may request input from NGOs and IGOs. The US preferred "accredited observers" rather than "NGOs." The US suggested text stating that the request for information follow examination and precede review of the proposal and at any time thereafter. AUSTRALIA proposed that a synthesis of information and a draft risk assessment be undertaken as an additional step between forwarding the proposal and information to the review committee, and the preparation of the risk assessment and risk management evaluation. JAPAN stressed the need for a prioritization process to determine which substances would be reviewed first, and highlighted information on the extent of use and production as playing an important role in prioritizing.

CANADA, with the EU's support, advocated two distinct reviews for risk profile and risk management evaluation and called for splitting the text into two paragraphs. To text on the preparation of a risk profile and recommendation, NORWAY proposed adding reference to the precautionary approach. AUSTRALIA opposed this reference, noting it is encompassed in the mandate of the convention. The US supported placement of this reference in the convention's preamble.

The US said the review committee's work should be done in accordance with the annex on information requirements for risk profile, and requested explicit text stating that if the committee decides a proposal should proceed, it shall prepare a risk management evaluation. He also asked for an explanation of the procedure if the committee decides a proposal should not proceed. He added that the committee should decide whether the substance warrants consideration by the COP for listing in one of the annexes. Regarding the review committee's decision to recommend a substance for listing, the US said the report on risk assessment and risk management evaluation should include an evaluation of control measures, rather than a recommendation of control measures.

Citing duplication with other articles of the draft text of the convention, AUSTRIA proposed deleting a paragraph indicating that the Secretariat would communicate information to all Parties when a decision to list a chemical had been taken and appropriate control measures had been approved. SENEGAL disagreed. QATAR stressed that the notification to Parties be undertaken in a timely manner. CÔTE D'IVOIRE supported specific deadlines. The US said the decision to list a chemical and the approval of appropriate control measures should be viewed as a single decision. The contact group on procedure convened and considered this article from Monday, 14 June, through Wednesday, 16 June. On Wednesday, the contact group reported the outcome of its work to Plenary.

The contact group concurred that the content of annexes depends on the nature and establishment of a committee. The group's objectives in drafting the articles on procedure and the COP included a simple and transparent procedure, providing a clear role for different bodies within the convention, and allowing for flexibility with regard to the different capabilities of Parties and the convention's evolution over time. He noted issues raised in Plenary for the contact group to consider, including: the potential need for feedback mechanisms; possible separation of risk assessment and management; the role of subsidiary bodies; the nature and representation of subsidiary bodies; the status of observers; assistance to countries not capable of providing full information; prioritization in assessing chemicals; the precautionary principle; and the meaning of a "flexible integrated manner" regarding the application of criteria.

The group considered three conceptual frameworks for the procedure, including decision points and entities:

- one subsidiary group dealing with both risk assessment and risk management evaluation;
- one or two subsidiary groups undertaking risk assessment and management to allow for separation between science and politics, as necessary, without formal approval from the COP in between; and
- two subsidiary groups with formal approval from the COP in between the risk assessment and management processes.

The group preferred the second option, but opinions varied as to whether this procedure should be included in the legal text, an annex or a COP decision. This recommendation will be forwarded to the IN for further consideration.

Regarding timelines for the procedure, Chair Egilson noted difficulties in setting timelines due to the complexity of issues and believed this would be more appropriate once the actual process is initiated. It was also noted that perhaps the COP should establish the timeframes once the convention is functioning.

Regarding the specific timeframe for the Secretariat to verify whether a proposal to list a substance meets the information requirements for the screening process, Jim Willis commented that six months was a reasonable time period given that proposals may be submitted concurrently and other Secretariat functions. Six months remains in brackets.

IRAN requested clarification as to whether the summary of the proposal forwarded to all Parties and observers would be comprehensive and include all information. Chair Egilson responded that the term summary was used to avoid burdening Parties with piles of documents and Bo Wahlström said the Secretariat would fulfill any request to receive all the documents.

Regarding the time allotted for the collection of technical comments by the Secretariat from Parties and observers after the initial screening, the US proposed that both "for a specified period" and "a period not to exceed six months" appear bracketed in the text. He proposed that the same clauses remain in brackets with respect to input collection from all Parties and observers relating to the information set out in the annex on socioeconomic considerations after the revie committee decides to proceed with a proposal. The final text contains these alternatives in brackets.

Regarding a footnote recognizing that the committee would need to develop a procedure for developing risk profiles, MEXICO asked whether the risk profile procedure would reflect the unique characteristics of each country. The US responded that the text's intent was to indicate how the committee might organize its work and that Mexico's concern would be addressed later. ARGENTINA clarified that the need to develop a procedure would also apply to the risk management evaluation.

Regarding the COP's decision to list a POP and the communication by the Secretariat to notify all Parties once a decision to list has been made, ICELAND noted that at this point the identification procedure has ended and the US added that a COP decision to list a POP would require amending the annexes and/or the convention.

MALAYSIA said the report recommending that the COP list a POP should include an analysis of possible control measures in addition to the risk profile and the risk management evaluation, which was accepted. GREENPEACE INTERNATIONAL proposed that the deci-

sion on whether or not to list a POP under the convention should come after the risk profile but before the risk management evaluation, and called for reorganizing the text.

In outlining the proposed procedure from the initial submission by a Party to the Secretariat to the decision by the COP to list a substance in one or more of the annexes, references to timeframes at various stages throughout the procedure were left in brackets. The text in the final report explains that the Secretariat will verify whether the proposal contains the information required by the annex on criteria. If it does, the review committee examines the information and applies the screening criteria in a flexible, transparent and integrative manner. If the criteria are fulfilled, a technical review is undertaken, with input on risk profile information from Parties and observers. The revie committee performs a review of the proposal and prepares the risk profile. The Secretariat then forwards the report to the Parties and observers and collects technical comments relating to the risk profile, which are taken into account in the completion of the risk profile. If the proposal proceeds, socioeconomic information is then requested from Parties and observers and a risk management evaluation, taking into account possible control measures, is prepared. Based on the risk profile and the risk management evaluation, the review committee recommends whether the substance should be considered by the COP for listing under the convention. The COP decides whether the proposed POP should be listed and under what annexes. The Secretariat then communicates this information to all Parties.

The final text states that the review committee will be responsible to the COP for prioritization and timely execution of its functions and will report to the COP at all of its regular sessions. It also includes provisions addressing the procedure when, for example, the screening criteria are not fullfilled or a risk profile determines that the proposal should not proceed.

CONFERENCE OF THE PARTIES (ARTICLE O): On Monday, 14 June, Co-Chair Jallow Ndoye introduced proposed text for the article on the COP. The text called on the COP to establish a review committee, set out guidelines for membership, determine the terms of reference of the committee and agree to a majority vote rule of two-thirds should the committee fail to reach consensus. In general discussion, CANADA questioned the appropriateness of discussing this article in the CEG. The US agreed that this article should be addressed by the INC.

Regarding the establishment of a review committee, CANAD said the focus should be on a technical committee of experts, not a political group. COLOMBIA underscored the need to look at technical rather than procedural aspects.

Regarding committee membership, the US preferred a limited number of Parties represented by government-designated experts, and said the committee should be open to observers, ensuring participation by a non-Party at an appropriate level. CÔTE D'IVOIRE asked if non-Parties could nominate experts. FRANCE suggested membership on a rotating basis. AUSTRALIA requested a definition for the geographical regional basis for participation.

Regarding a two-thirds rule for majority vote, JAPAN noted that the POPs convention negotiating text states three-fourths in brackets and, with AUSTRALIA, supported bracketing the rule. The US supported a three-fourths majority. AUSTRIA opposed this change. This article was then forwarded to the contact group on procedure.

The contact group on procedure considered this article on Tuesday, 15 June, and reported to the Plenary the following day. The group agreed to forward considerations to guide the INC in developing this article. The considerations include the need for a subsidiary body or bodies of manageable size made up of Party members and open to observers under the UN system. Such a subsidiary body would be able to establish *ad hoc* or standing subgroups to address specific issues.

INFORMATION REQUIREMENTS AND CRITERIA FOR THE PROPOSAL AND SCREENING OF PROPOSED POPS (ANNEX D): On Monday, 14 June, delegates held a general discussion on the proposed annex containing information requirements and criteria for the proposal and screening of proposed POPs. On Tuesday, 15 June, the contact group on criteria continued the discussion. The contact group revised the text and presented it to the Plenary for comments on Thursday, 17 June. The final version of the annex in the report of CEG-2 details information requirements and four criteria for the proposal and screening of proposed POPs, as well as a request for available additional information and a provision for Parties to draw on any source for technical expertise.

The initial text of the chapeau requested a Party submitting a proposal to provide sufficient information to enable determination as to whether the criteria were fulfilled, and stated that the information need not be exhaustive. AUSTRIA, with IRAN, supported deletion of "sufficient" and noted that verification of sufficiency would be part of the procedure. The RUSSIAN FEDERATION also proposed deleting "sufficient" as well as the text stating that the information need not be exhaustive, noting that the list of requirements appeared exhaustive. CANADA preferred to retain the text and noted that the information requirements were not too onerous and achievable by all countries. The US said that the information provided need not be exhaustive. The NETHERLANDS agreed and said the Secretariat should check for the completion of the information packet. ETHIOPIA preferred text stating that the information should wholly or partially meet the listed criteria. JAPAN remarked that the information requested would be for an initial screening, and that additional information could be assembled later. The UK noted the need to clarify whether information must be provided for each criterion or if meeting one criterion would be sufficient. The final text states that a Party submitting a proposal for listing substances shall identify the substance and provide information relating to the criteria set out in the annex. The report of the meeting reflects that the notion of not requesting exhaustive data is still a valid concern of several experts and that the current formulation should not be assumed to require exhaustive data.

Substance Identity: Regarding information required for substance identity, the RUSSIAN FEDERATION requested, and DENMARK opposed, reference to density and dispersion under substance identity because they are determinants of propagation. The final text calls for: substance name, commercial name and synonyms; chemical abstracts service registry number; International Union of Pure and Applied Chemistry (IUPAC) name, as appropriate; and structure, including specification of isomers, where applicable.

Persistence: A substance's half-life or other evidence of sufficient persistence proves the persistence criteria. While there was general agreement that a half-life greater than six months in soil or sediments would suffice, debates centered on whether the half-life in water would need to be greater than two or six months. DENMARK, GERMANY, on behalf of the EU, GREENPEACE INTERNATIONAL and SENEGAL supported a half-life in water greater than two months, with SENEGAL emphasizing that exposure risks are greater from water than soil and GREENPEACE INTERNATIONAL stressing that mobility in water is greater than soil. The US and JAPAN underscored the argument for six months, with JAPAN calling for harmonization of criteria in each media. Delegates were unable to reach agreement, but agreed to annex a summation of the supporting arguments for both

time periods to the report of the meeting. The final report identifies evidence of persistence as, in brackets, a half-life in water of two or six months, a half-life of a substance in soil or sediments of six months, or other evidence that the substance is sufficiently persistent to be of concern within the scope of the convention.

Bioaccumulation: The criterion of bioaccumulation is evidenced by: a bioconcentration factor (BCF) and bioaccumulation factor (BAF) or, in the absence of this information, a log Kow (an indication of solubility in water or fat); high ecotoxicity; or data on biota indicating that the bioaccumulation potential is sufficient to be of concern. The US said that a log Kow is not sufficient for the evaluation stage, and underscored that a BCF or BAF must be available prior to completing the review of a substance to ensure that the bioaccumulation potential can be assessed. JAPAN and INDONESIA supported use of a log Kow greater than five for the screening stage. DENMARK identified BCF in fish as preferable evidence and encouraged the creation of an incentive to obtain a correct BCF. He supported a precautionary value for the log Kow of greater than four. CUBA supported a log Kow greater than four. Unable to reach agreement on the log Kow necessary for evidence, delegates annexed a summary of supporting arguments for four and five to the report of the meeting. GERMANY emphasized that a BCF is not necessary if monitoring data in biota is available. DENMARK noted that bioaccumulation in non-aquatic species via the food chain could also qualify as evidence. The final report suggests the criterion of bioaccumulation be met through evidence that: the BAF or BCF in aquatic species for the substance is greater than 5,000, or that, in the absence of a BAF or BCF, the log Kow is greater than four or five; a substance presents reason for concern such as bioaccumulation in other species or high toxicity or ecotoxicity; or data on biota indicates that the bioaccumulation potential of the substance is sufficient to be of concern within the scope of the convention.

Potential for Long-range Environmental Transport: The initial text on the long-range environmental transport criterion called for measured levels of potential concern in locations distant from the source, data showing long-range transport or environmental fate properties or model results demonstrating potential for long-range transport. The US qualified "long-range transport" as "long-range environmental transport." CANADA, supported by GERMANY, called to move reference to evidence of potential exposure under the reasons for concern criteria. The US, underscoring the importance of deposition, advocated replacing "potential exposure" with "potential deposition" to distinguish between presence in transport media and in environmental media. FRANCE said reference to deposition would b too restrictive and would not accommodate migratory species. GREENPEACE INTERNATIONAL said the US proposal was too restrictive and that damage can occur in transport media and/or deposition media.

To text regarding environmental fate properties stating that substances that migrate significantly through the air should have a half-life no greater than two days, GERMANY urged adding a half-life in water greater than two months for substances that migrate significantly through the hydrosphere. The US said this would need to be bracketed to avoid inconsistency with the persistence criteria and questioned the need to detail different media. DENMARK explained that half-life in water is used both to indicate persistence and potential for long-range transport. The NETHERLANDS, supported by FINLAND, DENMARK, SWEDEN, GERMANY and NORWAY, requested that the text be revisited after defining long-range environmental transport. The final report includes three options for evidence of this criterion: measured levels of potential concern in locations distant from the source of release; data showing that long-range environmental transport may have occurred via air or water or migratory species; or environmental fate properties or model results demonstrating potential for long-range environmental transport, transfer to receiving environment, and an air half-life greater than two days.

Reasons for Concern: The text on reasons for concern noted evidence that chronic toxicity or ecotoxicity data on and predicted levels of a substance indicate a potential for damage to human health or the environment caused by long-range transport. SWEDEN opposed the need for toxicity or ecotoxicity data, noting that evidence of bioconcentration or bioaccumulation by long-range transport should provide reason for concern. Intending to broaden the reasons for concern, he proposed making the information requested optional under reasons for concern. The RUSSIAN FEDERATION emphasized the need to discuss all possible reasons for concern and to address possible local as well as distant effects.

ETHIOPIA underscored the importance of addressing substances of concern, even if concern is local, since possible problems from long-range transport cannot be excluded. FINLAND proposed, and the US opposed, bracketing text specifying damage resulting or anticipated from long-range transport. CANADA said exposure levels should be considered, and supported deleting "chronic" since this specification would limit information supplied on toxicity. He said consideration of toxicological interactions among substances should be addressed at the review stage. SPAIN, supported by INDONESIA and the RUSSIAN FEDERATION, also opposed specification of chronic toxicity, noting potential problems from acute toxicity. The UK said assessment of damage should take place further along in the evaluation.

CANADA, supported by DENMARK and ETHIOPIA, emphasized that persistence, bioaccumulation, potential for long-range transport and toxicity are the criteria and that their integrated impact present reason for concern. He proposed changing the heading from "reasons for concern" to "toxicity." In sum, CANADA proposed that the annex be a statement of concern based on four criteria with the annex on the risk profile conducting the assessment as to whether long-range transport of an identified substance could lead to environmental and human health problems. The US recalled that CEG-1 agreed to integrate toxicity into the concept of "reasons for concern" and opposed making it a separate criterion. The RUSSIAN FEDERATION, supported by GREENPEACE INTERNATIONAL, opposed limiting reasons for concern with the term "toxicity," since this would overlook numerous reasons for concern. MEXICO noted the importance of establishing broad criteria for concern, and for their applicability at the local, regional and global levels. The US remarked that studies on local and regional transport is included under environmental fate properties and that local and regional issues should be addressed, as appropriate, within the context of a global convention. GERMANY underscore that data other than toxicity, such as bioaccumulation in fish, demonstrate a reason for concern.

COLOMBIA expressed concern as to where non-bioaccumulating but persistent substances that can disseminate over long distances and produce a high level of ecotoxicity would qualify for the screening criteria. DENMARK suggested including this under substances with lower BCF or BAF that present other reasons for concern, such as ecotoxicity. The WORLD WIDE FUND FOR NATURE (WWF) emphasized the need for a precautionary approach and questioned the facility of predicting effects from toxicological interactions among substances.

In discussion on reasons for concern in Plenary on Thursday, 17 June, delegates considered two of three options for the text:

- one entitled "adverse effects," requiring evidence that toxicity or ecotoxicity data indicate the potential for damage to human health or the environment and that this evidence should, where possible, include comparison of toxicity or ecotoxicity data with substance levels resulting or anticipated from long-range environmental transport; and
- another entitled "reasons for concern," requiring evidence that toxicity or ecotoxicity data, when compared with availabl detected or predicted levels of the substance resulting from long-range transport, indicate a potential for damage to human health or the environment.

The US said exposure should be included but is not necessary in the first option, while in the second, toxicity and exposure together must demonstrate danger. AUSTRALIA supported the criterion indicating a need for information on exposure. FINLAND, along with NORWAY and GERMANY, supported the option where evidence of exposure is not mandatory. AUSTRALIA noted a difference in opinion that some countries thought exposure should not need to be considered at the initial screening stage but instead considered during the risk evaluation stage. The US and AUSTRALIA preferred this information at the screening stage. DENMARK noted that exposur has a very broad meaning and that exposure concentration is not mentioned in the mandate, and could not support deleting "where possible." INDONESIA supported the adverse effects option. DENMARK, GERMANY and AUSTRALIA agreed that the comparison should be provided, where possible. The GAMBIA stressed that even with assistance, many countries may still find it difficult to submit comparisons and that the convention must be flexible enough so as not to be a deterrent. The GAMBIA and CHILE supported the Co-Chair's proposal. The US said felt that no more progress on the issue could be made at this time.

The final report has two options for the title, "reasons for concern" or "adverse effects." The text calls for evidence that toxicity or ecotoxicity data indicate the potential for damage to human health or the environment and that this evidence either, in brackets, "should, needs to, or where possible, include comparison of toxicity or ecotoxicity data with substance levels resulting or anticipated from long-range environmental transport."

Additional Information: To text requesting Parties to provide additional information, to the extent possible, the US added that the differing capabilities of countries to provide such information and the implied responsibilities should be recognized. Co-Chair Arndt said consideration of assistance to developing countries in submitting a proposal should be incorporated into the convention, not in the annex. The final text notes that a Party shall provide additional information to the extent possible, taking into account its capabilities and drawing on technical expertise from any source.

INFORMATION REQUIREMENTS FOR THE RISK PROFILE (ANNEX E): This annex highlights information requirements for the review of proposals by the POPs review committee. The Secretariat text outlined information requirements including information on: sources, uses, and releases; hazard assessment for endpoint(s) of concern; environmental fate; monitoring data; information regarding exposure; national, regional and international risk evaluations assessments or profiles; labelling information and hazard classification; and status of the substance under international conventions.

Delegates discussed this annex in Plenary and in a contact group, finalizing text for further consideration by the INC. On Tuesday, 15 June, delegates made initial comments on the text. Regarding the chapeau, containing text outlining the purpose of the review GERMANY, supported by SENEGAL, FINLAND and GREENPEACE INTERNATIONAL, proposed deleting the word "significant" before "adverse human health and/or environmental effects." FINLAND and GREENPEACE INTERNATIONAL said a qualifier already exists and pointed to text stating that the purpose of the review is to evaluate whether the substance's effect would warrant global action. The US, AUSTRALIA and MEXICO supported its retention.

Delegates then discussed the specific information requirements for a review. To information on sources, FINLAND proposed "major" sources and the US suggested "significant" sources. SENEGAL and the GAMBIA preferred the original reference to sources without a qualifier. To discharges and emissions, DENMARK, supported by the GAMBIA, proposed adding "losses."

PAKISTAN proposed text elaborating release information to include releases during handling, transport, storage and disposal. The GAMBIA said release information implicitly includes all of these. Co-Chair Arndt said the elaboration would be put in the meeting's report.

Regarding information on hazard assessment for endpoint(s) of concern,PAKISTAN asked for clarification of the term "concern." Th US stressed the need to keep the assessment to a reasonable size and scope.

Regarding information on environmental fate, the US proposed adding that prior to the review's completion, a determination of a BCF or BAF must be available. GERMANY stressed that if monitoring biota is available, the BAF or BCF is not needed. Amended text reflects that BCF and/or BAF data should be available except when monitoring data are judged to meet this need.

ETHIOPIA, supported by CANADA, proposed moving text stating that the assessment of damage should include a consideration of toxicological interactions among substances from the annex on criteria to the paragraph on environmental fate in this annex. The US requested that a footnote listing environmental fate properties and data relevant for assessing long-range transport for the screening stage be placed under the environmental fate section of the annex.

On monitoring data, PAKISTAN called for the establishment of a uniform methodology. ETHIOPIA questioned how the revie committee would check the validity of data provided by Parties and also raised the issue of methodologies.

DENMARK called for language noting the need to verify the validity and quality of the data, as well as how representative the data is. MEXICO, noting difficulties with harmonizing data systems, said data should be comparable and called for flexibility with some general guidance on validity, quality and representative aspects of data.

CANADA, supported by GERMANY, suggested that control actions taken, including information on alternatives and other risk management information, be placed in the annex on socioeconomic considerations. GREENPEACE INTERNATIONAL agreed and suggested moving information on PIC status to the annex on socioeconomic considerations as well. The US supported retaining the information on PIC status in this annex. AUSTRALIA opposed moving risk management information and, supported by CANADA, modified "PIC status" to "status under other conventions."

Regarding the definition of risk profile, GERMANY said a risk profile should be more than a hazard assessment but not as rigorous as a comprehensive risk assessment. The task of defining risk profile was left for the contact group.

On Thursday, 17 June, contact group Co-Chair Andrew Gilman reported that the contact group on criteria agreed to move the information requirement on regional control actions taken, including information on alternatives and other relevant risk management information,

to the annex on socioeconomic considerations. The RUSSIA FEDERATION reiterated his earlier proposal to include reference to dispersion and density. Co-Chair Arndt confirmed that this reference would be included in a note in the report of the meeting.

Regarding hazard assessment, the US, supported by DENMARK, modified text to state the assessment should include a consideration of toxicological interactions involving multiple substances. To text stating that a determination of BCF or BAF, based on measured values, must be available except when monitoring data are judged to meet this need, the US stressed that the measured values should not be interpreted to include a measured log Kow.

Information requirements regarding, as available, national, regional and international evaluation, labelling information and hazard classification, and status under international conventions were combined into one paragraph. CROATIA added clarification that "status" referred to status of the substance. Some debate ensued as to whether the information should be provided "as available." The GAMBIA and others stressed that evaluations may not be available at all levels. The phrase "as available" was retained.

Delegates discussed at length the definition of risk profile. The contact group developed and forwarded to Plenary text in the form of a note in the annex which contained numerous brackets. GERMANY asked for clarification on a reference to the term "integration" regarding the portion of the text that states that the risk profile refers to a "comprehensive written review, analysis and integration." In response, the US remarked that an integrated assessment brings all the information together throughout the process, and stressed the importance of this reference. DENMARK and the US modified text to state "comprehensive written review, including analysis and integrated conclusions."

Some debate revolved around whether the term "significant" should precede "adverse human health and/or environmental risks" with respect to the long-range environmental transport of a substance. Initially, GERMANY, SENEGAL and IRAN supported deleting the reference to "significant." JAPAN questioned the need to use "significant" since the reference to "warranting global action" conveyed the same idea and, with IRAN, requested further clarification of the term "significant." The US, AUSTRALIA and MEXICO opposed the deletion. Co-Chair Arndt suggested that the meeting notes indicate that some delegations requested further clarification of the meaning of "significant" and whether its use adds anything to the text.

GERMANY suggested deleting "adverse" if the term "risks" was retained. AUSTRALIA and SENEGAL supported using the term "risks." The US, BRAZIL and MEXICO preferred using the term "effects" in place of "risks." GERMANY, supported by SENEGAL and others, preferred text stating that the substance, as a result of long-range environmental transport, is likely to "lead to risks" instead of "likely to have risks." Co-Chair Arndt proposed using "integrated conclusions" and "lead to significant adverse human and/or environmental effects such that global action is warranted." This proposal was accepted.

The final text defines risk profile as a "comprehensive written review, including an analysis and integrated conclusions focused on the scientific information necessary for evaluating whether the substance, as a result of its long-range environmental transport, is likely to lead to significant adverse human health and/or environmental effects, such that global action is warranted."

Concerned with the length of the process, FINLAND, supported by CANADA, stressed that a focused report on scientific elements will make the case for global action. GERMANY and FINLAN suggested the definition of risk profile be included as a second paragraph in the annex. ETHIOPIA and CUBA suggested putting the definition of risk profile with the other definitions.

Discussion of the chapeau of the annex was left until the end of deliberations and a decision on the definition for risk profile. Regarding the chapeau, the US and CANADA believed that an elaboration of risk profile should be retained in the chapeau for the sake of transparency. COLOMBIA, AUSTRIA and the UK said the definition was not necessary in the chapeau. AUSTRALIA said the chapeau should not be changed. ICELAND agreed that transparency is needed and said that the INC will come back to it later.

FINLAND said the dual purpose of the annex should be highlighted and directly linked to the information gathering and the revie content paragraphs of the article on procedure and that the chapeau should be kept as simple as possible. She proposed changing the annex's title from "Information Requirements for the Review of Party Proposals by the POP Review Committee" to "Information Requirements for the Risk Profile." Co-Chair Arndt said the title should not be changed and that the sentence elaborating on the risk profile could be deleted. He left the issue for the contact group.

The final text reflects the decision to change the annex's title to "Information Requirements for the Risk Profile." The annex's chapeau states that the purpose of the review is to evaluate whether the substance is likely to lead to significant adverse human health and/or environmental effects as a result of its long-range environmental transport, such that global action is warranted. It further states that, for this purpose, a risk profile will be developed that further elaborates on, and evaluates, the information referred to in the annex on criteria and includes the following types of information:

- sources, including, as appropriate, production data, including quantity and location, uses, and release information such as discharges, losses and emissions;
- hazard assessment for endpoint(s) of concern, with the assessment including a consideration of toxicological interactions involving multiple substances;
- environmental fate, including data and information on the chemical and physical properties and persistence of a substance and how they are linked to its environmental transport, transfer within and between environmental compartments, degradation and transformation to other substances. A determination of BCF or BAF, based on measured values, must be available except when monitoring data are judged to meet this need;
- monitoring data;
- information regarding exposure, both in local areas and particularly as a result of long-range environmental transport, and including information regarding bio-availability; and
- as available: national, regional and international risk evaluations, assessments or profiles; labelling information and hazard classifications; and status of the substance under international conventions.

In the final report, the definition of risk profile is included in the section on definitions.

INFORMATION ON SOCIOECONOMIC CONSIDERATIONS (ANNEX F): On Wednesday, 16 June, the Plenary considered information on socioeconomic considerations associated with control measures. Co-Chair Jallow Ndoye stressed that control measures can be in the form of bans or restrictions but that the ultimate goal in line with the convention is to ban.

The US said the text represented a good package that resulted from balanced discussion. On the item referring to information on efficacy and efficiency of control measures in meeting risk reduction goals: technical feasibility and cost, there was agreement. To information on alternatives (products and processes): cost; efficacy; risk and availability, IRAN added technical feasibility and BURKINA FASO added accessibility. To positive or negative impacts on society of implementing control measures: health (*inter alia*, public, environmental and occupational health); agriculture (*inter alia*, aquaculture and forestry); biota (biodiversity); economic aspects and movement toward sustainable development, MEXICO, noting the "colossal" economic and social costs for dealing with POPs, added social costs. GREENPEACE INTERNATIONAL said positive and negative impacts of inaction should be considered.

PAKISTAN, supported by BURKINA FASO, said developing countries are not producers of the majority of POPs and highlighted the need for the convention to address appropriate infrastructure to assess incoming chemicals. Delegates agreed to extend the information item on waste and disposal implications "(in particular, obsolete stocks of pesticides)" to "(in particular, obsolete stocks of pesticides and cleanup of contaminated sites)" and to add sub-items "technical feasibility" and "cost." Also added as items to the information list on socioeconomic considerations were information access and public education (CROATI), status of control and monitoring capacity (AUSTRIA), and any national or regional control actions taken, including information on alternatives and other relevant risk management information (relocated from the annex on risk profile).

A number of delegations, including MEXICO and SENEGAL, stressed the need to make some provision for capacity building. The US highlighted that a separate working group was considering all areas of capacity building under the convention. AUSTRALIA, noting its support for the concept of capacity building, stressed that the list of socioeconomic considerations was described in the text as an indicative list of items. GREENPEACE INTERNATIONAL said it viewed the information list as applying to what action should be taken rather than whether a chemical is a POP. Co-Chair Arndt underscored that the information list takes into account impacts on countries of the addition of new chemicals in a convention that addresses capacity building. Th information list was agreed to, as amended.

RELATED ISSUES: The contact group on criteria considered three related issues: test methods and data generation; data quality and validity; and environmental fate. The results, agreed to in Plenary on Thursday, 17 June, will be included in the report of the meeting and forwarded as recommendations for consideration by the INC.

Test Methods and Data Generation: The CEG identified several potential issues and needs concerning testing. These included the need for development and improvement of relevant test methods and the issue of meeting needs for the generation of test data. Delegates agreed to recommend the possibility of referring the need for development and improvement of relevant test methods to organizations such as the International Standards Organization (ISO) and the OECD. The Plenary also agreed on a recommendation that the INC might consider developing a provision to identify and develop approaches within the convention wherein the Parties would encourage manufacturers of the substance under review to generate test data required to meet the needs of the convention. These would be generated under standardized conditions using widely accepted test methods and laboratory practices.

Data Quality and Validity: The CEG recognized that data might have been generated under a variety of test methods and conditions, that all available data should be considered, and that scientific judgment should be used by putting more emphasis on results generated under standardized conditions using widely accepted test methods and laboratory practices. Results obtained under non-standardized test conditions or without recognized test methods might be considered as they might be more appropriate to the issues of concern. In the risk profile, however, the review of such studies might need to be more rigorous, particularly if the findings differed greatly from the bulk of the data from other studies.

Environmental Fate: The CEG agreed there are many environmental fate properties and data that are relevant for assessing long-range environmental transport. Those properties and data could be grouped into those relevant for transport (vapor pressure, Henry's Law constant, water solubility, studies relevant to local, regional or global environmental transport, particle dispersion, density, etc.), transfer (log Kow, other partition coefficients, water solubility, molecular weight, molecular size, BCF, BAF, etc.), and transformations (molecular structure, half-lives in various environmental media, and many of the properties and data noted above).

DEFINITIONS: On Tuesday, 15 June, Co-Chair Arndt invited discussions on an appendix to the Secretariat's document which contains definitions of substance, half-life, bioconcentration factor, bioaccumulation factor and log Kow. He stressed the definitions were working definitions that would be refined later. After genera comments on the definitions, a contact group met on Thursday, 17 June, to further discuss these and other terms considered to warrant definition. On Friday, 18 June, the Plenary discussed the outcomes of the contact group's deliberations on the working definitions.

Substance: The EU said the definition of substance should be included in the draft convention's article on definitions and proposed broadening the definition to read: "Organic chemical or group of chemicals including organo-metallics. Not only the parent substance is to be considered but also its transformation products with POP characteristics." AUSTRALIA stressed the need for wider discussion and consideration of the proposed definition. DENMARK, supported by INDONESIA, noted that organo-metallics are organic chemicals and are thus implicitly included. The RUSSIAN FEDERATION stressed that organo-metallic compounds are a separate category. SENEGAL proposed defining substance as POPs or their transformation products with the same characteristics. The European Chemical Industry Council (CEFIC) said the proposal to broaden the definition should be qualified by the words "man-made" to avoid confusion.

Co-Chair Arndt stressed focusing on the objective of controlling POPs as opposed to debating differing scientific meanings. CANADA said if a substance is defined as a POP then substances put forward for screening are already POPs. Supporting CANADA, COLOMBIA noted the word "substance" appeared in the proposed definition of substance. The contact group reported on a revised definition of substance as an "organic chemical or group of structurally related organic chemicals, including organo-metallics." The group noted a lack of agreement on the definition, and recognized that transformation products with POPs characteristics might be addressed elsewhere in the convention and that parent substances rather than transformation products are likely to be listed in the control annexes.

Delegates in Plenary debated the bracketed text "group of structurally" and "including organo-metallics" and also the need to address transformation products having POPs characteristics. Regarding "group of structurally" related organic chemicals, Co-Chair Arndt

preferred referring to "chemical class of organic chemicals" since this language was already used in text on substance identity in the criteria information screening requirements. FINLAND proposed substituting "compound" for "chemical." AUSTRALIA proposed deleting the definition of substance to avoid unwanted obligations accruing under the convention relating to transformation products. He preferred using the nomination procedure for listing potential POPs in order to address substances that are not themselves POPs but have transformation products. Supporting AUSTRALIA, the UK, with the US, INDONESIA and CANADA, said substance has a commonly accepted definition. He said transformation products would be better addressed elsewhere than as a definition.

The RUSSIAN FEDERATION, supported by CANADA, called for deletion of the reference to including organo-metallics. CANADA added that organo-metallic substances would be addressed through the listing procedure. GERMANY, on behalf of the EU, supported deleting the definition but stressed the need to reflect the group's agreement that organo-chemicals should be addressed. AUSTRALIA, indicating indifference on inclusion of organo-metallics in the convention, stressed that the convention should, however, encompass organi but not inorganic substances. The US emphasized that the convention is about organic pollutants and expressed concern over addressing substances not covered in the mandate. GERMANY preferred some indication that organo-metallics are covered under the convention and suggested asking the INC to define POPs rather than substance.

The Plenary agreed that the INC should consider substance to mean organic chemicals or classes thereof, including organo-metallics for the purposes of the convention. Delegates also agreed that transformation products as well as parent substances should be addressed and that the nomination process should extend to substances whose parent properties are not POPs but that have POPs transformation products. These points are to be reflected in the final report.

Half-life: Delegates deliberated on half-life defined as "the time taken for the concentration of a substance in a medium to decrease to 50% of its original value in that medium. Half-life based on degradation is to be preferred to disappearance into another compartment. GERMANY, on behalf of the EU, supported by COLOMBIA and the US, said half-life should be based on degradation and not on disappearance into another compartment. The RUSSIAN FEDERATION proposed defining it as the time taken for the concentration of a substance in any model medium to decrease to 50% of its original value in that medium.

The contact group reported that it had consolidated the two parts of the definition by defining half-life as "the time taken for the substance to degrade to 50% of its original concentration," which was agreed to by the Plenary.

Bioaccumulation Factor (BAF): In discussions on the proposed definition of BAF as the concentration of a substance in an organism divided by the concentration of the chemical in the surrounding medium measured in an intact ecosystem (takes into account accumulation through ingested food, as well as concentration from the surrounding medium), FRANCE questioned what was meant by an intact ecosystem. DENMARK explained that this referred to bioaccumulation through ingested food as well as through the surrounding medium. The US proposed saying in an "environmental medium." The contact group reported minor amendments including a substitution of "substance" for "chemical," and the definition was accepted.

Bioconcentration Factor (BCF): The contact group reported on BCF defined as the concentration of a substance in or adsorbed on an organism or specified tissues thereof divided by the concentration of the substance in the surrounding medium at steady state (definition modified from Test Guideline No. 305 of OECD). COLOMBIA preferred "concentration of a substance sorbed" rather than "concentration of a substance in or adsorbed." The definition was accepted as reported by the contact group.

Long-range Environmental Transport: SWEDEN proposed including a definition of long-range environmental transport as transport of a substance via air, water and migratory species occurring in different regions of the world, leading to environmental exposure at distances higher than a hundred kilometers from the sources of release of the substance. Underscoring the aim of the convention to prevent and control pollution, NORWAY emphasized that regional concerns are just as relevant as global concerns. The US noted problems with establishing a definition. AUSTRALIA said the convention should only address issues not covered at the regional level. The RUSSIA FEDERATION opposed using a set distance in the definition and noted variations in what is regional depending on the size of a country and different climatic and soil structure zones.

Contact group discussions led to a bracketed definition containing three separate options:

- environmental transport of a substance on at least a regional scale occurring in different regions of the world;
- environmental transport of a substance globally or transregionally and at a distance where regional action is not sufficient alone to address the problem; and
- environmental transport of a substance on a global or transregional scale such that global action is warranted.

AUSTRIA asked what the general definition for region is within the UN system.

JAPAN queried whether the global scope of the convention also covered regions. Co-Chair Arndt suggested reflecting the discussion in the report and noting the need to define long-range environmental transport. He said the report would note the three proposals made, but that the CEG saw it as beyond their mandate. The NETHERLANDS, with FINLAND, stressed articulating that the CEG had explored th issue based on its mandate. In support, INDONESIA emphasized a preference for a more scientific definition based on distance and exposure. AUSTRIA proposed referring to subregions, noting that the term regions has a political connotation in the UN. Co-Chair Arndt said the report would qualify that the region concept is not the political U type.

Log Kow: The contact group reported progress in simplifying this definition to be the logarithm of the ratio of the chemical's concentration in n-octanol and water at equilibrium, and this was accepted.

Risk Profile: An agreed definition of risk profile emerging from the discussions on the annex on information requirements for the risk profile was included in the report under definitions. Risk profile is defined as a "comprehensive written review, including an analysis and integrated conclusions focused on the scientific information necessary for evaluating whether the substance, as a result of its long-range environmental transport, is likely to lead to significant adverse human health and/or environmental effects, such that global action is warranted."

CLOSING PLENARY

In a final Plenary session on Friday, 18 June, delegates adopted th draft report of CEG-2, as contained in UNEP/POPS/INC/CEG/2/L.1/Rev.1, which incorporates comments made in Plenary on Wednesday, 16 June, during the first round of discussions on the draft report. Regarding a paragraph concerning the possible inclusion of TBT in the

future POPs convention, the revised draft report takes into account an Australian concern highlighting the fact that TBT would still have to go through the agreed procedures

The CEG proceeded to adopt the portion of the report regarding the articles on procedure and the COP, as contained in UNEP/POPS/INC/CEG/2/L.1/Add.1. ICELAND noted inconsistencies in the report which refers to both risk assessment and risk profile. The UK and others called for consistency in referring to the future subsidiary body or bodies. Regarding the group's elaboration on the procedure regarding one or two groups undertaking risk assessment and risk management evaluations, consecutively, without formal approval of the COP, CANADA requested adding text to reflect that some experts believed that the procedure should be included in the legal text, whil others thought it may be more appropriate in an annex or in a decision of the COP.

ICELAND requested adding language to reflect that some expressed understanding that the term "flexible" in the context of applying screening criteria meant that a proposal might be considered to have satisfied the criteria if one of the criteria was marginally not met but two or more other criteria were amply met. Regarding a paragraph on the establishment of a subsidiary body or bodies and possible *ad hoc* or standing subgroups, AUSTRIA, supported by the EURO PEAN COMMISSION, said it would be helpful to obtain from the Secretariat and include in the report possible financial implications and time estimates for the procedure. The NETHERLANDS stressed that an indication of how long the entire procedure would take was important for the INC.

Regarding the text of the article on the procedure and the information from the annex on socioeconomic considerations, the US amended text to state that the review committee shall "request" input rather than "collect" input. This section of the report was then adopted.

The CEG next addressed the second addendum to the draft report, UNEP/POPS/INC/CEG/2/L.1/Add.2, containing the report of the contact group on criteria. GERMANY deleted text on socioeconomic factors in risk assessment analyses and replaced it with text stating that the impact of a substance on socioeconomic factors is a reason for concern. Regarding socioeconomic factors, the US requested text indicating that some considered that such issues should not be part of risk assessment, but of risk management.

AUSTRALIA requested that the report include a reference to the legal question on the issue of "and/or" connecting the criteria in the annex on criteria. CANADA requested a reference to the contact group's examination of bioaccumulation potential, possibly as a *bis* paragraph. Responding to DENMARK's concern regarding the reintroduction and refining of arguments on criteria, Co-Chair Arndt suggested that summaries of the arguments be annexed to the report of the contact group.

Regarding text stating that the definitions considered were not intended as input to articles in the future convention but rather were to assist the INC in deliberations, the US requested assurance that this does not apply to the definition of risk profile.

Regarding reference to the precautionary approach, the US wished to record that some noted that in global conventions the placement of this reference is often in the preamble. GERMANY, on behalf of the EU, with others, called for its inclusion in an appropriate part of the convention as an overall guiding principle. The US and AUSTRALIA, supported inclusion in the preambular text. Co-Chair Arndt proposed recommending that the INC decide where and how to address the issue in the convention. The Plenary agreed the report would note discussion of the precautionary principle with differing views as to its placement in the convention.

The US also requested recording in the report of the meeting that measured values for BAF and BCF do not refer to a measured log Kow.

In the "reasons for concern" criterion in the annex on criteria, the EU proposed, and the US rejected, removing brackets such that evidence of levels of a substance resulting from long-distance environmental transport would need to be included, where possible. The US preferred retaining the option "should be included." Views expressed during contact group discussions on the annex on criteria would be reflected in the report of the meeting

The CEG next addressed the annex on risk profile in the report of the meeting. Regarding monitoring data, PAKISTAN asked that the text read, "monitoring data in environmental media and biota." The US said it must imply inclusion of source monitoring. FRANCE preferred keeping the reference more general to avoid losing other monitoring data such as food. Co-Chair Arndt proposed a note to take into account the concerns raised.

In closing remarks, the US as well as the NETHERLANDS, on behalf of the EU, lauded the CEG's success in reaching the goals and purposes set out in its mandate. GERMANY also remarked on the excellent work of the CEG and commented that it is now in the hands of the INC. He thanked the Co-Chairs, the rapporteur, the interpreters and the Secretariat, and wished everyone a safe return home. Co-Chair Arndt acknowledged the retirement of Peter Corcoran (United Kingdom) and thanked him for his many contributions to international chemicals management. Arndt recalled the CEG's mandate and confirmed that the CEG's work was finished. He said the remaining brackets in the final report can only be removed by political negotiations at the INC. He thanked delegates for their hard work, the Governments of Austria and Germany for supporting the meeting, and the Secretariat. He gaveled the meeting to a close at 4:25 pm.

A BRIEF ANALYSIS OF CEG-2

In the warm climes and high culture of host city Vienna, delegates to CEG-2 found the inspiration they needed to undertake and complete their work in what was by and large a harmonious and well orchestrated performance. The CEG, conducted expertly by Co-Chairs Reiner Arndt and Fatoumata Jallow Ndoye, succeeded in completing its work well ahead of the INC-4 deadline as agreement was quickly reached on many key issues. However, as with any intergovernmental process addressing such a complexity of issues, the CEG-2 concert did strike a few discordant notes. Fractures persisted throughout the week on topics such as required levels of scientific evidence and, on occasion, discussions sidetracked into issues considered beyond the mandate of the CEG, such as procedural timeframes and subsidiary body membership. In the final analysis, it was determined that such matters should be forwarded to the wisdom of the INC or eventually to the COP for fine tuning. The formation of two contact groups, one on procedure and the other on criteria, did succeed in keeping the political and scientific aspects separated to some extent, an issue of concern articulated by many.

WALTZING THROUGH THE PROCEDURE: Although many delegates acknowledged that the CEG reached a successful conclusion on the procedure for listing additional POPs, many participants remain concerned that too much detail is in the text, whether the INC will agree to what the CEG has forwarded to it, and that many decisions will ultimately be left to the COP. Others, however, felt that the level of detail was necessary to lend some structure to the procedure and that

too much detail was better than the vagueness of too little. A more contentious issue was whether a review committee or committees would be needed and the implications of having standing committees, particularly if the decision is taken to establish two committees. Although there was general agreement in theory to separate the risk assessment and risk management evaluation processes to keep politics from meddling with science, concerns arose over the financial implications and the length of time to get through the procedure, particularly if the COP decides to meet every 18 months.

One delegate said an *ad hoc* committee working outside of th process and the UN system and reporting to the COP would be a better guarantee for expert involvement, objectivity and more timely meetings. He cited the IPCC and its relationship to the COP under the U Framework Convention on Climate Change (FCCC) as an example. Another delegate speculated on the idealism of the CEG recommendation that any future review committee should be kept small and manageable, which are critical criteria for an effective technical group. He predicted that the committee recommended by the CEG would end up being very similar in composition and size to the CEG, with governments often sending "experts" who are not scientists.

STEPPING ON TOES: The CEG made the work of establishing criteria and procedure look comparatively easy, but this was not without some push and pull as delegations struggled to take the lead, resulting in some confusing backstepping, sideways shuffles and stepping on each other's toes. Delegates furthered the work of CEG-1 on criteria, but were not able to forward bracket-free text to the INC. Disagreement remained over the values for persistence in water and for a proxy indicator for bioaccumulation. Some of the division could be chalked up to differences in science, but also reflected delegations' determination to use levels that would easily harmonize with domesti or regional criteria. Also, discussions on the "reasons for concern" criterion demonstrated a difference of opinion as to how much and what type of data would be demanded at the screening stage and whether evidence of risk to human health and the environment in far away places would be needed before a substance would be considered. Calls for stringent information resulted in divisions among countries wishing to practice the precautionary principle and those preferring thorough information before action. Such criteria also evoked concern from developing countries as to where such data would come from and be gathered, especially with issues of capacity building and assistance unresolved.

ATTEMPTING TO TAKE THE LEAD: On various occasions throughout the week, the need to integrate science into the broader procedural and policy considerations of a legally binding convention lured delegates beyond their mandate into political hazards seen as more appropriate for INC control measures. Delegates were often reminded of the CEG's relation to the INC and that its work is part of the overall process of negotiating an international agreement. Som attempts to integrate or address concepts such as the precautionary principle, socioeconomic concerns or capacity building within th screening process and procedure elicited tutoring guidance as to the specific role of the CEG in the overall process of formulating a convention. Lengthy debates over definitions such as long-range environmental transport led to questions of how to address regions and what the scope of the eventual convention will be.

AWAITING THE CRITICS' REVIEW: The CEG now eagerly awaits the review of its final performance by the INC. Although th reception is likely to be a warm one, this may be tempered as the INC starts to address the CEG's outstanding issues. One delegate expressed concern that while it played well in Vienna, much of the CEG's work may not be as well received in Geneva. Although the INC will inherit some contentious and complex issues from the CEG, there can be little doubt that the CEG has delivered a virtuoso and expert performance.

THINGS TO LOOK FOR

SIXTH SESSION OF THE PIC INC The Sixth Session of the PIC INC will be held at FAO Headquarters in Rome from 12-16 July 1999 to begin work during the interim period between the signing of the PIC Convention and its entry into force. For more information contact: UNEP Chemicals (IRPTC), tel: +41 (22) 979-9111; fax: +41 (22) 797-3460; e-mail: jwillis@unep.ch; Internet: http://irptc.unep.ch/pic/. Or contact: FAO, tel: +39 (6) 5705 3441; fax: +39 (6) 5705 6347; e-mail: Niek.Vandergraaff@fao.org ; Internet: http://www.fao.org/ag/agp/agpp/pesticid/pic/pichome.htm.

POPS INC-3: The third session of the Persistent Organic Pollutants (POPs) Intergovernmental Negotiating Committee (INC-3) is scheduled for 6-11 September 1999 in Geneva. For more information, contact UNEP Chemicals (IRPTC), tel: +41 (22) 979-9111; fax: +41 (22) 797-3460; e-mail: dogden@unep.ch; Internet: http://irptc.unep.ch/pops/.

DIOXIN '99: The 19th International Symposium on Halogenated Environmental Organic Pollutants and POPs, will take place from 12-17 September 1999 in Venice, Italy. For more information, contact the Organizing Secretariat, EMMEZETA CONGRESSI, Via C. Farini 70 - 20159 Milan, Italy; tel: +39-(2) 6680 2323; fax: +39 (2) 668 6699; e mail: dioxin99@mzcongressi.com; Internet: http://www.kemi.se/default_eng.cfm?page=aktuellt/pressmedd/default_eng.htm

WMO/EMEP WORKSHOP ON MODELING OF ATMOSPHERIC TRANSPORT AND DEPOSITION OF POPS AND MERCURY: This workshop will take place in November 1999 at WMO Headquarters in Geneva. For more information, contact: Marina Varygina, Meteorological Synthesizing Centre East, Kedrova Street 8, 117292 Moscow, Russian Federation; tel: +7 (95) 124 4758; fax: +7 (95) 310 7093; e-mail: msce@glasnet.ru.

BASEL CONVENTIO : The fifth Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal will be held in Basel, Switzerland from 6-10 December 1999. For more information, contact the Secretariat of the Basel Convention at tel: +41 (22) 917-8218; fax: +41 (22) 797-3454; e-mail: bulskai@unep.ch; Internet: http://www.unep.ch/basel/index.html.

THIRD MEETING OF THE INTERNATIONAL FORU ON CHEMICAL SAFETY: The Third Meeting of The International Forum on Chemical Safety (Forum III) is tentatively scheduled for September or October 2000, and will be held in Brazil with the city yet to be determined. For more information contact: Executive Secretary, Intergovernmental Forum on Chemical Safety, c/o World Health Organization, 20 Avenue Appia, CH-1211, Geneva 27, Switzerland; tel: +41 (22) 791-3650/4333; fax: +41 (22) 791-4875; e-mail: ifcs@who.ch; Internet: http://www.who.int/ifcs.