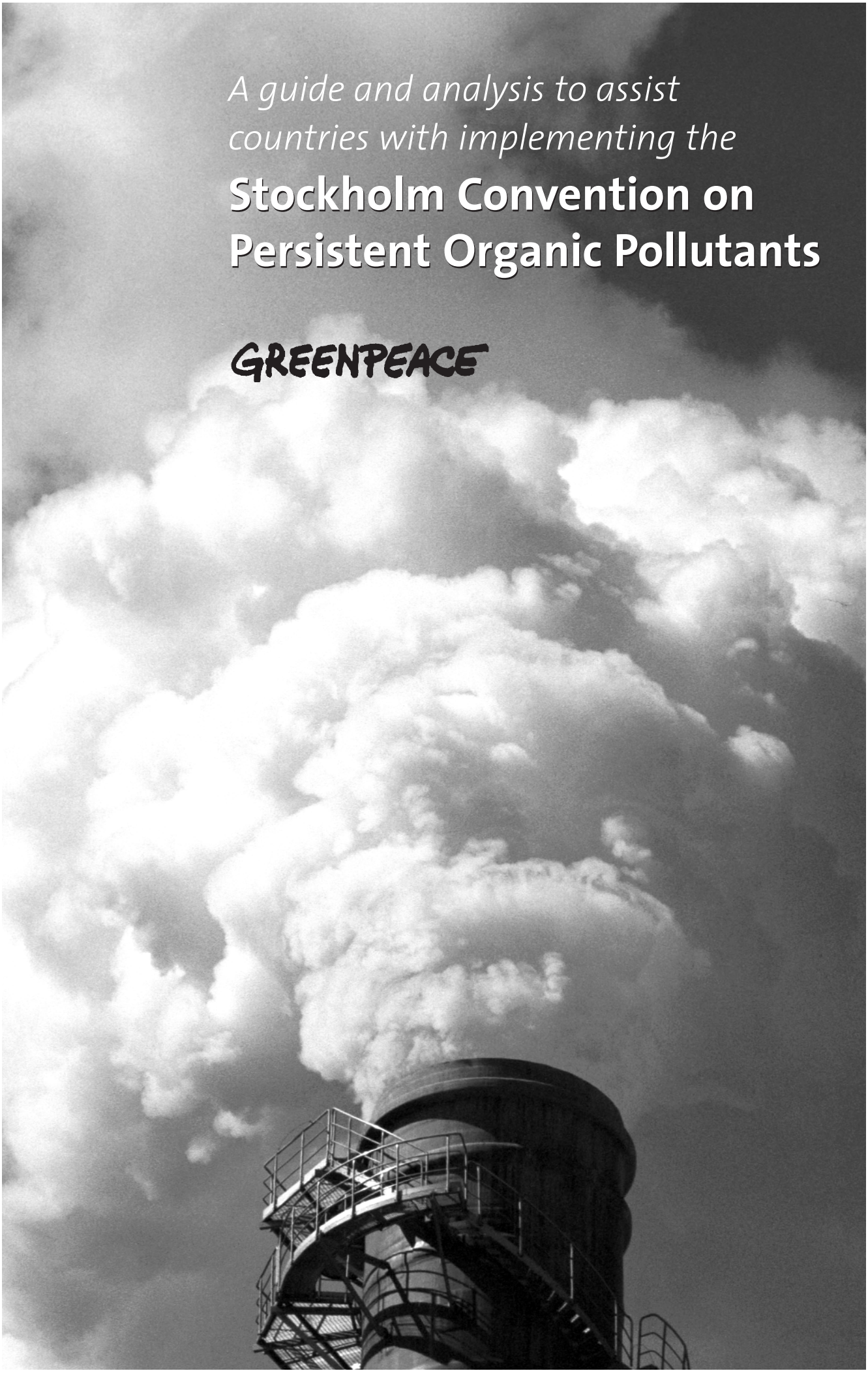

A guide and analysis to assist countries with implementing the

Stockholm Convention on Persistent Organic Pollutants

GREENPEACE

STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (POPs)

A GUIDE AND ANALYSIS TO ASSIST COUNTRIES WITH IMPLEMENTATION

PREPARED BY GREENPEACE INTERNATIONAL

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EXECUTIVE SUMMARY

The present paper is intended as an analysis and guide to assist countries with implementation of the POPs treaty, and the development of legislation to address all hazardous substances. The paper provides reference information for the treaty (title and adoption), followed by a section on the process for the treaty's entry into legal force. Section III addresses the POPs treaty in the context of recent developments in international policy and law in the field of hazardous wastes and chemicals. Section IV covers selected key POPs treaty provisions that warrant special attention when adopting implementing legislation, Section V covers the basic treaty structure, and is followed by Section VI which provides an article-by-article analysis of the specific treaty provisions.

In general terms, the POPs treaty is a treaty based on eliminating and phasing out POPs. The principle of avoidance and substitution is the priority measure within the treaty for achieving this goal, both for intentional and unintentional POPs. A key aspect of this is confining the problem by ensuring no new chemicals with POPs properties are produced, and no new facilities that generate and release unintentional POPs are sited. Once the problem has been confined, the focus is to phase out current POPs and POPs' sources through substitution.

Understanding the context of recent developments relating to hazardous wastes and chemicals presents an opportunity to utilise the POPs treaty implementing process to advance legislation addressing all hazardous substances. Specific recommendations include:

1.) Adopt/improve a prevention and phase-out legislative regime for all hazardous substances, not only POPs since this is necessary to protect the near field environment and human health (community, national level), and it is the inevitable direction anyway, already required under a number of international regimes;
2.) Define hazardous substances as those substances that are toxic, or persistent and bioaccumulative, or substances giving rise to similar concerns (e.g., known to be or suspected of being endocrine disrupting chemicals). The inherent properties of a chemical (e.g., persistent, toxic or bioaccumulative) should define the basis for action, rather than the risk assessment approach that has failed to adequately address the chemical crisis.
3.) Give special attention and consideration to the following selected provisions when adopting implementing legislation:

- NO NEW POPS: Prohibition of new chemicals that have POPs (hazardous) properties thereby confining the problem from increasing;
- ELIMINATION: Elimination as the goal (prevention and phase-out programmes are the priority, rather than end-of-pipe measures);
- UNINTENTIONAL POPs (DIOXINS) ELIMINATION: Priority to avoiding and preventing new facilities that yield unintentional POPs by-products (e.g., dioxins), while phasing-out existing ones. Chlorine industry (chlor-alkali, and chlorine use industries, e.g., PVC, chlorine bleaching, solvent production) should be included in national dioxin elimination action plans;
- SUBSTITUTION PRINCIPLE: Requiring the Substitution Principle (substitute materials, products, and techniques) to prevent formation and release of POPs as the priority for the Best Available Techniques (BAT) requirement as the primary strategy to implement the goal of elimination;
- AVOIDING INCINERATION: Priority to avoiding and phasing out incineration through alternative waste management (phase-out hazardous substances, waste separation and reuse/recover/recycle non-hazardous substances);
- STOCKPILES AND WASTES: POPs stockpiles and wastes must be destroyed pursuant to alternative destruction technologies that do not yield POPs, rather than incineration;
- PRTR AND RIGHT-TO-KNOW: Pollution release and transfer registers (PRTRs) and right-to-know legislation; and
- RESOURCES: Capacity building and financial assistance for developing countries and countries with economies in transition to assist in implementation of the POPs treaty provisions.

I. REFERENCE INFORMATION

The Official title is the Stockholm Convention on Persistent Organic Pollutants. The short titles include Stockholm Convention, POPs Convention, and POPs treaty. The official date of adoption is 23 May 2001, adopted in Stockholm, Sweden.

II. ENTRY INTO FORCE

1. The POPs Convention will enter into legal force and thereby become part of international law after the United Nations receive ratification by 50 countries (plus 90 days). As with all such treaties, a country becomes Party to the Convention and thereby legally bound by its provisions when that country ratifies or otherwise accedes to the treaty and it is in legal force. Hence, there are no "Parties" until it enters force.

2. The process of entry into force is as follows:

(i) Adoption of the final draft of the Convention (23 May 2001), and open for signature on 23 May 2001 in Stockholm, and again at the UN headquarters in New York from 24 may 2001 to 22 May 2002. A country signing the treaty becomes a signatory to the treaty (not a Party) and thereby demonstrates its political support for the treaty and intention to become Party. Signatory countries signal their moral and political commitment to the treaty, but are not legally bound by its provisions. (Article 24)

(ii) A signatory State then must ratify, accept or approve the treaty. (Article 25). This usually requires the adoption by parliament (or similar body) of implementing national legislation in order to transfer the international treaty provisions into national law. Once ratified, accepted or approved, an instrument confirming ratification (legal document) must be deposited with the designated treaty depositary (Secretary-General of the United Nations).

(iii) A State that does not sign during the period open for signature joins the treaty by "accession". Accession is the legal term for joining the treaty after the signing period has closed. Reasons for not signing could be opposition to the treaty, but also could be internal process, administrative delays etc. Just like ratification, acceptance or approval, an instrument of accession must be deposited with the depositary at the UN.

(iv) The treaty enters into legal force 90 days after the 50^{th} instrument of ratification or accession is deposited with the UN. At this point all those ratifying and acceding are Parties and legally bound in addition to being politically and morally bound. (Article 26). Once the Convention is in legal force, each additional country that deposits its ratification or accession document with the UN becomes Party (legally bound) 90 days after such deposit.

(v) Pursuant to Article 27, no reservations are allowed. Reservations are when a country would exclude itself from parts of the treaty, e.g., one or more provisions when they ratify or accede.

(vi) Note that during negotiations and upon adoption of the treaty, the international community agreed to begin implementing the treaty before it enters into legal force. Hence, countries' efforts to implement the treaty provisions at the national and local level should already be underway.

III. THE POPS TREATY AND THE DEVELOPMENT OF INTERNATIONAL POLICY AND LAW RELATING TO TOXIC CHEMICALS AND HAZARDOUS WASTES

1. The purpose of this section is to describe the context, or relation of the POPs Convention vis-à-vis other recent significant developments in international policy and law in the field of toxic chemicals and hazardous wastes. Recognising these relationships presents opportunities to go beyond the POPs provisions to further develop and improve national legislation during the process of drafting POPs implementing legislation.

2. The world is facing a chemical crisis. Thousands of chemicals are released to the environment with little or no knowledge about their impact on the environment, including human health. There is an even greater lack of information regarding their degradation compounds, and the effects of mixing chemicals once released to the environment. Historically we have allowed the chemical industry to play large-scale laboratory with our very health and the future of the environment. The result is a "cocktail" of chemicals mixing and mobilising in the environment, affecting the life support systems on which we depend. Babies born today, enter the world with a toxic chemical burden, passed on from their mothers.

3. Recent scientific revelations indicate a host of hormone disrupting chemicals (endocrine disrupting chemicals) that is causing untold damage in the minutest concentrations. The endocrine disrupting substances are increasingly associated with damage to the developing fetus, gender determination, the immune system, and human (and other species) development in general, again, at the most minute levels of concentration.

4. Hazardous substances are especially dangerous because they are invisible, and although they can cause acute damage, they usually cause chronic, slow, incremental destruction such that it is often too late by the time significant or irreversible damage is recognised. This hidden, slow death to the planet's life support systems is at a crisis level, contaminating the marine environment, fresh water supplies, and threatening water security and food security, and thereby global political security as well.

5. The traditional, outdated policy and legislative approach, called the assimilative capacity approach or permissive approach has contributed to the crisis. This past approach was based on attempts to control "permissible" quantitative release levels of harmful substances under the erroneous assumption that the receiving environment could dilute and disperse them and thereby render them harmless. This approach has failed, in particular with respect to persistent harmful substances. The failure of this outdated and dangerous approach led to the realisation that a better, more protective paradigm is needed to adequately address the problem.

6. This realisation gave rise to the adoption of the precautionary principle (sometimes called the precautionary approach principle, e.g., Principle 15 of the Rio Declaration). The precautionary principle, now universally adopted at global, regional and national level, consists of four key elements:

(i) An approach based on preventive action;
(ii) Taking preventive action before waiting for conclusive scientific proof regarding cause and effect between the substance (or activity) and the damage, at which time it is too late;
(iii) Reversal of the burden of proof on to the proponent of a release or activity to demonstrate that it is unlikely to cause harm, before they may proceed; and
(iv) Implementation through clean production substitution (materials, products, technologies, techniques), e.g., as advocated by the UNEP Governing Council in 1990

7. Indeed, it is common sense to realise that we can not continue to release persistent harmful substances to the environment, without expecting significant and irreversible harm. Common sense alone should dictate an approach based on the prevention and phase out of substances that are toxic; substances that are persistent and bioaccumulative; and substances that otherwise give rise to similar concerns, e.g., likely to be endocrine disrupting. This is particularly true given that many of the hazardous substances persist in the environment to cause damage not only to today's generation, but also for generations to come.

8. The precautionary principle is a scientifically more robust and strengthened approach because it recognises and takes into account the limitations of scientific information. Sound scientific methodology and assessment require consideration of both what we know and what we do not know. The assimilative capacity approach has failed precisely because it failed to acknowledge and accommodate the limitations in scientific information. The body of scientific information that we now know is far less than the body of scientific information that we do not yet know. This is evident when we look at the information available 10 or 20 years ago compared to today; compared to what we will probably know in 20 years from now.

9. Fortunately, the adoption and implementation of the precautionary principle, as well as commitments and programmes to eliminate hazardous substances are replacing the failed assimilative capacity approach. The key today is to expedite this change to ensure the prevention or substitution of hazardous substances, rather than end-of-pipe measures that merely concentrate pollution and thereby create another problem in the form of hazardous waste. End-of-pipe measures such as filters do not ultimately solve the problem, and can result in higher costs than the inevitable and ultimate solution of substitution at source.

10. In addition, there is a growing recognition and acceptance that hazardous substances need to be targeted for prevention and phase-out based on their inherent characteristics (e.g., persistent, toxic, bioaccumulative, endocrine disrupting properties). When persistent substances are released to the environment they can not be controlled, and consequently exposure is far less relevant than inherent characteristics.

11. Risk assessments that attempt to include the risk of exposure as another criterion are dangerous when applied to substances that persist in the environment, or have their effects in the smallest of concentrations. Furthermore, risk assessments have failed to keep pace with the thousands of chemicals in commercial use (as well as unwanted chemical by-products) for which there is a tremendous void in information regarding their effects in the environment. The vast majority of the thousands of chemicals are not well assessed, and indeed many by-products remain unidentified. It would take decades to accomplish such assessments, the results of which may well be irrelevant anyway, when compared to the need to take action based on the inherent characteristics of hazardousness, e.g., persistent and bioaccumulative chemicals.

12. Another major and seriously dangerous shortcoming of risk assessments is their failure to address exposure of, and effects on human conception and the fetus. We know little about either, but we do know that the human conceptus, fetus and nursing infant are exceptionally vulnerable to the effects of toxic chemicals.

13. Risk assessments are expensive and scientifically questionable given the complexity of environmental and human health interactions. Risk assessments making exposure, rather than inherent characteristics, are a deciding factor in regulation deriving from a conflict of interest, i.e., from the very industry to which they are applied. The origin of risk assessment is the chemical industry, which advocates the approach to avoid restrictions, rather than accepting that persistent hazardous substances should not be released to the environment. The risk of damage from persistent hazardous substances is known to be high, in many cases one-hundred percent. Even more alarming are the consequences of such risks: significant and irreversible damage (over the course of generations) to the basic life support systems that sustain the environment and human health. This stands in marked contrast to the risks associated with automobile accidents or other activities that risk assessment advocates often try to use as a justification analogy.

14. The greatest danger of risk assessment is that it is being used to continue and justify the release of hazardous substances to the environment, a situation that common sense (and the precautionary principle) would prevent because the practice carries a high risk of significant and irreversible damage. On the global level, this is particularly true for persistent chemicals. Consequently, risk assessment appears to be designed more to protect chemical manufacturers and polluting technology vendors, rather than constituting a reliable approach to protect the environment and human health. In hindsight, this has indeed been the unfortunate result to date.

15. Inherent characteristics - e.g., persistent; bioaccumulative; or toxic; or characteristics that otherwise give rise to similar concerns, e.g., suspected/known endocrine disrupting properties – are sufficient reasons to warrant taking preventive action, rather than whether exposure is considered sufficiently high to warrant action. Indeed, exposure is a changing parameter, changing over time as a result of mobilisation in the environment – both from natural and human activities over which we have little-to-no control. With regard to POPs, some of the most dangerous chemical compounds, the presence of inherent hazardous characteristics must be the basis for preventive action.

16. Consequently, risk assessment approaches requiring exposure criteria before action can be taken are not part of the precautionary approach, and at best they are scientifically questionable with significant risk to sustainable development. Given the magnitude of the risks involved (significant and irreversible damage to life support systems), and the time dimension involved (often many generations), risk assessment is simply far too risky.

17. The recent changes taking place in favour of the precautionary principle and the prevention/elimination of hazardous substances (based on inherent characteristics) are some of the most significant developments of the international community in its attempt to solve the chemical crisis and to achieve sustainable development. The following bodies have adopted this new paradigm:

(i) North Sea Ministers Conference – all North Sea states agreed to phase out all hazardous substances;
(ii) OSPAR Convention for the protection of the North-east Atlantic marine environment – Western European governments and the European Commission have agreed to prohibit new hazardous substances, and to phase out within one generation (25 years) existing hazardous substances defined as toxic, persistent and liable to bioaccumulate, or otherwise giving rise to similar concerns (i.e., defined based on inherent characteristics, not risk assessment);
(iii) Helsinki Convention for the protection of the Baltic Sea – Baltic Sea states agreed to phase out all hazardous substances defined on the basis of inherent characteristics;
(iv) Barcelona Convention for the protection of the Mediterranean Sea and its related land-based sources protocol – Mediterranean coastal states agreed to phase out hazardous substances based on their inherent hazardous characteristics;
(v) Bamako Convention for Africa – The Bamako Convention contains one of the most progressive definitions of hazardous wastes (based on inherent characteristics), the precautionary principle, and clean production. The convention calls for the goal of eliminating the generation of hazardous waste and hazardous releases at source, rather than end-of-pipe measures;
(vi) Basel Convention, at the global level, addressing hazardous waste generation, transboundary movements and disposal (adopted 1989) – The convention defines hazardous waste pursuant to inherent characteristics, not risk of exposure. Furthermore, Article 10 calls on Parties to co-operate in the development and implementation of new environmentally sound low-waste technologies and improve existing ones "with a view to ELIMINATING, as far as practicable, the generation of hazardous wastes …"; and
(vii) POPs Convention at the global level – The international community has agreed at the global level to prohibit and phase out intentional persistent organic pollutants (POPs), and to adopt a number of measures to reduce releases of unintentional POPs with the goal of their continuing minimisation and, where feasible, ultimate elimination. For both intentional and unintentional POPs, elimination through substitution is a priority.

18. Other significant achievements adopted in the recent past by the international community in the field of toxic chemicals and hazardous wastes include the following:

(i) Prohibiting the dumping at sea of industrial wastes and radioactive wastes and incineration at sea. (London Convention at the global level; Bamako Convention for Africa; Barcelona Convention Protocol for the Mediterranean States; Waigani Treaty for the South Pacific States; OSPAR Convention for the North-east Atlantic States; Helsinki Convention for the Baltic Sea States). These achievements of the 1990s have essentially shut off two-thirds of the earth's surface, i.e., the oceans, to waste disposal.

(ii) Prohibiting the export of hazardous wastes and other wastes to the area south of 60 degrees south latitude (Antarctica) and prohibiting the export of hazardous wastes for any reason, including recycling, from OECD States to non-OECD States. (Basel Convention at the global level, Bamako Convention banning hazardous waste imports into Africa, Central American Hazardous Waste Trade Agreement banning imports into the region, Barcelona Convention Waste Trade Protocol, Waigani Treaty for the South Pacific, and the European Union). These 1990s achievements, such as prohibiting ocean disposal, have ended dangerous and damaging disposal practices. Not only has this reduced pollution, but it also increased incentives especially in OECD countries to address the problem at source through clean production substitutes.

19. The POPs treaty with the aim of eliminating POPs represents the most recent addition to this necessary and growing body of international policy and law in this field. Some of the most important concepts and provisions contained in the POPs treaty include:

(i) Elimination as a goal; both for existing intentionally produced POPs such as chlordane and DDT, and also for technologies and practices that yield unwanted by-product POPs such as incineration and thermal processes involving chlorine.
(ii) Prohibiting the manufacture of new chemicals with POPs characteristics, thereby confining the POPs problem;
(iii) Capacity building and financial resources for developing countries and countries with economies in transition to assist in implementing the provisions;
(iv) Advocating or requiring the Substitution Principle (substitute materials, products and processes) to prevent the formation and release of unintentional POPs as the priority for Best Available Techniques (BAT), as well as substitution for intentional POPs;
(v) Recognition that avoiding incineration (a major source of POPs formation and release) through alternatives - waste separation and reuse/recycling - is a priority;
(vi) POPs stockpile and waste destruction pursuant to alternative destruction technologies that do not create POPs, rather than incineration;
(vii) Calling for pollution release and transfer inventories and public right-to-know measures.

20. Collectively, the above mentioned significant developments over the past 15 years represent a major breakthrough in tackling the chemical crisis. In the field of toxic chemicals and hazardous waste the challenge remains, however, to ensure that resource allocation, legislation, and implementation efforts reflect the priority given to the application of clean production methods that substitute non-hazardous materials, products and techniques/technologies for hazardous ones. Indeed, clean production application is the only real solution to the toxic crisis and is far more cost effective. Substitution is a one-time cost and final solution, whereas attempted control and management (e.g., end-of-pipe measures) is

a never ending, ever-changing process of continued costs without actually solving the problem. The cost of avoidance through substitution is usually far less, and it is far more efficient and effective compared to the real costs associated with ever-changing attempted controls, clean up or remediation (e.g., water supplies), and the real costs to human health and society.

21. Clean production solutions (alternative substitutes, including products and technologies) are especially relevant and necessary for the POPs treaty, a treaty grounded on the goal of elimination rather than attempted control.

IV. IMPLEMENTING LEGISLATION – SELECTED PROVISIONS

1. Depending on the legislative system in a country, most countries will have to adopt national legislation that reflects the POPs treaty in order to become Party to it. The adoption of implementing legislation for the POPs treaty provides an opportunity to put into place a legislation framework that reflects the significant developments over the past 15 years in the field of hazardous chemicals and hazardous wastes. Not only should this opportunity not be missed for the sake of the environment and human health, but also for reasons of efficiency. The above mentioned progressive developments clearly indicate the inevitable direction and consequently should be put into place now, rather than through retroactive amendments later.

2. The opportunity to adopt legislation to comprehensively cover all hazardous substances, rather than limit the legislation to POPs only (chemicals of global concern), can be even more important and relevant for protecting the environment and human health in the near field (community, national and regional context). Strictly speaking, the POPs treaty addresses the elimination of hazardous substances that are of global concern because they are persistent and have the potential to cause severe impacts on human health or the environment. However, all hazardous substances are in need of such regulation, not only those which are the product of the "lowest global common denominator" process. The POPs treaty provides the legal and policy framework to eliminate all hazardous substances, including those that may not be classified as persistent and globally distributed, but may cause local or regional concern because of their intrinsic properties.

3. This section includes selected provisions to pay particular attention to when adopting implementing domestic legislation. The selected provisions are further elaborated in section VI.

4. NO NEW POPs (Article 3, paragraph 3): In national implementing legislation, this provision needs to reflect a ban on new chemicals being produced that have POPs characteristics (toxic, persistent, bioaccumulative, long-range transport). However, it is in a country's best interest (ecosystem/human health protection, efficiency and inevitable direction anyway) to ensure that this ban is broadened to include all hazardous substances (HS), not only POPs. In Western Europe under the OSPAR marine protection regime, and for the Mediterranean coastal states under the Barcelona Convention, hazardous substances are defined as toxic, persistent and bioaccumulative, or as those that are of equivalent concern. In Sweden, national legislation defines HS more progressively as substances that are persistent and bioaccumulative, in addition to substances with toxic properties. In any case, national

legislation must be unambiguous regarding banning new POPs, and the opportunity to broaden this provision in domestic legislation to include all HS should not be missed.

5. ELIMINATION LANGUAGE (inter alia, Article 5 chapeau): National legislation should be based on the prevention and elimination of POPs. As with the no-new-POPs provision above, national implementing legislation should encompass all hazardous substances (HS), not only those strictly defined by the treaty as POPs – a reflection of the lowest common denominator for which agreement at the global level can be achieved. Legislation should require phase out programmes for all HS. And, for unintentional POPs (dioxins) it should also specifically ban new source categories, as well as new sources within existing categories. The treaty affirms the marked change in environmental policy rejecting the assimilative capacity approach based on attempted control of quantitative releases, in favour of the common sense approach of elimination for hazardous substances. Implementing policy and legislation should reflect this significant and necessary change.

6. PRINCIPLE OF SUBSTITUTION (Article 5, paragraph (c)): Although the Principle of Substitution is inherent for intentional POPs and expressly stated in the context of unintentional POPs, the principle should be reflected in national legislation requiring substitution for all hazardous substances (HS). In light of the elimination goal, SUBSTITUTION MUST BE A REQUIREMENT and the primary objective, rather than end-of-pipe measures that do not prevent the formation of POPs or other hazardous substances. The DDT obligations in the treaty provide a good approach to required substitution where continued DDT use must be justified, including a justification that no viable substitutes are available. The Principle of Substitution is not only applicable, but also indispensable for all unsustainable activities if we are serious about achieving sustainable development. Perhaps one of the most important developments from the POPs treaty would be to utilise the implementing legislative process to require the substitution principle specifically for POPs and all hazardous substances, AND to incorporate it into a requirement for all unsustainable activities. Indeed, the only way to achieve sustainable development is to substitute (replace) currently unsustainable practices, products and techniques with sustainable ones.

7. POLLUTANT RELEASE INVENTORIES AND PUBLIC RIGHT-TO-KNOW: (Article 10, paragraph 5, and Article 9, paragraph 5). National legislation should require pollutant (all HS) release and transfer inventories (plant-by-plant basis) with public access to all such information. Again, this legislation should go beyond POPs to apply to all HS.

8. ALL POPs RELATED INFORMATION AVAILABLE TO THE PUBLIC: (Article 10). Similar to the right-to-know issue above, implementing legislation should expressly state that there is no business confidentiality for any and all information related to POPs, and all such information must be made available to the public. In balancing the interests of business confidentiality with the public right to information affecting their health and welfare, (especially once a substance has been released to the environment), clearly the public interest must prevail the confidentiality argument.

9. DIOXIN/FURAN ELIMINATION (Article 5 and Annex C): Dioxin source categories and national dioxin elimination action plans need to include the chlor-alkali industry and chlorine use industries. As stated in the chapeau paragraph of Annex C, Part II Source Categories, when chlorine and thermal processes are combined, dioxins are formed.
Chlorine industrial sectors can be some of the most significant sources of dioxins for many countries. In addition, as mentioned above no new source categories and no new sources within existing source categories should be part of national implementing legislation addressing the unintentional POPs in order to implement the obligation to reduce with the aim of ultimate elimination.

10. AVOIDING AND ULTIMATELY PHASING OUT INCINERATION (Article 5 and Annex C): Implementing legislation should pay particular attention to ensuring the development of the alternative to incineration, in particular to municipal waste incineration. Legislation should reflect the priority afforded to alternative waste management systems based on separation and reuse/recycling, thereby avoiding the need for municipal incineration. This is particularly true given the tremendous costs of siting, construction, operation and maintenance of incinerators (and the fact that dioxins are still formed and become a hazardous waste disposal problem), compared to avoiding incineration by investing in the alternative system, a system that also employs more workers. This same alternatives approach should be pursued with respect to other sources of dioxins.

V. GENERAL TREATY STRUCTURE

1. The POPs treaty consists of a preamble, 30 articles and six annexes.

2. The intentionally produced POPs are addressed specifically in Article 3 (production, use and trade) and Annexes A and B. Article 3 addresses both the chemicals to be prohibited/eliminated, and those to be restricted. Annex A lists the chemicals (production and uses) that are prohibited or to be phased out, and the types of uses (country specific exemptions) allowed during the phase out period. Annex B lists and addresses the restricted chemicals (DDT), and establishes a DDT Register that is available to the public. Note: Although Annex B applies to restricted POPs (currently only DDT), the goal is to ultimately eliminate DDT. Annexes A and B also contain in their respective “Notes” the general exemptions to prohibition and restriction.

3. Article 4 addresses the register that will contain the country specific exemptions that allow countries to produce/use Annex A or B chemicals until their complete phase out. Countries will be named in the register and it is available to the public.

4. Unintentional POPs are addressed in Article 5 and Annex C. Stockpiles and waste disposal is addressed in Article 6. Article 7 addresses the requirement for implementation plans for each Party. Article 8, and Annexes D, E, and F address the adding of additional POPs to the treaty.

5. The remaining articles are of a general nature and are typical of most environmental agreements, although Articles 9 and 10 provide additional requirements for pollutant release registers and public right-to-know provisions. Also the financial assistance articles 13 and 14 are significant developments within the treaty.

The following section covers the Articles and Annexes in detail.

VI. SPECIFIC TREATY PROVISIONS ANALYSED

1. The Preamble

1.1 Status of Preamble: The preamble is not legally binding on Parties. It is a statement of the rationale and context for the treaty and it also provides the basis upon which the treaty action is to be taken. However, arguments/statements can be found in the preamble that assist in the interpretation of treaty provisions, and provide general guidance. Below are selected points contained in the Preamble warranting specific mention.

1.2 The 2nd paragraph (preamble paragraphs are not numbered in the text) identifies LOCAL exposure including to women and babies. This supports the point that the characteristics toxic, persistent, and bioaccumulative are more important than the long-range transport criterion when adding additional POPs to the Treaty, and when adopting implementing legislation that applies to all hazardous substances.

1.3 HUMAN HEALTH is identified in many paragraphs and in the objective of the treaty (Article 1).

1.4 The 9th paragraph states that the Convention and WTO (and trade agreements) ARE mutually supportive, therefore trade provisions can not supersede the POPs treaty provisions. The WTO regime has exceptions specifically for environmental and human health protection, whereas the POPs treaty does not have specific exceptions for free trade objectives.

1.5 The 10th paragraph reiterates the commitment from the UN Charter, also found in commitments from the first Earth Summit – the 1972 Stockholm Conference on the Human Environment– that countries have the responsibility to ensure that their activities do not damage areas outside of their jurisdiction. This commitment underscores the need for the expeditious phase-out of all hazardous chemicals, in particular persistent ones.

1.6 The 15th paragraph identifies PRODUCER RESPONSIBILITY. Liability and responsibility of POPs producers and users, both physical and financial are in need of further development within the POPs treaty. Until that time, governments carry the primary responsibility for funding implementation, e.g., the destruction of POPs stockpiles and wastes, as well as the environmental and human health costs from current and future POPs pollution.

1.7 The 16th paragraph identifies PREVENTION MEASURES AT ALL LIFE CYCLE STAGES. This especially carries implications for unintentional POPs source categories involving chlorinated materials such as PVC (and other halogenated substances). Non-chlorinated substitution throughout the life cycle stages is the preferred prevention measure in order to avoid dioxin formation.

1.8 The 17th paragraph cites Principle 16 from the Rio Declaration, identifying the Polluter Pays Principle. This has implications for phase-outs, clean up costs, destruction costs and liability.

1.9 The 19th paragraph further supports the priority measures of alternatives and substitution.

2. The Objective of the Treaty *(Article 1)*

Article 1 states that the objective is to protect both human health and the environment. It also cites Principle 15 from the Rio Declaration on the precautionary approach. Central to this approach is taking preventive action before conclusive proof regarding cause and effect is available. This is also important when adding additional POPs (chemicals and groups of chemicals) to the treaty. Not all evidence need be present regarding cause and effect, at which time it is often too late to prevent the damage.

3. Definitions *(Article 2)*

Basic definitions are contained in Article 2.

4. Intentionally produced POPs *(Articles 3 and 4, and Annexes A and B)*

4.1 NO NEW POPS

New Chemicals with POPs characteristics are to be banned (Article 3, paragraph 3). Parties are to incorporate into their assessment schemes the criteria contained in Annex D (persistent, bioaccumulative, long-range transport, adverse effects such as toxicity). Chemicals (pesticides and industrial chemicals) being developed that exhibit these POPs characteristics are to be banned from production and use. This is the provision that "shuts off the tap" of new POPs entering the world thereby confining the problem.

4.2 PRODUCTION AND USE OF ANNEX A CHEMICALS - ELIMINATION

4.2.1 The production and use of existing intentional POPs listed in Annex A are to be prohibited/eliminated EXCEPT as allowed by Annex A. Annex A includes in Part I, the chemicals Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, Toxophene and PCBs. Part II of Annex A addresses PCBs specifically. Annex A contains general exemptions available to all Parties and country specific exemptions with phase-out timeframes.

4.2.2 GENERAL EXEMPTIONS: Article 3, paragraph 5, and the Notes contained in Annex A provide for general exemptions that are available to all Parties. The general exemptions to the prohibition/elimination (and trade limitations) include:

(i) Quantities of a chemical to be used for laboratory-scale RESEARCH or as a REFERENCE standard (Article 3, paragraph 5);

(ii) Quantities of a chemical occurring as UNINTENTIONAL TRACE CONTAMINANTS in products and articles (Annex A, Note i);

(iii) Quantities of a chemical occurring as CONSTITUENTS OF ARTICLES ALREADY MANUFACTURED or already in use before the date of entry into force of provisions with respect to that chemical but – a Party must notify the Secretariat that such an article remains in use. This information is to be made available by the Secretariat to the public (Annex A, Note ii);

(iv) IF notified to the Secretariat, the production and use of Hexachlorobenzene (and any additional POP not having an asterisk (*) after its name in Annex A) are allowed as a CLOSED-SYSTEM SITE-LIMITED INTERMEDIATE that is chemically transformed in the manufacture of other chemicals that do not possess POPs properties. The notification information is to be made available to the public by the Secretariat. Such production and use shall end after 10 years unless a new notification is made to the Secretariat. A new notification gives the Party another 10 years unless the Conference of Parties decides otherwise. The 10 year extension can be repeated (Annex A, Note iii).

4.2.3 SPECIFIC EXEMPTIONS: Annex A (and B) also contains the country specific exemptions allowed. These exemptions are only available to Parties that register their specific exemptions in the Register of Specific Exemptions (Article 4). The Register is to be maintained by the Secretariat and available to the public. It will include a list of specific exemptions, the Parties exercising specific exemptions and the expiry dates for each specific exemption.

4.2.3.1 All registrations of specific exemptions EXPIRE five years after entry into force of the Convention. For additional POPs added to the Convention, any specific exemptions likewise would expire five years after the entry into force of that amendment adding the chemical to the treaty. BUT, an extension is available giving the potential to extend the registered specific exemption for another five years. A review process will be adopted at the first Conference of Parties to consider a request for extension of a specific exemption. Parties exercising the specific exemptions will need to justify their exemption extension request. The maximum time frame for specific exemptions is a possible 10 years after entry into force with respect to that chemical.

4.2.3.2 In addition, when the register has no Parties for a particular type of specific exemption, the specific exemption expires and no new registrations may be made for it.

4.2.3.3 Note that under Article 3, paragraph 6 there are additional duties on a Party exercising a specific exemption. They must prevent or minimise human exposure and releases.

4.2.4 PCBs: Under Part I of Annex A the production of PCBs is banned. Annex A, Part I provides Parties with a special type of exemption for PCBs in articles in use (available to all Parties without the need to register). This exemption is governed by Annex A, Part II. Under Part II of the Annex, PCBs in articles such as transformers may be used until the elimination date of 2025, which is subject to review by the Conference of Parties. A number of duties are required however, such as the attempt to identify, label and remove equipment/articles from use depending on the PCB concentrations and volumes. Furthermore, the equipment can not be leaking or used in certain areas such as food production. Trade in PCBs can only be for environmentally sound waste management. No recovery is allowed for recycling/reuse in equipment with greater than .005% PCB. "Determined efforts" to environmentally sound waste management (destruction) of PCBs should be as soon as possible, and no later than 2028. This date is subject to review. A report by each Party regarding their progress on eliminating PCBs is to be submitted to the Conference of Parties every five years. PCBs in other articles such as painted objects, cured caulk, and cable covers with greater than .005% are to be addressed as well.

4.3 PRODUCTION AND USE OF ANNEX B CHEMICALS – RESTRICTED (DDT)

4.3.1 Article 3, paragraph 1 (b) requires Parties to restrict production and use of Annex B chemicals, rather than eliminate them. As described below, however, the ultimate goal is to eliminate Annex B substances such as DDT. The only chemical currently listed in Annex B is DDT. Its production and use are governed by Annex B. Annex B, Part I restricts DDT production and use for "acceptable purposes" or specific exemption.

4.3.2 GENERAL EXEMPTIONS: The same general exemptions afforded Annex A chemicals are available for Annex B chemicals (DDT). See section above addressing the general exemptions.

4.3.3 SPECIFIC EXEMPTIONS: The only specific exemption for DDT is as an intermediate and specifically for the production of dicofol. The specific exemption is available to countries that register pursuant to Article 4. This Annex B specific exemption is addressed in the same manner as Annex A specific exemptions. See discussion above regarding Annex A specific exemptions. These exemptions expire after 5 years with the possibility of an extension for another 5 years; hence a maximum of 10 years.

4.3.4 ACCEPTABLE PURPOSE: The only "acceptable purpose" for DDT is disease vector control (e.g., malaria). This purpose is governed by Part II of Annex B. Part II eliminates the production and use of DDT except for Parties that notify the Secretariat. Such Parties can produce and/or use it for disease vector control. A separate DDT SPECIFIC ACCEPTABLE PURPOSE REGISTER will be established and maintained by the Secretariat. It is to be available to the public. This will be similar to the specific exemption register, but for DDT production and/or use with respect to disease vector control.

4.3.5 Parties exercising their acceptable purpose use must do so in accordance with WHO recommendations and guidelines, AND only when safe, effective and affordable alternatives are not available to the Party concerned. Parties can register when they deem the need to exercise the acceptable purpose. Every three years Parties must provide the Secretariat and

the WHO with information regarding amounts used, how these amounts were used and their disease strategy.

4.3.6 Annex B, Part II, paragraph 5 states clearly that the goal is to reduce and ultimately eliminate DDT. To this end, Parties using DDT should develop and implement an action plan to restrict DDT to disease vector control, implement alternatives and take measures to strengthen health care and reduce disease. Parties are also encouraged to promote research and development into alternatives (chemical and non-chemical products).

4.3.7 An evaluation regarding the continued need for DDT shall be done by the Conference of Parties at its first meeting and every three years thereafter.

4.4 TRADE IN ANNEX A AND ANNEX B CHEMICALS *(Article 3, paragraph 2)*

4.4.1 IMPORT: A chemical listed in Annex A or B only can be imported by a Party for the purpose of environmentally sound disposal pursuant to Article 6 (discussed below); or for a use permitted for the importing Party allowed by Annex A or B, i.e., general exemption, specific exemption, or acceptable purpose.

4.4.2 EXPORT: A chemical listed in Annex A or B and allowed under the respective Annex (general exemption, specific exemption, acceptable purpose) only can be exported for environmentally sound disposal pursuant to Article 6 (discussed below); or to a Party that is allowed to use the chemical pursuant to Annex A or B (general exemption, specific exemption, acceptable purpose); or to a non-Party ("State not Party to this Convention") if certain conditions are met. The term "State not Party to this Convention" means either a State that is not a Party to the Convention, or a Party to the Convention that is not bound with respect to the chemical in question, i.e., an additional POP to the 12 currently in the treaty for which it has not agreed to be bound (Article 3, paragraph 2 (d)).

4.4.3 The non-Party conditions include providing an annual certification to the exporting Party containing: the intended use and that the recipient is committed to protecting health and environment by minimising or preventing releases; that they will comply with disposal obligations pursuant to Article 6; and that they will comply in the case of DDT with Annex B, Part II, paragraph 2 (disease vector control only; follow WHO; and no safe, effective, affordable alternatives). The annual certification is to go to the Secretariat from the exporting Party within 60 days of its receipt from the importing State.

4.4.4 Any chemical on Annex A for which no specific exemption exists for production and use, can be only exported for environmentally sound disposal pursuant to Article 6 (discussed below).

5. Unintentional POPs *(Article 5 and Annex C)*

5.1 Annex C, Part I lists the unintentional POPs subject to Article 5 provisions. The existing list includes dioxins/furans, hexachlorobenzene (HCB) and PCBs.

5.2 An important priority with respect to the elimination of unintentional POPs (e.g., dioxins) is to ensure measures adopted and implemented go first and foremost to prevention and

elimination of their FORMATION through avoiding/prohibiting chlorine inputs, and implementing safe alternative products and technologies, rather than end-of-pipe controls. Another significant point is to ensure that targeted source categories for dioxins/furans include chlorine industries, which are not directly very well reflected in the list of source categories contained in Annex C. The chapeau in Part II of Annex C, however, covers the chlorine and chlorine use industries making the point that chlorine plus thermal processes equals dioxins. Consequently, chlorine and chlorine use industries need to be considered for inclusion in the dioxin elimination action plans that countries are required to develop.

5.3 The Article 5 chapeau (first paragraph) requires each Party at minimum to take the measures listed in order to REDUCE the TOTAL releases with the goal of their CONTINUING MINIMISATION and where feasible, ULTIMATE ELIMINATION.

5.4 This small paragraph contains important implications. Parties must take the measures to reduce total releases with the aim of elimination. The goal of ultimate elimination would render increases inconsistent with the obligation. The language “reduce with the aim of ultimate elimination” does not permit “trading” between source categories (increasing one source while decreasing another). The elimination goal also underscores the obligation and need to ensure priority is given to substitution (non-chlorine material use, and technologies/techniques that do not create dioxins) rather than end-of-pipe measures.

5.5 The “where feasible” condition on elimination should be interpreted in its common usage since it is not a term of art. This would mean physical possibility. However, even if the phrase was to include economic feasibility, it would not make a significant difference. Compared to the costs of inaction (not eliminating) in terms of damage to human health and the environment, clean up costs and the costs of inevitable increasing controls if elimination is not undertaken, it is virtually always more economically feasible to eliminate dioxin formation through substitution than to incur the real costs of inaction.

5.6 At the centre of the measures required by Article 5 is the ACTION PLAN. This will usually be a national elimination action plan, but could be a regional or sub-regional one for a group of countries. The action plan must be drafted within two years of entry into force for the country in question. The action plan is to identify, estimate and address the releases of unintentional POPs, AND to facilitate the other Article 5 provisions, e.g., Substitution Principle discussed below.

5.7 The elimination action plan must include an inventory of source categories of current and projected releases and the estimated releases. Annex C contains in Part II and Part III non-exhaustive, indicative lists of source categories to take into account when developing the inventories. Part II sources are considered higher priority than Part III sources.

5.8 The Annex C, Part II chapeau paragraph clearly states the reason for the formation of unintentional POPs (hereafter referred to as dioxins, recognising that there are others, e.g., HCBs and PCBs.). They are formed and released from thermal processes involving organic matter and chlorine. Hence, the key is to avoid chlorine. The most effective measures therefore would be to avoid chlorine inputs, products and technologies. With respect to heterogeneous facilities with a broad mix of inputs, like incinerators, avoid the incinerator in

the first place, while during the interim phase out period, avoiding chlorine inputs like PVC to the maximum extent possible.

5.9 The priority source categories (Part II of Annex C) include all waste incinerators, and cement kilns burning hazardous waste; pulp production using elemental chlorine or chemicals generating elemental chlorine for bleaching (note: chlorine dioxide bleaching analysis indicates evidence of elemental chlorine formation, whereas non-chlorine bleaching substitutes are available to the pulp industry); secondary copper, secondary aluminum, secondary zinc, and sinter plants for iron and steel. Note: the secondary metallurgy industries are probably most problematic due to chlorine contaminants involved in the recovery process. Note: The only chlorine-use industry directly listed is the pulp and paper industry. This may be because all chlorine industries are identified in the chapeau paragraph due to the obvious link between chlorine and dioxin. Hence, countries need to ensure that they include any relevant chlorine industries located in their country (e.g., the chlor-alkali industry and major chlorine-use industries such as PVC, chlorinated solvents, and chlorinated pesticide production) in their elimination action plans.

5.10 The Part III (of Annex C) sources include: open burning (note: chlorine products such as PVC can never be sufficiently controlled to keep them out of fires); other metallurgy thermal processes not included in Part II; residential combustion like fireplaces; fossil fuel utility facilities and industrial boilers, wood and biomass fuel facilities; chemical production especially chlorophenols and chloranil; crematoria; motor vehicles especially with leaded fuel; burning of animals; textile and leather dyeing (chloranil) and finishing (alkaline extraction); shredder plants for e.g., automobiles; copper cables burning, e.g., to recover copper; and waste oil refineries.

5.11 Again, as long as chlorine continues to be used and spread around the world, the contamination will continue to create dioxins when thermal processes are involved. The key is to phase out chlorine use if the POPs treaty is to be successful.

5.12 BACK TO THE ELIMINATION ACTION PLAN: The action plan must also include a review of laws and policies, and development of strategies to implement the elimination action plan. Here again it is essential that the strategies envisaged reflect chlorine substitution as a centrepiece. A review every five years is required to analyse the strategies vis-à-vis the results in meeting the obligations. The reviews submitted by each Party will be sent to the Secretariat and made available. The action plan must also include a schedule for implementation of the strategies and measures to be taken.

5.13 In addition to the elimination action plan as a measure to be taken, other measures are required as well: Article 5, paragraph (c) contains the SUBSTITUTION PRINCIPLE. The language is weakened by the word “promote” the development of substitutes, but it also includes “where it (a Party) deems appropriate, REQUIRE the use of substitute or modified MATERIALS, PRODUCTS AND PROCESSES to PREVENT the FORMATION and release” of dioxins. REQUIRING substitution should be at the centre of the strategies and elimination action plan – chlorine substitution/incineration substitution in order to solve the dioxin problem.

5.14 When implementing the Substitution Principle, each Party is to take into consideration the Annex C general guidance on prevention and release reduction measures. These add to the case for substitution. The general prevention measures section (Part V, paragraph A) states that PRIORITY should be given to approaches to PREVENT THE FORMATION and release of dioxins, which could include (among others) the use of low-waste technology and the use of less hazardous substances (note: chlorine and chlorinated material substitutes). Other approaches listed in Part V, A help supplement the substitution principle, such as paragraph (d) "replacement of feed materials which are POPs or where there is a direct link between the materials and releases of POPs from the source". (Note again: chlorine and chlorinated materials).

5.15 Another Annex C measure to take into consideration, in particular for the substitution of incinerators is the promotion of recovery and recycling of wastes and substances used in a process. Segregation of wastes, recovery, recycling and composting, coupled with the phase out of hazardous substances would avoid the need for municipal incineration, a significant dioxin source. Indeed the huge capital costs associated with municipal incinerators would be better spent on developing this incinerator substitute approach that would also increase employment while decreasing environmental and human health damage.

5.16 Another measure supporting substitution is (f) when considering new waste disposal facilities. Consideration is to be given to alternatives such as low waste products, reuse-recovery-recycle, minimising waste generation (municipal and medical) and waste segregation. Measure (g) calls for minimising dioxins as contaminants in products, and (h) avoiding elemental chlorine or chemicals generating elemental chlorine for bleaching.

5.17 Furthermore, in Annex C, Part V, paragraph B, (b) guidance is given on general release reduction measures: "When considering proposals to construct new facilities or significantly modify existing facilities using processes that release chemicals in this Annex (note: dioxins), PRIORITY consideration should be given to ALTERNATIVE PROCESSES, TECHNIQUES AND PRACTICES that have similar usefulness but which AVOID THE FORMATION and release of such chemicals. This paragraph goes on to list other reduction measures that "could also be considered" which are primarily end-of-pipe for incinerators, e.g., flue-gas cleaning, treatment of residuals and waste water, process changes such as moving to closed systems and improved combustion. However, the substitution measures identified above are to be given priority over the end-of-pipe measures. Implementation practice needs to reflect this priority focus on substitution.

5.18 Another Article 5 obligation concerns "best available techniques" (BAT) and "best environmental practices" (BEP). BAT and BEP are defined in Article 5, paragraph (f) with further guidance contained in Annex C, Part B (BAT), and Part C (BEP). BAT means the most EFFECTIVE AND ADVANCED stage in the development of activities and methods of operation that provide release limitations DESIGNED TO PREVENT and, where that is not practicable, generally to reduce releases of dioxins. (Note: priority is clearly given to prevention). "TECHNIQUES" are defined to include both the technology used, and the way the facility is designed and operated. "AVAILABLE" is defined as meaning available to the operator and sufficiently developed to allow implementation within the industrial sector under economically and technically viable conditions.

5.19 Therefore BAT can be viewed as a follow-the-leader approach. Those industrial sectors (e.g., the pulp industry) with existing sustainable, non-toxic production techniques should be fully transformed pursuant to the BAT goal in such a way that all facilities/plants within the particular industrial sector implement the BAT. For example, total chlorine-free (TCF) bleaching in pulp production is the lead to follow for chlorine bleaching and chlorine dioxide bleaching facilities, since it represents BAT for the pulp and paper industrial sector.

5.20 Annex C, Part V provides further guidance on BAT. As mentioned above under the section on the Substitution Principle, the considerations that support substitution all relate to BAT, e.g., low-waste technology, less hazardous substances, replacement of feed materials, avoiding chemicals that generate elemental chlorine, alternative consideration to incineration, and PRIORITY to alternatives that avoid POPs.

5.21 BEP is defined broadly to encompass a combination of measures and strategies, and is to be further elaborated upon by the Conference of Parties.

5.22 NEW SOURCES within the source categories identified by Parties in their respective elimination action plans: Parties are to promote, and in accordance with its implementation schedule for its action plan, REQUIRE the use of BAT for NEW sources of dioxins it has identified as warranting such action. Particular focus is to go to the source categories in Part II of Annex C, e.g., incineration. This obligation is a mandate pursuant to the requirement that in any circumstance, the requirement to use BAT for new sources in the categories listed in Part II of Annex C SHALL be phased in as soon as possible but NO LATER THAN FOUR YEARS after entry into force of the Convention for that Party. BEP is merely to be promoted. Note that "new sources" are defined as those for which construction or substantial modification is started one year or more after the entry into force with respect to that chemical.

5.23 EXISTING SOURCES: Parties are to PROMOTE in accordance with their action plan, the use of BAT and BEP for existing sources in source categories listed in Part II of Annex C, and other source categories SUCH AS those listed in Part III. The same promotion obligation applies to NEW sources within source categories listed in Part III that were not addressed in addressing Part II.

5.24 In all cases, BAT should be viewed as a "highest common denominator" strategy. The most protective/least polluting technology and/or method of operation in practice (or not yet in practice but considered viable) should result in the transformation of the respective industrial sector so that all facilities within the sector implement the best protection approach - a follow-the-leader approach.

6. Disposal-Stockpiles and Wastes *(Article 6)*

6.1 Article 6 governs the disposal of stockpiles consisting of or containing Annex A or Annex B chemicals (intentionally produced). The article also governs wastes, including products and articles upon becoming wastes that consist of, contain, or are contaminated with Annex A, B or C chemicals (intentional and unintentional POPs).

6.2 Each Party must (shall) DEVELOP STRATEGIES FOR IDENTIFYING: 1) stockpiles with Annex A or B POPs and 2) articles and products in use and wastes consisting of, containing or contaminated with Annex A, B, or C POPs.

6.3 Then each Party must actually IDENTIFY stockpiles with Annex A or B POPs pursuant to those strategies.

6.4 Once identified, stockpiles with Annex A or B chemicals (intentional POPs) are to be defined as wastes after they are no longer allowed for any specific exemption or acceptable purpose, except stockpiles which are allowed to be exported according to Article 3. The wastes, including products and articles upon becoming wastes (with Annex A, B or C POPs) must be managed according to Article 6, paragraph 1, (d): environmentally sound handling, collection, transport and storage; and then:

6.5 Stockpiles must be disposed of so that the POPs are DESTROYED OR IRREVERSIBLY TRANSFORMED into non-POPs, UNLESS destruction or irreversible transformation are not considered the environmentally preferable option or when the POPs content is LOW. Consequently, destruction or irreversible transformation is required in most cases, since it is difficult to envisage when this would not be the environmentally preferable option. In cases where the POPs content is low, however (or when the case can be made that destruction is not the preferable option) disposal must be done in "an environmentally sound manner".

6.6 The reference to Annex C chemicals in Article 6, paragraph 2 indicates that Annex C wastes, including articles and products upon becoming wastes, are also subject to the destruction/disposal paragraph of Article 6, paragraph 1, (d) which is otherwise ambiguous regarding this scope of application.

6.7 Article 6 also envisages close cooperation with the Basel Convention (addressing hazardous waste generation and transboundary movements and their disposal) for further elaboration.

6.8 The language of paragraph 1 (d) is sufficiently clear regarding the requirement of destruction or irreversible transformation such that alternative destruction technologies are to be required (unless the POPs concentration content is "low"), rather than incineration (a source of POPs).

6.9 Article 6, paragraph 1 (d) also bans disposal operations that lead to recovery, recycling, reuse or alternative uses of POPs. This is an important recognition. Reuse, recovery and recycling are not always good. Reuse, recovery and recycling are beneficial when applied to non-hazardous materials and products. However, when applied to hazardous materials and products, the result is continued pollution (at the production, recycling, and ultimate disposal stages), as well as a continuation and even increase in demand for hazardous production due to recycling markets. This is counter productive when the only adequate solution is to prevent and avoid the generation of the hazardous substance through clean production substitution. Recycling has no role in the context of hazardous substances, such as POPs for which the goal is avoidance and elimination.

6.10 Another requirement of Article 6 is for each Party to ENDEAVOUR to develop strategies for identifying POPs contaminated sites (Annex A, B or C chemicals).

7. Implementation Plans *(Article 7)*

Each party must DEVELOP and endeavour "to implement plans for the implementation of its obligation under this Convention". The dioxin elimination action plan is part of the overall implementation plan. The plan must be transmitted to the Conference of Parties within two years of entry into force. The Parties must cooperate with NGOs including women's groups and health care groups especially regarding children's health when developing, implementing and reviewing/updating their plans. Furthermore, Parties are to integrate the POPs implementation plans into their sustainable development strategies.

8. Adding more Chemicals to the Treaty *(Article 8)*

8.1 Article 8 governs the process for adding chemicals to Annex A, B or C. It is important that groups or sub-groups of chemicals are addressed, not only individual chemicals if Parties are to adequately address the POPs crisis. To go chemical-by-chemical will take far too long to prevent POPs destruction of the earth.

8.2 The process for adding chemicals to one or more of the Annexes is as follows:

(i) A party may submit a PROPOSAL to the Secretariat for listing a chemical in an Annex. The proposal must contain information specified in Annex D:

Chemical NAMES and structure AND its transformation products where relevant; PERSISTENCE (>2 months half-life in water OR >6 months half-life in soil, OR >6 months half-life in sediment, OR evidence that the chemical is sufficiently persistent to justify its consideration); BIO-ACCUMULATION (bio-concentration factor or bioaccumulation factor in aquatic species is >5,000 OR in absence of such data, that the log Kow is >5, or evidence of other reasons of concern such as bioaccumulation in other species, high toxicity or ecotoxicity, OR that monitoring data in biota indicates bioaccumulation potential such that its consideration is justified); POTENTIAL FOR LONG-RANGE ENVIRONMENTAL TRANSPORT (measured levels in areas distant from release; OR monitoring data showing long range transport may have occurred via air, water, or migratory species; OR environmental properties or model results showing that the chemical has potential for long range transport); ADVERSE EFFECTS (to human health or to the environment that justifies consideration (note: no need to demonstrate toxicity), OR toxicity or ecotoxicity data indicating potential harm.

The proposal must also include a statement of the reasons for concern and a statement regarding the need for global control.

(ii) If the Secretariat is satisfied that the information is sufficiently complete, it forwards the proposal to a body called the POPs REVIEW COMMITTEE. Pursuant to Article 19, paragraph 6, the Conference of Parties is to establish the POPs Review Committee at its first meeting. Its members are to be appointed by the Conference of Parties and consist of government-designated experts on the basis of equitable geographic representation. The Committee is to adopt recommendations by consensus, unless no agreement can be made in which case a two-thirds majority can adopt the recommendation.

(iii) The Committee will review the proposal pursuant to Annex D and decide to let it proceed or set it aside as insufficient regarding Annex D criteria.

(iv) If the criteria are satisfied, the proposal and Committee evaluation shall be available through the Secretariat to all Parties and observers inviting them to submit Annex E information (Risk profile information the purpose of which is to evaluate if global action is warranted as a result of long range transport and significant adverse effects). The information is to include: sources - production data, locations, quantities, uses and releases; hazard assessment of the endpoints of concern including toxicological interactions with other chemicals; environmental fate; monitoring data; exposure in local areas; national and international risk evaluations, assessments or profiles, hazard classifications; and status under international conventions. (Note: under the OSPAR, Barcelona, Bamako, and other Conventions, hazardous substances are prohibited or targeted for phase out).

If the Committee rejects the proposal as incomplete regarding Annex D information, the proposal and Committee evaluation shall be available, through the Secretariat to all PARTIES only, and the proposal shall be set aside. It may be resubmitted to the Committee. If the Committee sets it aside again, the Party may challenge the Committee decision and let the Conference of Parties decide.

(v) If the proposal proceeds (per Committee decision or decision by the Conference of Parties in the event of a challenge), the Committee shall prepare a DRAFT RISK PROFILE in accordance with Annex E, taking into account the information already submitted regarding Annex E. The draft risk profile shall be made available through the Secretariat to all Parties and observers for comments. Thereafter, the Committee will complete the risk profile.

(vi) On the basis of the risk profile, the Committee can decide NOT to proceed with the proposal. NOTE: LACK OF FULL SCIENTIFIC CERTAINTY shall not prevent the proposal from proceeding. If the Committee does, however, decide not to proceed, the risk profile will be made available to all Parties and observers and the proposal is set aside. A Party may request the Conference of Parties to instruct the Committee to invite additional information during a period of up to one year. The Committee shall then reconsider the proposal, and if set aside again, the Party may challenge, and the Conference of Parties shall consider the issue and decide if the proposal is to remain set aside, or proceed. If the Conference of Parties decides to proceed with the proposal, the Committee must prepare a RISK MANAGEMENT EVALUATION.

If on the other hand, on the basis of the risk profile, the Committee decides to proceed with the proposal, concluding that the chemical is likely as a result of long range transport to lead to significant adverse effects such that global action is warranted, the Committee shall through the Secretariat, invite all Parties and observers to provide information relating to Annex F. It shall then prepare a RISK MANAGEMENT EVALUATION that includes an analysis of possible control measures in accordance with Annex F. Annex F requires an evaluation regarding possible control measures encompassing the full range of options including management and elimination. Relevant socio-economic information associated with the possible control measures is to be included.

(vii) The Committee shall make a recommendation, based on the risk profile and the risk management evaluation, on whether the chemical should be considered by the Conference of Parties for listing in Annex A, B, and/or C.

(viii) The Conference of Parties taking account of the Committee recommendations, including any scientific uncertainty, shall decide in a precautionary manner whether to list the chemical, and specify its control measures, in Annexes A, B, and/or C.

9. Information Exchange and Public Information *(Article 9 and 10)*

9.1 Article 9 requires each Party to designate a national focal point for the exchange of information. The Parties are to exchange information regarding reduction or elimination of the production, use and releases of POPs, and alternatives to POPs. The Secretariat serves as a clearing-house for such information provided by Parties and others including observers.

9.2 Article 9, paragraph 5 states that information on the health and safety of humans and the environment SHALL NOT BE REGARDED AS CONFIDENTIAL. And Article 10, paragraph 1 (b) requires Parties to promote and facilitate provision to the public of ALL AVAILABLE INFORMATION ON POPs, taking into account paragraph 5 of article 9. (Note: These provisions require that all POPs release information be available to the public, including workers since all such information is within the scope of information on health and safety of humans and the environment.)

9.3 Article 10, paragraph 1 (d) also requires each Party to promote and facilitate PUBLIC PARTICIPATION in addressing POPs and their effects, and in developing adequate responses (strategies) including opportunities for input at national level regarding implementation of the Convention.

9.4 Article 10, paragraph 5 states that each Party must give sympathetic consideration to pollutant release and transfer registers (PRTRs). This provision (together with the public information provisions above) should result in the PRTR and public right-to-know legislation as part of the implementing legislation package in each country.

10. Research, Development and Monitoring *(Article 11)*

Article 11 language encourages Parties to undertake research, development, and monitoring related to POPs, THEIR ALTERNATIVES and CANDIDATE POPs (additional POPs). Paragraph 2 (e) requires Parties to make such information accessible to the public.

11. Technical Assistance *(Article 12*)

The Parties are to establish arrangements for technical assistance and promoting the transfer of technology to developing country Parties and Parties with economies in transition. The arrangements shall include regional and subregional centres for capacity building and technology transfer to assist in implementing the Convention.

12. Financial Resources and Mechanisms *(Article 13 and 14)*

12.1 Article 13 requires developed country Parties to provide NEW AND ADDITIONAL FINANCIAL RESOURCES to assist developing country Parties and Parties with economies in transition with implementing the Convention. Paragraph 4 states that the extent to which developing country Parties will implement their commitments depends on developed country Parties implementing their commitments on financial and technical assistance. The paragraph goes on to state that sustainable economic and social development and eradication of poverty are the first and overriding priorities of developing country Parties and that this will be taken into account. Note: POPs elimination is clearly an integral part of sustainable economic and social development.

12.2 This Article also establishes a MECHANISM FOR PROVIDING FINANCIAL RESOURCES to developing country Parties and Parties with economies in transition. (paragraph 6). The mechanism is to be under the authority of the Conference of Parties. Its operation shall be entrusted to one or more entities decided on by the Conference of Parties. The Conference of Parties at its first meeting shall adopt guidance for the mechanism, including guidance relating to the determination of policy, strategy AND PROGRAMME PRIORITIES, as well as eligibility for access to funds.

12.3 Article 14 establishes the Global Environment Facility (GEF) as the interim financial entity entrusted with the operations of the financial mechanism for the period between entry into force and the first Conference of Parties. The Conference of Parties will then decide on the entity that it wants to entrust with the operations of the financial mechanism. (Note: This is to give the GEF a chance to prove that it is capable of providing the resources and conditions acceptable to developing countries and countries with economies in transition.)

13. Reporting *(Article 15)*

Article 15 requires Parties to report on measures taken to implement the Convention and their effectiveness. Such reporting is to include data on total quantities (or reasonable estimates) of production, import and export of each chemical listed in Annex A and B (intentional POPs). A list of states from which it imported and to which it exported each such chemical is also to be included.

14. Effectiveness Evaluation *(Article 16)*

Four years after entry into force and periodically thereafter (to be decided by the Conference of Parties), the Conference of Parties (COP) shall evaluate the effectiveness of the Convention. To facilitate this, at its first meeting, the COP shall begin the establishment of methods to provide COMPARABLE MONITORING DATA on the presence of Annex A, B and C chemicals, and their regional and global environmental transport.

15. Non-Compliance *(Article 17)*

This issue is left to the COP to determine later.

16. Settlement of Disputes *(Article 18)*

16.1 Any dispute between Parties concerning interpretation or application of the Convention is to be settled through NEGOTIATION or other peaceful means of the Parties choice.

16.2 When ratifying or acceding to the Convention, a Party can declare in writing that it recognises ARBITRATION (pursuant to procedures to be agreed by the COP) and/or submission of the dispute to the International Court of Justice (ICJ) as compulsory for any dispute in relation to any Party accepting the same.

16.3 If a dispute can not be settled pursuant to agreement, one year after one Party notifies another about the dispute, the dispute shall be submitted to a CONCILIATION COMMISSION at the request of any Party involved in the dispute. The Commission shall provide a report with recommendations.

17. Conference of Parties (COP) *(Article 19)*

The first Conference of Parties (COP) shall be held within one year of entry into force, and at regular intervals to be decided on by the COP. At its first meeting, the COP shall adopt rules of procedure for the COPs and financial rules for itself. The primary purpose is to keep under continuous review and evaluation the implementation of the Convention.

18. Secretariat *(Article 20)*

This Article establishes the Secretariat. The Executive Director of UNEP is the designated Secretariat unless the COP by three-fourths majority decides otherwise. The functions include organising meetings of the COP and its subsidiary bodies (e.g., the POPs Review Committee), facilitating with implementation, coordination with other secretariats of international bodies, preparing reports based on the information received from Parties and others, and undertaking other functions entrusted to it by the COP.

19. Amendment of the Convention *(Article 21)*

19.1 Only the COP can adopt amendments to the Convention. Any Party may make a proposal for amendment. It is to be distributed by the Secretariat to all Parties at least six months in advance of a meeting for its adoption. Parties are to agree by CONSENSUS, and if that is not possible, by a THREE-FOURTH MAJORITY VOTE (of Parties present and voting; abstentions are not counted).

19.2 Entry Into Force: An adopted amendment must be ratified, accepted or approved by at least three-fourths of the Parties for it to enter into force. Only those Parties ratifying or accepting the amendment are bound to it.

20. Adoption and Amendment of Annexes *(Article 22)*

20.1 Additional Annexes: Any Party may propose an additional annex. Such proposal is to be communicated to all Parties by the Secretariat at least six months before the meeting at which it is to be considered. It is to be agreed by consensus and if not possible then by three-fourths majority vote (present and voting negative or positive).

20.2 Entry into Force: Additional annexes enter into force by 'tacit consent". On the expiry of one year from the date of the communication by the depositary (UN) of the adoption of the additional annex, the annex shall enter into force for all Parties that have not submitted a notification that they reject it. In order not to be bound, a Party may reject it by written notification to the depositary within one year from the date of communication by the depositary of the adoption of the additional annex.

20.3 Amendments to Annexes A, B or C: The same procedure as the proposal (six months), adoption (consensus or three-fourths majority vote) and entry into force (tacit consent) of additional annexes, governs the proposal, adoption and entry into force of amendments to Annexes A, B and C EXCEPT that such amendment (e.g., adding more chemicals) does not enter into force for a Party that makes a declaration pursuant to Article 25, paragraph 4. Article 25, paragraph 4 allows a country to declare in its instrument of ratification or accession, that any amendment to Annexes A, B or C shall enter into force only upon deposit of an instrument of ratification or accession with respect to that amendment. This provision is legally unnecessary since a Party may (by written notice) reject any such additional POP amendment within one year of the official notice of the adoption of the amendment in question. Subsequently, when a Party is in a position to accept the amendment, it can simply withdraw the notice of un-acceptance. The optional provision in Article 25 requiring each additional chemical to be ratified was the unfortunate result of a few industrial countries that apparently do not want to draw attention to themselves when they do not want to protect the environment and human health from an additional POP agreed by the Parties. The provision is more designed for quietly prolonging or protecting the continued use of persistent organic pollutants, than protecting human health across generations as agreed by the Parties. The effective success of the POPs treaty would be threatened if countries had to go through ratification of every additional POP. Consequently, it is recommended that countries do not exercise this legally unnecessary provision contained in Article 25, since they always have the option of rejecting an amendment by written notification.

20.4 Amendments to Annexes D, E or F: Proposal by any Party at least six months in advance of the meeting for consideration; adoption ONLY by CONSENSUS; entry into force pursuant to the date specified in the amendment decision.

21. Remainder of the Convention *(Articles 23 – 30)*

These articles have been covered above, or are standard articles in treaties and self-explanatory.