

LRTAP Ad Hoc Group of Experts – Action on the Long Term Strategy

Item 4(c): Protocols on POPs and Heavy Metals

Introduction

The Long Term Strategy (LTS) for LRTAP mandates the following action 4(c) to the Ad Hoc group of experts:

“Review the need for possible further revisions, amendment or updates of the Protocol on POPs and the Protocol on Heavy Metals in light of the Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention) and the pending United Nations Environment Programme (UNEP) global agreement on mercury. Included will be an evaluation to address gaps or overlaps between the Protocols and the global instruments, and to ensure added value in taking regional action. “

The POPs and HM Protocols have both built on the strengths of the LRTAP Convention to promote action on the regional scale and address adverse impacts on human health and the environment. The POPs Protocol leveraged quick action on POPs in the mid to late 1990s and acted as a springboard for global action on POPs through the Stockholm Convention, which entered into force in 2004. The HM Protocol has also provided a starting point and solid scientific/technical foundation for the many issues being addressed in the ongoing negotiations of a global instrument on mercury. This paper posits that the need for future amendments to either of these protocols should be assessed in relation to any additional benefits that could be achieved beyond the impact of the existing and upcoming global instruments.

The intent of this paper is to facilitate and guide further consideration by parties on how they may wish to proceed with possible further amendment to the regional agreements on POPs and Heavy Metals under LRTAP in light of the mandate provided by the Long-Term Strategy.

1. LRTAP POPs Protocol

1.1 Comparison of POPs Protocol with the Stockholm Convention

Two international agreements seek to reduce and eliminate the release of persistent organic pollutants (POPs): the Convention on Long-range Transboundary Air Pollution (LRTAP) POPs Protocol and the Stockholm Convention on POPs. The two treaties have considerable overlap in their respective provisions – both include a defined process for evaluating candidate chemicals for inclusion¹, cover essentially the same substances² with very similar control measures³, and have requirements for the use of Best Available Techniques for controlling sources of unintentionally released POPs⁴. There are also significant differences between the two treaties:

¹ EB Decision 1998/2 outlines information requirements and procedure for adding substances POPs Protocol; Article 8 of the Stockholm Convention outlines its listing process including information requirements under Annexes D, E and F.

² 24 substances listed to the POPs Protocol (*note that lindane, alpha-HCH and beta-HCH counted separately as part of the 24 to facilitate comparison with Stockholm Convention where they are listed individually*); 21 substances are listed to the Stockholm Convention. Totals include substances for which requirements are not yet in force. Differences: HCB, PAHs, SCCPs and PCNs on Protocol only; endosulfan on SC only.

³ Main difference involves greater number of exemptions under the Stockholm Convention; however, many of the exemptions unique to the Stockholm Convention have gone unclaimed and are no longer available.

⁴ BAT requirements under POPs Protocol Annex 3; Stockholm Convention requirements for BAT and BEP (best environmental practices) under Article 5 with companion guidance document outlining specific measures.

- a) the Stockholm Convention addresses international trade in intentionally produced POPs⁵ while the Protocol does not;
- b) only the Stockholm Convention includes a financial mechanism to assist developing countries and countries with economies in transition with implementation⁶;
- c) the Protocol on POPs addresses Polycyclic Aromatic Hydrocarbons (PAHs), short-chained chlorinated paraffins (SCCPs), polychlorinated naphthalenes (PCNs) and hexachlorobutadiene (HCBd)⁷ while the Stockholm Convention does not; and only the Stockholm Convention addresses endosulfan;
- d) the Protocol on POPs includes emission reduction commitments for unintentional releases of POPs (PAHs, PCDD/F, HCB and PCBs) and emission limit values for PCDD/F, while the Stockholm Convention uses the BAT BEP approach to (in the long term) limit emissions;
- e) implementation of the Protocol on POPs is monitored and guarded by the Convention's Implementation Committee while a compliance mechanism is not yet in place for the Stockholm Convention (though called for in Article 17 of the Convention); and,
- f) the number of Parties to Stockholm Convention⁸ (177 Parties) significantly outnumber those of the POPs Protocol⁶ (33 Parties, all of which are also Parties to Stockholm), including 15 more UNECE member states⁹.

Having two international agreements on POPs has at times resulted in two international processes running concurrently and inherent duplication and redundancies. The Long-Term Strategy for LRTAP has recognized this challenge and through its Action Plan, has emphasized the need for Parties to undertake efforts to streamline the activities of the Protocol on POPs, taking into account the ongoing work under the Stockholm Convention. The Strategy lays out specific priorities for the Protocol on POPs (Section V.16.f):

"...the main focus of global action on this issue will be taken through the Stockholm Convention under UNEP...Options to better complement the measures and actions taken at the global level and to secure the added value of the Protocol on POPs will be explored. Policy work directed at a new or revised Protocol will therefore scale down, by shifting its focus to unintentionally released POPs and to areas and substances where the implementation of stricter measures in the UNECE region is still recommended. The Parties to the Convention will give high priority to increasing the number of countries ratifying and implementing the existing Protocol...If new substances arise where action is needed, the first priority for Parties should be to nominate them in the Stockholm Convention, but incorporation into the Protocol on POPs would be an option should the former route fail..."

The Long-Term Strategy also signals that while global action on POPs will be taken through the Stockholm Convention, there may be instances where additional work under the Protocol on POPs may

⁵ Stockholm Convention Article 3 includes export and import provisions

⁶ Article 13 of the Stockholm Convention contains requirements for developed countries to provide financial assistance. The Stockholm Convention uses the Global Environment Facility as its financial mechanism. In 2009-10, GEF allocation on POPs was \$63M, supplemented by an additional \$151M in co-financing from partners. It should be noted that CLRTAP supports capacity building for POPs Protocol activities (largely focused on technical assistance) through the Convention's E112 Trust Fund, however, the fund is voluntary, is not specific to POPs and is several orders of magnitude smaller than the GEF POPs funding (E112TF total budget is in the area of \$400K).

⁷ Amendments adding SCCPs, PCNs and HCBd to the POPs Protocol are not yet in force.

⁸ 177 Parties to the Stockholm Convention as of June 2012; 33 Parties to the POPs Protocol as of May 2012.

⁹ 48 UNECE member states are Parties to Stockholm Convention, 15 more than are Parties the POPs Protocol (33 Parties)

be warranted, such as: where efforts to list a substance are unsuccessful or the listing of a substance on the Stockholm Convention may not be as stringent as the listing of a substance could be under a more regional forum, like the Protocol on POPs.

1.2 Need for further revisions – addition of substances to the Protocol

The nature of POPs is such that effective global action is crucial to effective risk management. The entry into force of the Stockholm Convention has changed the manner in which POPs are addressed internationally by mobilizing 177 countries, ranging from the least developed to the most highly developed countries in the world, to take action on POPs. With the recent addition to the Stockholm Convention of 9 new chemicals at COP-4, and the addition of endosulfan at COP-5, confidence in the effectiveness and timeliness of this international agreement in addressing risks from POPs has been demonstrated.

In alignment with the Long-term Strategy, a principled approach is proposed for considering the addition of substances to the Protocol on POPs (notwithstanding the nomination process that is currently in place, as described in Article 14).

- Before proposing a new substance for listing under the Protocol on POPs, a Party should first nominate that substance under the Stockholm Convention;
- Parties should consider additional action under the Protocol on POPs only if:
 - i. The substance is listed under the Stockholm Convention but stricter measures in the UNECE region are warranted; or
 - ii. The substance is not listed under the Stockholm Convention, e.g. because no agreement could be reached on listing or because negotiations under the Stockholm Convention become protracted.

To support this proposed approach, Parties should consider the following factors:

- Status of international efforts and work on chemicals (including unintentionally produced POPs), and
- Added value to the protection of the environment and human health

International Efforts and Work on Chemicals:

The Long-Term Strategy signals that global action on POPs will be taken through the Stockholm Convention. There may, however, be instances where additional work under the Protocol on POPs may be warranted. Before further consideration of proposals to list a substance on the Protocol on POPs, Parties could consider work under the Stockholm Convention and whether or not it can be applied to the work being considered under the Protocol on POPs, so as to reduce redundancies and duplication of effort. This could include consideration of a number of activities such as:

- Work under the Stockholm Convention's POP Review Committee (POPRC), in particular the Stockholm Convention's Annex E (risk profile) and Annex F (socio-economic) reviews and whether or not the information collected by the POPRC, would also meet the requirements of the Track A and Track B reviews undertaken by the POPs Task Force, in accordance with the

process described in Article 14 of the Protocol on POPs and Executive Body decision 1998/2; and

- Outcome of any negotiations under the Stockholm Convention.

Added Value to the Protection of Human Health and the Environment from Regional Action under the Protocol on POPs:

As noted above, there may be instances where, following the work undertaken by the Stockholm Convention, additional measures may be warranted under the Protocol on POPs; however, it is suggested that Parties first consider the added value to human health and the environment that would result from additional measures under the Protocol.

The listing of a substance to the Stockholm Convention could result in a larger number of Parties taking action and greater human health and/or environmental benefit than if a substance was listed on the Protocol on POPs. Although there are a greater number of Parties under the Stockholm Convention, there may be different concerns with respect to the listing of a substance. As such, situations may arise where efforts to list a substance are unsuccessful or the listing of a substance on the Stockholm Convention may not be as stringent as the listing of a substance could be under a more regional forum, like the Protocol on POPs.

While the two agreements must follow their respective review process, there may be opportunities to streamline efforts between the two which would result in “considerable savings in technical effort”, as suggested in David Stone’s informal submission to the 43rd WGSR entitled, “*Possible Technical and Process Efficiencies in the Review of Substances Nominated to Both the Protocol on Persistent Organic Pollutants and the Stockholm Convention*”. As such, efforts under the Protocol on POPs to review information provided to the Stockholm Convention could be streamlined such that Parties to the Protocol could take note of it, with a focus on elements specific to the UNECE region, such as environmental persistence and application of POPs criteria, ecosystem sensitivity and population vulnerability, and the potential of application of BAT. This may reduce and in some cases eliminate the need for the POPs Task Force to undertake complete Track A and Track B reviews as there may be opportunities for focused discussions amongst Parties, to address particular areas of interest.

In assessing the added value of further work by Parties to the Protocol on POPs, consideration could also be given to whether or not Parties would undertake additional domestic measures if a substance, already listed to the Stockholm Convention, is also listed to the Protocol on POPs. If a substance is already listed to the Stockholm Convention, most of its Parties in the UNECE region should have domestic measures in place to phase out the production and use of the substance. Additional measures proposed under the Protocol may therefore have little added value to the protection of human health and the environment.

In summary, proposals to add substances to the Protocol should be examined through the abovementioned approach, with a view to eliminating redundancy, ensuring that additional work secures added-value for the Parties to the Protocol, and that Parties are in agreement that nominated substances meet the POPs criteria.

1.3 Need for further revisions – further development of BAT/BEP guidance and addition of ELVs for UPOPs

Parties agreed in the Long Term Strategy to increase the focus of future policy work for the Protocol on POPs towards unintentionally releases POPs (UPOPs). The two treaties cover the same UPOPs – dibenzo-p-dioxins and dibenzofurans (PCDD/F), hexachlorobenzene (HCB) and polychlorinated biphenyls (PCBs) – with one exception: only the Protocol on POPs covers PAHs. The POPs Protocol also includes requirements to reduce atmospheric emissions of PCDD/F, PAHs, HCB and PCBs and to apply emission limit values for PCDD/F for certain stationary sources.

Both the POPs Protocol and the Stockholm Convention include best available techniques (BAT) for controlling sources of unintentionally produced POPs (the Protocol includes an "extended" BAT approach, while the Stockholm Convention includes both BAT and best environmental practices (BEP) for such sources)¹⁰. BAT practices developed under the POPs Protocol reflect the abilities of a mix of 51¹¹ developed countries and countries with economies in transition to deal with sources of unintentionally produced POPs. Under the Stockholm Convention, both BAT and BEP measures reflect the abilities of a mix of 177 Parties that range from the least developed to the most highly developed countries in the world. BAT guidance under the POPs Protocol was recently updated (December 2009) with the amendment of Annex V and the adoption of a guidance document on BAT¹². The Stockholm Convention adopted¹³ guidelines on BAT and guidance on BEP in December 2006 and more recently, a procedure for reviewing and updating the guidelines/guidance¹⁴. The existence of BAT (and BEP) under two agreement raises the question of whether it is worthwhile to further develop and update two sets of BAT procedures that may differ in content and scope. Added benefit of UPOPs BAT guidance under the Protocol on POPs may continue if:

- a) a greater number of UPOPs is addressed in the Protocol on POPs than in the Stockholm Convention
- b) the level of BAT in the Protocol on POPs is more ambitious than what can be agreed to under the Stockholm Convention

From this perspective the existence of two sets of BAT can be seen as complementary rather than duplicative work, with the guidance prepared under the Protocol on POPs being considered as preparatory input for the Stockholm Convention.

¹⁰ POPs Protocol BAT requirements under Annex V; Stockholm Convention requirements for BAT and BEP (best environmental practices) under Article 5 with companion guidance document outlining specific measures.

¹¹ BAT guidance is formally adopted by the Parties to the Convention (51) at the Executive Body and not only by the 33 Parties to the POPs Protocol.

¹² EB Decision 2009/3. Guidance document on best available techniques for reducing emissions of POPs from major stationary sources adopted on 18 December 2009. Available: http://www.unece.org/env/lrtap/pops_h1.html

¹³ COP Decision SC-3/5. Guidelines on best available techniques and provisional guidance on best environmental practices relevant to Article 5 and Annex C. Available: <http://chm.pops.int/Implementation/BATBEP/Guidelines/tabid/187/Default.aspx>

¹⁴ COP Decision SC-5/12. Procedure for the review and updating of the guidelines on best available techniques and provisional guidance on best environmental practices adopted in May 2011. Available: <http://chm.pops.int/Implementation/BATBEP/DecisionsRecommendations/tabid/186/Default.aspx>

2. LRTAP Heavy Metals (HM) Protocol

The HM Protocol was adopted in 1998 and entered into force in 2003. As of May 14, 2012, the HM Protocol has been ratified by 33 Parties. Implementation of the HM Protocol has resulted in reductions in the use and release of lead, cadmium and mercury in the UNECE region.

A mandate was provided in December 2011 by the Executive Body to the Working Group on Strategies and Review to finalize the negotiation of amendments to the HM Protocol by the end of 2012. Proposed amendments include additional control measures for new mercury-containing products, amendments involving amendment procedures for consistency with similar amendments to the POPs and Gothenburg Protocols, enhancements in the area of atmospheric emissions, including more flexibility in implementing control measures with the aim of increasing ratification by countries of Eastern Europe, the Caucasus and Central Asia (EECCA)¹⁵ and South-Eastern Europe (SEE)¹⁶. These amendments were discussed by the WGSR in September 2012, and a decision on them could be taken as early as December 2012.

Drivers for the current HM Protocol amendments have been to increase the ratification of EECCA and SEE countries, to enhance consistency with amendments to the Gothenburg (as adopted in 2012) and POPs Protocols (as amended in 2009), and to make the Protocol more adaptable in future by producing a guidance document on best available techniques extracted from annex III and updated as appropriate¹⁷.

The process to negotiate a global treaty on mercury is unfolding on a similar timeline.¹⁸ The fourth of five negotiating sessions was held in June/July 2012, with the last session scheduled for January 2013, just in advance of the twenty-seventh regular session of the UNEP Governing Council/Global Ministerial Environment Forum in February 2013. A Chair's text is expected in October to facilitate a successful outcome in January. The Diplomatic Conference, at which the treaty will be adopted and opened for signature, is planned for the fall of 2013.

2.1 Comparison of HM Protocol with global mercury treaty

The Heavy Metals Protocol currently regulates all heavy atmospheric emissions metals with a focus on lead, cadmium and mercury. It includes requirements to reduce atmospheric emissions and apply best available techniques and limit values for new and existing listed stationary sources based on timescales in the annexes. There is a requirement to develop and maintain emissions inventories, as well as obligations on exchange of information and technology; research, development and monitoring. Accountability is maintained through use of the Implementation Committee, a requirement for national reports, and reviews of the sufficiency and effectiveness of the Protocol. In terms of control measures, the only other control obligations are "product control measures" which relate to achieving mercury levels in certain batteries; Parties are encouraged to consider product management measures for other

¹⁵ Only 1 of 12 EECCA countries (Republic of Moldova) has ratified the HM Protocol (as of May 2012)

¹⁶ 3 of 6 SEE countries (The former Yugoslav Republic of Macedonia, Montenegro and Serbia) have ratified the HM Protocol (as of May 2012)

¹⁷ ECE/EB.AIR/WG.5/2011/4, paragraph 5.

¹⁸ ECE/EB.AIR/WG.5/2011/4 noted in particular at paragraph 3: "When considering the above amendment proposals, the Working Group is invited to be mindful of the work undertaken by the Intergovernmental Negotiating Committee under the auspices of the United Nations Environment Programme towards a legally binding global instrument to address mercury, which also addresses mercury containing products. In February 2009, the Governing Council of UNEP agreed on the need to develop a global legally binding instrument on mercury: <http://www.unep.org/hazardoussubstances/Mercury/Negotiations/tabid/3320/Default.aspx>. The work to prepare this instrument is undertaken by an intergovernmental negotiating committee (INC) and the negotiations commenced in 2010.

products, such as mercury-containing electrical components, measuring devices, lamps, dental amalgam, pesticides, paint and other batteries.

The current amendments proposed under the HM Protocol include the following technical amendments to Protocol Annexes¹⁹:

- 1) Timing flexibility for countries with economies in transition when choosing a reference year for emission reductions;
- 2) Flexibility for countries with economies in transition regarding the timescales for applying emission limit values and BAT to new and existing sources;
- 3) New stationary source categories (manganese);
- 4) Updates of emission limit values for stationary sources corresponding to BAT and
- 5) New product control measures (including for batteries, measuring devices, vehicles, electrical and electronic equipment, fluorescent lamps, dental amalgam).

There are also several additional, general amendments proposed to some Articles of the Protocol that would bring consistency with similar amendments to the Gothenburg and POPs Protocols (e.g. amendment procedures).

The global treaty for mercury is expected to be much broader in scope than the Heavy Metals Protocol. While it will address atmospheric emissions, it will also deal with many of the products listed for possible amendment under the Protocol, and will also likely address the trade in products. The treaty will also deal with issues of trade in elemental mercury and mercury compounds, supply, wastes, storage, contaminated sites, and artisanal and small-scale gold mining

On atmospheric emissions, the complexity and sensitivity of the issue at the global level has meant that progress has been slow and the ultimate nature and type of obligations will not be known until INC-5 in January 2013. Treaty obligations for reducing emissions are shaping up to be differentiated between new and existing facilities. New facilities would be required to use best available techniques (as defined in a global context, different from the EU and UNECE definitions of BAT) while obligations for existing facilities could be selected by countries from a list of options (including national goals, emissions limit values, best available techniques and multi-pollutant approaches) to achieve a similar level of reduction. Among the sources that are currently under consideration for regulation are: coal-fired power plants and industrial boilers, non-ferrous smelters, cement production, incinerators, iron and steel manufacturing and oil and gas production and processing. Given its global coverage, the treaty is expected to include all countries with significant mercury emissions, which would provide the maximum beneficial impact for sensitive regions such as the Arctic.

¹⁹ See ECE/EB.AIR/WG.5/2011/4.

2.2 *Evaluating the value added of further revisions/amendments/updates*

The Heavy Metals Protocol is expected to continue providing value currently through control measures for lead, cadmium, mercury, and possibly other heavy metals, and from linkages with scientific activities being conducted under the Convention. Therefore, it is considered necessary that effects-related work under the Convention is maintained at a sufficient level, and that the evolution of the Protocol is used to influence meaningful projects.

At the present time, a legally-binding global mercury treaty is being negotiated under UNEP, and is scheduled to be completed in January 2013. This instrument is expected to cover a broader scope for mercury control measures than the Protocol. Consequently, prior to undertaking future mercury-related amendments to the Protocol:

- (a) Parties should specifically consider whether these will deliver increased health and environmental protection beyond the impacts of the global treaty.
- (b) If sufficient additional benefits could be obtained, Parties should then identify, as a minimum:
 - (i) If more stringent requirements are needed in the UNECE region; and
 - (ii) If earlier regional action is required compared to timelines for global measures where such measures exist.

In the current timeframe, Parties should focus on the full implementation of Protocol measures, including their obligations towards emission inventories and monitoring. In the longer term, Parties should decide if and when amendments to the Protocol are needed by taking into account the latest scientific knowledge on the effects of heavy metals on human health and ecosystems, and the benefits and successes of the new UNEP global mercury treaty.