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Contributing to the 2020 Goal

**The Need for International Action to Phase
out Lead in Lead-based paints by
implementing paragraph 57 of the
World Summit on Sustainable
Development Plan of Implementation**

*Submitted by: Indian NGO, Toxics Link on behalf of the
International POPs Elimination Network (IPEN)*

R O O M D O C U M E N T

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The Need for International Action to Phase out Lead in Lead-Based Paints by Implementing Paragraph 57 of the World Summit on Sustainable Development Plan of Implementation

Submitted by the Indian NGO, Toxics Link on behalf of the International POPs Elimination Network (IPEN)

This is a proposal to Forum VI to recommend that a global partnership be established to promote efforts to phase-out lead in lead-based paints in countries where these paints are still commonly used. This proposed partnership would also support the better control or phase-out of other sources of human exposure to lead, especially children's exposure, and it would seek to strengthen monitoring and surveillance and the treatment of lead poisoning.

WSSD Supported International Action on Lead

In 2002, the World Summit on Sustainable Development (WSSD) took two decisions to protect children's health from exposure to lead. Paragraph 56 (b) of the WSSD Plan of Implementation (POI) called for: "*Supporting the phasing out of lead in gasoline.*"

The other decision was paragraph 57. It states:

*"Phase out lead in lead-based paints and in other sources of human exposure, work to prevent, in particular, children's exposure to lead and strengthen monitoring and surveillance efforts and the treatment of lead poisoning."*¹

At WSSD, the *Partnership on Clean Fuels and Vehicles* was established to contribute to the implementation of WSSD POI paragraph 56, and to help developing countries eliminate lead from fuels.² At a 2005 Partnership meeting held in Kenya, it was agreed that the partnership was on course to "phase out leaded gasoline by the end of 2008 worldwide."³ By 2007, there remained 17 countries (with a total population of 258 million) known to possibly still sell leaded gasoline for road use,⁴ and in some of these countries, the phase-out of leaded gasoline is underway. The global campaign to eliminate lead from gasoline appears to be approaching success. This will make an important contribution in substantially reducing childhood lead exposure in many developing countries.

On the other hand, it appears that there has been less concerted international action aimed at helping to implement WSSD POI paragraph 57. Lead-based paints appear to still be widely manufactured and sold for interior use in many countries of the developing world. It has long been known that lead-based paints can be a significant source of childhood exposure to lead, especially when they are used to paint the interiors of homes or schools, and when they are used to paint toys, furniture and

¹ See WSSD POI at: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIChapter6.htm

² See: <http://www.unep.org/pcfv/pdf/InfSheet.pdf>

³ See: <http://www.unep.org/pcfv/PDF/4GPM-report-final.pdf>

⁴ See: <http://www.lead.org.au/fs/fst27.html>

other articles with which children come in contact. Other well-documented sources of human exposure to lead include lead water pipes and lead-glazed ceramics.⁵

Forum V adopted a statement calling for the consideration of “actions at the local, national, regional and global levels for mercury, lead and cadmium, as appropriate, with particular emphasis on the needs of developing countries and countries with economies in transition.”⁶ The present session of IFCS is examining whether the dispersal of lead and cadmium through international trade of these metals as commodities and in products and wastes may warrant coordinated international action to protect human health and the environment. Hopefully, its deliberations and recommendations will provide useful information to the Governing Council of the United Nations Environment Program which will be considering possible international actions on mercury and other heavy metals at its upcoming, February 2009 meeting.

The sponsors of this paper would very much welcome the development of a global, legally-binding instrument aimed at minimizing human exposure to mercury, lead, cadmium and other heavy metals of concern. We note, however, that the development of such a legal instrument may be a lengthy process. Therefore, we seek support from the IFCS for the establishment of an international partnership to promote the implementation of WSSD POI paragraph 57.

Background on Lead Exposure and Lead in Paint

Lead exposure is a well-known source of injury to human health, and particularly to the health of children and to workers in lead industries. Lead’s poisonous properties have been recognized since ancient times. In the first century B.C., for example, the Roman architect, Vitruvius, spoke out against the use of lead pipes for conveying water saying that water “conveyed in lead must be injurious, because from it white lead is obtained, and this is said to be injurious to the human system.” He also noted that “workers in lead, are of a pallid color for in casting lead, the fumes from it fixing on the different members, and daily burning them, destroy the vigor of the blood.”⁷

Unfortunately, the health injuries caused by exposure to lead have continued into modern times and have, in many places, intensified with increases in the use of lead.

Leaded Gasoline and Lead-Based Paints In the 20th century, the major public health campaigns to protect children and workers from lead exposure have focused primarily on tetra-ethyl lead additives in gasoline and lead-based interior house paints. These campaigns started early in the century. The 1921 General Conference of the International Labor Organization (ILO) adopted a Convention to prohibit the use of

⁵ See: the *Background Document* for the WHO Europe’s *Fourth Ministerial Conference on Environment and Health* at: <http://www.euro.who.int/document/ehec/ebakdoc07.pdf>

⁶ IFCS Forum V, *The Budapest Statement on Mercury, Lead and Cadmium*, para. 10, IFCS/FORUM-V/05w, Executive Summary (2006), <http://www.who.int/ifcs/documents/forums/forum5/report/en/index.html>.

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See: *Lead Poisoning and Rome*, from the Encyclopedia Romana, on the web at: http://penelope.uchicago.edu/~grout/encyclopaedia_romana/wine/leadpoisoning.html

white lead paints for interior use and gave countries six years to comply.⁸ By 1940, twenty-four governments had formally agreed.

Unfortunately, lead-based paints continued to be supported, and despite resistance from public health advocates, the use of lead as an additive in gasoline was also introduced. Global production and use of these products grew very rapidly in the quarter century following World War II. Finally, in the 1970's the United States – until then the world's leading producer of leaded gasoline and lead-based paints – began to phase-out these products for domestic use.⁹ However, while many highly industrial countries phased out the use of leaded gasoline and lead-based interior paints, these practices remained widespread in the developing world.

Lead Exposure Reduces a Child's Intelligence While the initial public health concerns about lead-based paints and leaded gasoline were mainly focused on occupational exposures, starting in the 1940's, health experts began to suspect that childhood lead exposure was a serious problem. Some suspected that a proportion of school failures and childhood behavioral disorder was a result of unrecognized lead toxicity. This conjecture was controversial at first. Then, in 1979, a well-designed study by pediatrician and psychiatrist Herbert Needleman resolved the dispute by establishing a direct correlation between the lead content of a child's teeth and bad classroom behavior.¹⁰ Follow-up studies on these same children 12 years later found that those who had the highest lead levels in their teeth as children continued to have school problems through their last year of high school including more school failures and reading disabilities, and lower class standing.¹¹

More recently, a 2002 study by Bruce Lanphear found that children's math and reading scores showed reductions correlating to blood lead levels at concentrations as low as 2.5 µg/dl (micrograms per liter). A fact sheet published by the World Health Organization (WHO) European Region identifies lead as the single most important chemical toxicant for children. It notes that the effects are particularly severe during the child's first 2-3 years, and that these include: learning disabilities; attention deficits; disorders in a child's coordination, visual, spatial and language skills; and anemia.¹²

In 2002, WHO *World Health Report* identified lead exposure as one of twenty leading selected risk factors contributing to the global burden of disease, and stated that worldwide, 40% of children have blood lead levels above 5 µg/dl, and that 97% of the affected children live in developing regions.¹³ This is an alarming and unacceptable level of exposure. To put it into context, since 1991, it has been policy in the United States that a public health intervention is needed when a child is found to have a blood-lead level above 10 µg/dl.¹⁴ The US Center for Disease Control (CDC) which

⁸ ILO continues seeking ratifications of this Convention, see: <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C013>

⁹ See: <http://www.epa.gov/history/topics/epa/25b.htm>

¹⁰ *Lead Poisoning*, by Herbert Needleman, Annual Review of Medicine 2004, on the web at: http://www.rachel.org/files/document/Lead_Poisoning.pdf

¹¹ See: Needleman cited above

¹² See: WHO Euro Region, *Study on environmental burden of disease in children: key findings*: <http://www.euro.who.int/document/mediacentre/fs0504e.pdf>

¹³ See: http://www.who.int/whr/2002/en/whr02_en.pdf

¹⁴ See: *Interpreting and Managing Blood Lead Levels <10 µg/dL in Children and Reducing Childhood Exposures to Lead* at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5608a1.htm>

established this policy, clearly stated that 10 µg/dl should not be seen as defining a threshold level for harmful effects.¹⁵ The World Health Organization (WHO) suggests that IQ loss can be expected from blood lead levels as low as 5 µg/dl;¹⁶ and some researchers call for action to be triggered when a child's blood level is above 2 µg/dl.¹⁷

Lead Regulation and the Socio-Economics of Childhood Lead Exposure In the 1960's, before regulatory action was taken in the United States to control gasoline with lead additives and lead-based interior paints, 10%–20% of inner-city children had blood lead levels of over 40 µg/dl (micrograms per deciliter).¹⁸ Then, as a result of regulatory action, by 1997 average lead blood level in U.S. children age 5 was reported to be 2.7 µg/dl.¹⁹ This shows that regulatory interventions can greatly reduce exposure. However, current U.S. childhood lead exposure is still considered to be unacceptably high.

A 2002 study by Philip Landrigan and others investigated the socio-economic impacts of lead exposure in U. S. children. It estimated the cumulative reduction in childhood intelligence associated with current levels of lead exposure and correlated this to reduction in a child's lifetime earning potential. The study concluded that the economic losses that can be attributed to the current U.S. level of childhood lead exposure amount to \$43.4 billion per year.²⁰ To offset this burden, the U.S. maintains programs to reduce lead exposure in children including the removal of lead-based paints from homes painted with these paints 35 years ago and longer.

To our knowledge, no similar studies have been conducted to quantify the socio-economic costs of childhood lead exposure in developing countries. However, since childhood lead exposure in many developing countries is generally much higher than childhood lead exposure in the U.S., it is reasonable to assume that it represents a major socio-economic burden and is an important impediment to achieving national sustainable development objectives. Widespread childhood lead exposure undermines educational achievement and reduces the productivity of the workforce. Therefore, public health interventions that can significantly reduce childhood lead exposure can make an important contribution to achieving sustainable development objectives including the Millennium Development Goals.²¹

Proposal that Forum VI Recommend Establishing a Global Partnership to Implement Paragraph 57 of the WSSD POI

In 2002, the World Summit on Sustainable Development called for action to support the phase-out of lead in gasoline and to phase out lead in lead-based paints and in

¹⁵ See reference above

¹⁶ See: http://www.who.int/quantifying_ehimpacts/publications/en/leadebd2.pdf

¹⁷ See: <http://www.ncbi.nlm.nih.gov/pubmed/16889836>

¹⁸ See: Needleman cited above

¹⁹ See: Philip Landrigan and others, *Environmental Pollutants and Disease in American Children*: <http://www.ehponline.org/members/2002/110p721-728landrigan/EHP110p721PDF.PDF>

²⁰ See Landrigan above

²¹ A methodology that can be used for relating lead regulations to the MDG can be found in the United Nations Development Program's *Toolkit for Incorporating the Sound Management of Chemicals in MDG-based Policies and Plans* at: <http://www.undp.org/chemicals/Documents/UNDP%20toolkit%20-%20Mainstreaming%20the%20Sound%20Management%20of%20Chemicals%20-%205B1%5D.pdf>

other sources of human exposure (as referenced above). The partnership that was formed during WSSD to promote clean fuels and vehicles has been very effective. On the other hand, no international partnership was created to support the implementation of paragraph 57 whose objectives are to phase out of lead in paints and other sources and to strengthen monitoring and surveillance and the treatment of lead poisoning.

Global action to control heavy metals in the form of establishing a new legally-binding Convention for that purpose would be most welcome. However, concerted international action in support of implementing WSSD POI paragraph 57 need not wait for the establishment of such a Convention. Quicker action can be taken on a parallel track by creating a global partnership to promote the measures set forth in WSSD POI paragraph 57.

Forum VI will be holding plenary discussions on *Substitution and Alternatives* and on *International Transport of Lead and Cadmium Via Trade*. The phase-out of lead from paint is relevant to both of these discussions. International trade in lead and in lead-based paints contributes to the widespread availability of lead-based paints in many countries. Furthermore, most highly industrial countries have already mandated the phase out of lead from paints and its substitution with less hazardous pigments. Our proposal is to develop a partnership to promote similar mandates in countries where lead-based paints are still widely used.

It is therefore proposed that Forum VI consider adopting a statement in support of the establishment of an international partnership to promote the implementation of WSSD POI paragraph 57 that might include the following elements:

- √ Notes WSSD POI paragraph 56 (b) supporting the phasing out of lead in gasoline; applauds the important work of the *Partnership for Clean Fuels and Vehicles* (PCFV) in its implementation; and notes that much progress is being made toward achieving a global phase out of lead in automotive fuels;
- √ Notes WSSD POI paragraph 57 calling for the phase out of lead in lead-based paints and in other sources of human exposure; and for work to prevent, in particular, children's exposure to lead and strengthen monitoring and surveillance efforts and the treatment of lead poisoning;
- √ Decides that a global partnership to promote the implementation of the measures contained in paragraph 57 would be very useful, especially for developing countries and countries with economies in transition; and that the initial priority of such a partnership might be to support the phase out of lead in lead-based paints;
- √ Establishes an IFCS working group to further develop ideas and proposals that might lead to the formation of such a global partnership; and
- √ Invites ICCM-2 to give consideration to taking a decision supporting concerted action to promote the implementation of the measures contained in WSSD POI paragraph 57, including a request to the SAICM Secretariat, within available resources, to help initiate a global partnership to promote the

implementation of paragraph 57, starting with activities to promote the phase out of lead in lead-based paints in countries where they are still commonly used.