ELIMINATE LEAD PAINT: PROTECT CHILDREN'S HEALTH

IPEN Global Lead Paint Elimination Campaign

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IPEN
a toxics-free future

IPEN has demonstrated that leaded paints for home use continue to be widely produced, sold and used in developing countries despite the fact that most highly industrial countries banned leaded house paints more than 40 years ago. IPEN's global campaign to eliminate leaded paint raises awareness that childhood exposure remains a serious problem and has catalyzed national activity in a number of developing countries to eliminate leaded paint and protect children.

In 2007 and 2008, NGOs in the IPEN network collected and analyzed decorative (home use) paints on the market in 11 developing countries and countries with economies in transition. The results were startling. In every one of these countries, many of the paints had dangerously high lead content. In response, IPEN launched a worldwide lead paint elimination campaign.

Since then, IPEN-affiliated NGOs have collected and analyzed more than 1,500 paint samples in 30 countries, and IPEN has assisted NGOs in establishing national lead paint elimination projects and programs.

IPEN also has been instrumental in making lead in paint an issue of global concern. The adoption of a 2009, IPEN proposal to the 2nd International Conference on Chemicals Management created the Global Alliance to Eliminate Lead Paint, now led by the United Nations Environment Programme (UNEP) and the World Health Organization (WHO).

Today IPEN is comprised of 700 participating organizations in 116 countries, primarily developing countries and countries with economies in transition. IPEN brings together leading environmental and public health groups around the world to engage in international efforts to minimize and, whenever possible, eliminate hazardous toxic chemicals both internationally and within their own countries.

IPEN works in the following areas:

- ***International Treaties on Chemicals and Wastes***, including the Basel, Rotterdam and Stockholm Conventions
- ***Toxic Metals***, including the Mercury Convention and lead paint elimination
- ***Chemical Safety and Sound Chemicals Management***, including the Strategic Approach to International Chemicals Management
- ***Global Movement Building***

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INTRODUCTION

Lead is a toxic metal that can be found in paints when a paint manufacturer intentionally adds one or more lead compounds to paint for some purpose. When lead compounds are used as ingredients in the manufacture of a paint product, the paint produced is considered to be "lead paint."

Most highly industrial countries adopted laws or regulations to control the lead content of decorative paints—the paints used on the interiors and exteriors of homes, schools, and other child-occupied facilities—beginning in the 1970s and 1980s. Many also imposed controls on the lead content of paints used on toys and for other applications likely to contribute to lead exposure in children. These regulatory actions were taken based on scientific and medical findings that lead paint is a major source of lead exposure in children and that lead exposure in children causes serious harm, especially to children aged six years and under. Exposure to lead also harms adults, especially those working in occupations associated with high lead exposure. Lead in paint can contribute to high occupational lead exposure in painters, auto body shop workers, construction workers involved in building renovations, and others.

Collection of data on the lead content of paints in developing countries and countries with economies in transition began as early as 1999 by a number of University-based teams and non-governmental organizations (NGOs). Many NGOs began sampling and analyzing paints for sale in their countries starting in 2007 after numerous high profile reports appeared in the international news media raising concerns about toys coated with lead paint being manufactured in Asia for sale by major brands in North America and Western Europe.

Since 2007, NGOs associated with the IPEN network have collected and analyzed decorative paints for sale on the market in 30 developing countries and countries with economies in transition. In every one of these countries, if there was no national law or regulation in force to control the lead content of paints, the majority of the enamel decorative paints for sale on the market contained lead levels above 600 parts per million (ppm). Many of the paints contained more than 10,000 ppm lead and would be prohibited for sale or use in virtually all highly industrial countries. In almost all cases however, the consumer had no way to tell which of the enamel decorative paints for sale contained added lead and which did not.

LEAD EXPOSURE AND ITS HEALTH EFFECTS

Children are not generally exposed to lead from paint while the paint is still in the can or when the paint is being newly applied to a previously unpainted or uncoated surface. Rather, lead exposure generally occurs after the lead paint has already dried on the wall or on the article that has been painted.

Over time, paint on a surface will chip, wear and deteriorate. This happens more quickly when the surface is exposed sunlight or is subject to friction and impact (such as with windows and doors). Any lead that was present in the deteriorating paint is released to dust and soil in and around the home school or other location where lead paint was used. When a surface that was previously painted with lead paint is sanded or scraped in preparation for repainting, very large amounts of lead-contaminated dusts are produced and spread.

Children playing indoors or outdoors get house dust or soil on their hands and then ingest it through normal hand-to-mouth behavior. If the house dust or the soil is contaminated with lead, the children ingest lead. Hand-to-mouth behavior is especially prevalent in children aged six years and under, the age group most easily harmed by exposure to lead. A typical one- to six-year-old child ingests approximately 100 milligrams of house dust and soil each day.[1]

WHILE LEAD EXPOSURE IS ALSO HARMFUL TO ADULTS, LEAD EXPOSURE HARMS CHILDREN AT MUCH LOWER DOSES, AND THE HEALTH EFFECTS ARE GENERALLY IRREVERSIBLE AND CAN HAVE A LIFELONG IMPACT.

In some cases, children pick up paint chips and put them directly into their mouths. This can be especially harmful because the lead content of chips can be much higher than what is typically found in dust and soils. When toys, household furniture or other articles are painted with lead paint, children may chew on them and directly ingest the lead-contaminated dried paint. Nonetheless, the

1 World Health Organization, Childhood Lead Poisoning, page 18. http://www.who.int/ceh/publications/leadguidance.pdf (2010)

Lead Paint Terminology

As used in this booklet, the term ***"decorative paint"*** refers to paints that are produced for use on inside or outside walls and surfaces of homes, schools, commercial buildings and similar structures. Decorative paints are frequently used on doors gates and windows, and to repaint household furniture such as cribs, playpens, tables and chairs.

The term ***"enamel"*** refers to oil-based paints.

The term ***"ppm"*** means parts per million total lead by weight in the dried paint sample.

most common way that children ingest lead is through lead-contaminated dust and soil that gets onto their hands.

While lead exposure is also harmful to adults, lead exposure harms children at much lower doses, and the health effects are generally irreversible and can have a lifelong impact.[2] The younger the child, the more harmful lead can be, and children with nutritional deficiencies absorb ingested lead at an increased rate.[3] The human fetus is the most vulnerable, and a pregnant woman can transfer lead that has accumulated in her body to her developing child. Lead is also transferred through breast milk when lead is present in a nursing mother.

Once lead enters a child's body through ingestion or inhalation or across the placenta, it has the potential to damage a number of biological systems and pathways. The primary target is the central nervous system and the brain, but it can also affect the blood system, the kidneys and the skeleton.

It is generally agreed that one key element in lead toxicity is its capacity to replace calcium in neurotransmitter systems, proteins and the bone structure, altering their function and structure and thereby leading to severe health impacts. Lead is also known to affect and damage the cell structure.[4]

2 Ibid, page 12

3 Ibid, page 48

4 Verstraeten, S.V., et al, "Aluminium and lead: molecular mechanisms of brain toxicity" (Archives of Toxicology 82:789–802. DOI 10.1007/s00204-008-0345-3, 2008)

Lead Exposure Reduces Intelligence

Lead exposure in children may be measured in micrograms of lead per deciliter of blood (μg/dL) or in micrograms of lead per liter of blood (μg/L). At the low end of the lead exposure spectrum, an increase in blood lead level in a pre-school child from less than 1 μg/dL to 10 μg/dL is associated with a six point decrease in IQ (intellectual quotient) points. For children whose blood lead level is in the range of 10-20 μg/dL, a quarter to a half of an IQ point is lost for each 1 μg/dL increase in the blood lead.[13]

Children are more sensitive to the harmful effects of lead than adults for several reasons, including:[5]

- A child's brain undergoes very rapid growth, development and differentiation and lead interferes with this process. For example, it has been shown that moderate lead exposure (5 to 40 ug/dL) during early childhood is connected to region-specific reductions in adult gray matter volume. Moderate blood levels have been linked to an increased likelihood of impaired cognition and executive function, impulsiveness, aggression and delinquent behavior. The loss of grey matter in the brain constitutes a potential explanation for cognitive and behavioral problems associated with lead exposure.[6] Brain damage caused by chronic, low-level exposure to lead is irreversible and untreatable.
- Exposure to lead early in life can re-program genes, which can lead to altered gene expression and an associated increased risk of disease later in life. For example, gene alterations caused by prenatal lead exposure have been implicated in the development of Alzheimer's disease.[7]
- Gastrointestinal absorption of lead is enhanced in childhood. Up to 50 percent of ingested lead is absorbed by children, as compared with 10 percent in adults. (Pregnant women may also absorb more ingested lead than other adults.)[8]

5 World Health Organization, Childhood Lead Poisoning, http://www.who.int/ceh/publications/leadguidance.pdf, 2010

6 Cecil, K.M., et al. , "Decreased Brain Volume in Adults with Childhood Lead Exposure" (PLOS Medicine (2008) 5(5): e112. DOI:10.1371/journal.pmed.0050112)

7 Mazumdar, M., et al, "Prenatal Lead Levels, Plasma Amyloid Levels, and Gene Expression in Young Adulthood," (Environmental Health Perspectives (2012) 120 (5))

8 World Health Organization, Childhood Lead Poisoning, http://www.who.int/ceh/publications/

Evidence of reduced intelligence caused by childhood exposure to lead has led the World Health Organization (WHO) to list "lead caused mental retardation" as a recognized disease. WHO also lists it as one of the top ten diseases whose health burden among children is due to modifiable environmental factors.[9]

In recent years, medical researchers have been documenting significant health impacts in children from lower and lower lead exposures.[10,11] In response, the U.S. Centers for Disease Control and Prevention (CDC) and other authorities have concluded that there is no known acceptable lead exposure level for children.[12]

leadguidance.pdf, 2010

9 http://www.who.int/quantifying_ehimpacts/publications/preventingdisease.pdf

10 Herbert Needleman, "Lead Poisoning,"(Annual Review of Medicine 2004, http://www.rachel.org/files/document/Lead_Poisoning.pdf)

11 Bruce P. Lanphear et al., "Low-Level Environmental Lead Exposure and Children's Intellectual Function: An International Pooled Analysis" (Environ Health Perspectives. 2005 July; 113(7): 894–899 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1257652/)

12 Centers for Disease Control and Prevention, Blood Levels in Children Aged 1-5 Years – United States, 1999-2010, (Morbidity and Mortality Weekly Report http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm?s_cid=mm6213a3_w)

ECONOMIC IMPACTS

When a young child is exposed to lead, the harm to her or his nervous system makes it more likely that the child will have difficulties in school and engage in impulsive and violent behavior.[13] This impact continues throughout life, has a long-term impact on the child's work performance, and—on average—causes decreased economic success as measured by lifelong earnings. Widespread lead exposure harms society as a whole by placing an extra burden on the national education system; raising national costs associated with increased crime and incarceration rates; and reducing the overall national productivity of labor.

A recent study that investigated the economic impact of childhood lead exposure on national economies in all low and middle income countries estimated a total cumulative cost burden of $977 billion international dollars[14] per year.[15] The

13 Mielke, H.W. and Zahran, S., "The urban rise and fall of air lead (Pb) and the latent surge and retreat of societal violence" (Environment International. 43 (2012) 48-55)

14 An International dollar is a currency unit used by economists and international organizations to compare the values of different currencies. It adjusts the value of the U.S. dollar to reflect currency exchange rates, purchasing power parity (PPP) and average commodity prices within each country. According to the World Bank, *"An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States." The international dollar values in this report were calculated from a World Bank table that lists* GDP per capita by country based on purchasing power parity and expressed in international dollars. The data from the table (at: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD) was accessed by the report's authors in February 2012.

15 Teresa M. Attina and Leonardo Trasande, "Economic Costs of Childhood Lead Exposure in Low and MiddleIncome Countries" (Environmental Health Perspectives; DOI:10.1289/ehp.1206424; http://ehp.niehs.nih.gov/1206424/)

study considered the neurodevelopmental effects on lead-exposed children, as measured by reduced IQ points, and it correlated lead exposure-related reductions in children's IQ scores to reductions in lifetime economic productivity as expressed in lifelong earning power. The study identified many different sources of lead exposure in children, with lead paint as one major source. Broken down by region, the economic burden of childhood lead exposure as estimated by this study was:

- Africa: $134.7 billion of economic loss or 4.03% of Gross Domestic Product (GDP)
- Latin America and the Caribbean: $142.3 billion of economic loss or 2.04% of GDP
- Asia: $699.9 billion of economic loss or 1.88% of GDP

SOURCES OF LEAD IN PAINT

Paints contain lead when the paint manufacturer intentionally adds one or more lead compounds to the paint for some purpose. A paint product may also contain some amount of lead when paint ingredients that are contaminated with lead are used or when there is cross contamination from other product lines in the same factory.

The lead compounds most commonly added to paints are pigments. Pigments are used to give the paint its color; make the paint opaque (so it covers well); and protect the paint and the underlying surface from degradation caused by exposure to sunlight. Lead compounds commonly used as paint pigments include: lead chromates, lead oxides, lead molybdates, lead sulfates and others. Lead-based pigments are sometimes used alone and sometimes used in combination with other pigments.

A 90 ppm Standard for Lead in Paint

When a paint manufacturer does not intentionally add lead compounds in the formulation of its paints, the lead content of the paint will be very low - usually less than 90 parts per million (ppm) total lead by dry weight and frequently much lower. If a paint manufacturer takes care to avoid the use of paint ingredients that are significantly contaminated with lead, the lead content of the paint will often be as low as 10 parts per million or less. IPEN recommends 90 ppm as an achievable and protective goal for lead in paint worldwide. While WHO, the U.S. CDC and other health agencies have determined that no safe level of childhood lead exposure can be established, 90 ppm is the current standard for household paints in the U.S. and Canada and would ensure that a manufacturer could sell its paint anywhere in the world.

Lead compounds also may be added to enamel (oil-based) paints for use as driers (sometimes called drying agents or catalysts). Enamel paints dry to a hard and smooth surface through a process that involves chemical reactions in which paint ingredients called binders polymerize and crosslink. The driers serve as catalysts that speed up the polymerization and make paints dry faster and more evenly. Lead compounds commonly used as driers include lead octoate and lead naphthenate. These lead-based driers are generally not used alone, but are usually combined with other driers, including compounds of manganese, cobalt and others.

Lead compounds are also sometimes added to paints used on metal surfaces to

inhibit rust or corrosion. The most common of these is lead tetroxide, sometimes called red lead or minium.

Inorganic pigments, fillers and possibly some other ingredients used in the manufacture of paints may be derived from natural, earth-based materials and may be more or less contaminated with lead depending on geological character-

IN MOST CASES, BY AVOIDING THE USE OF LEAD PIGMENTS, LEAD DRIERS AND OTHER INTENTIONALLY ADDED LEAD COMPOUNDS, A PAINT MANUFACTURER WILL PRODUCE PAINTS THAT HAVE LEAD CONTENT WELL BELOW 90 PPM AND THAT CAN BE SOLD IN ANY COUNTRY IN THE WORLD.

istics at the location where they were mined. When lead-contaminated ingredients are used in the manufacture of paints, this will contribute to the lead content of the paint.

Finally, when a paint manufacturer uses added lead compounds in the manufacture of some of its paints (such as industrial paints), other paints produced in the same facility might become contaminated with lead when proper housekeeping and cleanup procedures are not followed.

ALTERNATIVES TO LEAD IN PAINT

Non-leaded pigments, driers and anti-corrosive agents have been widely available for decades and are used by manufacturers producing the highest quality paints. In most cases, by avoiding the use of lead pigments, lead driers and other intentionally added lead compounds, a paint manufacturer will produce paints that have lead content well below 90 ppm and that can be sold in any country in the world.

If a case arises in which a paint product has been analyzed and found to contain somewhat more than 90 ppm lead, but the paint manufacturer claims to have eliminated the use of all intentionally added lead compounds, the source of the lead might be significant lead contamination in one or more of the paint ingredients. Highly contaminated ingredients can be easily avoided by a paint manufacturer that uses appropriate quality control procedures and that informs its vendors that paint ingredients with high lead contamination are not acceptable.

DECORATIVE PAINTS

Highly industrial countries in North America, Western Europe and elsewhere have strictly controlled the lead content of all decorative paints sold and used in their countries for decades. (They have also controlled the lead content of paints used on children's toys and for some other applications likely to contribute to

THE U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) AND OTHER AUTHORITIES HAVE CONCLUDED THAT THERE IS NO KNOWN ACCEPTABLE LEAD EXPOSURE LEVEL FOR CHILDREN.

childhood lead exposure.) Even in the absence of specific laws and regulations, some paint manufacturers in most developing countries and countries with economies in transition are already producing unleaded paints and compete well in the marketplace. Appropriate substitute ingredients are widely available, and the cost to manufacturers associated with reformulating decorative paints

to avoid the use of added lead compounds appears to be minimal.[16]

While the obstacles associated with the elimination of lead-based ingredients in the manufacture of decorative paints appear to be minimal, there may be additional technical obstacles or costs associated with eliminating the use of lead compounds in some categories of industrial paints. For this and other reasons, when governments consider the adoption of legally binding laws, regulations, standards and/or procedures to control the production, import, sale and use of lead paints, priority might be given to controls addressing decorative paints and paints for the other applications that are most likely to contribute to childhood lead exposure.

INDUSTRIAL PAINTS

Lead paints used for certain industrial applications have a long history of contributing to occupational lead exposure in workers. In addition, there are cases where leaded industrial paints also contribute to lead exposure in children (as, for example, when lead industrial paints are inappropriately used for outdoor playground equipment or used on bridges and other structures near areas where children may play). Although highly industrial countries do not have a consistent history of strictly controlling the lead content of all industrial paints, this is now changing.

Starting in May 2015, the European Union will strictly control the manufacture and import of lead chromate pigments and their use in all categories of paints and coatings. This has led European pigment manufacturers to phase out of

16 Though studies in the public literature on the costs to paint manufacturers in developing countries associated with discontinuing the use of added lead compounds in the paints they manufacture are lacking, NGO staff and consultants working on lead paint elimination projects have had personal conversations in several countries with paint manufacturers who have recently reformulated their paints. All reported their additional total ingredient costs were minimal. Some reported that additional materials costs were at most two percent of total materials costs; many reported lesser amounts. Most or all continued to sell their paints at the same price points after reformulation. For smaller manufacturers, the biggest challenge often appears to be the research and development time and effort associated with reformulation, and identifying an appropriate and reliable vendor willing and able to provide the substitute ingredients and advice on their proper use.

the production of lead-based pigments in Europe,[17] and it is has led some paint manufacturers that serve the European market to phase out the use of lead pigments in all their paint and coatings products. In July 2012, DuPont, the world's leading manufacturer of automotive paints, announced it will discontinue the use of all leaded pigments in all the lines of automotive paints it produces.[18] In August 2012, AkzoNobel, the world's largest paint and coatings manufacturer, became the first major industrial coatings producer to eliminate the use of added lead compounds in all of its products with the decision of its Marine and Protective Coatings unit to eliminate the use of lead chromates in paints used for marine applications.[19]

17 "BASF Phasing Out Lead Chromate Pigments," PAINTSQUARE: Paint and Coatings Industry News, February 23, 2012; http://www.paintsquare.com/news/?fuseaction=view&id=7230&nl_versionid=1759

18 "DuPont Refinish to Pump Unleaded," PAINTSQUARE: Paint and Coatings Industry News, July 16, 2012

19 http://www.paintsquare.com/news/?fuseaction=view&id=8041&nl_versionid=2183 "International Paint Drops Lead Chromate," PAINTSQUARE: Paint and Coatings Industry News, August 8, 2012;

FRAMEWORK FOR ELIMINATING LEAD PAINT

An international convention limiting the use of white lead was adopted by the General Conference of the International Labour Organisation and ratified by 63 countries as early as 1921. Many highly industrial countries enacted laws, regulations or mandatory standards to protect the health of their people in the 1970's and 1980's. These laws generally prohibit the manufacture, import, sale or use of lead paint for interiors or exteriors of homes, schools and other child-occupied facilities. The standard adopted by the United States imposes an upper limit of 90 ppm on total lead (dry weight) for household paints and many other paint categories. Other countries have adopted mandatory limits in the range of 90 to 1,000 ppm total lead (dry weight).

Analytical data from paint studies show that in countries where no national law, binding regulation, or other legal instrument specifically forbids it, some or most of the brands of enamel decorative paints for sale on the national market contain high levels of lead. This suggests that national laws, binding regulations, or other legal instruments are a key tool for controlling the lead content of paints.

INTERNATIONAL FRAMEWORK FOR LEAD PAINT ELIMINATION: GLOBAL ALLIANCE TO ELIMINATE LEAD PAINT (GAELP)

At the second session of the International Conference on Chemicals Management (ICCM), held in 2009, several chemical issues were identified by consensus to be international priority issues of concern. One of these was lead in paints, and there was a decision to establish it as an international emerging policy issue.[20] In response to the ICCM decision, the United Nations Environment Programme (UNEP) and the World Health Organization (WHO) jointly initiated a global partnership to eliminate the use of lead compounds in paints in order to protect public health and the environment. This partnership is called the Global Alliance to Eliminate Lead Paint (GAELP).[21] GAELP's broad objective is to phase out the manufacture and sale of paints containing lead and eventually to eliminate the risks from such paint.[22]

20 (http://www.saicm.org/images/saicm_documents/iccm/ICCM2/ICCM2%20Report/ICCM2%2015%20FINAL%20REPORT%20E.doc)

21 http://www.unep.org/hazardoussubstances/LeadCadmium/PrioritiesforAction/LeadPaints/tabid/6176/Default.aspx

22 http://www.unep.org/hazardoussubstances/LeadCadmium/PrioritiesforAction/GAELP/GAELPObjectives/tabid/6331/Default.aspx

NATIONAL FRAMEWORKS FOR THE ELIMINATION OF LEAD PAINT

Governments can address the problem of lead in paint by establishing a legal framework to control the manufacture, import, sale and use of lead decorative paints and other paints likely to contribute to human lead exposure. Legal frameworks used for controlling lead paints vary from country to country.

Virtually all highly industrial countries have laws or regulations that have been in force since the 1980's or before to control the lead content of decorative paints. In 2008, in response to growing concerns about childhood lead exposure and new evidence of low dose impacts, a law was passed by the United States that revised the previous 600 ppm maximum limit for lead in decorative paints and established 90 ppm as the new limit.[23] This limit applies to paint and other similar surface coatings used on toys, other articles intended for use by children, and certain items of furniture. The law applies to paints used in residences, schools, hospitals, parks, playgrounds, and public buildings or other areas where consumers will have direct access to the painted surface.[24] Canada has since set a similar limit, and in 2009 the European Union placed new, very strict controls on the production and use of lead pigments.

In Argentina, Brazil, Chile, Sri Lanka, and Uruguay, recent decrees with the force of law have established a maximum allowable lead concentration in enamel decorative paints of 600 ppm and prohibit the production and import of paints with a lead concentration above this limit. Sri Lanka has established 90 ppm lead as the maximum limit for emulsion paints and paints for use on children's toys.

In some countries, the Environment Ministry or the Health Ministry may have the authority to issue a regulation, a decree or a control order that controls the lead content of paints. A number of countries, as part of their national Strategic Approach to International Chemicals Management (SAICM) implementation programs, are attempting to strengthen their national capabilities for sound chemicals management, including the promotion and adoption of enabling laws and the establishment of inter-ministerial committees to coordinate these national efforts. In some other countries, national standards agencies have the power, under certain conditions, to establish legally binding national standards, such as the maximum permissible lead content of paint.

23 http://www.cpsc.gov/PageFiles/109515/cpsia.pdf

24 United States Consumer Products Safety Commission, FAQs: Lead In Paint (And Other Surface Coatings) (http://www.cpsc.gov/en/Business--Manufacturing/Business-Education/Lead/FAQs-Lead-In-Paint-And-Other-Surface-Coatings/)

MONITORING AND COMPLIANCE

While the establishment of a national law, regulation, decree or binding standard to control the lead content of paint is very important, it is not, by itself, enough. Any such instrument must also include or establish an effective regime for monitoring compliance and for enforcement.

The elimination of lead paint may also be aided by voluntary schemes such as third-party paint certification and labeling programs. Under such programs, participating paint companies agree that they will not add lead compounds to their paints and only market products with lead levels below a specified limit (for example, 90 ppm). Participating companies also agree to place a certification label on their paints indicating that the paint does not contain added lead compounds. Consumer groups and others then work cooperatively with participating companies to encourage consumers to look for the label when selecting paints. Third party monitors have the paints analyzed on a regular basis to ensure compliance.

Third-party certification of paints would also safeguard against double standards from paint companies selling unleaded paints where the national law requires it and leaded paints where no regulations exists, as has been shown in a study from South Asia.[25]

25 Toxics Link, Double Standard: Investigating Lead Content In Leading Enamel Paint Brands In South Asia
(http://toxicslink.org/docs/Double_Standard_Lead_Paint_29_June_2011.pdf)

CONCLUSIONS

- Lead paint is a serious human health hazard, especially when the paint is used in applications likely to expose children to lead.
- Decorative paints and paints for use on children's products can be easily produced without the use of lead pigments, lead driers, and lead anti-corrosive agents.
- Manufacturers can reformulate their decorative paints to avoid the use of leaded ingredients without any significant sacrifice to the quality of the paint and with very little, if any, increase in their total cost of production.
- All paint manufacturers that currently produce lead decorative paints and lead paints for other applications likely to contribute to childhood lead exposure should, as a matter of social responsibility, immediately reformulate these paints to avoid the use of leaded ingredients.
- Governments have an obligation to protect children and protect society from harms that result from lead paint. Therefore, governments should act quickly to promulgate a national law, regulation, decree or other legal instrument to control the lead content of paints that are manufactured, imported, sold or used in their country.

APPENDIX A

LEAD PAINT STUDIES AND REPORTS BY IPEN AND ITS PARTICIPATING ORGANIZATIONS

LEAD IN NEW DECORATIVE PAINTS (IPEN & TOXICS LINK, 2009)

A report on the lead content of paint samples from major paint brands in eleven countries. Countries covered in the report and IPEN participating organizations engaged in lead elimination that collected data for the report:

Belarus: Center for Environmental Solutions (CES)

Brazil: Assoçiãcao de Proteção ao Mei Ambiente de Cianorte (APROMAC)

India: Toxics Link

Mexico: Red de Acción en Plaquicidas y sus Alternativas México (RAPAM)/ Centro de Análisis y Acción en Tóxicos y sus Alternativas (CAATA)

Nigeria: Friends of the Environment (FOTE)/Strategic Research and Action for Environmental Development (SRADev)

Philippines: EcoWaste Coalition

Senegal: Pesticide Action Network (PAN) South Africa and Senegal

South Africa: groundWork – Friends of the Earth

Sri Lanka: Centre for Environmental Justice (CEJ)

Tanzania: AGENDA for Environment and Responsible Development

Thailand: Campaign for Alternative Industry Network (CAIN)

DOUBLE STANDARD: INVESTIGATING LEAD (PB) CONTENT IN LEADING ENAMEL PAINT BRANDS IN SOUTH ASIA (TOXICS LINK, 2011)

A report comparing lead content in major paint brands sold in three Asian countries. Countries covered in the report and IPEN participating organizations engaged in lead elimination that collected data for the report:

Bangladesh: Environment & Social Development Organization (ESDO)

India: Toxics Link

Nepal: Center for Public Health and Environmental Development (CEPHED)

IPEN ASIAN LEAD PAINT ELIMINATION PROJECT (IPEN, 2013)

IPEN participating organizations working on lead elimination that will release reports in 2013 on the lead content of paint samples from major paint brands in their countries:

Bangladesh: Environment & Social Development Organization (ESDO)

India: Toxics Link

Indonesia: BaliFokus

Nepal: Center for Public Health and Environmental Development (CEPHED)

Philippines: EcoWaste Coalition

Sri Lanka: Centre for Environmental Justice (CEJ)

Thailand: Ecological Alert and Recovery Thailand (EARTH)

LEAD IN ENAMEL DECORATIVE PAINTS (UNITED NATIONS ENVIRONMENT PROGRAMME, 2013)

A report on the lead content of paint samples from major paint brands in nine countries. IPEN prepared and coordinated the report and study for UNEP in cooperation with the following IPEN participating organizations:

Argentina: Taller Ecologista

Azerbaijan: Ruzgar Ecological Society

Chile: Observatorio Latinoamericano de Conflictos Ambientales (OLCA)

Cote d'Ivoire: Jeunes Volontaires pour l'Environnement (JVE)

Ethiopia: Pesticide Action Nexus Association (PAN)

Ghana: Ecological Restorations

Kyrgyzstan: NGO Independent Ecological Expertise

Tunisia: Association d'Éducation Environnementale pour la Future Génération (AEEFG)

Uruguay: Red de Acción en Plaguicidas y sus Alternativas para América Latina Uruguay (RAPAL Uruguay)

OTHER STUDIES

IPEN participating organizations working on lead elimination that have released reports on the lead content of paint samples from major paint brands in their countries:

Armenia: Khazer Ecological and Cultural NGO

Cameroon: Centre de Recherche et d'Éducation pour le Dévelopment (CREPD)

Kazakhstan: Greenwomen, Analytical Environmental Agency

Kenya: iLima

Lebanon: IndyAct

Paraguay: Altervida

Russia: Eco-Accord

GLOBAL LEAD PAINT ELIMINATION BY 2020: A TEST OF THE EFFECTIVENESS OF THE STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT.

Prepared for the third meeting of the International Conference on Chemicals Management (ICCM) in 2012, this report makes the case that lead paints are still widely manufactured, sold and used in developing countries and countries with economies in transition. It argues that global elimination of all decorative paints in countries of all regions by 2020 is an achievable objective.

For these and other resources on lead paint elimination, please visit the IPEN website

www.ipen.org

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