



Global Environment Facility (GEF) 9771: Global best practices on emerging chemicals policy issues of concern under the Strategic Approach to International Chemicals Management (SAICM)  
Component 1: Promoting regulatory and voluntary action by government and industry to phase out **lead in paint**

## Background and Policy Context:

### Global Context:

A number of additional 'Emerging Policy Issues' (EPIs) have been nominated for voluntary cooperative risk reduction actions by countries through the Strategic Approach for International Chemicals Management (SAICM). In 2002, Governments agreed that "by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment."

One of the Emerging Policy Issues is focused on Lead in Paint. Lead paint is a major source of childhood lead exposure, for example via contaminated dust in homes that can be inhaled or ingested (UNEP 2010). There is no safe level of lead exposure known, and even relatively low levels of exposure to lead can cause serious and irreversible neurological damages, such as loss of IQ points. The Institute for Health Metrics and Evaluation (IHME) has estimated that in 2017 lead exposure accounted for 1.05 million deaths due to long-term effects on health, with the highest burden in low and middle-income countries.

Lead paint is paint to which one or more lead compounds have been added, e.g. as pigments, driers or as anti-corrosives. Lead paint used in homes, schools and playgrounds is an important source of exposure to lead for children. Intact lead paint is safe, however, as it ages the paint starts to decay, fragmenting into flakes and dust that contaminate the environment. Paint flakes and dust are readily swallowed by young children who typically play on the ground and frequently put their hands to their mouths.

There are safer alternatives to lead compounds for use in paints, and a number of paint companies have stopped using lead additives on a voluntary basis. The best way to protect the population from lead exposure from this source, however, is to introduce and enforce laws that either ban or restrict the use of lead in paint.

The phasing out of lead paint by 2020 is one of the priority actions for governments included in the WHO *Road map to enhance health sector engagement in the Strategic Approach to International Chemicals*

*Management towards the 2020 goal and beyond*<sup>1</sup>. Member States approved this road map at the Seventieth World Health Assembly (WHA70(23)) in 2017.

To address these issues, the Global Environment Facility (GEF) is supporting a Strategic Approach to International Chemicals Management (SAICM) project on global best practices for emerging chemical policy issues of concern. The project inception workshop took place on 15-16 January 2019 in Geneva. More information about the workshop is available at <http://www.saicm.org/Implementation/GEFProject/Inceptionworkshop/tabid/7910/language/en-US/Default.aspx>. Component 1 of the project concerns the phasing out of lead paint, hereinafter called the SAICM GEF Lead Paint project. The goals of the SAICM GEF Lead Paint Project are to work with small and medium-sized enterprises (SME) paint manufacturers to conduct pilot demonstration projects to phase out lead from their production processes (Project Output 1.1) and to promote the establishment of lead paint laws by governments (Project Output 1.2).

The UN Environment Assembly, at its third session in December 2017, adopted resolution UNEP/EA.3/Res.9 “Eliminating Exposure to Lead Paint and Promoting the Environmentally Sound Management of Lead Acid Batteries”. The resolution provides impetus for countries to adopt laws eliminating lead paint.

The United Nations Environment Programme (UN Environment) and the World Health Organization (WHO) lead the Global Alliance to Eliminate Lead Paint (Lead Paint Alliance). The primary goal of the Lead Paint Alliance is to prevent children’s exposure to paints containing lead and to minimize occupational exposure to lead paint. The Lead Paint Alliance is working to phase-out the manufacture, import and sale of all paints containing lead. To achieve this global goal, countries must eliminate the use of lead additives in new paints by establishing and enforcing lead paint laws. The strategic target of the Alliance is for all countries to have effective lead paint laws in place by the year 2020.

The elimination of lead paint will contribute to the achievement of the Sustainable Development Goals targets 3.9<sup>2</sup> and 12.4<sup>3</sup>.

## China:

China is classified as middle-income country according to World Bank. The cost of removing existing decorative lead paint from surfaces in homes, schools, and other buildings is significant. By comparison, the cost for eliminating the use of lead compounds in new decorative paints is low and alternatives to lead additives are available for all types of paints. Many manufacturers have successfully reformulated their paint products to avoid the intentional addition of lead. However, the continued use of lead paint around the country remains a significant source of human exposure. The economic costs of childhood lead exposure in China is 227 billion USD. The average blood lead level is 6.56 µg/dl and the presumed IQ loss is 55 million points. In addition, the population at risk under 5 years of ages is estimated to be 16 million children.<sup>4</sup> There are yet still barriers to their use such as lack of regulations, access to vendors and

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<sup>1</sup> <http://www.who.int/ipcs/saicm/roadmap/en/>

<sup>2</sup> By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

<sup>3</sup> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

<sup>4</sup> NYU Langone Health, 2019, <https://med.nyu.edu/departments-institutes/pediatrics/divisions/environmental-pediatrics/research/policy-initiatives/economic-costs-childhood-lead-exposure-low-middle-income-countries>

lack of awareness of small and medium sized manufacturers (SMEs) to the need for phasing out lead paint. Most of the paint manufactures in China is classified as a SME, with limited technical and financial resources.

China is a major producer of paints which supplies a considerable share of paints in the world. Key paint production hot spots were identified as Guangdong, Shanghai, Jiangsu, Hunan and Shandong provinces and cities. China has formulated and promulgated a range of policies and regulations on the restriction of the production and use of lead-based paints. Ministry of Industry and Information Technology, Ministry of Science and Technology, Ministry of Ecology and Environment (formerly named as Ministry of Environmental Protection)-*Catalogue of Alternative Products Promoted by State to Replace Toxic and Hazardous Raw Materials (Products)*; The National Development and Reform Commission-*Catalogue for Guiding Industry Restructuring* and Ministry of Industry and Information Technology-*Catalogue for Guiding Some Industrial Sectors to Phase out Outdated Production Processes, Equipment, and Products*. The Government of China has also enacted regulation addressing soluble lead content in paint for various uses. The limit to lead (soluble lead < 90 ppm) shall apply to most of the paints. The limit to lead in automobile paints, exterior wall paints, and steel structure antirust paints is < 1000 ppm.

IPEN conducted a study on soluble lead available in the Chinese market in 2016 with his partner organization which highlights that technology exists in China to produce paint within the current regulatory limit<sup>5</sup>.

### NCPC China

China National Cleaner Production Center (NCPC China) has been selected as a project executing partner in Output 1.1 of the Strategic Approach to International Chemicals Management (SAICM) Global Environment Facility (GEF) lead in paint project.

NCPC China is a unit of the Chinese Research Academy of Environmental Sciences (CREAS), one of the national government's research institutes with a particular mandate for undertaking policy relevant research in environmental sciences, engineering and management. NCPC China was established in 1994, and focuses on policy advice to national and local government, developing innovative cleaner production techniques, and producing sector-based cleaner production guidelines. Focusing on the national environmental protection strategy of pollution prevention, NCPC China has conducted a series of creative and foreseeing studies and activities in cleaner production area, serving for the achievement of energy conservation and pollution reduction.

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<sup>5</sup>IPEN, *Soluble and Total Lead Content of Solvent-Based Paints for Home Use in China*, October 2017, [https://ipen.org/sites/default/files/documents/ipen-china-lead-report-v1\\_3-en.pdf](https://ipen.org/sites/default/files/documents/ipen-china-lead-report-v1_3-en.pdf)

## Meeting with the China Government Officials

### Beiyuan Grand Hotel, Beijing, China

### 16 October 2019 (Wednesday)

#### Purpose of the event:

The event aims to share and discuss information related to lead paint both in the global and country context. Data and information on health and economic impact, country lead paint testing, current legislation, and paint market situation, will be presented and discussed with government officials (environment, industry, etc). The SAICM GEF project will be presented including the work plans for the SME demonstration pilots and project work on legal assistance will be introduced of output 1.1 and 1.2 and how activities in both outputs will interact. Suggestions from on how to improve the current lead paint limits and well as possible SME candidates will be drawn from government officials.

The technical guidelines of lead paint elimination will be presented in a simplified manner to familiarize the audience with the general framework of the guidance.

#### Participants

- Ministry of Ecology and Environment
- Ministry of Industry and Information Technology
- World Health Organization
- Chinese Research Academy of Environmental Sciences
- Solid Waste and Chemicals Management Center
- China Coating Industry Association

#### Publicizing the event

In advance of the event, publicity will be focused on ensuring we attract the target audiences for the event. This will be done by tailored publicity actions: email invites, letters, telephone contact, meet-ups.

#### Agenda:

Host: Zhou Changbo, Deputy Director of NCPC China, CRAES

| Time        | Session  | Responsible   |
|-------------|--|---|
| 13:45-14:00 | Registration with coffee break   |   |
| 14:00-14:20 | Welcome Note<br>CRAES, NCPC China<br>UN Environment, Chemicals and Health Branch | CRAES NCPC China, Zhou Changbo<br>UN Environment, Desiree Narvaez |
| 14:20-14:40 | Why remove lead from paint: Health and economic impacts of lead exposure         | WHO Country Office, TBC   |

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| <b>14:40-15:00</b> | Overview of status of global and national lead paint laws   | UN Environment<br>Desiree M. Narvaez                                 |
| <b>15:00-15:20</b> | Policies and regulations for the coatings and pigment industry in national environmental protection for chemicals   | Ministry of Ecology and Environment<br>Lin Jun                       |
| <b>15:20-15:40</b> | Industrial standards for the coatings and pigment industry  | Ministry of Industry and Information Technology<br>Official TBC      |
| <b>15:40-16:00</b> | Paint industry overview and the substitution situation in China   | China Coating Industry Association<br>Ma Jun                         |
| <b>16:00-16:10</b> | Coffee break  |  |
| <b>16:10-16:30</b> | Description of SAICM Lead Paint Project work with governments: Policy support and awareness raising to generate support for lead phase out<br><br>Discussion of connections between work on SME demonstrations and policy support for lead paint laws (project outputs 1.1 and 1.2) | UN Environment<br>Desiree Narvaez                                    |
| <b>16:30-16:50</b> | Description of SAICM GEF Project workplan with industry: Demonstration pilots with SME Paint manufacturer (Output 1.1) Discuss interlinkages and collaboration between outputs 1.1. and 1.2   | CRAES NCP China<br>Li Zixiu  |
| <b>16:50-17:10</b> | General Presentation of paint reformulation guideline for lead paint eliminations; Presentation of Proposed Lead Paint Reformulation Technical Guidelines   | NCP Serbia<br>Vojislavka Satric                                      |
| <b>17:10-17:30</b> | Q&A; Next steps   | CRAES NCP China, Zhou Changbo<br><br>UN Environment, Desiree Narvaez |
| <b>17:30</b>       | Dinner  |  |

## **Paint Reformulation Technical Guidelines Workshop**

### **Beiyuan Grand Hotel, Beijing, China**

### **17 October 2019 (Thursday)**

#### **Purpose of the event:**

This workshop represents the initiation of SME demonstration activities in China. The overall goal of the workshop is to discuss in detail the project work plan and the draft technical guidelines on paint reformulation as it applies to SMEs (project output 1.1).

#### **Workshop objectives include:**

- To raise awareness on the advances on lead paint elimination at the national level.
- Increase understanding of the adverse health and economic impact of lead compounds.
- To present global and national status of lead in paint.
- To present and discuss the technical guidelines on paint reformulation manual prepared by NCPC Serbia that will be pilot tested in selected SMEs through NCPC China with support of other relevant parties.
- To make a connection between international and local activities on lead paint.
- To gain understanding that eliminating lead from paint is possible and that the project will support the participants in doing so.
- To facilitate discussion about issues related to paint manufacturer, import, export and regulation.

Audience must be aware after the event that eliminating lead from paint is possible and that the project will support them in doing so. Chance must be given to audience to discuss issues related to paint manufacture, import, export and regulations.

#### **Participants**

- Paint manufactures(SMEs)
- Paint retailers and wholesalers
- Alternative suppliers
- Chinese Research Academy of Environmental Sciences
- Solid Waste and Chemicals Management Center
- China Coating Industry Association

#### **Publicizing the event**

In advance of the event publicity will be focused on ensuring we attract the target audiences for the event. This will be done by:

- Tailored publicity – email invites, letters, telephone contact, meet-ups;

- Generating interest through website and Wechat;
- Securing a high-profile keynote speaker to introduce the event;
- Securing one or more high profile local figures to promote the event and/or be there on the day. Options include MEE or MIIT officials.
- Contacting the local press and media to secure coverage of the event.

## Draft Agenda:

Host: Zhou Changbo, Deputy Director of NCPC China, CRAES

| Time        | Session  | Responsible   |
|-------------|--|---|
| 9:00-9:30   | Registration with coffee break   |   |
| 9:30-9:50   | Welcome Note<br>CRAES, NCPC China<br>UN Environment, Chemicals and Health Branch                 | CRAES NCPC China, Zhou Changbo<br>UN Environment, Desiree Narvaez |
| 9:50-10:10  | Toxicity of lead and its impact on health and economy, and global effort to eliminate lead paint | WHO Country Office, TBC   |
| 10:10-10:30 | Legal and institutional framework for regulating lead in paints in China                         | Ministry of Ecology and Environment<br>Jian Xiaodong              |
| 10:45-11:00 | Supervision and standard of lead paint in China  | Ministry of Industry and Information Technology<br>Official TBC   |
| 11:00-11:20 | Coffee break   |   |
| 11:20-11:35 | Paint industry overview and the substitution situation in China                                  | China Coating Industry Association<br>Ma Jun                      |
| 11:35-11:50 | Promoting elimination of the use of lead paint in China  | Ministry of Ecology and Environment<br>Ye Jing                    |
| 11:50-13:30 | Lunch  |   |
| 13:30-13:45 | SAICM GEF Project Description and workplan   | UN Environment  |

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|                    |  | Desiree Narvaez                          |
| <b>13:45-14:00</b> | Description of Demonstration pilots project with SME Paint manufacturer and promoting cleaner production in the industry | CRAES NCPC China<br>Zhou Changbo         |
| <b>14:00-15:00</b> | Presentation of paint reformulation technical guideline for lead paint elimination                                       | NCPC Serbia<br>Vojislavka Satric         |
| <b>15:00-15:15</b> | Coffee break   |  |
| <b>15:15-15:45</b> | TBC  | BASF                                     |
| <b>15:45-16:15</b> | Lead substitution for heavy anti-corrosion coatings  | Zhejiang Yutong New Materials Co., Ltd.  |
| <b>16:15-16:45</b> | Lead substitution for light anti-corrosion coatings  | Hunan Xiangjiang Coating Group Co., Ltd. |
| <b>16:45-17:15</b> | Application practice for lead chrome pigment substitutes in coatings industry  | Hunan Jufa Technology Co., Ltd.          |
| <b>17:15-17:30</b> | Q&A and next steps   |  |
| <b>17:30</b>       | Dinner   |  |