Global Webinar for Paint Industry on Eliminating Lead in Paint

19 November 2020
15:00-17:30 (GMT +2)
WebEx

Webinar Report

BACKGROUND:
Lead is a cumulative toxicant that poses serious risks to human health and development, with children being especially vulnerable. Lead-containing paint remains one of the major sources of lead exposure for children globally and was identified as one of the international Emerging Policy Issues of focus by Strategic Approach for International Chemicals Management (SAICM). Since then, the international community, governments, industry and nongovernmental organizations have been working together to promote the establishment of lead paint laws in all countries. In 2009, the second SAICM International Conference on Chemicals Management policy framework endorsed the establishment of the Global Alliance to Eliminate Lead Paint (or Lead Paint Alliance). UNEP and WHO serve as the joint Secretariat for this partnership and the US Environmental Protection Agency is the Chair of the Alliance Advisory Council. The goal of the Lead Paint Alliance is to phase out the manufacture, import and sale of paints containing lead and eventually to eliminate the risks from such paint. To achieve this goal globally, the Lead Paint Alliance is encouraging countries to eliminate lead in new paints by establishing and enforcing lead paint laws.

Industry is critical to eliminating the risks from paints containing lead. Given this, the Alliance facilitated a Global Webinar for the Paint Industry on Eliminating Lead Paint. The webinar focused on information of interest to industry stakeholders considering or in the process of phasing out paints containing lead.

OBJECTIVES:
The webinar aimed to provide participants with:

- Increased awareness on progress on and best practices for lead paint elimination
- Increased understanding of the adverse health and economic impact of lead compounds.
- Increased understanding of the technical guidelines on paint reformulation manual prepared by the National Cleaner Production Center (NCPC) Serbia
- Increased understanding that eliminating lead additives from paint is possible.

SUMMARY:
The Global Webinar for the Paint Industry on Eliminating Lead Paint featured presentations on topics most relevant to the paint industry, with a focus on small- and medium-sized enterprises (SMEs), such as views of the global paint industry, lessons learned from paint reformulation, and lead paint testing, and also provided the opportunity for questions and answers (see agenda in Appendix I). Presenters included
UNEP, the World Coatings Council (WCC), non-lead additive manufacturer, BASF, the American Bar Association Rule of Law Initiative (ABA-ROLI), the International Pollutant Elimination Network (IPEN) (an international environmental NGO), and the Serbian National Cleaner Production Center (NCPC), which are both working with small paint companies. The webinar was facilitated by Branko Dunjic, Executive Director of the Serbian NCPC. There were 72 attendees, representing industry, NGOs, governments and academia from countries around the world. Participant statistics showed that 65% of participants were from the paint industry (see table 1). The poll showed that the goal of greatest interest from the webinar was increased awareness of progress on laws and best practices for lead paint elimination (see Section on Poll for Participants). Speakers noted work with small manufacturers has shown that lead paint reformulation is technically and economically feasible. WCC noted the support of industry for lead paint laws to level the playing field for paint manufacturers. The webinar was the second in a series, the first of which was specifically tailored to policymakers. Key links and information are provided at the end of the Presentation Summaries section in this report. The presentations developed for the webinar are posted on UNEP’s website¹ and will be incorporated into an updated UNEP Toolkit for establishing laws to eliminate lead paint.²

Table 1: Participant statistics

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>Number of Participants</th>
<th>Percent</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academia</td>
<td>1</td>
<td>1</td>
<td>U.S.</td>
</tr>
<tr>
<td>Government</td>
<td>14</td>
<td>14</td>
<td>Japan, US, Sweden, Madagascar, Bhutan, Sierra Leone, Mexico, Ecuador</td>
</tr>
<tr>
<td>Industry</td>
<td>48</td>
<td>65</td>
<td>WCC, American Coatings Association, Japan Paint Manufacturers Association, Mexico National Paint Manufacturers Association (ANAFAPYT), Malaysian Paint Manufacturers Association, and companies in South Africa, Indonesia, Ecuador, Singapore, Sri Lanka, China, Vietnam, Mexico, Thailand, Brazil, Switzerland, Finland, Germany, US</td>
</tr>
<tr>
<td>NGO</td>
<td>9</td>
<td>13</td>
<td>Ecuador, Vietnam, Nepal, Indonesia, Iran</td>
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<tr>
<td>TOTAL Attendees</td>
<td>72</td>
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</tr>
<tr>
<td>Panelists and organizers</td>
<td>12</td>
<td></td>
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</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
<td></td>
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</tr>
</tbody>
</table>

Presentation summaries:

Opening Remarks: Ms. Desiree Narvaez, UNEP

Main Points:

- There is a need to partner with industry in order to eliminate lead in paint.

¹ Link to UNEP Alliance web site – industry webinar event
² Link to UNEP Regulatory Toolkit
• UNEP welcomed the good work that has already been done by industry.
• In 2019, paint was a $194 billion industry.
• SMEs indicate they do not have the capacity to reformulate, but this webinar will show the case that paint reformulation is possible and feasible.
• The Lead Paint Alliance invites discussion of how to help SMEs reformulate.

Poll for Participants:

A poll was held to gain an understanding of the types of webinar participants and what they were hoping to learn.

Poll Question 1:
What brings you to this workshop?

Results:
- Part of paint industry to be regulated: 41%
- NGO working with paint industry: 12%
- Government want to know how to work with paint industry: 9%
- Other: 14%
- No answer: 24

Poll Question 2:
What are you hoping to learn about today (goals of webinar; presentation topics)?

Results:
- Increased awareness on progress on and best practices for lead paint elimination: 62%
- Increase understanding of the adverse health and economic impact of lead compounds: 21%
- Increased understanding of the technical guidelines on paint reformulation manual prepared by the National Cleaner Production Center (NCPC) Serbia: 30%
- Increased understanding that eliminating lead additives from paint is possible: 24%
- No answer: 27%

Introduction: The Impacts of Lead Exposure and the Need for Regulation: Ms. Elena Jardan, WHO

Main Points:

Lead presents a significant health concern
• Lead has wide-ranging effects on health. These have personal, societal and economic impacts.
• Even low levels of lead can lead to health effects.
• Pregnant women and children are particularly vulnerable.
• It is essential to minimize lead exposure from all sources.

Lead paint is a real risk
• Good data link lead in paint to human exposure and poisoning.
• Exposure occurs during entire lead paint life cycle.
• Children in homes with no lead paint are more likely to have blood lead levels.
• There is evidence linking lead in paint to lead in dust and elevated blood lead levels in children.

Actions can and must be made now
• Paints with the required properties can be made without adding lead.
• Remediation of lead paint is expensive. It is better to proactively prevent exposure in the first place by eliminating lead paint.
• As more countries regulate lead paint the market, such paints will continue to shrink.
• Stopping the addition of lead to paint makes public health and business sense. Therefore, action by government and industry is needed. Eliminating lead in paint is protective and feasible.
• The United Nations’ Model Law and Guidance for Regulating Lead Paint (Model Law) recommends a limit of 90 ppm.

Questions for Presenter:

• Question: What is WHO’s influence on the governments to pass a law on a lead ban?
  o Answer: WHO is working with ministries of health and advocacy activities by providing technical materials and organizing webinars, as well as presenting rationales for a lead paint limit. WHO can also participate in multi-stakeholder meetings.

• Question: Given the economic benefits, why do you think more countries have not implemented the Model Law?
  o Answer: The Lead Paint Alliance has found in some instances there is lack of awareness in governments about the impact of lead on health. Once we begin working with governments, they often do start to work on a law, working with industry stakeholders.

• Question: What is the percentage contribution of lead in paint to the global lead level, since there are many sources of lead?
  o Answer:
    o In view of the long-term health impacts of even low levels of exposure to lead, and the lack of therapeutic interventions to prevent some of these impacts, it is essential to minimize lead exposure from all sources as far as possible.
    o Eliminating lead from paint is feasible and achievable and would reduce risks from lead exposure, especially for children.
    o Children are especially vulnerable to lead exposure. Even low levels of exposure can result in reduced IQ, and attention span, increased antisocial behavior and reduced educational level. Modeling indicates that a small IQ reduction has significant societal impact. A 5-point loss in IQ might not affect the ability of an individual to live a productive life. But if that loss is experienced by an entire population, the implications for that society could be profound.
    o Professor Bernard Weiss, a behavioural toxicologist at the University of Rochester, New York, USA, examined the societal impact of seemingly small losses of intelligence. Imagine an unaffected population numbering 260 million people (such as that of the USA) with an average IQ of 100 and a standard deviation of 15. In that population there would be 6 million people with IQs above 130 and 6 million below 70. A decrease in average IQ of 5 points would
shift the distribution to the left. The number of people scoring above 130 would decline by 3.6 million while the number below 70 would increase by 3.4 million.

To estimate population exposures to lead, there are various biomonitoring studies from countries, such as the USA NHANES, Canadian, Korean and other national equivalents that provide mean population values and relate to chronic exposures to lead. There are two other publications from New Zealand which show evidence that adults had high exposure to lead in childhood. We have evidence-based data for adult individuals, hence for children we have to use a model to calculate for lead paint.

• Question: What is the health burden of lead in paint?
  o Answer: Lead is a multi-system toxicant affecting many systems of the body. Children are especially vulnerable as early childhood is critical period for neurological and organ development. Lead also causes a significant burden of diseases through other long-term impacts on health, such as: reduced IQ, antisocial behavior, cardiovascular and renal disease. Absorption of lead may increase during pregnancy and could cause reduced fetal growth and risk of complications e.g. hypertension, premature birth. Studies show that lead in paint is a source of lead in dust and lead in dust associates with increased blood lead level. Polled analysis of 12 studies showed lead-contaminated house dust is major source of intake for children with BLL of 10-25 µg/dL (Lanphear et al., 1998). While the precise contribution of lead paint to blood lead levels is not fully known, there is no known level of exposure that has no harmful effects on children or adults. The effects of lead exposure are wide-ranging and also result in socioeconomic costs from reductions in IQ and criminal behavior. Therefore, eliminating sources of lead to prevent exposure, such as lead in paint, will help prevent blood lead concentrations in children and associated socioeconomic costs in the future.

• Question: Is there another project similar to the Model law, which bans the use of lead in other kind of products/sources/objects (apart from paints)?
  o Answer: The Lead Paint Alliance is focused solely on lead paint. There are other efforts looking at other sources, such as Lead Acid Batteries. Reduction of these other sources takes different approaches and is very complex. WHO is not aware of other "model laws."

Industry Perspective on the Elimination of Lead Paint: Mr. Steven Sides, World Coatings Council (WCC)

Main Points:

• Many WCC members have joined the Lead Paint Alliance in support of its goal to eliminate lead paint.
• WCC supports the UN’s Model Law for widespread and verifiable compliance.
• Exposure to lead has been studied for over 100 years.
• Lead paint restrictions are already in many places all over the world.
• Industry representatives have many opportunities to engage with eliminating lead in paint.
• Laws have tracked awareness of the lead issue.
• Establishment of a level playing field for manufacturers is important. The Model Law is key to beginning discussions on lead paint laws.
• 15% of global production of paints is in countries that do not regulate the use of lead compounds, which is a significant amount of global paint production not subject to regulation.
• Industry believes that less than 4% of global coatings production might require reformulation.
• Waterborne paints (which have never used lead compounds) are gaining market share.
• The problem of laboratory capacity and testing can be addressed by the concept of conformity assessment; if test data developed in one country can also be accepted in another country, this drives the change more quickly.
• Overall, more awareness of the dangers of lead, leads to more paint laws.
• Companies will have larger market opportunity if they stop making lead paint.
• High levels of lead in paint are usually un-intentionally added (such as residual lead), and a slightly higher limit may be needed. Industry needs to work with governments closely should a higher limit be needed.
• In many countries 90 ppm is feasible.
• Governments need to develop a sound public health rationale for lead paint laws.

Questions for Presenter:

• Question: What is the quantity of lead pigments still used to produce paints (worldwide)?
  o Answer: WCC has no data on the exact global quantity. There is increasingly less lead pigment in the global market. IPEN may be able to gather that data and send it out later.

• Question: What is the stance of WCC on Uniformity of Labeling?
  o Answer: WCC is very active in product labeling. It is one of the issues associated with the Model Law. Certainly, it is a requirement in jurisdictions where lead paint is still allowed that the label show that there is lead content in the paint and it should not be used near children. WCC encourages everyone to look at the Model Law, as it speaks of labelling for exempt paints to indicate that lead is hazardous.

• Question: What is the standard limit of lead paint content in toys? Lead in painted walls?
  o Answer: Many countries limit lead content in toys. The limit depends on the country. Limits for lead in paint on walls also depends on the country. Setting a limit for lead in the manufacture of paint helps avoid high levels of paint used on toys and on walls.

Paint Reformulation—Technical Guidance, Feasibility, and SME Experience: Ms. Vojka Satric, Serbian National Cleaner Production Center, and Dr. Sara Brosche, IPEN

Main Points:

• Lead is a toxic metal. Lead compounds should have a priority in substitution.
• Lead paint is used due to lack of knowledge, use of old formulas, and lack of incentive to change.
• There are many pigments and driers available that could substitute lead in paint.
• Paint raw materials that may contain lead include pigments, extenders, driers, and natural
extenders and pigments (such as ferro oxides).

- Paint may also unintentionally be contaminated if there is no equipment cleaning between batches of lead and non-lead paints.
- Lead driers are still used in some countries, and lead pigments are used in many countries.
- In substituting non-lead additives to attain desired properties, certain considerations determine the approach to reformulation.
  - For example, base paint color is not as important. Thus, a substitute need not match the color exactly. The anti-corrosive properties of a paint are more important, and the substitute needs to be able to match those properties.
  - Reformulation of red paints may even result in a reduction in cost.
- The GEF project has helped get non-lead additive suppliers involved in smaller markets.
- For SME’s to be able to reformulate paints, finding the right supplier is important. Trainings can be helpful, and trade shows where manufacturers may meet suppliers.
- Case studies for small and medium enterprises (SMEs) carried out by National Cleaner Production Centers and IPEN in Jordan, Ecuador, and China provided insight on the stages of reformulation.
  - Jordan – Scale-up will be done as the company reached compliance with specifications as required by local authorities.
  - Ecuador – The company decided to try reformulation with another supplier.
  - China - It is feasible to substitute lead anticorrosion pigment.
  - Indonesia - Yellow chromate is the main color the companies would like to reformulate. Import prohibition of lead paint is key.

Questions for Presenters: None

**Color Our Future: Lead Chromate Alternatives: Mr. Georg Döring, BASF**

**Main Points:**

- Formulators must adjust the formulation to their customer needs.
- Alternatives to lead chromate available in the market include organic pigments (classical and high performance), inorganic pigments (titanates, metal oxides, iron oxides, titanium dioxide), hybrid pigments, and customized pigment blends.
- Hybrid pigments combine organic and inorganic pigments and can offer similar shade, opacity, strength and durability compared to lead chromate pigments.
  - Hybrid alternatives to lead chromate can be adjusted for color and opacity. Developments are being made to improve the alternatives.
  - Durability of hybrids can be adjusted through combinations of organic and inorganic pigments.
- There is a cost reduction when using alternative organic pigments for indoor applications, with similar color and opacity
- Outdoor applications using alternatives have some issues with durability, but this can be improved with high performance inorganic materials.
  - The cost to durability comparison depends on the shade of paint of outdoor applications.
• There is no 1 to 1 replacement for lead chromates.

Questions for Presenter:

• Question: When reformulating pigments, are efforts made to make sure there are no or minimal tradeoffs, such as other residual hazardous components like PCB’s or other heavy metals?
  o Answer: BASF is conducting the efforts to reduce hazardous components, such as heavy metals.

Overview of Lead Paint Testing: Capacity and Methods: Ms. Elena Jardan, WHO

Main Points:

• Lead paint testing is a key enforcement and compliance tool.
• Lead paint testing methods differ in accuracy, limit of detection, and cost.
• International standards to testing and sampling methods exist. Laboratories should be contacted to understand their capacity and experience in conducting lead paint testing.
• High Definition X-Ray Fluorescence (HD XRF) is a new technology that uses ionizing radiation. It is expensive to buy but cheaper to operate than conventional laboratory methods and has a low detection limit.
• HD XRF can be used for compliance testing to a 90 ppm limit.
• Current lack of in-country lab capacity should not be an impediment to a lead paint law going into effect, as countries can send samples to other countries for testing.

Questions for Presenter:

• Question: What do you think of demonstrating the compliance of lead content throughout theoretical data? Raw material data instead of a test method?
  o Answer: Safety Data Sheets may not be adequate. Low residual numbers may not be feasible to demonstrate on safety data sheets alone. Information from certificates of conformity from raw materials can be useful in conducting calculations of the coatings formulation, to see if you’d be below the 90 ppm limit. You’d still need to conduct an initial conformity test. VOC content in coatings is known and evaluated and can be used in calculation methods, for example. Safety data sheets are not always clear on the content of the formulation.

• Question: The limit of 90 ppm has been presented as technically feasible. Is there any study that supports this number limit? Is there any law or standard of references such as ASTM, ISO or others that a country can use as a reference?
  o Answer: The Alliance recommends the 90 ppm limit as lowest technically feasible limit. For more information about the importance of a low lead limit in paint, see WHO’s Global elimination of lead paint: why and how countries should take action - Technical brief, which is referenced in the WHO presentation. The justification of 90 ppm is that
it is a technically feasible standard, not a health-based standard. The lead content of the paint is only one part of the equation. The other part is how people are exposed. The dosage of how much paint is getting into the child’s body is a factor.

There are international standard methods for testing and sampling, such as the ASTM and ISO standard methods. For example, one standard method is for preparation of dry paint samples. Another ASTM standard method is for ultrasonic extraction of paint. ISO 6503 is a standard test method for lead in paint using flame atomic absorption spectrometry. These standard testing and sampling methods are available online.

**Q & A Discussion**

In this session participants asked questions about the webinar as a whole.

- **Question:** In Colombia, in order to adopt a technical regulation, it would either be based on studies on the 90 ppm limit in relation to health of communities or the environment. The other way would be to copy and paste a standard that is already in use, for example ASTM. Are there any international standards that can be adopted in Colombia? Documents would be useful for guidance.
  - **Answer:** All the needed materials will be sent to the participants and attendees can contact the panelists as well. While there is no formal international standard for lead in paint, the limit of 90 ppm has become a commonly used limit in recent lead paint laws. For reference see UNEP’s [Lead paint law status interactive map](#). The UNEP Model and Law and Guidance for Regulating Lead Paint can be used by governments as a model to develop a standard to set a mandatory lead paint limit.

- **Question:** Would XRF-based data be used for the determining compliance with a legal limit? Or compliance monitoring of lead paint laws?
  - **Answer:** HD XRF presents comparable results to classical lab methods. This can be used for compliance purposes. Not all XRF are equivalent. Older, non-HD, XRF units are not as adequate to reach these low levels.

- **Question:** By when will all countries have lead paint laws?
  - **Answer:** The strategic target of the Alliance is for all countries to have effective lead paint laws to achieve the elimination of lead paint. The target date was initially based on the SAICM target date of sound management of chemicals by 2020. It is clear that in 2021 and beyond urgent action continues to be needed to establish lead paint laws as soon as possible.

- **Question:** This forum only covers water-based paint and oil paint lead levels. There have been no comments on marine anti-fouling and nitrocellulose paints. (note: nitrocellulose paints are solvent-based lacquers comprised of plant-based substances as binding agents that have been used as coatings for guitars and cars)
  - **Answer:** The Alliance encourages reducing lead in all paints by setting a low lead limit, including marine anti-fouling and nitrocellulose paints. This can largely be achieved by stopping the intentional addition of lead compounds. Some types of paints may contain unintentionally added lead, such as copper-based marine anti-fouling coatings.
from recycled copper would not be able to consistently meet a 90 ppm lead limit at this time. In these cases, the Alliance encourages government and industry to work together to develop an appropriate regulatory approach to promote reduction of lead, such as a longer phase in time for a 90 ppm limit or setting an interim, higher limit to be lowered over time.

Closing Remarks: Overall Messages of the Webinar: Ms. Desiree Narvaez, UNEP

- This was a successful webinar. We heard from a wide range of experts and had good participation from the industry sector representatives and also had participation by NGOs, governments and others.
- As WHO and the World Coatings Council have said, the human health impacts of lead are very real.
- There is a public health benefit to eliminating lead in paint.
- Collaboration among stakeholders has been the key to progress.
- WCC also noted that a significant amount of paint production (15%) occurs in countries without lead paint laws.
- We learned that paints with the required properties can be made without adding lead.
- Stopping the addition of lead to paint through lead paint laws makes public health and business sense.
- The World Coatings Council noted that industry supports lead use elimination.
- Laws in every country will provide a level playing field for industry.
- It is feasible to substitute lead compounds in paints in SMEs.
- UNEP’s SME pilot demonstration project has helped put SMEs in contact with suppliers.
- There are many pigments and driers available on the market that may effectively substitute lead compounds and UNEP has developed helpful guidance on reformulation.
- There are cost considerations, but no high cost investments are needed.
- There are increasingly less lead additives available on the market.
- We heard from a supplier of lead-free pigments, BASF, that there are substitutes for lead chromates. Reformulation requires adjustments in ingredients. Suppliers can help with reformulation to meet needed performance specifications, in some cases at similar cost or slightly lower cost.
- WHO indicated that lead paint testing is a key enforcement and compliance tool in the Lead Paint Model Law.
- Regulations drive the development of lead paint test methods, technologies, and laboratory networks.

The materials for the webinar will be available on UNEP’s Lead Paint Alliance website. Key links and information are available below and the Agenda is available in Appendix I.

**Key Links and Information:**

• Link to Materials for the Lead Paint Alliance Global Webinar for Policymakers on Eliminating Lead in Paint through Regulatory Action on UNEP Lead Paint Alliance website: 
https://www.unep.org/events/webinar/global-policymakers-webinar-eliminating-lead-paint-through-regulatory-action

• Latest status of lead paint laws, see the UNEP Lead paint law status map: 
https://saicmknowledge.org/content/lead-paint-law-map

• Information on testing: WHO’s Brief guide to analytical methods for measuring lead in paint

• Importance of a low lead limit in paint: WHO’s Global elimination of lead paint: why and how countries should take action - Technical brief

• Information on raising awareness: WHO’s Guidance on organizing an advocacy or awareness-raising campaign on lead paint

• The Lead Paint Alliance: https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/global-alliance-eliminate-lead-paint

• Questions and Answers about Lead Paint and Lead Paint Laws: 

• UNEP collaboration with NCPCs and IPEN on SME pilot demonstrations: 

• UNEP’s Draft Technical Guidelines on Paint Reformulation are available here in Arabic, Chinese, English and Spanish.

• IPEN’s Map of Lead Levels in Paint Around the World

• UNEP Model Law and Guidance for Regulating Lead Paint

• Snapshot of existing lead paint limits established globally (as of September 2019): UNEP Global Status of Legal Limits on Lead in Paint
Appendix I: Agenda

Global Webinar for Paint Industry on Eliminating Lead in Paint
19 November 2020
15:00-17:30 (GMT +2)
WebEx

BACKGROUND:
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Industry is critical to eliminating the risks from paints containing lead. Given this, the Alliance is facilitating a global webinar for this key stakeholder group. The webinar will focus on information of interest to industry stakeholders considering or in the process of phasing out paints containing lead.

OBJECTIVES:
The webinar aims to provide participants with:
• Increased awareness on progress on and best practices for lead paint elimination
• Increase understanding of the adverse health and economic impact of lead compounds.
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• Increased understanding that eliminating lead additives from paint is possible.

OPERATING DETAILS:
Webinar moderator
• Dr Branko Dunjić, NCPC Serbia director
Invited participants:
• Paint Industry – company, global and regional representatives
• Other relevant stakeholders involved in paint manufacture, import, and sale
• SAICM Lead Paint Project Partners: UNEP Regional Offices, WHO, IPEN, ABA-ROLI, US EPA, and WCC
Working Language: English
<table>
<thead>
<tr>
<th>Presentation</th>
<th>Objective</th>
<th>Presenter</th>
<th>Time (GMT +2)</th>
<th>Available Background Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opening Remarks</strong></td>
<td>Welcome participants and kick off the webinar</td>
<td>Desiree Narvaez, UNEP</td>
<td>15:00-15:03 (3 mins)</td>
<td></td>
</tr>
<tr>
<td><strong>Poll for Participants</strong></td>
<td>Gain an understanding of the makeup and goals of the webinar audience</td>
<td>Branko Dunjić, NCPC Serbia</td>
<td>15:03-15:05 (2 mins)</td>
<td>• Poll provided during webinar</td>
</tr>
<tr>
<td><strong>Introduction: The Impacts of Lead Exposure and the Need for Regulation</strong></td>
<td>Discuss the health and economic impacts; provide justification for regulation, specifically focusing on the 90ppm limit</td>
<td>Elena Jardan, WHO</td>
<td>15:05-15:20 (15 mins)</td>
<td>• WHO Global elimination of lead paint: why and how countries should take action - Technical brief and Policy brief</td>
</tr>
<tr>
<td><strong>Questions for presenter</strong></td>
<td>WHO to answer any questions on their presentation</td>
<td>Branko Dunjić, NCPC Serbia</td>
<td>15:20 – 15:25 (5 mins)</td>
<td></td>
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<tr>
<td><strong>Industry Perspective on the Elimination of Lead Paint</strong></td>
<td>Show support of paint industry for lead paint laws</td>
<td>Steve Sides, World Coatings Council</td>
<td>15:25-15:45 (20 mins)</td>
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<tr>
<td><strong>Questions for presenter</strong></td>
<td>WCC to answer any questions on their presentation.</td>
<td>Branko Dunjić, NCPC Serbia</td>
<td>15:45 – 15:50 (5 mins)</td>
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<tr>
<td><strong>Paint Reformulation-Technical Guidance, Feasibility, and SME Experience</strong></td>
<td>Presentation of paint reformulation technical guideline for lead paint elimination; focusing on feasibility; share experience of SME reformulation (case studies).</td>
<td>Vojka Satric NCPC Serbia, Sara Brosché, IPEN</td>
<td>15:50-16:20 (30 mins)</td>
<td>• UNEP Draft Technical Guidelines for Paint Reformulation from the UNEP GEF Lead Paint Project</td>
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<td><strong>Questions for Presenter</strong></td>
<td>NCPC/IPEN to answer any questions on their presentation.</td>
<td>Branko Dunjić, NCPC Serbia</td>
<td>16:20 – 16:25 (5 mins)</td>
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<tr>
<td><strong>Color Our Future: Lead Chromate Alternatives</strong></td>
<td>Overview of lead chromate alternatives; Is one to one replacement of lead</td>
<td>Georg Döring, BASF</td>
<td>16:25-16:45 (20 mins)</td>
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<tr>
<td>Questions for Presenter</td>
<td>BASF to answer any questions on their presentation.</td>
<td>Branko Dunjić, NCPC Serbia</td>
<td>16:45 – 16:50 (5 mins)</td>
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| Overview of Lead Paint Testing: Capacity and Methods | Provide an overview of lead paint testing globally and analytical methods for measuring lead in paint and discuss how to build lab capacity | Elena Jardan, WHO             | 16:50-17:05 (15 mins)       | • [IPEN Lead Paint Studies](#)  
• [WHO Guidance on Lead Paint Testing](#) |
| Q & A Discussion             | All presenters to answer any questions on their presentations.            | Branko Dunjic, NCPC Serbia    | 17:05 - 17:25 (20 mins)     |                               |
| Closing Remarks              |                                                                           | Desiree Narvaez, UNEP         | 17:25-17:30 (5 mins)        |                               |