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COMMUNITY OF PRACTICE ON

LEAD IN PAINT

Organized by the SAICM Secretariat and the University of Cape Town

Issue: 2 of 2021

Discussion date: 9th June 2021

Discussion Digest

Topic of Discussion: Reformulation is entirely possible.

The second Lead in Paint Community of Practice (LiP CoP) discussion for 2021, presented by Branko Dunjic and Vojislavka Satric form NCPC Serbia, Jeiel Guarino from IPEN, and Monica Alcala Saavedra from PPG-Comex, reviewed three questions focusing on reformulation of lead paints, with the discussions centred around the current status of reformulation around the world, what the motivations for reformulation may be and what the needs are to make reformulation possible. To view the PowerPoint presentation of the discussion, click here.

ABOUT THE PRESENTERS

5

Dr Branko Dunjic is managing Cleaner Production Centre in Serbia, established in the frame of a UNIDO-sponsored project since 2007. In 2017, he was elected as a President of the RECPNet, global network of Cleaner Production Centres supported by UNIDO and UN Environment.

Vojislavka Satric is a Chemical Engineer and Key Technical Expert on the project. She was working in the paint industry as Technical Manager, Executive Manager, Research and Development Manager. She was working in the Cleaner Production Centre of Serbia as

Chemical Leasing and Cleaner Production expert.

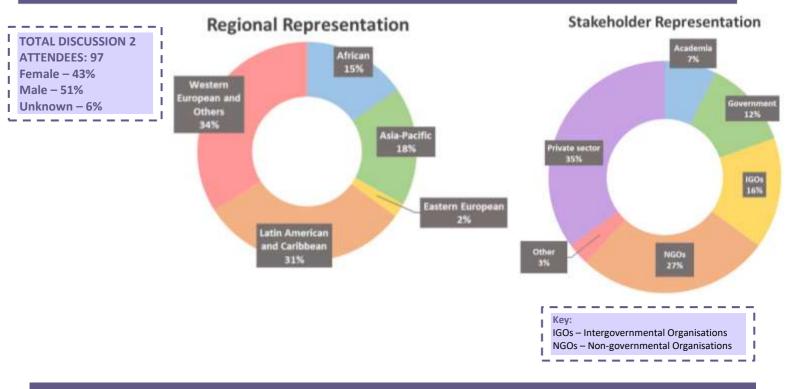
Jeiel Guarino works as a global campaigner of IPEN's Global Lead Paint Elimination Campaign, which aims to end the manufacture, import, export, sale, and use of lead-containing paints and similar surface coatings worldwide. IPEN is a global network of NGOs in over 125 countries

working together for a world in which toxic chemicals are no longer produced or used in ways that harm human health and the environment.

Monica Alcala Saavedra has a Ph.D. in Chemistry from The University of Texas at Austin and a 20-year career in the paint and coatings industry including her present position as Director of Quality and Technical Services for PPG-Comex, one of the major paint manufacturer and distributor

of paint based in Mexico. She also serves as President of the Mexican National Technical Standardization Committee for Paints and Coatings (COTENNAREC).

2021 DISCUSSION 2 ATTENDANCE BREAKDOWN



Lead in Paint Community of Practice 2021 Discussion 2 Summary

- 1. Reformulation is entirely possible. Paint made with non-lead compounds would have a lead content lower than 90ppm. Most of the participants from different countries and companies in the discussion were familiar with reformulation and mentioned how reformulation is taking place. While reformulation is possible, the prices of reformulated products without intentionally added lead are usually higher (around 60-70% of cases). The opposite exists too. For example, in China good quality paint can be found at a lower price.
 The Lead Paint Alliance invite participants to contact them with further questions, to review the Technical Guidelines on Paint Reformulation guidelines, and to work with alternatives suppliers.
- 2. The main motivations for lead paint reformulation highlighted by the participants included national regulations, market competition, the safety of factory workers and users, consumer demand or requirements, especially export requirements, product stewardship, and corporate social responsibility. However, decreased profits in selling paint free of lead additives was mentioned, as in some countries alternatives to lead pigments are much more expensive.
- 3. Barriers are still existing and could prevent paint reformulation. Some of the challenges to lead paint reformulation include the higher cost of lead-free pigment compared to lead pigments. There is a need for tax incentives on import (such as tax credits for imported lead-free pigments or reduced taxed on lead-free ingredients) and exploration of other incentives to promote paint reformulation. The enforcement of existing regulations is not strong in some jurisdictions with regulations, and this may require additional direct market surveillance and monitoring. Improved access to third-party testing and certifications and considerations of the cost of testing are also being explored. Informed consumers can cause an increase in demand for paint without added lead and lead-free pigments, therefore supporting the conditions for cost adjustment to allow for lead additive-free alternatives in the marketplace.

ANNEX

DETAILED SUMMARY OF 2021 DISCUSSION 2

<u>Disclaimer</u>: The information in this digest represents the opinions of members participating from different stakeholder groups expressed during the discussion. The views expressed in this document do not necessarily represent the opinion or the stated policy of the United Nations Environment Programme, the SAICM Secretariat, the GEF or UCT, nor does citing of trade names or commercial processes constitute endorsement.

THE DISCUSSION WAS STRUCTURED AROUND THREE QUESTIONS AND THE KEY DISCUSSION INPUTS FROM PARTICIPANTS ARE PRESENTED UNDER EACH:

Q1. Based on your knowledge, what is the status of paint reformulation in your company, community or country? What reformulation successes are you aware of?

BANGLADESH (NGO)	 There are several paint brands that are in below 50ppm. Standard of Testing Institution gazetted a regulation establishing a 90ppm limit in 2018. Most of the companies have already reformulated their paints as per the 90ppm regulation. Small companies still using leftovers of bigger manufacturers which ultimately leads to Informal use of leaded pigments.
CAMEROON (NGO)	 Awareness-raising and advocacy actions have been carried out in Cameroon by CREPD. The State, through the ministerial decree of September 2017, fixed the lead content in paints at 90ppm. This put pressure on SMEs so that the lead content in paints is 90ppm. Despite this, the country faces a lack of knowledge on the part of workers and consumers. There is also a lack of adequate equipment to check the lead content in paints.
ECUADOR (NGO)	 Three of the four companies participating in the project reached a successful reformulation process. A limitation is the availability of pigments in the country.
EGYPT (Academia)	 Egypt has executed several initiatives in the field of "Cleaner Production". There have been a few projects in the field of "Eco-labelling" in different industrial sectors. There is also a project in the field of "Paints Sector" that is expected.
EGYPT (Government)	 Lead additive-free paints are already available in the market. Distribution of these paints is hindered due to two main reasons: The price is the first reason, as lead additive-free paints are very expensive compared to traditional type of paints. The second reason is the absence of proper awareness of end users with the benefits of using lead additive-free paints instead of other traditional paints and the harmful effect of those traditional paints for both the end users and the formulators themselves.
INDONESIA (NGO)	- The paint manufacturers are able to produce lead additive-free paints right now (especially the big manufacturers).
IRAN (Academia)	 In Iran most paint industry factories have laboratories as usual. There is a large amount of research that has been going since more than 2 decades ago in academia. The process is going well.
MADAGASCAR (Government)	 The exact data on the status of the reformulation is unknown. However, with the support of Lead Exposure Elimination Project (LEEP) the lead content in paints from 20 paint producers and importers in the country, including small producers, is currently being tested. The results of the analysis will serve as a basis for the reformulation issue. Making surveys and polls to know the state of the place of the reformulation of the paint in our country will be considered.
MALAYSIA (NGO)	 The Malaysian government is currently working on lead paint standard. The Malaysian Paint Manufacturers Association and its members control 80% of the paint market and most of them have pledged and transitioned to lead-free paint.
MEXICO (Private sector)	 Quality is not an issue, reformulate or not is a matter of costs. Lead free pigments are more expensive. The global companies in Mexico are aligned to the global regulations and their formulas have been updated to lead-free content. But there is an economy market that needs lower prices, for Mexico.

NEPAL (NGO)

- Based on market coverage, paint producers with more than 80% of the market coverage have reformulated their product.
- Based on number of paint brands, 40% of the paint brands still require reformulation.
- Government of Nepal enacted mandatory Lead Paint Standards of 90 ppm for all paints on December 22, 2014.
- This took effect from 20th June 2015.
- Since then, a remarkable improvement has happened in the lead-free paint formulation.
- All larger companies, national and multinational, have reformulated their products.
- Some SME still need to reformulate.
- Important to note is that sometimes even if there is law, many violate the law and do not comply with it.

PHILIPPINES (NGO)

- Under the Department of Environment and Natural Resources (DENR) Administrative Order 2013-24, or the Chemical Control Order for Lead and Lead Compounds, lead in architectural, decorative and household paints was phased out on January 1, 2017.
- Lead in industrial paints was phased out on January 1, 2020.
- There are already administrative issuances and policies that regulate the use, manufacture, and distribution of paints containing lead levels greater than 90ppm.
- However, just recently, based on the laboratory analysis commissioned by EcoWaste Coalition, high lead content, way over 90ppm, was found in spray paints being sold in retail shops.

RUSSIA (Private sector)

- For the members of Russian Quality Paint Association, it took around one year to substitute lead containing ingredients in ALL the formulations.
- The work was finished 5 years ago.

SOUTH AFRICA (Government)

- Reformulation is happening as lead-free paints are available but not all paints are lead free yet.
- If there is no pressure to change, then reformulation will not happen, as changing formulations costs money.

SRI LANKA (NGO)

- Yes, the reformulation is entirely possible.

- SMEs were able to transfer to lead safe paint by using good quality ingredients.

TANZANIA

- Some paint manufacturers have reformulated their paint.
- (NGO) Not sure of the status.

TANZANIA (Private sector)

- Already reformulated for lead free paints.

UNITED STATES OF AMERICA (Private

sector)

- All Consumer coatings in the United States are required to be < 90ppm dry film lead.
- Currently work is being done on implementing regulations around the world to adopt similar regulations.

US EPA (Lead Paint Alliance Advisory Council Chair)

- The Lead Paint Alliance looks forward to learning about progress in Vietnam with the newly passed National Technical Standard on Lead Paint.

VIETNAM (NGO)

- Newly launched National Technical Regulations on the limits of lead content in paint since the end of December, 2021 at levels of:
 - < 600 ppm right after the time the national technical regulation takes effect.
 - < 90 ppm after 5 years since the circular takes effect.
- The newly launched National Technical Regulations is a big progress for Vietnam as there have never been any regulations related to the lead paints.
- Accordingly, paint producers will have to reform their production techniques to adopt the new regulation.

STATEMENTS BY PRESENTER (NCPC Serbia):

- Question: Why do paint manufacturers need to be provided incentives to produce safer products?
 - Lead paints are well established, with good performance.
 - If there is no law, then there is no motivation to change it.
 - By incentives we also mean providing information about why lead is a health issue and should be removed.
 - Some manufacturers are not aware of the health risks.
- In Serbia, there are no lead containing paints for 20 years already.
- For additional information on lead in paint reformulation, including the draft paint reformulation guidelines, please visit:

https://saicmknowledge.org/program/lead-paint

- The draft technical guidelines on paint reformulation can be found here: https://saicmknowledge.org/library/draft-technical-guidelines-paint-reformulation

Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participant views.

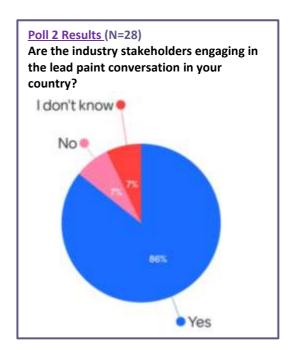
Poll 1 Results (N=23):

Is reformulation happening in your country and/or organization? Please specify yes, no, or I don't know and the name of your country.

Yes - 23 (100%)

Countries that said "yes":

- Bangladesh
- Colombia (in architectural coatings)
- France
- Indonesia
- Iran
- Jordan
- Malaysia (not all paint companies)
- Mexico
- Peru
- Philippines
- Serbia (completed already)
- South Africa
- Sri Lanka
- Sweden (completed already)
- United Kingdom (for all decorative coatings)
- United States of America (completed already)



Q2. In your experience, what motivates companies to reformulate their paint to remove added lead? **BANGLADESH** - Awareness. (NGO) - Media Pressure. - Regulation. **CAMEROON** - Regulations are the strongest incentives to motivate companies to reformulate their paint to eliminate added lead. (NGO) - In addition to this understanding the effects of lead on their workers and consumers as well as the fear of seeing their image tarnished are also good motivators. Regulations. **ECUADOR** (NGO) **EGYPT** - It is suggested to motivate the targeted "industrial and commercial community" through different (Academia) motivation packages, both positive and negative, such as the following: Financial subsidies to modernize some production lines within the targeted industrial community. Technical support by government and international consulting firms and relevant experts. Legal restriction as a negative motivation for the industrial targeted community. **EGYPT** - The government must support the lead-free paint companies by offering them a lower tax plan (Government) compared to traditional paints producers. - Moreover, giving those lead-free paints wider market share and low-price energy supplies. **FRANCE** - Regulations. (Private sector) - Worker's health. - Market pressure. Consumer demand for non-toxic substance. **IRAN** - Price and incentives. (Academia) **ITALY** - Regulations. (NGO) **JAMAICA** - Companies can be motivated when customers choose their product as the safer product on the market. (NGO) (Note: Governments can use labelling provisions in lead paint laws for two main purposes: to indicate conformity with an established national lead concentration limit, or to provide warnings for users of paints and other coating products that are exempt from such national limits, or both.) Once all companies follow a standard labelling declaring ingredient of paint and stating, "no lead added", then customers will have the information to help choose wisely when shopping. Presently, Jamaica and the Caribbean Community (CARICOM) are reviewing the standards for the Lead in Paint limit. - Standardized labelling with adequate information is a part of this discussion. - An important element of infrastructure that is needed locally is the ability to monitor paints on the market. - A part of the review process involves looking at the recommended method and infrastructure that is in place for effective implementation. **MADAGASCAR** - Some producers state that they no longer use lead in their paints because of the danger. (Government) Others prefer not to sell solvent-based paints but sell water-based paints instead, should the waterbased paint contain less lead. (Note: Paint testing and reformulation demonstration projects have shown that both solvent- and water-based can contain lead.) This is already encouraging but there is still a lot of work to be done, such as the lack of ability to reformulate. The absence of information on the importance and feasibility of phasing out lead, may have little incentive to change the formulation at the level of small producers. **MALAYSIA** - Regulatory reasons. (NGO) Market demand, especially for export. - Nevertheless, through testing we have found lead content in paints that have lead-free labels. **MEXICO** - Regulations. (Private sector) - When a client wants to use lead-free paints.

- Certifications.

Environmental activities.

Global goals for global companies.

- When clients have strict guidelines for the specifications of the products needed.

- Cost.

- Reputation.

NEPAL - Competition. (NGO) - Government regulations. Higher rate of income of lead-free paints in comparison to the leaded paints. - Rate of income. Income of selling one litre of lead-free paints vs income from selling one litre of leaded paints. - Government mandatory lead standard. **PHILIPPINES** Regulations. (NGO) Public image. - Market demand for safer paint products. - Consumer demand. - Stricter policy implementation. - Environmental and health impacts. - Good company reputation. **RUSSIA** - Competitive advantage. (Private sector) - State regulations. - Consumer request for the coating's safety information. **SERBIA** - Regulation. (NGO) - Market pressure - The Model Law proposes third-party certification to avoid lead being found in lead-free labelled paints. Visit <u>www.saicmknowledge.org</u> for testing methods. - Alternatives are often more expensive and that is why legislation and enforcement is needed. **SOUTH AFRICA** - Regulations that will ensure change in lead paint usage, and monitoring. (Government) - Public pressure. - Consumer demand. - Monitoring and evaluation of the products on the market should be continuously carried out. **TANZANIA** Corporate responsibility. (NGO)

- The new legal standard passed in 2017.

- Doing the right thing for workers and consumers health.

- Market competition within the country and East Africa sub-region.

- Compliance to standards and regulations.

There are legally binding standards in Tanzania and East Africa Community (6 countries).

UNITED STATES

- Regulation.

OF AMERICA (Private Sector) - Product stewardship. - Customer requirements.

- There is availability of lead -free products.

- The providers offer technical support, but the costs are not competitive.

UNITED **KINGDOM** (Private sector) **US EPA**

- Safety of factory workers and users.

(Lead Paint **Alliance Advisory** - When referring to third-party certification in the Model Law for Regulating Lead Paint this pertains to the "labs" used for testing, not the "labelling".

Council Chair)

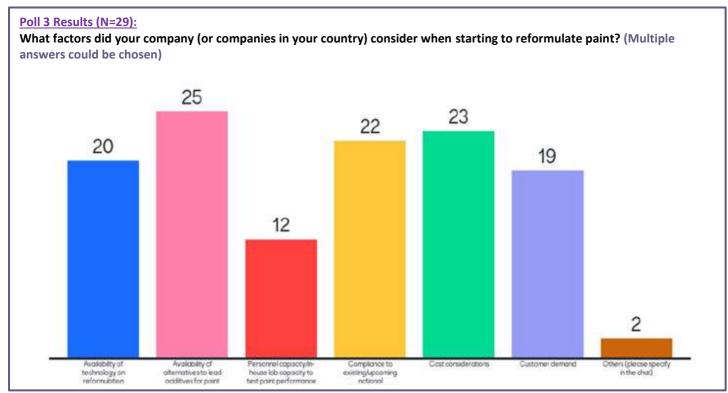
- Interesting to see that in some cases rather than laws, it is the availability of alternatives that are factors for companies.

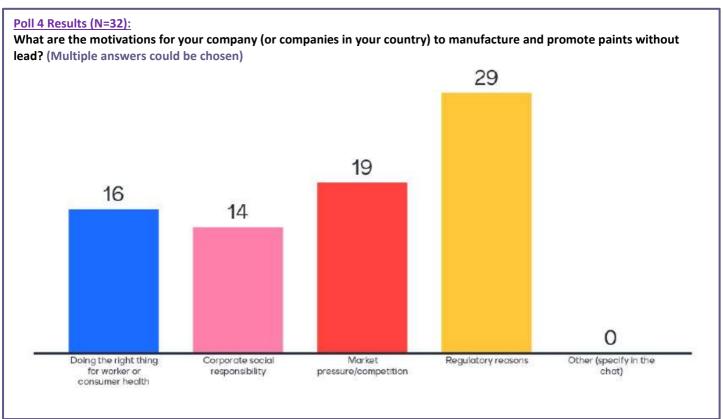
VIETNAM (NGO)

- With the new National Technical Regulation paint companies must apply to reformulate.

- Another motivation is to meet the export demand of their paint products to the countries that have strict requirements/regulations about lead paint.

- Due to the requirement of a group of consumers in their localities, as people are more and more conscious about their health and the product ingredients that might affect their health and environment.





Q3. What ways do you see to overcome potential barriers to paint reformulation in your company, community or country?

BANGLADESH

- Strict regulation.

(NGO)

- Enforcement of regulations.

- Continuous market monitoring.

- Lack of technical skill of SMEs. **CAMEROON** - Lead-free raw materials must be available to the market in real time and at a lower cost. (NGO) **COLOMBIA** - Information is critical, especially with consumers. (Private sector) - Consumers are the ones that demand certain products. - Work hand in hand with the authorities to carry out awareness campaigns on the effects of lead on health. **ECUADOR** (NGO) - This should involve the production, importing and distribution companies. **EGYPT** - Barriers that may need to be overcome are as follows: (Academia) Economical barriers due to inflation, Covid 19 pandemic etc... Financial barriers in some enterprises in the targeted community due to bad financial troubles. - The suggested initiative of "Lead Substitution" in Egypt to overcome these barriers could perform "a sectorial inventory" including: Preparing a list of all paints-related enterprises, both industrial and commercial, involved in export, import, handling, storage, transporting, etc... "Lead-containing Paints Inventory" should be implemented to determine the targeted community. Assessment of the budget required to implement a nationwide "Paints reformulation initiative in Egypt" to ensure cleaner production. A detailed initiative program could be agreed upon later by interested parties. **EGYPT** - The country shall give the chance to lead-free formulated paints to have bigger market share by decreasing the cost of their production. (Government) - A second main solution is to spread the awareness among consumers and industry workers about the harmful impacts of lead-containing paints during the production steps and usage. **FRANCE** - One way to overcome price issue is to switch from selling by weight to price in volume. (Private sector) - Lead pigments are heavy whereas alternatives are lighter. - Incentives and regulations. **INDONESIA** (NGO) - Approach the government and business actors. - Information sharing on the consequence and impact of lead on our environment and health. **IRAN** - All developing countries need to work on ENFORCEMENT issues. (Academia) - Iran needs more relations and communications between academic people and industry. There is lots of research being done but not it is not communicated to the industry. **ITALY** - SMEs were asked about barriers and, following this, were linked up with good quality raw material (NGO) suppliers, as that was the main barrier. - In these discussions one of the labs agreed to give them discount on paint testing. - Some wanted to have the third-party certification, but the cost prevented them from doing this. **JAMAICA** - The potential barrier I foresee is the resistance to change by industry and policy makers. (NGO) - There is also a need for comprehensive understanding of the purpose of the change and how stakeholders in health and industry can work together to make the transition doable. **MADAGASCAR** - Access to information is very important through workshops. - For example, for small producers, because most of them do not know that reformulation is possible with (Government) their paint. Furthermore, accompanying these small producers on the process of reformulation would be helpful. **MALAYSIA** - Support/incentives for SMEs as cost and equipment are barriers. (NGO) - Affordable testing facilities will also help support this transition in SMEs. **MEXICO** - Lead-free pigment cost is the main barrier. (Private sector) - Regulations would be a good start. - Increase technical skills. - Relationships with suppliers. - In Mexico we can support paint industry customers to reformulate at same cost for architectural market but not for industrial paints. - Society does not understand the consequences of using lead paint and the manufacturers in Mexico prefer the use of lead pigments. - So, information sharing would be valuable and helpful. **NEPAL** - The 'stick and carrot' principle needs to be adopted.

(NGO)

- Exemption in import and export taxes for import and export of lead-free inputs, raw materials, technology and products itself.
- Government agency capacity building (human resources and technology, laboratory personnel etc...) to do the regular market and industry monitoring.
- Periodic compliance monitoring by the regulating authorities.
- Good coordination and collaboration between and among the lead paint standards regulating bodies and import/export regulating agencies (e.g., custom authorities). 9

- Technical support to SMEs such as testing facilities for a group of SME on PPP mode.
- Information on cost, comparison of alternative pigments, and equipment would be good to receive.

PHILIPPINES (NGO)

- Tax incentives and support for SMEs.
- Promote/recognize paint companies that are implementing reformulation.
- Proactive participation of all stakeholders government, business, academe, civil society, and community.
- In the Philippines, the DENR, the governing body, has stopped issuing importation permits for lead pigments and other lead additives to paint since 2020.
- The paint industry has stopped importing lead pigments and other additives after the regulation entered into force.

RUSSIA

- Getting agreements with key customers, first, and with leading DIY chains.

(Private sector)

- State technical regulations.
- The volume of lead-free ingredients (both locally manufactured and imported) is growing each year in Russia.

SERBIA (NGO)

- During the GEF-SAICM project in seven countries it was noted that many SMEs do not have grinding mills; thus, they are unable to use solid lead-free pigments.
- In Serbia, the legislation prohibits production, trade and use of lead containing pigments. - There are some exceptions, especially for the industrial coatings and artistic paints.

SOUTH AFRICA

- Implement incentive programmes, such as tax incentives for manufacturing lead-free paints.

(Government)

- Ease import and export duties.

- Standardization across regional perspectives, with regards to import and export duties, to allow ease of

TANZANIA (NGO)

- Regular availability of raw materials.
- Improved access to laboratory facilities.
- Capacity building to lab staff, paint manufacturers and standard enforcers.

TOGO (NGO)

- Regulations are fundamental.

UNITED STATES

- Incentives are also but needs sensitization of companies first.

OF AMERICA

- Costs are not competitive enough.

(Private sector)

- Consistent regulations need to be adopted around the globe to help push the transition.

VIETNAM (NGO)

- Promote communication activities to improve the community's knowledge on lead paint so that not only consumers but also the paint producers all realize that lead-free paint products need to be applied widely for their health and for a healthier living environment.
- Strengthen the mechanism to monitor the implementation of lead paint regulations.
- Enhancing the labelling of lead content and other heavy metals in paint products.
- Have certifications on lead-free paint for paint producers.

STATEMENTS BY **PRESENTER**

- Architectural lead paint is banned in Mexico since 2015. - Enforcement of the regulation is indeed a challenge.
- (PPG-Comex):
- The paint reformulation guidelines developed under the SAICM GEF project might be useful for SMEs in addressing lead reformulation: https://saicmknowledge.org/library/draft-technical-guidelines-paintreformulation
- Question: What about not architectural coatings?
 - Extending the ban to non-architectural paints is being considered for the updated regulation in

Vietnam

Poll 5 Results (N=34):

Are lead-free pigments currently available in your country? Please specify yes, no, or I don't know and the name of your country.

Yes - 29 (85%) No - 3 (9%)

I don't know- 2 (6%)

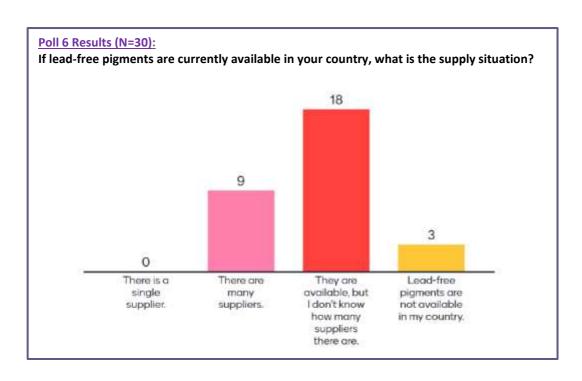
Countries that said "yes": Countries that said "no": Countries that said "I don't know":

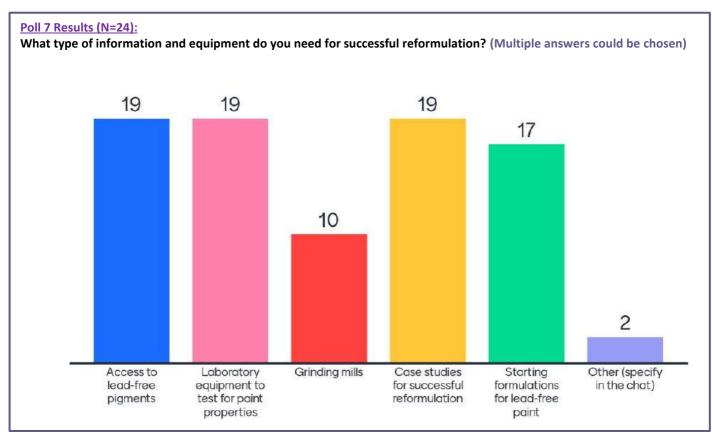
Bangladesh Ecuador China Indonesia **France Jordan**

Indonesia Iran Malaysia Mexico Nepal

Philippines Serbia **South Africa** Sri Lanka

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Useful resources:

Draft UNEP Technical Guidelines on Paint Reformulation, available at:
 http://www.saicm.org/Portals/12/Documents/GEF-Project/Lead-Paint_Lead_Paint_TG_Draft_25032019.pdf. 11

Note: When available, final guidelines will be posted at https://saicmknowledge.org/program/lead-paint.

- Challenges for Small and Medium-Sized (SME) Paint Manufacturers (Module G. of the Toolkit for establishing laws to eliminate lead paint; note: the Toolkit will be updated in 2021) available at:
 https://wedocs.unep.org/bitstream/handle/20.500.11822/22857/Module%20G%20SME%20Challenges%20FINAL.pdf?sequence=1&isAllowed=y
- UNEP Technical Guidelines on Paint Reformulation Validation Workshop Presentations available at https://saicmknowledge.org/event/validation-workshop-paint-reformulation-guidelines

<u>LiP CoP</u>: The Secretariat of the Strategic Approach to International Chemicals Management (SAICM) and the Environmental Health Division at the University of Cape Town (UCT) created this Community of Practice (CoP) to foster online discussions and address key issues on Lead in Paint (LiP) among stakeholders from governments, international organizations, industry, academia and civil society.

This CoP is contributing to the SAICM/GEF project on Emerging Chemicals Policy Issues Knowledge Management Component. This activity is supported by the Global Environment Facility (GEF) project ID: 9771 on Global Best Practices on Emerging Chemical Policy Issues of Concern under the Strategic Approach to International Chemicals Management (SAICM).

If you have any question or require clarification on this initiative, please contact the SAICM Secretariat at saicm.chemicals@un.org or UCT at uctcops@outlook.com.

Join the LiP CoP at: https://saicmknowledge.org/community