



***Global Environmental Facility (GEF – 9771):
Global best practices on emerging
chemicals policy issues of concern under
the Strategic Approach to International
Chemical Management (SAICM)***

***Component 1: Promoting regulatory and voluntary action
by government and industry to phase out lead in paint” of
the project Global Environment Facility***

Activity: ***National baseline survey of paint market including its
analysis***

Document: ***Report on selection of SMEs for pilot demonstration***

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EXECUTIVE SUMMARY

United Nations Environment Programme (UNEP) and the World Health Organization (WHO) have established the joint initiative Global Alliance to Eliminate Lead Paint (Lead Paint Alliance) to prevent children's exposure to lead from paints containing lead and to minimize occupational exposures to lead paints. The broad objective of the Alliance is to promote a phase-out of the manufacture and sale of paints containing lead and eventually eliminate the risks from such paint.

CER/Grupo GEA implements the Component 1 "*Promoting regulatory and voluntary action by government and industry to phase out lead in paint*" of the project Global Environment Facility (GEF) 9771: Global best practices on emerging chemicals policy issues of concern under the Strategic Approach to International Chemical Management (SAICM). Under the following UNEP project ID 516.1 SAICM-GEF 9771, CER/Grupo GEA executes the project during the period of January 2019 – June 2021.

The following document: National Baseline Survey of Paint Market, deliverable of Activity 1 is a result foreseen in the Project Cooperation Agreement (PCA) concluded between the United Nations Environment Programme (UNEP) and the non-governmental organization Grupo GEA in 2019.

GENERAL PROJECT INFORMATION

Global contaminants such as Persistent Organic Pollutants (POPs) or mercury are regulated by Multilateral Environmental Agreements (MEAs), namely the Stockholm and Minamata Conventions respectively. 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 identified the goal that "by 2020, those 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). Even relatively low levels of exposure to lead can cause serious and irreversible neurological damage; there is no known safe level of lead exposure. The cost of removing existing decorative lead paint from surfaces in homes, schools, and other buildings is significant. By contrast, the economic 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 world remains a significant source of human exposure. To protect human health, laws (legislation, regulations, or enforceable standards that are mandatory) are needed in every country to stop the manufacture, import and sale of lead containing paints and lead based pigments and other additives used in the manufacture of paints locally. Though lead-free alternatives exist, barriers to their use by the paint industry include lack of regulations, access to vendors and lack of awareness of small and medium sized manufacturers on the need for phasing out lead paint.

The main objective of this project is for the 3 countries (Colombia, Ecuador and Peru) in the Andean sub region to adopt laws intended to phase out the manufacture, import and sale of lead paint and to eliminate the lead poisoning risks. Activities to attain the objective include: facilitating meetings among stakeholders, disseminating information of trade unions and health-care issues, highlighting the availability of technically superior and safer alternatives; catalyzing the design and implementation of appropriate prevention-based programs to reduce and eliminate risks from the use of lead in paints and products coated with lead paints; helping identify paint manufacturers and formulators that continue to produce and market paints containing lead so as to foster actions to phase out lead from their products; and advocacy with governments for the establishment of appropriate national regulatory frameworks to stop the manufacture, import, sale and use of lead paints.

1. PROCESS OF SELECTION OF COMPANIES

The following report falls under the deliverables corresponding to *Activity 1. National baseline survey of paint market including its analysis, sub-activity 1.5: Select paint SMEs where the paint reformulation technical guidelines will be pilot tested*. Which states, the selection of four paint SMEs for pilot testing of the paint reformulation guidelines; for this, information about the company should be collected under the „Selection Criteria Questionnaire“.

The technical support on the selection of the four SMEs for pilot demonstration considers the information collected in the document aforementioned and other general information, the NCPC implementor, considers relevant for the international consultant from NCPC Serbia.

1.1 PERU PAINT SECTOR PROFILE

The national paint sector consists of 145 companies, mainly micro companies, with 51.7%, and SMEs, with 45.5%. From the total of companies, the 77% of them are located in Lima and Callao, followed by Arequipa with 11% of companies.

The three companies, considered under the big company size, account for 72.3% of the national market share according to the 2018 Economic Report of Construction elaborated by the Peru Construction Chamber (CAPECO)¹.

The Table 1 presents the distribution of the size of companies for the sector. For this, the company size is considered as follows²: i) micro, with USD 157,500 revenue and generally less than 10 employees; ii) small, with USD 157,500 - 1,785,000 revenue and generally less than 100 employees; iii) medium, with USD 1,785,000 - 2,415,000 revenue and generally less than 500 employees; and iv) big companies, with more than USD 2,415,000 revenue and generally more than 500 employees.

¹ Cámara Peruana de la Construcción (2018). *Informe Económico de la Construcción*. [online] Lima, pp.36-40. Available at: https://issuu.com/capeco.org/docs/iec21_1118 [Accessed 25 Jun. 2019]

² The company size classification was updated with the Law N°29157 (modified by the Law N° 30056) which defines a new revenue range however number of employees – which is described as “generally” – was considered from the Law N°29157 (modified by D.S N° 007-208-TR).

Table 1. Number of companies by size

Company size		Number of Companies	%
Micro	USD 157,500 < 10 employees	75	51.7
Small	USD 157,500 - 1,785,000 < 100 employees	56	38.6
Medium	USD 1,785,000 - 2,415,000 < 100 employees	10	6.9
Big	> USD 2,415,000 > 500 employees	3	2.1
Total		145	100

Source: Self-made with the información obtained from SUNAT

1.2 COLOMBIA

1.3 ECUADOR

2. SELECTED COMPANIES

For the selection of the paint manufacturing companies, the follow was considered:

- The company belongs to the small and medium company size
- The company is located in Lima
- The company manufacture architectural or industrial paint.
- The company is not closed or the legal representative is not reachable in the National Superintendence of Customs and Tax Administration.

Considering the aforementioned requisites, a total of 25 companies (18 for industrial and 9 for architectural paint) can be reached for the pilot testing. The Table 2 provides the volume of companies considering the requisities.

Table 2. Volume of companies for pilot testing

38	Industrial Paints	28	Manufacturer	9	Micro
				16	Small
				2	Medium
				1	Big
		10	Distributor		

41	Architectonical Paints	29	Manufacturer	18	Micro
				7	Small
				2	Medium
				2	Big
		12	Distributor		

The 25 companies were contacted through email and phone calls for the presentation of project. Other circumstances reduced the number of companies to worked with, such as: i) lack of interest of general manager and ii) the company affirms the manufacture of no lead paints.

The following idem presents the four SMEs that accepted the pilot testing for the reformulation of paints.

2.1 PERU

A. UNIVERSAL COLORS

<p><u>General Information:</u> Universal Colors, is a brand of industrial and marine paints and coatings; manufactured since 1999 by the peruvian company J&S COATING PERU S.A.C.</p> <p>Universal Colors, has as proposal the constant innovation in search of solutions that generate a smaller environmental impact and take care that their client count on a personalized attention, being their allies for the success of their projects.</p>	
<p><u>Size of company and number of employees:</u> Small Business 16 employees</p>	
<p><u>Product Portfolio:</u></p> <ul style="list-style-type: none"> ❖ Epoxy ❖ Alkydics 	<p><u>Paints with lead:</u></p> <ul style="list-style-type: none"> ❖ Epoxy ❖ Alkydics

❖ Polyurethanes ❖ Primers	❖ Polyurethanes	
Annual production capacity (ton):	100 TN – 160 TN / year	
Average volume of production for lead paints (ton):	30 TN	
<u>Lead additives used in the company</u>		
Lead octoate (ton per year)		NO
Lead oxides (ton per year)		NO
Lead tetraoxide (minion) (ton per year)		NO
Yellow pigments – lead chromates (ton per year)		YES
Orange pigment – molybdate sulphate, lead chromate (ton per year)		YES
Other (ton per year)		
<u>Production equipment:</u>		
❖ Mills ❖ Dispersers		
<u>Laboratory equipment</u>		
For production: ❖ Viscometer ❖ Ph meter ❖ Analytical balance ❖ Disperser ❖ Grindometer ❖ Applicator	For application: ❖ Applicator ❖ Air Pistol	For testings: ❖ Meters: Adherence and thickness

B. SOPRIN

<p><u>General Information:</u></p> <p>Soprin is a Peruvian family business with more than 50 years in the paint market. Recognized leader in the market of architectural bases and paints with its brand Majestad, that provides solutions for the treatment and painting of surfaces with a vision of sustainability and preservation of the environment.</p>	
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Size of company and number of employees: Mid-company 150 employees		
<u>Product Portfolio:</u> ❖ Water-based decorative paint ❖ Fillers (temple)		<u>Paints with lead:</u> ❖ Water-based decorative paint
Annual production capacity (ton):		
Average volume of production for lead paints (ton):		
<u>Lead addivities used in the company</u>		
Lead octoate (ton per year)		No
Lead oxides (ton per year)		No
Lead tetraoxide (minion) (ton per year)		No
Yellow pigments – lead chromates (ton per year)		No
Orange pigment – molibdate sulphate, lead chromate (ton per year)		No
Other (ton per year)		No
<u>Production equipment:</u> ❖ Mills ❖ Dispersers		
<u>Laboratory equipment</u>		
For production: ❖ Spectrometer ❖ Dispensers ❖ Stoves ❖ Scales ❖ Viscometer ❖ Ph meter	For aplicattion: ❖ Humidity measurements ❖ Torches	For testings: ❖ Spectrometer ❖ Scale ❖ Viscometer ❖ Ph meter

C. ENVASADORA SAN GABRIEL

<p><u>General Information:</u></p> <p>EGS is a company with more than 20 years in the peruvian market, with private capital and 100% national; dedicated to the commercialization and distribution of diesel fuels B5-S50, pressure painting service and production of paints and resins. During all these years, committed to provide a high quality service, with an enormous sense of responsibility to each of our customers.</p>		
<p><u>Size of company and number of employees:</u></p> <p>Mid-sized company 59 employees</p>		
<p><u>Product Portfolio:</u></p> <ul style="list-style-type: none"> ❖ Diesel ❖ Paints ❖ Resins 	<p><u>Paints with lead:</u></p> <ul style="list-style-type: none"> ❖ Traffic 	
Annual production capacity (ton):	10 000 L per month	
Average volume of production for lead paints (ton):	40 000 L per month	
<u>Lead additives used in the company</u>		
Lead octoate (ton per year)	NO	
Lead oxides (ton per year)	NO	
Lead tetraoxide (minion) (ton per year)	NO	
Yellow pigments – lead chromates (ton per year)	YES	
Orange pigment – molibdate sulphate, lead chromate (ton per year)	YES	
Other (ton per year)	NO	
<p><u>Production equipment:</u></p> <ul style="list-style-type: none"> ❖ Horizontal mill ❖ Vertical mill ❖ Dispersers (22 kg and 45 kg) 		
<u>Laboratory equipment</u>		
For production:	For application:	For testings:

<ul style="list-style-type: none"> ❖ 5 gallon vertical mill ❖ Viscometer ❖ Analytical balance ❖ Stove (solids) ❖ Fineness of grinding 	<ul style="list-style-type: none"> ❖ Spray gun: Poliester, Látex, Glazes. 	<ul style="list-style-type: none"> ❖ They don't have
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D. CHEMISA PINTURAS

<p><u>General Information:</u></p> <p>CHEMICAL MINING S.A was founded in March 1982, the rapid expansion of the company led to the inauguration of the facilities of the current factory which has state-of-the-art technology and the latest techniques for the manufacture of paints. The constant innovation in products, the human potential of the collaborators and a fleet of own vehicles allow them to offer quality products.</p>		
<p><u>Size of company and number of employees:</u></p> <p>Mid-sized company 100 employees</p>		
<p><u>Product Portfolio:</u></p> <ul style="list-style-type: none"> ❖ Resins ❖ Wood Line ❖ Thinner and Solvents ❖ Industrial Line 	<p><u>Paints with lead:</u></p> <ul style="list-style-type: none"> ❖ Alquidic ❖ Epoxies ❖ Nitrocellulose 	
Annual production capacity (ton):	1 800 Ton/Year	
Average volume of production for lead paints (ton):	1 920 Ton/Year	
<u>Lead additives used in the company</u>		
Lead octoate (ton per year)	YES	
Lead oxides (ton per year)	NO	
Lead tetraoxide (minion) (ton per year)	NO	
Yellow pigments – lead chromates (ton per year)	YES	
Orange pigment – molibdate sulphate, lead chromate (ton per	YES	

year)		
Other (ton per year)		NO
<u>Production equipment:</u>		
<ul style="list-style-type: none"> ❖ Dispersers ❖ Pearl Mill 		
<u>Laboratory equipment</u>		
For production: <ul style="list-style-type: none"> ❖ Drill type spreader ❖ Rule of Fineness 	For aplicattion: <ul style="list-style-type: none"> ❖ Paint applicators ❖ Blowtorches 	For testings: <ul style="list-style-type: none"> ❖ Brightness meter ❖ Colorimeter ❖ Viscometer ❖ Thickness measurements ❖ Scale