



Baseline Information for the Lead **Paint** Country Situation in Nigeria

Global Environment Facility (GEF) Project 9771: Global best practices on emerging policy issues of concern under the Strategic Approach to International Chemicals Management (SAICM)

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FEDERAL MINISTRY OF ENVIRONMENT



SRADev Nigeria



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This baseline report is as a result of research, commitment, and inclusive participation of some key sector stakeholders in the manufacture and management of paint-making in Nigeria.

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1.0 Introduction

Lead is a silvery white, bluish-white lustrous or grayish heavy metal with myriads of application based on its physical and chemical properties. It is very soft, highly malleable, ductile, and a relatively poor conductor of electricity. It is very resistant to corrosion but tarnishes upon exposure to air. These uses are not exhaustive as car batteries, electrodes for electrolysis, pigments, solders, weights for lifting, weight belts for diving, ammunition, cable sheathing, leaded crystal glass and radiation protection. More so, lead is found in paint as pigments and driers. However, the management of lead and its industrial use from exploration as ore, transportation, to conversion to products, disposal at end-of-life and recycling is a matter of concern.

Anthropogenic activities involving Lead use and leaded products are major sources of lead in the environment. Not only leaded gasoline use but also, fuel and solid waste combustion and industrial processes play contributes to environmental pollution of lead significantly. In the bodies of soil and water organisms, lead accumulates in the bodies of water and soil organisms along the food chain.

Toxicity positively correlates with blood lead levels. At levels around 10 µg/dL, biochemical and subclinical changes is noticed. At levels above 100 µg/dL may lead to coma and to death and disruption of the central nervous system at levels below 70 µg/dL as well as damage to vital organs in the body as kidneys, heart, bone and the hematopoietic system. Also, for every increase in 10 µg/dL in the lead level in blood, there is a two to three point decrease in IQ test scores. Common notable effects include disruption of the biosynthesis of haemoglobin and anaemia, rise in blood pressure, kidney damage, miscarriages and subtle abortions, disruption of nervous systems, brain damage, declined fertility of men through sperm damage, diminished learning abilities of children, behavioural disruptions of children, such as aggression, impulsive behavior and hyperactivity.¹ Growth problem and irreversibly lowered IQ is often the case in exposed children. Hence, lead use in many materials has been banned because of the health threat posed to life including humans especially in children.

1.1 *Lead as a Problem in Nigeria*

In Nigeria, the largest known outbreak of lead poisoning in history happened in Zamfara State in 2010². This was a result of exposure leaded particulates from gold mines and deaths of about 400 children occurred and thousands suffered brain damage³.

The Federal Ministry of Health and World Health Organization (WHO) recorded another lead poisoning (also known as saturnism) case in UnguwanMagiro and UnguwanKawo communities in Rafi Local Government Area of Niger State on 15 May 2015. Here, 48 children (age range 7 month-11years) were reported to have high serum lead level (between 171.5 – 224 µg Pb/dl). Common symptoms showed by affected persons are fever, pallor, abdominal pain, vomiting, convulsion and altered level of consciousness. Biological Exposure to lead is also significant because flora and fauna products may also be the source of contamination to humans.

Another anthropogenic source of lead in Nigeria is Lead contamination from Used Lead Acid Battery (ULABs) recycling facilities. In 2016, SRADeV Nigeria in collaboration with OK International conducted

¹ <https://www.lenntech.com/periodic/elements/pb.htm#ixzz6U1TZk7M0>

² <https://www.cdc.gov/onehealth/in-action/lead-poisoning.html>

³ <http://sradev.org/wp-content/uploads/2019/05/Blood-Lead-Level-Report.pdf>

a research on Soil contamination from lead battery manufacturing and recycling facilities in the south western part of Nigeria. A range of 40 -140,000ppm was documented in and around these facilities⁴. Devastatingly, sited around these facilities were small vegetable gardens. Moreover, in 2018, SRADev Nigeria in collaboration with international partners Petra Sorge and Tobias Eisehut of the European Journalism Center (EJC) and Oko Institute Munich examined human exposure levels of ULAB workers and residents of communities around lead battery recycling facilities, under the ample funding of Bill and Melinda Gates Foundation checked Blood lead levels. Elevated values ranged 22->65µg/dl were reported among the residents and workers of the ULAB facilities.

Lead in Nigerian paints is another route of lead into the environment and exposure can be caused as a result of inhalation or ingestion especially in children. In 2008, SRADev Nigeria under the auspices of International Pollutants Elimination Network (IPEN) collected and analyzed decorative paints produced and/or marketed in Nigeria. All the sampled paint brands were found to contain lead higher than 90ppm, in fact up to an alarming level of 129,837ppm in one case. At that time, there were no regulatory limit for the paint sector. In another study carried out between July to August 2016, a total of 54 cans of solvent-based paint intended for home use purchased from stores in Lagos, Nigeria, analytical results showed 74% of the samples had values higher than 90ppm as well as peak value of 160,000ppm.

Moreover, it has been estimated that lead exposure accounts for 7–25% of the disease burden among Nigerian children, and a 50% decrease in childhood BLL could save up to \$1 billion per year⁵. Like other West African countries, the economic cost due to lead exposure is estimated at \$27.9 Billion⁶. There are yet still barriers to this abuse to their use such as lack of regulations, access to vendors and lack of awareness of small and medium-sized manufacturers (SMEs) to the need for phasing out lead paint. Therefore, the Federal Ministry of Environment with key sectors stakeholders as well as Paint Manufacturers Association (PMA) of Nigeria in response to the shocking results have joined UNEP and other developing countries together with IPEN/SRADev Nigeria partnership and launched National Lead Paint Elimination Campaign.

In response to the international effort to eliminate lead in paint, the Global Environment Facility project on global best practices on emerging chemical policy issues of concern under the Strategic Approach to International Chemicals Management was launched in January 2019. In Nigeria, International Pollutants Elimination Network (IPEN) participation organization Sustainable Research and Action for Environmental Development (SRADev Nigeria) implements the national activities with support and guidance from IPEN's international team. A baseline information study on paint market in Nigeria is a preliminary deliverable of the project.

⁴<http://www.okinternational.org/docs/Lead%20Soil%20%20Countries%202018.pdf>

⁵Ogunseitan OA, Smith TR. The Cost of Environmental Lead Poisoning (Pb) in Nigeria. *Afr. J Environ Sci Technol.* 2007;1(2):27–36. [[Google Scholar](#)]

⁶<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3764081/#r20>

1.2 Use of Lead in paint and alternatives

Lead compounds use in paint production is due to its unique chemical properties. Historically, lead compounds are primarily intentionally added to oil-based decorative and industrial paints and other coatings as pigment to enhance colour, or as driers and anti-corrosives. However, they can also be found as contamination from other paint raw materials⁷. See *Table 1*.

‘No paint manufacturer or company imports lead to add to paint during production’

Jude Maduka, PMA Executive Secretary

Table 1: Lead compounds used in Paints

Lead ingredient	Types with Codes/CAS No
Pigment	
White pigment (Primary)	Lead carbonate White lead (1319-46-6)
Yellow pigment	<ul style="list-style-type: none"> • Lead monoxide (1317-36-8) • Lead chromate (7758-97-6) • Lead molybdate (10190-55-3) • Lead sulfochromate yellow (134437-2) • Lead sulfate (7446-14-2)
Red pigment	Lead chromate molybdate sulfate red (12656-85-8)
Driers	<ul style="list-style-type: none"> • Lead octanoate (7319-86-0) • Lead 2-ethylhexanoate (301-08-6) • Lead naphthenate (6179014-5)
Other Additives	<ul style="list-style-type: none"> • Lead chromate oxide (1845412-1) • Lead oxide (1314-41-6) • Lead nitrate (10099-74-8) • Lead peroxide (1309-60-0) • Tri-lead bis(carbonate) dihydroxide (1319-46-6)

Source: Lead Paint Alliance (LPA)

Today, non-lead pigments, driers and anti-corrosive ingredients are widely available and in use in paint production as well as most oil-based paints. These alternatives are readily available in the country, *See Table 2*. Although in comparison with lead substitutes, the unit cost is quite higher. However, with research on reformulation in paint production, a lesser quantity is required to achieve the same result. For example, 1 part of Strontium achieves an equivalence of 3 parts of Lead while, 3 parts zirconium metal can replace 4 parts of lead metal⁸. However, some additives may be required with the use of Zirconium as drier. Also, occupationally protection measures have to be in place in the

⁷IPEN, Presentation based on toolkit Module E, Alternatives to lead in paint.

Available on: <https://wedocs.unep.org>

⁸ A Presentation on Future Trends in Coating Technology - *Global Effort To Eliminate Lead Paint And Alternatives To Lead In Paint* at the 2019 Coatings and Exhibition Show of Paints Manufacturers Association of Nigeria

use of Zirconium due to its toxicity. Also, titanium dioxide is not only considered as substitute to white lead pigment but also proven to have a better opacity when compared with lead. Chromium and cadmium are good replacements for yellow and red lead pigments respectively.

Table 2: Lead ingredient and alternatives

Ingredient type	Lead type	Alternatives
Drying agent	Lead octanoate	Strontium and Zirconium
Pigment	White lead	Titanium dioxide
	Yellow lead	Chromate and chromium
	Red/Orange pigment	Cadmium

Source: SRADeV Nigeria

Other alternatives to red, orange and yellow pigments are of organic and inorganic origins and formulations of different big chemical companies. Of such companies include BASF, Clariant Corporation, Bruchsaler Farben, Papertex limited and others. The Table 3 shows the reformulation overview.

Table 3: Reformulation Overview Red, Orange and yellow pigment alternatives

Performance Level	Require colour performance	Yellow	Orange	Red
Top Performance level outdoor, processing >200C	Chroma	Isoindolinone (ie PY110)	Isoindolinone	Isoindolinone/Perylene /Quinacridone
	Opacity	Bismuth Vanadate (ie PY 184)	CICP (ie PO 82)	CICP
High Performance level Highest indoor selected outdoor, processing >200C	Chroma	Isoindolinone (ie PY110)	Isoindolinone (ie PO 61)	Isoindolinone/Perylene /Quinacridone
		Diazo condensation (PY95)		Diazo condensation (PY95)
	Opacity	Bismuth Vanadate (ie PY 184)	CICP (ie PO 82)	CICP
		CICP(ie PY53)		
Mid Performance level indoor processing >200C	Chroma	Azo Salt (ie PY62)	Azo Salt (ie PY62)	Bona
		Isoindolinone (ie PY139)	Benzimidazolone (i.e PO 64)	Monazo
	Opacity	CICP (ie PO 82) and TiO ₂ (ie PW6)	CICP (ie PO 82) and TiO ₂ (ie PW6)	CICP and TiO ₂ (ie PW6)
Mid Performance level indoor processing >200C	Chroma	Diarylide* (ie PY13)	Diarylide* (ie PY34)	
	Opacity	CICP (ie PY 53, PB24) and TiO ₂	CICP (ie PO 82 and TiO ₂	CICP and TiO ₂

Source: IPEN⁹

⁹<https://ipen.org/sites/default/files/documents/Replacement%20of%20lead%20pigments%20in%20solvent%20based%20decorative%20paints.pdf>

1.3 Aims and Objectives

The aim of this study is to assess the baseline information on the lead paint country situation in Nigeria. Utilizing available resources, information about production, consumption, import and export as well as a listing of paint manufacturers and vendors, volumes, and specifics on lead additives in use for manufacturing in Nigeria was gathered. The information will be compiled and shared at stakeholder meetings and other engagement with policy makers, industry stakeholders and civil society stakeholders.

Globally, 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*¹⁰. 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 phasing out/elimination of Lead in Paint amongst other SAICM emerging chemical policy issues of concern. The project inception workshop took place on 15-16 January 2019 in Geneva.

Component 1 of the project is “Promoting regulatory and voluntary action by government and industry to phase out lead in paint,” hereinafter called the SAICM GEF Project Lead Paint component. The objectives of the SAICM GEF Project Lead Paint component include *inter alia*: 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).

¹⁰ https://www.who.int/ipcs/saicm/ChemicalsRoadMapbrochure_en.pdf?ua=1

2.0 National Information

2.1 Geography and Population

The Federal Republic of Nigeria is located on the west coast of Africa between latitudes 4.16 and 13.52 North and longitudes 2.40 and 14.32 East. It is bordered by Republics of Benin to the west, Niger to the North, Chad to the north-east, Cameroon to the east and south-east and a southern coastline of 853km namely the Gulf of Guinea of the Atlantic Ocean. Nigeria occupies a total area of 923,768km² comprises 910,768km² of land 13,000km² of water.

The country has a varying humid sub-tropical climate: equatorial, tropical and arid in the south, centre, and the north respectively. The River Niger which runs through the entire country enters the country in the northwest and flows southward through tropical rain forests and swamps to its Delta in the Gulf of Guinea.



Nigeria, the most populous nation in Africa has an estimated population of 182 million (National Population Commission, 2017). About seventy percent (70%) of the population is rural but the rate of urbanization is high with significant rural-urban migration. There are more than 300 spoken languages, and well over 250 ethnic groups, some numbering fewer than 10,000 people, while Hausa, Ibo and Yoruba are the major linguistics groups. English is the official language and lingua franca of the country.

2.2 Political and Economic Profile

A democratic system of governance since 1999 followed a long era of military rule in Nigeria. There is a 3-level government system (National, State and Local Government). There are 36 states, a Federal Capital Territory (Abuja) and 774 Local Government Areas (L.G.A.s). The States and the Federal Capital Territory are geo-politically zoned into 6 namely North East, North West, North Central, South East, South West, and South-South.

The Federal Government of Nigeria consists of three distinct arms: executive, legislative and judicial. The executive branch is divided into Ministries, Departments and Statutory Agencies (MDAs). The National Assembly of Nigeria comprises the legislative arm. It has two chambers: The House of Representatives and the Senate. The House of Representatives is presided over by the Speaker of the House of Representatives. It has 360 members, who are elected for four-year terms in single-seat constituencies. The senate, on the other hand has 109 members, is been presided over by the President of the Senate. There are 108 members elected for four-year terms in 36 three-seat constituencies, which correspond to the country's 36 states. One member is elected in the single-seat constituency of the federal capital. The judicial branch consists of the Supreme Court of Nigeria, the Court of Appeals, the High Courts, and other trial courts such as Magistrates', Customary, Sharia and other specialized courts.

The approval of the three arms of the government is crucial in establishing a legal and institutional arrangement for the sound management of chemicals, including lead.

Economic: Nigeria is the largest economy in Africa, with a GDP greater than USD 108billion in 2019 with annual growth rate of 12.34%¹¹. The economy is driven primarily by the non-oil sectors, such as financial services, telecommunications, entertainment, etc. Foreign Direct Investment (FDI) inflows have been strong, averaging 909.54USD Million in the first quarter of 2019, with over 70percent of this in the non-oil sectors.

The major economic sectors include Oil and Gas, agriculture, industry, mining and quarrying, wholesale and retail trades. Insurance, banking and finance form a major part of the invisible trade. In 2019, the chemical and pharmaceutical product under the manufacturing sector grew by 0.35%. The manufacturing sector is diverse with metallurgical, mineral, chemical and allied productions, including those processing and/or producing chlorine-containing chemicals, foundries, cement plants, power plants, as well as a few industrial incinerators for hazardous wastes.

¹¹<https://nigerianstat.gov.ng/elibrary?queries%5Bsearch%5D=gdp>

3.0 Materials and Methods

In the conduct of the Nigerian baseline paint market information data acquisition, some extant global best practice methods were engaged in the fact-finding process including:

- Stakeholders' analysis: The stakeholders' analysis was carried out based on interest and power. Since the Federal Ministry of Environment is the SAICM focal point, Letter of approval on the project was secured from the Honourable Minister. This was followed by a meeting between SRADev and FMEnv where the stakeholders for the baseline study were identified. Thereafter, access to other MDAs for data gathering was facilitated by this ministry.
- Consultations and advocacy visits: Consultation with stakeholders including Ministries Department and the Federal Ministry of Environment (FMEnv), Federal Ministry of Trades, Industry and Investment(FMITI), Standards Organization of Nigeria (SON), National Environmental Standards, Regulation and Enforcement Agency (NESREA), National Bureau of statistics (NBS) and Nigerian Customs Service (NCS), National Agency for Food and Drug Administration and Control (NAFDAC) and Paint Manufacturers Association (PMA) of Nigeria.



Consultation meeting with PMA

- Desktop literature review: data from websites, national records from the Customs Service and National Bureau of Statistics as well as PMA were harnessed for the purpose of the study.
- Questionnaire administration: this commenced with an advocacy visit to PMA during the 2019 coating show where almost all dealers and stakeholders involved in paint manufacturing in Nigeria convened. The Coatings show provided a veritable opportunity of capturing and interacting with all producers and/or marketers of paints and coating in Nigeria. Also, questionnaires were administered to respondents as paint producers

especially non-PMA members and raw materials suppliers and suppliers (members and non-members) of paint raw material. See annex 1.



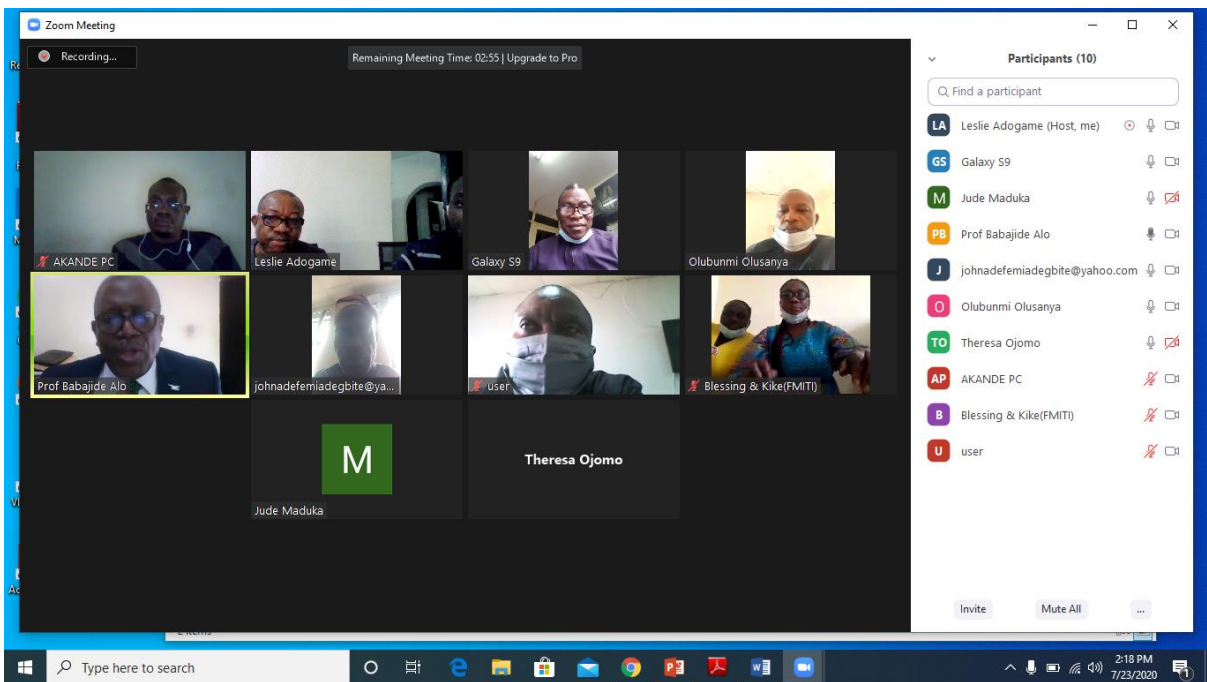
Consultation meeting with SON



Visit to the 2019 PMA's Coating show



Questionnaire administration at Brenntag Chemical Nigeria Limited



Zoom meeting for feedback from stakeholders

4.0 Study Findings and discussion

4.1 Stakeholders' analysis

The stakeholders involved in paints manufacturing and management in Nigeria are as delineated on *Table 3* below:

Table 3: Stakeholders analysis

Federal Ministries/Departments and Agencies	State Ministry and Agency	Professional Association/Civil society
Federal Ministry of Environment	Lagos State ministry of Environment	The Manufacturers Association of Nigeria
Federal Ministry of Industry, Trade and Investment	Lagos State Environmental Protection Agency (LASEPA)	Paint Manufacturers Association (PMA) of Nigeria
Federal Competition & Consumer Protection Council		Academia Department of Chemistry, University of Lagos
National Environmental Standards & Regulations Enforcement Agency		Chemical society of Nigeria
Nigerian Customs Service		NGOs/Civil society (SRADeV Nigeria)
Standard Organization of Nigeria		
National Agency for Food and Drug Administration Control (NAFDAC)		

Source: SRADeV Nigeria

4.2 Paint Market Information

In this section, information on the situational analysis of the Nigerian national paint market will be discussed, including the results of the estimated volume of various paint market, financial information/market size of paint industry.

4.2.1 Market and consumption of paint in Nigeria

The Nigerian paint market, production capacity, sales volume and consumption are difficult to estimate due to the unorganized nature of the industry. The industry consists of numerous uncontrolled and unregistered informal organizations. However, based on an estimated per capital consumption of 1kg in 2018, it is estimated that total sales volume will be in the region of 80 million liters.¹²

However, according to the PMA, the organized section of the paint industry controls 80% of the market share. The paint industry has an installed capacity of about 200 million litres/annum with

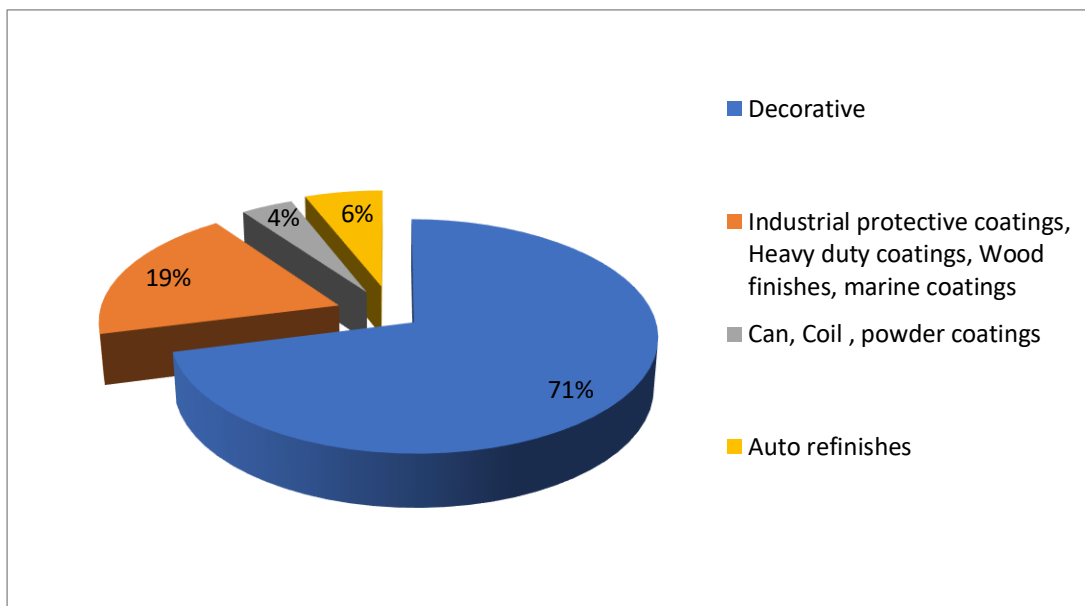
¹²Paint Association of Nigeria (PMA) 2018 Annual General Meeting, Theme: Strategic Roadmap for The Growth of the Nigerian Paint Industry at Conference Hall, Business Club Ikeja (BCI), CBD, Alausa, Ikeja, Lagos, on Wednesday, October 24, 2018.

70million litres/annum capacity utilization resulting into 0.41 litre/person paint per capital, derivable from an estimated population of 170million.

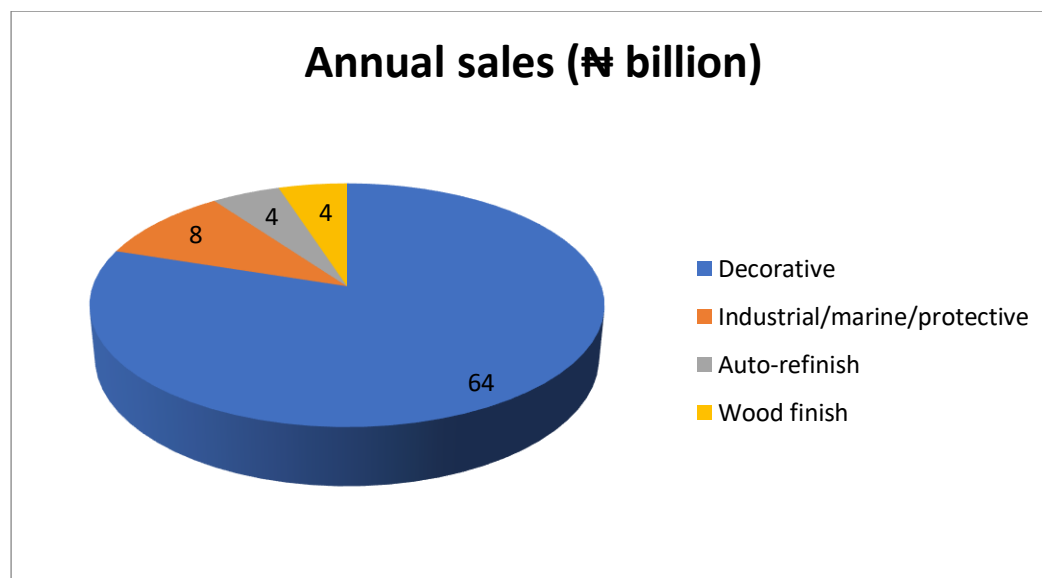
The products range from Heavy Coatings, automotive Finishes and Refinishes, Wood Lacquers, Industrial Coatings, Poly-urethanes, Acrylic, polyesters, Epoxies, Machinery Enamels, Adhesives and Decorative Finishes, the paints industry is undoubtedly playing a major role in the industrial growth of the economy of Nigeria.

Moreover, the national paint market is about ₦80 billion in size. While decorative paints including emulsion and gloss took about 80% of the market share, protective paint had 10% and the auto-finish and wood finish both 5% each, see Figures 1a & b.

Figures 1a & b: Volume breakdown of paint/Market share of the different types of the National Paint Market



Source: FMITI



Source: Paint Manufacturers Association

According to FMITI, the Nigerian paints & coatings market was worth an estimated \$200 million in 2012. Growing by an estimated CAGR of 9.01%, the market was an estimated \$218 million in 2013 and reached \$238 million in 2014. Presently, 2018 the market value is N80 billion naira. The current (2018) investment value of the industry is estimated to be N100 billion. Due to a significant number of unorganized players, production capacity and sales volume would be difficult to determine. However, from analysis the estimated total sales volume is around 128 million litres per year. The total installed Capacity is over 200 million liters per annum, while capacity utilization is 35% or 70 million litres/annum (2015); 20% in 2016; and 25% in 2017- 2018. Over 50,000 persons are employed both in paints and allied industries such as in raw materials procurement, packaging, haulage, distribution, fabrication and painting. Records indicates that Paint per capita was 0.41liters/annum in 2015 and now in 2018 has reduced to 0.25liters/annum when South Africa is recording 4.3 liters /annum.

4.2.2 Export and Import of Paints and coatings in Nigeria

Paints are both imported and exported in Nigeria. Despite the huge market, a lot of marine/ protective coatings are been imported for the oil and gas sector as well as decorative paints, powder and oil coatings.

According to the National Bureau of Statistics, generally across all the paint types from 2015 – 2019, importation was found highest in 2019 (January – September) see **Table 4**. Paint including enamel was most imported with a total value of ₦6.4Billion in 2019 followed by other paint with varnishes, dry powder paints and other paints at ₦1 Billion, ₦380 Million and ₦7 Billion respectively. In the last 5 years, exportation of paint was only made in 2015 and 2016.

Information on exportation and importation of Paint reported by NCS and NBS are shown in *Tables 4 and 5*. This information is disaggregated because data extracted from the NCS captured the foreign exchange inflow by paint selling or using companies. However, NBS reported the total import and export of these paints. The only exportation on paint manufactured in Nigeria was made by Berger Paint in 2015 as shown in tables 4 and 5. This implies that a lot of work has to be done with the paint manufacturers to boost the companies to international standards and encourage exportation. Generally, the importation of the enamel containing paints was highest across the different paint types in the period of 5years. In 2019, the highest of over 7 million kg in net quantity and ₦6billion in value was recorded according to NBS. However, the highest importation of enamel-based paint was highest in 2017 with over ₦2 billion in value according to NCS.

Table 4: Exportation and Importation of Paints (2015-2019)

Exportation											
HS Description	HS Code	2015		2016		2017		2018		2019	
		NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)
Other Paints and varnishes	3208902900			17,400	928,155						
Paints	3208902000	22.40	32,051,544								
Importation											
Paints	3208902000	684,462	271,956,213	40,000	6,958,040	4.00	154,165	-	-	40,004.00	7,112,205
Dry powder paint	3208902100	42,967	39,799,187	360,198	137,471,919	342,525	135,501,359	154,257	107,277,862	856,980	380,251,140
Other Paints & varnishes	3208902900	156,743	88,120,603	364,478	333,450,874	362,890	479,899,091	720,618	735,857,231	1,447,986	1,549,207,196
Enamel paints	3208202000	843,993	191,376,167	1,968,700	1,541,366,599	2,525,148	2,734,763,200	2,983,869	2,138,374,783	7,477,717	6,414,504,582

Source: National Bureau of Statistics, 2019

Table 5: Importation and Exportation of Paint (2015-2019)

Importation		2015		2016		2017		2018		2019	
HS DESCRIPTION	HS CODE	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)
Paints	320890200	8,344,165	50,364	-	-	-	-	-	-	-	-
Dry powder paint	320890210	-	-	-	-	3,162,917	2,180	28,667,135	15,347	5,115,358	6320
Paints including enamels	320820200	33,280,673	68,173	5,262,511	729,972	2,265,197,467	1,720,833	1,398,187,039	1,066,634	1,518,035,991	529,444
Exportation		2015		2016		2017		2018		2019	
HS DESCRIPTION	HS CODE	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)
Paints	320890200	22	32051544	-	-	-	-	-	-	-	-

Source: Nigerian Customs Service, 2019

4.3 National Paint industry in Nigeria

4.3.1 Profile of the National Paint Production

One of the most active segment of the chemical industry in Nigeria is the manufacturing of paints. The industry is a highly competitive one with free entrance and exit. The actors operate at varying capacities and scale. The national paint industry is organized to an extent. It consists of the organized sector consisting of the members registered with the Paints Manufacturers Association of Nigeria (PMA) and the unorganized informal sector. According to the FMITI, there are 500 paints operators registered with Manufactures Association of Nigeria (MAN) with over 2000 paint manufacturing plants (formal and Informal). There is unfortunately an inefficient regulatory monitoring mechanism which has inevitably led to the lowering of standards and enforcement in the sector. Hence fringe players (mostly SMEs) produce cheaper sub-standard paints.

The PMA is a sub-sector of the Chemicals and Pharmaceuticals sectorial group of the Manufacturers Association of Nigeria. It is an association of companies involved in paint manufacturing and paint material and allied products supplies and throughout the Federal Republic of Nigeria. Starting with a membership of eighteen in 1982, the association has grown to about two hundred registered members with an estimate of over five hundred unregistered members across the country. According to the brochure of PMA's 2019 coating/exhibition show, there are up to 91 member companies and 25 associate member companies of this association. Starting with a membership of eighteen in 1982, the association has grown to about two hundred registered members with an estimate of over five hundred unregistered members across the country.

Objectives of the PMA are as follows:

1. To promote mutual co-operation between member companies.
2. To promote further development of Paint Technology in the country.
3. To actively liaise with Government bodies or any other interest groups e.g. the Raw Materials, Research and Development Council in the area of local sourcing of raw materials.
4. To represent the interest of members to Government and appropriate authorities and other relevant associations.
5. To advise Government on budgetary matters relating to Paints and Paints Raw Materials.
6. To actively liaise with the Standards Organization of Nigeria to establish Paints standards and review such standards from time to time.
7. To do all such other things as may be incidental or conducive to the above objectives or any of them.

Table 6: Major paint brands in Nigeria

Major brands of paint manufacturers
Dulux, Caplux, Berger, Meyer, Sandtex, International, Plascom, Finecoat, Voda, IPWA, Eagle, President, Sharon, Saclux, Peacock, Saviour, Citizens, Bonalux, Nicen, Prestige, Precious, Value, Premier, Apex, Diamond, Blendtech, Megasea, Silka, Princess, Dalux, Demcok, Camelite, Skywall, Powerseal, Triton, Nalin, Cospee, Perfect, Empire, Pearl and Primeline.

Source: PMA

The paint industry can be grouped into the first rank consists of the top 5 including CAP plc, Paints & Coatings Manufacturing Nigeria plc, Portland Paints Nigeria plc, Berger Paints Nigeria plc, and DN Meyer plc., producing premium brands that are household names.

The second tier consists of medium-sized paint producers with lesser control of the market share. Privately owned companies largely operate informally on a smaller scale, while the third tier consists of companies that produce basic quality paint products. The latter have a bigger market share than the middle tier producers because their products are cheap and very affordable. They are often the unregulated informal sector.

4.3.1.1 Brief Profile of the Top 5 paint manufacturing Companies in Nigeria

According to the 2014 Nigerian Painting and coating Market Research, the coating market is highly fragmented and 5 companies account for approximately 46.8% of total revenues generated by the paints & coatings industry in 2013 including Chemical and Allied Products Plc (CAPL), Paints & Coatings Manufacturing Nigeria Plc (PCMN), Portland Paints Nigeria plc, Berger paints Nigeria plc, and DN Meyer plc. Below are the profiles of these companies¹³.

Chemical and Allied Products Plc (CAP Plc)

Chemical and Allied Products (CAP) Plc evolved from the world renowned British multinational company, Imperial Chemical Industries Plc, which formalized its Nigerian operations in 1957 under ICI Exports Limited to what is now known today as CAP Plc. The company markets Akzo Nobel's Dulux brand in Nigeria through 19 agents and is involved in promoting its own Caplux brand. CAP Plc currently ranks first in terms of total revenues generated by any company in the paints and coatings business in Nigeria. In 2013, revenues stood at \$38.7 million, an increase of 18.4% from 2012. The company's total market share of revenues also increased from 16.3% in 2012 to 17.8% in 2013. Activities of the company are mostly in the high-end decorative market. In 2012, Frost & Sullivan¹⁴ ranked the company number 2 in terms total annual production volumes.

Paints & Coatings Manufacturing Nigeria Plc (PCMN)

PCMN started as the Sole distributor of International Paints Protective coatings and Marine coatings, the world's leading brand for the Oil & Gas Industry in Nigeria in 2001 in Port Harcourt¹⁵. PCMN Plc presently has an installed manufacturing Capacity is 14,000,000 litres per annum. Additional installed capacity underway to increase the manufacturing capacity to 20,000,000 litres per annum¹⁶.

Portland Paints Nigeria Plc

¹³http://www.ikmib.org.tr/files/downloads/Bilgi_Bankasi/Raporlar/2014_The_Nigerian_Paints_and_Coatings_Market.pdf

¹⁴Frost & Sullivan, 2014. Market Research Report: Analysis of the Industrial Paints and Coatings Market in South Africa, Nigeria, and Kenya - Market Growth to Follow Economic Growth Trends.

¹⁵<https://www.pcmnigeria.com/manufacturing>

¹⁶<https://www.pcmnigeria.com/sites/default/files/attachments/PCMN%20Brochure%202014.pdf>

Portland Paints and Product Nigeria Plc with the flagship brand SANDTEX paint started off as a small division of a West African Portland Cement (WAPCO). It was incorporated as a limited liability company and public company in 1985 and 2008 respectively. Portland Paints became a subsidiary of UAC of Nigeria Plc in June 2013 after UAC acquired 51% equity stake in the company. The Company has decades of experience in manufacturing, distributing and marketing a wide array of Decorative, Automotive and industrial Paints, Marine and Protective Coatings including marketing and supplies of and Sanitary ware that support the building, construction and Oil and Gas industry in Nigeria¹⁷. Portland paint has an annual revenue profile of almost 2 Billion Naira.

Berger Paint Nigeria Plc

Berger Paints Nigeria Plc. (BPN) was established in Nigeria in 1959. The company is known for pioneering new products and setting the pace in the paint, and allied sector. BPN has been operating in 5 business segments Decorative/Architectural finishes, Industrial coatings, Marine & Protection coatings, Automotive/Vehicle refinishes, Wood Finishing and Preservers¹⁸. Some of the well-known brands include Luxol, Clinstay, Super Star and Texcote. The company has invested in the most technologically advanced automated paint manufacturing plant in Sub-Shara Africa, an investment of over ₦2 billion and with a production capacity of eight million litres annually in addition to the existing plant with production capacity of 4.5million litres. Also, BPN has distribution outlets of over fifty (50) Berger Colour World spread across the federation.

According to the 2019 audited financial statement BPN recorded a revenue of 3.5billion and profit after tax of 448million Naira.¹⁹.

DN Meyer Nig. Plc

MEYER PLC incorporated in 1960 and became a Public Company in 1979. It manufactures and Markets including Architectural Paints, Wood Paints, Auto refinishes, Industrial and Marine, Road lining Paints, Roof coatings, Tube coatings, HP coatings and Adhesives. In 1994, Hagemeyer was bought over by Dunlop Nigeria PLC, which led to the change of both the corporate and brand names to DN MEYER PLC and MEYER PAINTS respectively.

OTHER PLAYERS

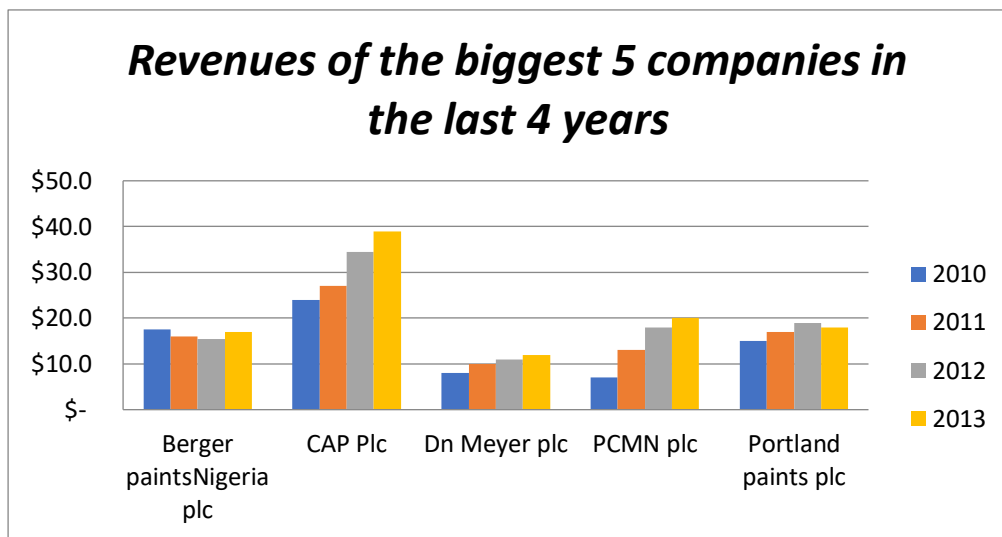
Other renowned Nigerian paint companies include IPWA Plc, Chemstar Nig Ltd, Eagle Paint Nigeria Ltd, President Paint Ltd, Perfect Paint Ltd, Premier Paint Ltd, YSR Nig. Ltd, Voda Paint, Saviour Chem and Allied Product Limited and Megasea International Paints Ltd (*see annex 1*).

¹⁷<http://www.portlandpaintsng.com/corporate-profile>

¹⁸<https://www.bergerpaintsnig.com/about>

¹⁹<https://www.bergerpaintsnig.com/reports/BPNP%20Q2%202019.pdf>

Figure 2: Revenues of the FIVE Biggest Paint Manufactures in Nigeria -2010 to 2013



Source: FMITI 2019

4.3.1.2 Suppliers of Paint Raw Materials

There are a number of leading paint raw materials manufacturers and suppliers in Nigeria. Some will be reviewed here.

Chizzy Limited is a family-owned and operated business that is continues to grow and prosper by providing customers with the highest quality products and service with representation in all major cities in Nigeria. The company claims to maintain our leadership position by representing quality principals, satisfying our customers' needs with a service-oriented sales force and providing unmatched customer services.

REDA Chemicals is a leading chemical distributor providing business-to-business solutions for users of industrial and specialty chemicals in the Middle East, India, Africa, South-East Asia and Central Asia. With over 500 professionals, they provide innovative solutions to a wide range of markets.

Cormart Nig. Ltd was incorporated in 1981 as an importer and distributor of paint chemicals Products including binders, pigments, titanium dioxides, solvents, additives and specialty chemicals used to achieve specific properties in paints. Their affiliates include Ashland Aqualon, Bayer material Science, Vink Chemicals GmbH & co.KG, Kimix Chemical Company Limited, Nuplex and 20 Micron Limited.

Brenntag Chemical Nigeria Limited

It is the leading name in the distribution of chemicals in Nigeria obtaining international support from her parent Company in Belgium, Netherlands and Mauritius. The total staff strength is 11 employees. Operationally, with direct sales of goods imported by client and sold on CFR basis, Stock sales: Goods are imported by BCN and sold on DDP basis. They have annual sale of ₦300million. Brenntag holds various certificates: ISO 9001, ISO 14001, ISO 22000 and FSSC 22000. The company deal in sale of lead-free alternatives and also provide technical guidance for lead-free alternatives for paint manufacturing.

Parco Enterprise Nigeria Limited

Parco Enterprise Nigeria limited located at Apapa in Lagos State, is a leading name in the sales of industrial chemicals, including paint chemicals. Its staff strength is 30 employees, with a sales turnover of about 6.5 billion annually. The Company deals in sales of powdered pigment and provide technical guidance to reformulation procedure to lead-free paint production.

Nagode Industries Limited

It is a premier Africa focused trading and distribution organization which has been in business for over 30 years with headquarters in Dubai. While its distribution operations cover Africa and the Middle East, the company represents over 40 major global suppliers' company and more than 150 Stock Keeping Unit that covers over 70% of the top traded chemicals products in Africa²⁰.

Nycil Limited

Nycil Limited was established in 1980 and it is a pioneer in the manufacture of synthetic polymers and specialty chemicals. The company is rated as one of the leading service providers as well as one of the largest manufacturers of synthetic resins and specialty chemicals in Nigeria.

4.3.2 Lead Paint and Coating Ingredients and alternatives in Nigeria

Lead pigment importation for the country

The study assessed the level of lead pigments importation into Nigeria. *Table 7* below is a representation of the amount of lead pigment imported in Nigeria in the years 2014-2018. As seen in the Table, 140 tonnes of Lead Pigment were imported in 2014 with a price value of \$388,777 which gives a price per unit value of \$2,785.63. Following that year was an economic recession in the country which apparently affected the importation of lead pigment as the Table shows no record of any leaded pigment imported for that year. Between 2016 and 2017, despite the increased unit price, the import volume also increased. This might have resulted from high demand of this product by the industry despite efforts on national campaign on elimination of lead in paint. In 2018, a 71% rise in trade volume of lead pigment was recorded. This is due to an 86% fall in the unit price of this produce.

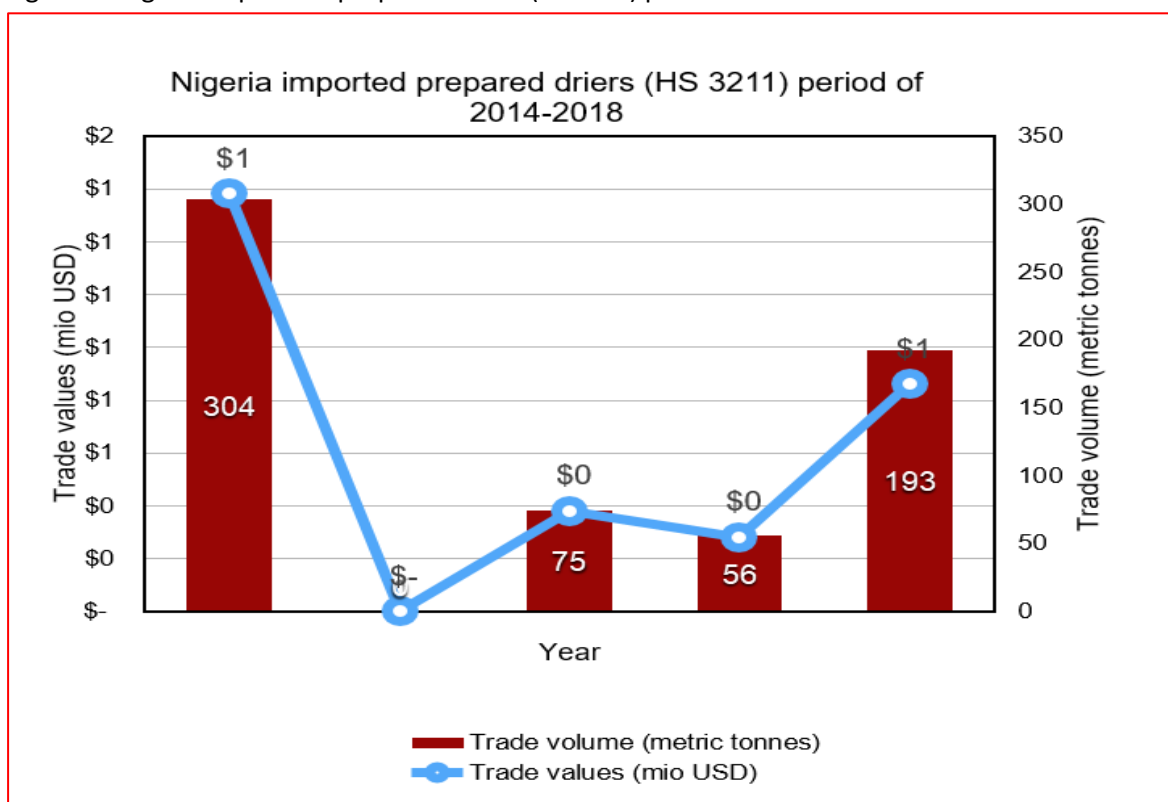
²⁰<http://nagode.com/who-we-are/#overview>

Table 7: Nigeria imported lead pigments (HS2824) period of 2014-2018

Period	Trade Value (US\$)	Trade volume (tonnes)	Unit Price (US\$/tonne)	Reporter	Partner	Commodity Code	Commodity
2014	\$388,777	140	2785.6	Nigeria	World	2824	Lead oxides; red lead and orange lead.
2015	\$0	0	0				
2016	\$501,933	220	2280.3	Nigeria	World	2824	Lead oxides; red lead and orange lead
2017	\$645,887	246	2629.0	Nigeria	World	2824	Lead oxides; red lead and orange lead
2018	\$593,832	420	1414.4	Nigeria	World	2824	Lead oxides; red lead and orange lead

Source: Atlas

Figure 3: Nigeria imports of prepared driers (HS3211) period of 2014-2018



Source: Atlas

The graph above is a representation of the imported prepared driers (HS 3211) for the period of 2014 – 2018 in Nigeria. Generally, the year 2014 was a good economic year for Nigeria as there was an increase in her GDP, hence the evident increase in the importation of this paint raw material as there was 304 Metric Tonnes of HS3211 Drier imported that year 2014. Nigeria’s Economy crashed in the

following year which results in the Zero Amount of Imported HS211 Prepared Drier for that year. There was an increase up to 75 (metric tonnes) in the importation the following year owing to increase in the GDP of the country. The importation in the drier reduced the following year to 56 Metric Tonnes while the year 2018 it increased to 193 Metric Tonnes.

Table 8: Importation of paint ingredients including lead-based materials and alternatives (2015-2019)

Importation		2015		2016		2017		2018		2019 (Jan-Sept)	
HS DESCRIPTION	HS CODE	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)
Lead paint ingredients											
Lead monoxide (litharge, massicot)	2824100000	-	-	-	-	350.00	337,438.00	-	-	-	-
Other lead oxides	2824900000	111,167.00	69,553,310.00	142,393.00	125,753,953.00	283,447.00	197,181,655.00	419,838.50	181,762,543.00	845,678.50	504,698,151.00
Lead alternatives											
Pigment/preparation based on titanium dioxide (TiO ₂) with =>80% TiO ₂	3206110000	4,966,534	2,048,126,196.00	2,083,463	1,094,162,999.00	2,639,368	2,254,717,837.00	5,349,078	5,347,679,147.00	5,978,633	4,511,432,627.00
Other pigments and preparations based on TiO ₂	3206190000	10,082,095	1,359,538,554	5,029,435	1,407,862,386	6,074,933	991,779,728	14,726,698	1,774,547,737	12,647,608	1,330,490,101
Zirconium ores and concentrates	2615100000	329,200	131,516,543	359,793	244,946,486	122,400	46,847,007	12,200	13,347,241		
Strontium or Barium oxides, hydroxides and peroxides	2816400000					6,368.00	3,751,930.00				
Pigments and cadmium based compounds	3206491000	291,875.00	170,719,625.00	295,327.71	130,495,697.00	299,317.00	148,943,440.00	886,519.71	450,158,762.00	1,481,164.42	729,597,899.00
Lithopone and other pigments and zinc sulphide (ZnS) based	3206420000	18,597.00	7,024,419.00	-	-	25,100.00	6,056,385.00	351,400.00	63,580,236.00	376,500.00	69,636,621.00
Pigments and chromium compound preparations	3206200000	1,139,139.00	499,815,065.00	842,272.00	540,670,264.00	1,055,378.00	780,260,250.00	850,712.88	601,404,402.00	2,748,362.88	1,922,334,916.00
Driers											

Prepared driers	321100 0000	12,870.00	12,424,097. 00	48,780.00	50,264,091. 00	124,440.00	107,245,519 .00	186,090.00	169,933,707.00	359,310.00	327,443,317.0 0
Exportation lead-based materials and alternatives (2015-2019)											
HS DESCRIPTION	HS CODE	2015		2016		2017		2018		2019 (Jan - Sept)	
		NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)	NET WEIGHT (Kg)	VALUE (₺)
Lead paint ingredients											
Lead monoxide (litharge, massicot)	282410 0000									55,000.00	9,116,415.00
Other lead oxides	282490 0000	54,452.00	93,519,120. 00	-	-	82,800.00	27,852,264. 00	241,000.00	55,284,773.08		
Lead alternatives											
Zirconium ores & concentrates	261510 0000	253.00	4,353,700.0 0	4,229,700.0 0	137,290,098 .11	8,005,800.0 0	125,503,287 .31	3,024,808.0 0	106,195,200.29	15,260,308. 00	368,988,585.7 2
Lithopone pigments	ZnS 320642 0000	322.80	59,962,072. 00								

Source: National Bureau of Statistics, 2019

Table 9: Importation and Exportation of lead paint ingredients, driers and alternatives

S/ N	HS DESCRIPTION	HS CODE	2015		2016		2017		2018		2019	
			VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)	VALUE (₦)	NET WEIGHT (Kg)
a.	Lead paint ingredients											
1	Other lead oxides	2824900000	48,235,647	36,350	3,529,452	14,056	3,162,917	2,180	28,667,135	15,347	5,115,358	6,320
b.	Lead alternatives											
2	Pigment/preparation based on titanium dioxide (TiO ₂) with =>80% TiO ₂	3206110000	582,045,355	1,418,200	328,742,476	608,438	221,534,608	287,994	1,265,235,600	1,439,389	2,471,059,525	3,105,340
3	Other pigments and preparations based on TiO ₂	3206190000	620,654,380	1,504,152	447,617,564	814,323	115,889,818	154,211	488,606,196	458,606	269,488,488	381,754
6	Pigments and preparations based on cadmium compounds	3206491000	11,119,586	18,166	-	-	43,310,903	79,632	31,405,389	24,989	-	-
8	Pigments and preparations based on chromium compounds	3206200000	185,502,542	310,672	245,825,080	255,725	265,978,089	242,773	185,512,323	217,870	357,617,348	553,367
c.	Driers											
9	Prepared driers	3211000000	-	-	78,166,958	139,220	54,319,397	54,615	208,098,707	166,689	173,491,870	189,016

Source: Nigerian Customs Service, 2019

Generally, the data from the National Bureau of Statistics is not specific to the paint industry. It was extracted from the information on chemicals related to paint, dye and pigments used in several chemical industries like polyethylene, glass, printing, paint and others. According to the National Bureau of statistics see **Table 8**, the Lead monoxide (litharge, massicot) with HS code 2824100000 is a lead paint pigment used also in solvent-based paint. While an amount of 350kg at ₦337,438 of this white pigment was imported only in 2017 between 2015 and 2019, a sum of 55,000kg equivalent to ₦9 million was exported in 2019 see **Table 8** between 2015 and 2019. Generally, importation of other lead oxides with the HS Code 2824900000 increased gradually but progressively from 2015 - 2019. The highest amount of 845,678.50kg at ₦504 million was recorded between January and September of 2019 but the least of about 111,167kg at about ₦70 million of the other lead oxides was imported 2015.

In respect of lead alternatives such as Titanium dioxide (TiO₂), Zirconium and strontium compounds imported, our survey showed that Pigments based on 80% TiO₂ were highest in terms of foreign exchange expenditure. The quantity and value of these alternatives imported ranged over 2-5millionkg at ₦1-6billion. However, the quantity imported for other pigments preparations based on TiO₂ was found higher but at lower price compared with preparations based on 80% TiO₂. This may be as a result of a lower concentration of TiO₂. The high quantity demand must have been as result of its wide use as pigment in different industrial production processes. It is also used with other colours to improve brilliance and opacity.

The importation of Zirconium documented was between 2015 and 2018. In 2016, the highest quantity of around 359,793kg at about ₦246 million of its importation was documented but lowest in 2018 12,200kg at ₦13 million. But the exportation of Zirconium was highest in 2019, see **Table 7**. Hence, the availability of this alternative is not deniable. Strontium on the other hand is not readily available in the country as data showed it was only imported in 2017 in a survey of imports between 2015 and 2019. This might have been due to its high cost of purchase as its unit cost is quite higher than Zirconium in the same year under survey. All of these findings are according to the data from NCS from which information on foreign exchange transfers associated with paint chemical are documented.

Information documented on **table 9** is data by Paint raw material suppliers. Information of these chemicals by companies that were not directly into sales of paint materials were not considered. Compared with the quantity imported in 2015, there was a huge decrease in the importation of lead oxide in subsequent years, with the year 2017 recording the highest decline of about 2tonnes. I conjectured that this may have been due to awareness on elimination of lead paint. Importation of the lead ingredients were mainly by Nagode Industry chemical and Samking Chemicals Nigeria Limited (see also **table 10**).

Furthermore, importation of alternatives like preparations based on 80% Titanium dioxide by paint raw material suppliers were found to be increasing and became highest in 2019 with over ₦2 billion in value but lowest in 2017. Data on importation of preparations of pigments based on chromium by companies revealed a continuous decline in the quantity imported from 2015-2018. However, in 2019 the highest imported quantity was recorded.

For driers, the chemical content was not stated. The quantity and amount revealed that 2018 had highest importation of paint drier (associated with paint companies).

Our data gathering surveys however, faced some challenges including poor documentation ranging from not well defined importers owing to lack of online presence, inconsistency of HS code, HS description, Tariff and Commercial description, especially between the HS and Tariff description, the chemical content of the materials not clearly stated and sometimes the importation of these chemicals were done by logistics agencies – clearing and forwarding agencies rather than by accredited importer companies.

Table 10: Importers and exporters of lead paint raw materials and their alternatives in Nigeria (2015-2019)

Importers		
HS Code	Type of raw materials	Name of Importer
2824900000	Lead oxides	Nagode Industries Ltd, Samking Chemicals Nig. Ltd
3206110000	Pigments containing 80% or more by weight of titanium dioxide	Truvalu Ltd, Redachem Industry Nigeria Limited, Cormart Nigeria Limited, Berger Paints Nigeria PLC, Ragi Industries Limited, Lexcel Product and Packaging, Nycil Ltd, Samking Chemicals Nig., Ltd, Riejom Chemicals Industry Ltd, Cytech Coating Nig Ltd, PureChem Manufacturing Ltd, Chizzy Nig. Ltd, Riejom Ind. Ltd, Brenntag Chemical Nigeria Ltd, Chemton Nig. Ltd, Chemicals and Allied Product Plc, Lexcel-chem Ltd, Allied Coatings Ltd, Pittsburgh Paints Nig. Ltd, Eagle Paint, Far East Paint.
3206190000	Pigments and preparation based on titanium dioxide, containing<80%	Ferro NCS Resins Nig. Ltd, Chemstar Paint Ind. Ltd, Parco Enterprises Nig. Ltd, Nagode Industries Ltd,Samking Chemicals nig. Ltd, Marvico ,Alkem Nig. Ltd, Swan Pain.t
3206491000	Pigments and preparations based on Cadmium compounds	Genesis Chemicals Ltd, Wapcil Nig. Ltd
3206200000	Pigment and preparations based on Chromium compounds	Sren Chemicals Ltd, Multichem Industries Ltd, Nagode Industries, Ferro NCS Resins Nigeria Ltd, Chizzy Nigeria Ltd, Fine Chemical Nigeria Ltd, Alkem Nigeria Ltd, Samking Chem Nigeria Ltd, Nycil Ltd, Ragi Industries Ltd, Diamond Paints.
3211000000	Prepared Driers	Nycil Limited, Lexcel Product and Packaging Nig Ltd, Ferro NCS Resin, Samking Chemicals, Procoating Nigeria Ltd, Chemstar Paint Ind. Nig. Ltd, Chizzy Nig. Ltd, Paints and Coating Manufacturers Nig. Ltd, Lexcel –Chem Limited, Redachem Ind. Nig. Ltd, Pittsburgh paints Nig. Ltd,
Exportation		
2824900000	Lead oxides	Nagode Industries Ltd

Source: SRADeV Nigeria, 2019 (extracted from Nigeria Customs Service data)

Table 11: LIST OF IMPORT DUTIES ON RAW MATERIALS FOR PAINTS

H.S. CODE	PRODUCT DESCRIPTION	2017 IMPORT DUTY
	PIGMENTS	
3206,1100	Titanium Dioxide	5%
3206.20	Inorganic Pigments	5%
3204.17	Organic Pigments	5%
2803.00	Carbon Black	5%
3212.90	Metallic Pigments (mixing /tinting)	5%
2812.1000	Iron Oxide (Red and Yellow)	5%
3204.11	Dyes	5%
3207.10	Pigment Paste	5%
	RESINS	
3907.5000.00	Alkyd Resins	10%
3906.9000.00	Acrylic Polymers in primary form. Other	10%
3907.3000.00	Epoxy	10%
3907.9100.00	Unsaturated Polyester Resin	10%
3907.9900.00	Other – Saturated Polyester Resin	10%
3905.1200.00	Poly (Vinyl Acetate)	10%
3905.1900.00	Other-Polyvinyl Acetate Copolymer	10%
3905.2100.00	Vinyl Acetate Copolymer in aqueous dispersion	10%
3905.2900.00	Other –Vinyl Acetate Copolymer, not in aqueous dispersion	10%
3905.9100.00	Copolymers	10%
3905.9900.00	Copolymers – Other	10%
3906.1000.00	Copolymers in Primary Form (Polymethy Methacrylate)	10%
3909.3000.00	Other Amino Resins	10%
3906.9000.00	Other Acrylic Polymers	10%
3909.2000.00	Melamine Resins	10%
3909.4000.00	Phenolic	5%
3909.5000.00	Polyurethanes	5%
3911.10	Hydrocarbon	5%
3912.2000	Nitro-Cellulose	5%
3908.10-90	Polyamides	5%
3707.5000.00	Polyallyl esters and other polyesters in primary forms	10%
2929.1000	Isocyanates	5%
3814.0000	Thinners	10%
3907.6000.00	Poly(ethylene terephthalate)	10%
	OIL PITCH SOLUTION	
1515.11	Raw Linseed Oil(Crude)	10%
1515.19	Other Linseed Oil	10%
1515.30	Castor Oil	10%
2715.00	Asphaltena/ Bitumen	5%
2708.10	Pitch Solution	5%

	EXTENDERS	
2836.50	Calcium Carbonate	5%
2507.00	China Clay/Kaolin	5%
2505.90	Silica/ Sand Quartz	5%
2525.2000	Mica	5%
	SOLVENTS	
2915.3100.00	Ethel Acetate	5%
2914	Ketones	5%
	ADDITIVES	
3912.31	Thickening Agents	5%
2835.1000	Phosphates	5%
3211.0000.00	Prepared Driers	5%
3910.0000.00	Silicones in Primary Forms	5%
3812.3000.00	Anti-Oxidation MEKO	10%
7212	Tins Plates	10%
7310	Folded Cans	20%

LIST OF IMPORT DUTIES CHARGED ON FINISHED PAINTS

3208.2010.00	Varnishes (including lacquers)	30%
3209.9020.91	Dry Powder Paint	20%
3209.9020.92	Other Paints and Varnishes	30%
3208.1000.00	Paints based on polyester	35%

Source: FMITI 2019

Questionnaire Responses

Generally, questionnaires were administered to both small and micro-scale producers and suppliers of paint materials. These questionnaires requested information including their knowledge of lead content in oil-based paints, their production capacity, and provision of material safety data sheet. Please see samples of the questionnaires in *annex 1*. In total, 17 responses were received from small scale producers (8), suppliers (4) and raw material vendors (5).

Generally, all the respondents have a good knowledge of the hazardous nature of lead and access to lead free alternatives but a large proportion of them still supply the lead ingredients. While 7 out of 10 reported they provide Material Safety Data Sheet (MSDS), over 60% of the paint producer expressed not been provided with MSDS. Hence, they claimed not to be aware of the risks. Not providing such crucial information about the chemical composition of the material will not give adequate clue to how such materials should be handled, transported, stored and managed and this can be deleterious to the health of the users and the environment. Almost all the producers acknowledged that leaded material has been cheaper compared with the alternatives. ***Therefore, cost was the major reason why leaded paint raw materials was still been sold and used in paint production.***

Table 12: Questionnaire responses from paint producers

Questions	Responses	Frequencies
Name of Organization	Alphat Chemical Venture	
	Beeyee Dolphin Nig. Ltd.	
	Bravo Nig. Ltd	
	Dalux Chemical Ind. Ltd.	
	Golbri paint	
	Karox Paints	
	Molox Paint	
	Saat	
	Unique Paint	
	Alphat Chemical Venture	
Role of Respondent	Chief Executive Officer	1
	Manager	3
	Managing Director	1
	Marketing Director	1
	Production Personnel	1
What lead additive do you use	Driers	4
	Orange Pigments	3
	Yellow Pigments	5
What instruments do you use	Hand Mixer	4
	Rolling Machine	2
	Hegerman Gauge	2
	PH Meter	1
	Set Mixing Machine	1

	B4 Cup	1
	Oven	1
	Spray Machine	2
	Rollers	2
Do you know of any lead alternatives	Pigments	2
	Dryers	4
	None	3
Do you use of the lead alternatives	Yes	5
	No	4
What Kind of Paint do you produce?	Emulsion, Gloss and PVA	3
	Emulsion and Gloss	6
Which of these paints types contain lead	Gloss(solvent based)	7
	None	2
Do you provide lead content information on your product?	Yes	3
	No	6
What Supplier do you get your leaded products from?	Local	7
	International	2
Names of Local Suppliers	Agege Market,	1
	Chizzy	2
	Osat	1
	Cpin	2
	Genopol	1
	Lolified	1
	None	2
	NYCIL	1
	Samking	1
	Talymaly	1
Do you think lead ingredient should be eliminated from Paint	Yes	7
	No	2
How can lead ingredient be removed from paint	Government Regulation and verification	3
	Creating Awareness	3
	Making the Alternatives cheaper	1
	introducing the alternatives into the market	2

Table 13: Questionnaire responses from paint raw material suppliers

Questions	Responses	Frequencies
Name of Organization	Akochem	
	Antoan Chemicals	
	Brenntag Chemicals N	
	Chemical World	
	Nagode Industries	
	Omak Ventures	
	Osat Chemical and ap	
	PARCO NIGERIA LTD	
	Samking	
	Sudarshan/Cormart	
What paint materials that contain lead do you supply?	Pigments	2
	Dryers	2
	Pigments and Dryers	3
	None	3
Primary	Lead Chromate MolybdateSulfate red (12656-85-8)	5
Yellow Pigment	Lead Monoxide (1317-36-8)	1
	Lead Chromate (7758-97-6)	2
	Lead Sulfate (7446-14-2)	1
	Lead Molybdate (10190-55-3)	1
Red Pigment	Lead Chromate MolybdateSulfate red (12656-85-8)	5
Driers	Lead Octanoate (7319-86-0)	2
	Lead Ethylhexanoate (301-08-6)	3
Other Additives	Lead Chromate oxide (18454-12-1)	1
	Lead nitrate (10099-74-8)	2
	Lead peroxide (1309-60-0)	1
	Tri-lead bis (carbonate dihydroxide 91319-46-6)	1
Do you supply lead free alternative raw materials?	Yes	6

	No	2
Are you provided with material safety data sheet at the point of purchase?	Yes	7
	No	3
Do you provide Material Safety data sheet to buyers at the point of supply	Yes	7
	No	3
Can you access lead free alternatives?	Yes	7
	No	1
	None of the above	2
What challenges do you face in accessing led free alternatives?	high cost of purchase	4
	Unavailability	2
	Poor Quality/Viability	1
	Others	3
Which do you consider cheaper	Leaded Materials	3
	Lead Free Alternatives	3
	None of the above	4
Do you think lead in paint is hazardous to end users?	Yes	10
What role should suppliers play in moving to the use of lead free alternatives in paint production	Source for lead free alternatives	2
	Sales of Lead-Free Alternatives	5
	Impact Technical know-how on use of lead-free alternatives	3

Source, SRADev Nigeria

5.0 Policy, regulatory and institutional framework

Regionally, six countries (11%) in the Africa Region have lead paint elimination and regulatory laws. Rwanda is drafting a regulation to legislate and implement an East African Community (EAC) regional standard and Zambia is finalizing a voluntary standard limiting lead content to 90 ppm to be incorporated later into a lead paint law. South Africa is working on revising an existing law to reduce the lead limit to 90 ppm and Côte d'Ivoire is drafting a law to make their voluntary standard of 90 ppm lead mandatory. The EAC agreed on regional lead paint standards setting the limit of lead in paint at 90 ppm to be finalized later this year. **Table 14** below provides a Summary of Country-Specific Lead Paint laws in the Africa Region Country Lead Paint Laws as of 2019.

Table 14: African Regional lead paint law information (as at 2019)

Country	Lead paint laws
Algeria	5000 ppm lead limit for manufacture, import and sale of paint
United Republic of Tanzania	90 or 100 ppm lead limit, depending on the type of paint
Cameroon	90 ppm lead limit and restricts specific lead additives
Kenya	90 ppm lead limit for manufacture, import and sale of all paint; sampling and testing requirements
South Africa	600 ppm lead limit for manufacture, import and sale of paint; no testing or certification requirements

Source: UNEP, 2019

However, in Nigeria the Federal Ministry of Environment stands as the focal point for the SAICM in the country. Through its implementing agency NESREA, the drafting of a formal regulation to control lead and other lead compounds is ongoing. This seeks to eliminate the use of paints containing added lead (less than 90ppm), prevents the production, distribution, import and export of paint products exceeding specified limit and also requires provision of standardized information and labels for all paint product to better inform consumers and workers on hazards of lead exposure. Moreover, environmental concerns especially toxic releases, waste management and disposal are put into consideration.

The FMITI is working on the national paint policy working closely with the PMA. The policy thrust is to “drive appropriate actions for reviving ailing firms, improving performance, and encouraging innovative and job creating green field investment”. This sustains the minimum standards for paint manufacturing stipulated by Standard Organisation of Nigeria (SON) and reaffirms that standardization be intensified improving the overall quality level of paints. This will provide an inclusive appraisal of the challenges faced by the sector especially profiting also formalizing the informal sector. However, these policy instruments are yet to be finalised. SON is an implementing agency of the FMITI. The agency is mandated to promote manufacturing activities in Nigeria to meet with the requirement of the applicable Nigerian Industrial Standards which elaboration, review, adoption, and adaptation are done in consensus with stakeholders and interested parties. This agency has maintained a good working relationship with PMA for over 30 years. In line with the SAICM’s goal to eliminate lead paint in Nigeria, in 2017, SON (NIS 269:2017) set Lead paint standard at 90ppm.

6.0 Implementation plans and priorities for action

The Paint industry in Nigeria has designed a Strategic Roadmap to grow the industry and was presented at the 2018 annual general meeting of the PMA. In the Roadmap, the association seeks to harness the opportunities and resources that will enable a transition from 1kg per capital consumption to a 3kg per capital in the country. Towards this target, an analysis of the strength, weakness, opportunities and threats of each of the paint subsectors of the paint industry was undertaken. **See Tables 15, 16 and 17.**

Table 15: A SWOT of the Paint Sector

Strengths	Weaknesses
<ul style="list-style-type: none"> Established manufacturing network Effective marketing and sales network Government policies which aims to promote local sourcing of coatings (local content law) 	<ul style="list-style-type: none"> High cost of production Raw material prices High cost of sales Lack of technical expertise
Opportunities	Threats
<ul style="list-style-type: none"> Anticipated increase in activities of the oil and gas industry Gradually developing auto industry Infrastructure growth Expanding Marine sector Drive towards industrialization 	<ul style="list-style-type: none"> Economic slowdown Raw material prices

Source: PMA

Table 16: SWOT Analysis of the Decorative paints segment

Strength	Weakness
<ul style="list-style-type: none"> Increasingly effective sales and distribution Networks Effective value and supply chain 	<ul style="list-style-type: none"> Innovation High cost of production Cost of capital and access to funds
Opportunities	Threats
<ul style="list-style-type: none"> Economic growth opening up, albeit slowly rural markets Investments in cities 	<ul style="list-style-type: none"> Excess supply Economic stagnation owing to political uncertainty Rising raw materials prices

Source: FMITI

Based on this SWOT Analysis, the PMA also delineated a few key drivers (**Table 17**) to achieve the goals and targets as specified above. It also recognized that there must be a veritable stakeholders' engagement. Hence it is stated that in order to achieve this priority, stakeholders including the consumers, paint manufacturers the PMA, the public sector/government/regulatory bodies must play strategic roles. It therefore developed the roles and responsibilities of each of the stakeholders in achieving the goals of increasing the national paint per capita consumption while complying with

the established regulated standards of limits in marketed paints towards the total elimination of lead in paint. *See Table 18.*

Table 17: SWOT analysis of the Industrial Coatings segment

Strength	Weakness
<ul style="list-style-type: none"> Established manufacturing network Effective marketing and sales network Government policies which aims to promote local sourcing of coatings (local content law) 	<ul style="list-style-type: none"> High cost of production Raw material prices High cost of sales Lack of technical expertise
Opportunities	Threats
<ul style="list-style-type: none"> Anticipated increase in activities of the oil and gas industry Gradually developing auto industry Infrastructure growth Expanding Marine sector Drive towards industrialization 	<ul style="list-style-type: none"> Economic slowdown Raw material prices

Source: FMITI

Table 18: Key Drivers of the achieving the goal

The Paint Consumer	The Individual Paints Manufacturing Firms	The Entire PMA Group	The Public Sector/Government/Regulatory Agencies
National population growth	Instituting strong, qualified and experienced management teams	Access to finance for new or expansion projects	More robust and encompassing policies on Urban Renewal.
Rising per capital incomes/higher disposable income as the economy picks up from the last recession	Good corporate governance structures	Public awareness/enlightenment of the general public	Regulating the sector to promote quality and upholding standards while empowering the informal sector
Increase in the Infrastructural development, investment in Real Estate with quest to meet world standard	Efficient processes, foolproof internal controls/audits	Lobbying of Government (especially the legislature) on Group interest areas like curbing counterfeiting and organizing the informal sector	Increased public sector spending on public Infrastructure and Enhanced maintenance culture
	Research and Development		Increased support by Government to the entire manufacturing sector
	Quality Control		
	Out-of-the-box Marketing/Sales strategies		

Source: PMA and SRADev Nigeria

7.0 Conclusion and Recommendation

The baseline paint market information unveils that the industry is a huge sector that contributes immensely the national GDP. With the estimation of 1kg per capital, the consumption is fixed to 180million litres and 80billion annual sales. However, the 'Giant 5' Paints Manufacturers account for over 40% of the total revenue. Suppliers of paint raw materials majorly the gateway of the materials into the country import both the leaded and non-leaded alternatives.

Furthermore, importation of alternatives like preparations based on 80% Titanium dioxide by paint raw material suppliers were found to be increasing and became highest in 2019 with over ₦2 billion in value and lowest in 2017.

Most of the SME manufacturers had a good knowledge of the hazardous nature of lead and were aware of access to lead free alternatives but a large proportion of them were still supplied the leaded ingredients which are in use in their enterprises. Almost all the producers also acknowledged that leaded raw material was cheaper compared with the alternatives. Therefore, cost was the major reason in Nigeria why leaded paint raw materials was still been sold and used in their paint production.

Gradually as the awareness and advocacy on the elimination of lead in paint is growing, industries and manufacturers are keying into the need for a phase-out owing to the attendant health effects. Legislation and enforcement of SON guidelines in the country on the elimination is still at its rudimentary stage. While SON has standards on lead level limits in paint since 2017 but compliance is still voluntary. NESREA the agency with the mandate to ensure safe environment is currently working on the policy to eliminate the intentional use of lead in paint making.

For Nigeria, this Project completely aligns with the United Nation Environment's efforts to eliminate lead in paint through empowering SMEs to reformulate, and also to strengthen national regulatory frameworks¹.

7.1 Recommendations

- The government needs to strengthen collaborations across multi-sectorial stakeholders including agencies, ministries, departments, corporate bodies, professional associations and the civil society to promote the establishment of appropriate national regulatory frameworks to control the manufacture, import, export, sale and the use and disposal of leaded paint and product coated with lead paints.
- Following the agreement reached by stakeholders in 2018, a legislative framework and adoption of lead in paint regulation and standards has to put in place.
- Government needs to consider lowering or totally removing the tariffs on non-leaded raw materials or alternatives in order to encourage their use in paint production in the country
- Government agencies, civil society and the media should put more effort on awareness-raising of the general public through schools and the social media.
- Efforts by the government, PMA and civil societies is required to sensitize both local and foreign suppliers of paint raw materials on effect of lead in paints as well as availability of alternatives.

- Government agencies should partner with paint manufacturers (both formal and informal) should engage in knowledge sharing of reformulation of paint production embracing the use of less evasive materials (Lead alternatives).
- Paint manufacturers and importers of paint chemicals should be encouraged to research paint ingredients with lead content and desist from its use.
- The need to engage regulatory bodies and the paint manufacturers to regulate the activities of the informal industries that engage in counterfeiting.
- More concerted efforts need to be channeled to providing adequate information especially the lead content of paints by government bodies and paint manufacturers.

Annexes

Annex 1: List of Paint manufacturers

Name of Manufacturer	Location (city)	Other info
ACELAND IND. LTD.	36, Alhaji Adams Street, Off Ile-Epo Bus stop, Ijigbo. P.O Box 1343, Mushin, Lagos	08033644620 01-7745523 Email: celandindusltd@gmail.com
AFRICAN PAINTS NIG. PLC.	Plot 51, Oregun Ind. Estate Alausa, P.M.B. 21538, Ikeja	01-7645817
AKIN-TUNBOD CHEM. IND. (NIG) LTD.	119, Aka Road, Okokomaiko, P.O. Box 6379, Festac Town, Lagos.	01-2881037 08033019296 Email: akintnbod@yahoo.com
APEX PAINTS LTD.	KM 8, Abeokuta Lagos Road, P.O. Box 2073 Abeokuta, Ogun State.	039-770961 08129008252 08129008253 Email: bhanu@apexpaints.com
BANNEX IND. LTD.	16/17, Abimbola Street, Isolo Ind. Estate, Isolo, P.O. 6042, Marina, Lagos.	01-8042451 08033873805 Email: banex@banexvina.com
BERGER PAINTS NIG. PLC.	Oba Akran Avenue, P.M.B. 21052 Ikeja, Lagos	01-2805161-3 Email: customercare@bergerpaintng.com
BILLAND CHEMICALS & PAINTS IND. LTD.	29/30, Alhaji Haruna Street Off College Road, Ifako Agege, P.O. Box 7877, Ikeja, Lagos	08023160389
CAMEL PAINTS AND CHEM. IND. LTD.	1, Yaya Close, Off Imudia Str., P.O. Box 1660, Agbor, Delta State.	07060613481 07034143408 07034143409 Email: info@camelpaints.com.ng
CHEMICAL AND ALLIED PRODUCTS PLC.	2, Adeniyi Jones Avenue, P.M.B. 21072 Ikeja, Lagos.	01-4972450 01-4714050 Email: careline@capplc.com
CHEMSTAR PAINTS IND. (NIG) LTD.	Km 32, Lagos-Abeokuta Expressway, Casso B/Stop, P.O. Box 14199 Ikeja, Lagos.	01-7744066 01-7755612 FAX: 01-4971940 Email: finecoatpaints@yahoo.com
MEYER PLC.	Plot 34, Oregun Ind. Estate, Mobolaji Johnson Avenue, Alausa P.M.B. 21002, Ikeja, Lagos.	01-2693592 01-7740579 01-4968250-2 Email: info@meyerpaints.com
DALUX CHEM. IND. LTD.	Kilani Oke Way, By Opeyemi Bus Stop, Ibereko, Off Aradagun Bus Stop, Badagry P.O. Box 1567, Apapa, Lagos.	01-7624773 07086707740 08033322971 Email: daluxchem01@yahoo.com
EAGLE PAINTS IND. LTD.	Plot 5, New Isheri Road, Agidingbi, Ikeja, G.P.O. Box 3329 Marina, Lagos.	01-4920057 01-4920559 Email: akintundedisu@eaglepaints.com.ng

EGRO-SOLID NIG. LTD.	12, Onievwe close, behind VitamaltAgbara, P.O. Boxx 111 Oto-Ijanikin, Lagos.	01-712131 08033081382 Email: egrosolid@yahoo.com
EREKE PAINTS NIG. LTD.	3, Ereke Avenue Ojodu, Abiodun, P.O. Box 9344, Ikeja Lagos.	07039167044 Email: ereke_paints@yahoo.com
JACBON IND. LTD.	Km 2, Nkpor-Obosi Road, Opp. Jairo Filling Station, Obosi, P.O. Box 4113, Onitsha, Anambra State.	080766508132 08035005902 08036160797 Email: bonaluxb@yahoo.com
LYDOLINE PAINTS LTD.	58, Adeola Avenue, Ifako-Agege P.O.Box 297, Ikeja, Lagos	08033086283
MEX-MACON INT. LTD.	9, Onitsha-Enugu exp. Road, Onitsha, P.O. Box 6540, Onitsha	0803-3238218 Fax: 234-46-218771 Email: madueke2005@yahoo.com
NALIN PAINTS IND. LTD.	8, Black and Proud Crescent Achara Layout, Enugu	08033229908 08055040976 Email: nalinpaintltd@yahoo.com
NICEN INDUSTRIES LTD.	Km 5, Old Aba-Owerri Rd., Osisioma Ind. Layout Aba	082-441788 08037078078 08042155261 Email: ezenicen@yahoo.com
NIGER CEDAR IND. NIG. LTD.	1, Cedar Road, Ojodu Village, Off Julius Berger Bus Stop, P.O. Box 2402, Ikeja, Lagos.	08032951771 08023710569 Email: benotogbolu@gmail.com
PEACOCK PAINTS LTD.	IkoEkan, P.M.B. 1054 Etinan, Akwa Ibom State.	08033601614 Fax: 085-201090 082-440574
PORTLAND PAINTS & PRODUCTS NIG. PLC.	105A, Adeniyi Jones Avenue Ikeja, P.M.B. 21782, Ikeja, Lagos.	01-4968181-3 01-7740413 Fax: 01-5507651 Website: www.portlandpaints.net
POWERSEAL NIG. LTD.	4, Sultan Road, P.O. Box 629, Kaduna	08058012081 08029481791 Email: ibus@powersealpaints.com Betaraku_usman@yahoo.co.uk
PREMIER PAINTS PLC.	Km 2, Ifo-Ibogun Road, P.O. Box 211 Ifo, Ogun State	08037270473 08033343755 Email: walebanks@yahoo.com
PRESIDENT PAINTS NIG. LTD.	Km 27, Lagos Abeokuta exp. Way, Amadiyya B-Stop, AbuleEgba, P.O. Box 11771, Ikeja, Lagos	01-7943761 08033003586 08023239007 Email: info@presidentpaints.com Website: presidentpaints.com
REGENCY OVERSEAS CO. LTD.	13, AbebeVillage road, Iganmu, P.O. Box 856, Lagos	01-7646691 01-7646692 Email: sales@rolng.com
SACLUX IND. NIG. LTD	OhokobeAfara-ukwu, Ibeku, Off Aba Road, P.M.B. 1409 Umuahia, Abia State	07037174435 08035492956 08032360542

		Email:sacluxpaints@yahoo.com
SAVIOUR CHEM & ALLIED PRODUCTS LTD.	6, Savior Avenue, Off Ille-Eja Road, Okerubelkotun, Lagos.	08033050701 08095405551 Email: saviourchemicals4@yahoo.com
SHARON PAINTS & CHEMICAL CO. LTD.	No. 12-20, Sharon Paints Avenue, Ngwo P.O. Box 14102, Enugu	08101615380 Email: sharonpaintsltd@yahoo.com
YSR. CO. LTD.	Behind Oando Filling Station, Ibereko, Badagry, P.O.Box 3951, Apapa, Lagos.	01-4713712 0803-3060164 0802-3937339
DEMCOCK PAINTS LTD.	14, Dike Ogu Avenue, Off Agip Road Portharcourt.	08033421112 08037584564 Email: demcotex4sure@yahoo.com
TECHNOGEM LTD.	No, 4, Lane B, AkpanEtuk Str., Uyo, Akwa Ibom State.	08173100921 08023100921 Email: aniekan.bassey@technogemltd.com Website: technogemltd.com
GOLDEN VOICE CONCEPT LTD.	New Mesallaci Rd. Opp. Hadejia rd. Yankaba by Dakata Junction, P.O. Box 4447, Kano	0803-786-7512 Email: goldenconcept@hotmail.com
SELLAR PAINTS NIG. LTD.	47, Dada Onijiamah Crescent, Awodiora, Estate, P.O.Box 618, Apapa, Lagos.	01-7748189 01-2631972 0803-3250864 Email: sellarpaints@yahoo.com
ALASKA PAINTS LTD	7B, Prince Durotoye Street, IfakoAgege, P.O. Box 3606, Ikeje, Lagos	01-4926193 0802-3033946
CITIZENS CHEM. IND. (NIG.) LTD	Km 2, NkporObasi Road, P.O. Box 613, Obosi Anambra State	08033934156 08033215545 Fax: 046-212014 Email: citigroup1993@yahoo.com
DECORK PPRODUCTS & CO. LTD	128, Faulks Road, P.O. Box 12133 Umungasi, Aba	08037242284 Email:decorkproductscompanyltd@yahoo.com
DIAMOND PAINTS NIG. LTD	5, J.I.B Industrial Road Jos	073-457636 0803-5896930 Email: diamond.paint@yahoo.ca
MEGASEA INT. PAINTS LTD	5, Tijani Ashogbon Str., Bariga, P.O. Box 4585k Ikeja, Lagos	08028863909 08028352515 Email: megaseapaints@gmail.com
IPWA PLC.	Oba Akran Avenue, P.O. Box 67, Ikeja, Lagos.	01-4968155-8 01-4961716 0802-3018591 Fax: 4970148-9 Email: ipwaplc@hyperia.com
KOBAK PAINTS LTD	53, Arigo Street, near Volkswagen B/Stop Ira Quarters, Ojo, P.O. Box 3165, Festac Town, Lagos	01-7741820 01-4802144 0803-3823381

PERFECT PAINT LTD	5, OseniAkinganhim Str., Dele Aro B/Stop Abaranje Road, Ikotun, Lagos.	08023405144 08183050038 Email: perfectpaintltd@yahoo.com Website: www.perfectpaint.com.ng
PAINTS & COATINGS TECHNOLOGY SERVICES LTD.	6, Tunji Adebayo Street, Off Iju Road, Fagba B/Stop, Agege, Lagos. P.O. Box 18635, Ikeja	08033005290 08084288450 08173005290 Email: drsomorin@pctsng.com , drsomorin@yahoo.com Website: www.pctsng.com
VODA PAINTS LTD	Km 33, Lagos-Ibadan Exp. Way Magboro Ind. Area (Ascon Petroleum Zone) Magboro, Ogun State.	01-7915472 01-4701025 01-8120404 Email: inquiries@vodapaints.com Website: vodapaints.com
COSPEE WISDOM NIG. LTD	12, Gold Coast Rd. Sabongari, Kano	08037024612 08058420573 07090317298 Email: cospeewisdom1@yahoo.com
PHILOFES NIG. LTD	84A, Aiten Rd Sabongari, P.O. Box 2716, Kano.	08032655295 07090317298
SKYWALL CHEMICALS LTD	No. 45E Ibo Road, Kano.	08034519797 Email: yakudimabashir@yahoo.com
SUNLUX PAINTS LTD	45, Ibo Road, SabonGari, P.O. Box 5051, Kano	08037878230 064-646502 064-630513
ELCODIS-LUI IND. LTD	Oduke Layout, Behind Electrical Mkt., Obosi	08033094177 Email: elcodispaint@yahoo.com
A.U. DONAC IND. LTD	Km 5, Oba Okigwe Road, Ojoto-Afia, Ojoto Anambra State.	08033430113 08052808984 Email: donagroup@yahoo.com
BLENDTECH LTD	12-20, Clem Road, Adanitan Estate, IjayeOjokoro, Lagos.	01-8954877 08023152472 Email: bolubabatunde@yahoo.com
FREEMONT GLOBAL STRUCTURES LTD	16/18, Ikotun Road, Opp. Ikotun Market, Ikotun, Lagos.	08033431216 07028165513 Email: freemmontltd@yahoo.com
PRESTIGE PAINTS LTD	Km 2, Ajegunle Road, Prestige Bus Stop, AttanOtta, Ogun State	08034049158 Email: prestige4urbuiding@yahoo.com
SONIC PAINTS LTD	21, Upper Sakpoba Road, Benin City, Edo State	08033700637 Email: ebukaezekwueme@yahoo.com
INFINTY PAINTS INT. LTD	Km 36, Lagos-Ibadan Exp. Way, Ago Agbala, Ibafo, Ogun State. P.O. Box 14624, Ikeja, Lagos.	07030800337 08023039427 Email: infinitypaintsintl@yahoo.com , www.infinitypaints.com
ORBITCHEM NIG. LTD	Plot 100/120, Idu, Road, Ikotun, Lagos.	07090818601 08074938359 Email: orbitchemltd@yahoo.com

PAINTS & COATINGS MANUFACTURERS NIG. PLC	18/24, Ajisehiri Street, Ladipo Bus Stop, ShogunleOshodi, Lagos.	01-7404044 Email: femi@pcmnigeria.com, www.pcmnigeria.com
CODILLY INVESTMENT LTD	Plot 386-388, Maryland, Enugu.	08033133708
GOLD EDGE IND. NIG. LTD	9, Ilado Street, Adexson B/Stop, Akesan, P.O. Box 558, Ikeja, Lagos.	01-4359667 01-4331316 08033017345 Email: goldedgeind@yahoo.com
KINGMOS PAINTS NIG. LTD	44, Aka Road, Uyo, Akwa Ibom State	08057143895 08062400665 08022044635 Email: dir.kingmospaints.2025@gmail.com
MABOLC INT. LTD	Plot 20, Shyllon Estate, Alagbado, P.O. Box 13915, Ikeja Lagos	08053048300 08023131448 Email: majek_owoo@yahoo.com Website: www.mabolc.com
JO-SYLVA IND. LTD	79/83, Olowora Road, P.O. Box 10267, Ikeja, Lagos	08033018229 07032744444 Email: josylva@yahoo.com
JCE CAN GLOBAL LINK NIG. LTD.	No. 10, AlhajiKazim Street, by Oko Filling Bus Stop, Igando, Lagos.	08061152877 01-8418674 Email: jcecanglobalpaints@gmail.com
EZETEM GLOBAL PAINTS NIG. LTD	No. 6A, Ogundare Street, Mosan, Ipaja, Lagos.	08033043106 08035518790 08055348605 Email: ezekieladagbada@gmail.com
BECKERS INDUSTRIAL COATINGS LTD	Km 33, Lagos-Badagry Exp. Way, P.O. Box 14, Julie Post Offic, Ikeja, Lagos.	07033735655 01-2956905 Email: damolaolusmade@beckers-group.com
PRECIOUS PAINTS NIG. LTD	4, Mission Street, F.L.C.H, Ipaja, Lagos	08023801775
JOLAKO SPECIAL PAINTS	Plot 85, Adelakun Street, Off Kudaki Road, by Hostel Bus Stop, Agogo, Egbe, Lagos	07040602423 08082528573 Email: preciouspaintsofficial@yahoo.com
ACCURATE CHEMICAL AND ALLIED INDUSTRIES LTD	31, Illufe Road, Ojo, Alaba, P.O. Box 376, Festac Town, Lagos	08033221040 08034756437 Email: accuratechem.84@yahoo.com
CHEQAN NIGERIA LTD	9/11, Nando Crescent, Off YisaOladimeji Street, U-Turn, AbuleEgba, P.O. Box 15154, Ikeja	08033001525 08033018512 08033248297 Email: cheqannigeria@yahoo.com
COAST PAINTS AND CHEM. LTD	107, Ikola Road, Off Obafemi Awolowo Road, Via OdoEran, Ota, Ogun State.	08023164511 07062159140 Email: coastpaints23@yahoo.com
GLAXO PAINTS NIG. LTD	59 Ikwere Road, Mile 1, Diobu, Port Harcourt, Rivers State.	08033100915 08169088447 Email: ouzuma@rockmail.com Uniquehomes28@yahoo.com

INTEGRATED PAINTS AND ALLIED PRODCUTS LTD	27, Thomas Ekun Street Off AIT Road, Alagbado, Lagos	08033082612 08039544882 08150730384 Email: integratedpaints@yahoo.com
GOODNEWS PAINTS AND CHEM. IND. LTD.	No. 1, Yusuf Street, Ira Quarters, Ojo, Lagos	08033801707 Email: iykedangoodnews@yahoo.com
SEIKO PAINTS LLTD	23 OlufemiAjayi Street, Ifako, Ijaiye, Lagos.	08036749618 Email: seikpaints@yahoo.com
BEST LABORATORIES LTD	54, Egbe Road, jigbo, Lagos.	08034816922 08092344699 07089141659 Email: xanders200@yahoo.com
ABC PAINT AND CHEMICALS NIG. LTD.	E-12F, Niger Street Opp. Mr Biggs, Kano.	08034411771 08082119911 Email: abcpaintltd@yahoo.com
SAAT SPECIALITY COATINGS SOLUTIONS LTD.	9, Association Avenue, Ilupeju, P.O. Box 283, Apapa, Lagos.	08023152475 Email: saatcoatings@gmail.com
EVIDENCE PAINTS NIG. LTD.	14C, Benin-Agbor Road Opp. First Bank, IkpobaHill, Benin City, Edo State.	08037155453 08095607093 Email: suechem55@yahoo.com
PASTEL INDUSTRIES LTD.	Plot 7, Surulere Street, Ogba Industrial Estate, Ogba, Ikeja, Lagos.	08095178063 Email: chris.aoun@pastelng.com
ARMSTRONG PAINTS	No. Western bye-pass Beside Funtosh Petroleum Resources, Iwo-Ibadan Road, Iwo	0803618184162
FUNDAMENTAL TECHNOLOGY LTD.	29, Olurin Street, Off Iyana Ilogbo, Ojuore, Ogun State.	08099712185 08072658726 Email: fundapaints@yahoo.com
DIMLOB VENTURES LTD.	Plot 7 & 8, Momtola Layout, Ekin-Ologuneru, Ibadan, Oyo State.	08037051722 Email: sirleks4040@gmail.com
BULDARS PAINTS LTD.	6, Obanta Close, Alafia Estate, Aseese, Off Lagos Ibadan Exp. Way. Aseese, Ogun State.	08023261492 07035357395 Email: buildarspaints@gmail.com
YALOGS PAINTS NIG. LTD.	9, Jolaoso Layout, Fajol Estate, Obantoko, Ibadan Road, Abeokuta, Ogun State.	08033213645 08034253306 Email: yalogspaintsnigltd@gmail.com
MICROLUXINDSUTRIAL AND CHEM. CO. LTD.	20, Andrew Uncugba St, Off New Lagos Road, Benin City, Edo State.	08050997186 08083236928 Email: microluxindustrial@yahoo.com
CHROMAX AND MACRO ALLIED	12, Oluwole Street, by Powerline Bus Stop, Ejigbo, P.O.Box 3604, Sabo-Yaba, Lagos.	08034716910 08176999646 Email: chromaxmcr@gmail.com
LUSTER PAINTS AND CHEMICALS	40-46 AbuleOtun Road, Egbado, Ajegunle, Via Ewekoro, Ogun State.	08037167115 Email: lusterpaints@gmail.com
CHRISTANBETH INVESTMENTS LTD.	Conoil Building, Ground floor, Plot 763, Herbert Macaulay Way, Central Business District, Abuja.	08033120109 Email: christanbethltd@gmail.com

TOP POWER PAINTS LTD.	10, Mohammed Akije Street, Off Ifoshi Road, Ejigbo, Lagos.	08033317736 Email: toppowerpaintsltd@gmail.com
TRITON INT. CO.LTD	11, Iyaoloye Crescent, Ismail Estate, Maryland, Ikeja, Lagos.	08175044210 08030744444 09053934040 Email: info@tritoncl.com www.tritoncl.com

Annex 2: List of Paint Raw material suppliers

CHIZZY NIG. LTD	Opp. Saddle Club, Olowora Junction Isheri Rd, Olowora.	01-4925227 01-7747936 Fax: 01-4966044 Email: chizzyltd@yahoo.com Website: www.chizzyltd.com
CORMART NIG. LTD	Cormart House, Plot A, Block 2, Ilupeju Ind., Estate, Apapa-Oshodi Exp. Way, Ilupeju,	01-7616605 Email: cormart@clicktgl.net Website: www.cormart-nigeria.com
DANEL (NIG) LTD	17, Morrison Road, Off Oregun, Ikeja, Lagos.	Tel/Fax: 01-7742889, 01-4930467 Mobile: 01-7755426 Email: info@danelnigtld.com
NYCIL LTD	Plot 5-8, Ogun State, Housing Corporation Ind. Estate, km 6, Ottaldiroko Road, Ogun State.	08148599840 08163580593 Email: nycil_limited@yahoo.co.uk Website: info@nycil.org
SAMKING CHEMICALS LTD	Plot 13A, Acme road, Ogba, Ikeja, Lagos Nigeria. OR Fawora House, 538, Lagos Abeokuta exp. Way, Opp. Bank PHB, Ahmadiyyah, Lagos.	01-7752257 01-7611766 01-7611776 Fax: 01-3451578 Email: info@samkingchemicals.com
NAGODE	33 Mobolaji Johnson Ave, Eleganza Plaza, Oregun Ind. Estate, Alausa, Ikeja, Lagos.	01-4527014 01-4525528 Email: info@nagode.com Website: www.nagode.com
PARCO ENTERPRISES NIG. LTD	2, Central Avenue, Off Point Road, Apapa GRA, Apapa, Lagos.	07087415522 07086063223 Email: info@parco.net jc.mehta@parco.net Website: www.parco.net
CHEMTON NIG. LTD	7B, Ologun Agbaje Street, Off AdeolaOdekun, Victoria Island, Lagos.	08122198283 Email: info@chemtonng.com Website: www.chemtonng.com

EUROBRIDGE IND. LTD	Menthol Avenue, Behind TAS Petrol Station, Arepo, Ogun State	08034410000 08028802033 Email: chrisayu@yahoo.com
FALCON CHEMICALS LTD	Falcon House, 7, Chief David Street, off km. 42, Lagos-Abeokuta Exp. Road. Otta, Ogun State.	08181428290 08090448670 Email: falcon-chemicals@yahoo.com, macrosol@falcon-chemicals.com
ORKILA CHEMICALS LTD	48, Ogunnusi Road, Ojodulkeja, Lagos.	01-7742182 01-3205772 0802-3042577 Email: info@orkila-ng.com
ANTOAN CHEM. IND. LTD	No. 1, Shonola Street, Ogba, Ikeja, Lagos.	08033068744 08033373938
TRUVALU LTD	3B, Folawewo Avenue, Ikeja, Lagos.	08033333536 01-8538058 Email: truvalu2003@gmail.com
MELVYNNICKSON NIG. LTD	11E, ObagunAvene, Off Fatia Atere Way, Matori Ind. Estate, Mushin	01-4527429 Fax: 01-4936872 Email: irvingsinat@hotmail.com, girish@melvnnicksonnig.com
RAGI IND. LTD	Olajire House, 3, Ilupeju Bypass, Opp. Mega Plastics Ilupeju.	01-7917575 01-2718175-8 08072387288 Email: ragindustriesltd@yahoo.com
ROBINSON VENTURES LIMITED	646/648, Lagos-Abeokuta Exp. Way, Adura Bus Stop, Alagbado, Lagos.	01-4784585 08026608333 080256608811 Email: robinsonchemicals@yahoo.co.uk
BOLA CHEMICALS VENTURES	Km 22(1004), Badagry, exp. Way, Iyana Isashi, Bus stop, Lagos.	08033045240 08166346634 Email: ganiyu_adewale80@yahoo.com
REDACHEM IND. NIG. LTD	Valley View Plaza, 2 nd Floor, 99 Opebi Road, Ikeja, Lagos.	08072036221 Email: amol.patil@redachem.com Website: www.redachem.com
LEXCEL LEXCELCHEM LTD	Plot 13, Block XII Ind. Estate, Off Ota-idiroko Road, Ogun State.	09019702773 08115558397 Email: rajiv@lexcelchem.com, dheeraj@lexcelchem.com
BASF WEST AFRICA LTD	1, Murtala Muhammed Drive, Ikoyi, Lagos.	014607480 Email: akintayo.adisa@basf.com
BRENNTAG CHEMICALS NIG. LTD	Plot 1, Block G, Oshodi Ind. Layout, Oshodi-Apapa exp. Way, Matori, Lagos.	09028904704 08035713044 Email: nurudeen.balogun@brenntagigeria.com, www.brenntag.com
EMYCHEM LIMITED	2A, Henry Carr Street, Off Akanni Doherty Street, Ikeja.	01-7740500 01-7910470 Fax: 01-4615914 Email: emychem.com

Annex 3: QUESTIONNAIRE FOR PAINT MAKERS

Section A

This Section is centered on getting the bio-data of the respondents

1. Name of Respondents:
2. Name of Organization:
3. Role of Respondent:
4. Contact number/ information:
5. Estimated No of Employees:
6. Estimated Sales Per Annum:
7. Total company production capacities (t/year)

Section B

This section focuses on ascertaining the knowledge of the respondents on Lead additives.

1. What lead additive(s) do you use? A.as Pigments B. as Dryer C. others, please Specify _____

QUESTION	ANSWER	
Which raw materials that could contain lead are in use in your company. Please specify trade names and attach MSDS, if possible	Possible Lead compound	Quantity per year
	Driers:	
	Orange pigments:	
	Yellow pigments:	
	Green pigments:	
Please, specify		
Production equipment		
Laboratory equipment for paint production		
Laboratory equipment for application		
Laboratory equipment for paint testing		

2. Do you know of any lead alternatives as A. Pigments B. Dryers C. Others _____
3. Do you use any of the aforementioned Alternatives? A. Yes B. No
4. What kind of paint do you produce? [] Emulsion [] Gloss [] Epoxy [] PVA [] others specify _____
5. Which of these Paint Types Contains Lead A. Emulsion B. Gloss (Solvent-Based) C. Satin
6. Do you provide lead content information on your product? A. Yes B. No
7. What supplier do you get your leaded materials from? A. Local B. International
8. If Local, please specify the name and address: _____
9. If 7 B, What country do you get your leaded materials from? _____
10. Do you think lead ingredient should be eliminated from Paint? A. Yes B. No
11. If Yes, How _____
12. What role can the industry play in the elimination of lead content in paint?

13. Which do you consider cheaper between leaded materials and lead free alternatives? A. Leaded Materials B. Lead Free Alternatives

14. What challenges do you envisage in the changing process to lead free alternatives?

QUESTIONNAIRE FOR SUPPLIERS

Section A

This Section is centered on getting the bio-data of the respondents

1. Name of Respondents:
2. Name of Organization:
3. Role of Respondent:
4. Contact information:
5. Estimated No of Employees:
6. Estimated No of Sales Per Annum:

Section B

This section of the questionnaire will focus on ascertaining the knowledge of the respondents on LEAD content in their respective materials.

1. What paint materials containing lead do you supply? A. Pigments B. Dryers C. Others, Specify __a and b_____

Lead compounds referenced by LPA					
Pigment	Tick [v]				
Primary	[] Lead carbonate White lead: 1319-46-6)				
Yellow pigment	[] Lead monoxide (1317-36-8)	[] Lead chromate (7758-97-6)	[] Lead sulfate (7446-14-2)	[] Lead molybdate (10190-55-3)	[] Lead sulfochromate yellow (1344-37-2)
Red pigment	[] Lead chromate molybdatesulfate red (12656-85-8)				
Driers	[] Lead octanoate (7319-86-0)	[] Lead 2-ethylhexanoate (301-08-6)	[] Lead naphthenate (61790-14-5)		
Other Additives	[] Lead chromate oxide (18454-12-1)	[] Lead oxide (1314-41-6)	[] Lead nitrate (10099-74-8)	[] Lead peroxide (1309-60-0)	[] Tri-lead bis(carbonate) dihydroxide (1319-46-6)

1. Do you supply lead free alternative raw materials? A. Yes B. No A
2. Are you provided with material safety data sheet at the point of purchase? A. Yes B. No B
3. Do you provide Safety Data Sheet or Material Safety Data Sheet to buyers at the point of supply? A. Yes B. No B
4. Can you access lead free alternatives? A. Yes B. No A ONLY DRYERS
5. What Challenges do you face in accessing lead free alternative raw materials? A. high cost of purchase B. Unavailability C. Poor Quality/ Viability D. Other, please specify_____
6. Which do you consider cheaper? A. Leaded Materials B. Lead Free Alternatives A
7. Do you think lead in paint is hazardous to end users A. Yes B. No A
8. What role can suppliers play in moving to the use of lead free alternative in paint production?

Annex 4: Inputs from stakeholders

Inputs from PMA



PAINTS MANUFACTURERS ASSOCIATION OF NIGERIA

Page

GLOBAL ENVIRONMENT FACILITY (GEF) 9771: GLOBAL BEST PRACTICES ON EMERGING CHEMICALS POLICY ISSUES OF CONCERN UNDER THE STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT (SAICM): ELIMINATION OF LEAD PAINT- BASELINE INFORMATION IN NIGERIA: PMA'S COMMENTS/INPUTS

Congratulations on the successful hosting of the Webinar meeting in respect of the above last Thursday, July 23, 2020 to articulate the comments/inputs from the different stakeholders.

Members of our Technical Committee went through the report and they were satisfied with it.

However, we have some comments as follows:

1. We commend the Federal Ministry of the Environment and SRAdev on the baseline report.
It represents the true nature of lead in paint challenge in Nigeria.
2. Like we had stated at different fora in the past, no paint company or manufacturer imports lead to add to paint during production. Lead enters paint via lead- based compounds such as chrome pigments or other drying agents.
3. In view of the current challenges posed by the Covid 19 Pandemic across the globe, we feel concerned that the 2020 commencement date for implementation and enforcement is not realistic. January 2022 looks more realistic.
4. In addition to our effort aimed at sensitizing the local raw materials suppliers to the industry, FME and SRAdev need to do a further sensitization of the suppliers and their foreign partners.
5. Page 13, line 1, change production to products, ranges to range, car to Automotive.
Line 2, add polyesters after Acrylic.
6. Page 18, under Major brands of Paint Manufacturers, add Caplux.
7. 4.3.11, include the updated Corporate Profile of Berger Paints Nig. Plc(see attached).
8. There two sectors in the Nigerian Paint industry today.- Organised and Un-organised sectors.
 - a. Organised sector is made up of those Paint companies which are registered with the Association(PMA). They bear the brunt of all regulations in the industry, pay taxes and levies to the Federal/state governments and their agencies. They have been working hard towards the growth and development of the paint industry in Nigeria. They have known facilities and location addresses where they carry out their businesses.



- b. The un-organised sector is made up of the paint producers who are not easily identified. They are parasites, do not pay taxes and levies. Most of them do not have identifiable location addresses because majority of their products are substandard and of poor quality. They produce paints for unsuspecting developers at construction sites. This is against the ethics of paint production and it should be discouraged by the government. The paints produced at construction sites fail within a few months because they do not use the complete materials to produce. We appeal to the government to encourage them to join the organized sector for ease of co-ordination and enforcement of the quality standards and the new regulations on lead elimination in paint.

Thank you.

Jude Maduka

Executive Secretary

BERGER PAINTS NIGERIA PLC. - CORPORATE PROFILE

Berger Paints Nigeria Plc. (BPN), was established in 1959, The Company is known for pioneering new products and setting the pace in the paint, coating and allied sector.

BPN has been operating in five business segments: Decorative/Architectural finishes, Industrial coatings, Marine & Protection coatings, Automotive/Vehicle refinishes, Wood Finishes and Preservers¹. Some of our well-known brands include Luxol, Clinstay, Super Star and Texcote. The Company has invested in the most technologically advanced Automated Paint manufacturing Plant in Sub-Saharan Africa, an investment of over N2billion naira and with a production capacity of eight million litres annually in addition to the existing Plant with Production capacity of 4.5million litres. Also BPN has distribution outlet of over fifty (50) Berger Colour World spread across the federation.

Berger Paints provides Supply and Apply Services for Corporate and Government organizations.

According to 2019 Audited financial statement BPN recorded a revenue of 3.5billion and profit after Tax of 448million Naira.

Baseline Information for the Lead Paint Country Situation in Nigeria

1) Introduction

- i. Introduction should start with brief discuss on Lead, occurrence, properties, uses, environmental and health impacts.
- ii. A paragraph on Lead as a problem in Nigeria, outlining anthropogenic sources of Lead in Nigeria and major Lead poisoning incidences.
- iii. Another paragraph on the project, a short description of the project itself.

2) Chapter 1

- i. 1.3 – Aims and objectives should be limited to the baseline information only and not the general project title. Therefore, it's to generate and compile baseline information for the lead paint country situation in Nigeria was undertaken. Utilizing available resource, information about production, consumption, import and export as well as a listing of paint manufacturers and vendors, volumes and specifics on lead additives in use for manufacturing in Nigeria.

3) Chapter 3

- i. 3.0 – Materials & Methods should be explained in details.

4) Chapter 4

- i. 4.0 – Study, findings and discussion: The results of the findings should be presented without reference to how the information was gathered, as this should have been discussed under materials & methods and then followed by discussion of the results.
- ii. 4.2.1 – Reconcile the first statement on paint industry been unorganized to paragraph 2 which stated that 80% of the paint industry are organized.
- iii. 4.2.1 – The market price value should be in the same currency for uniformity (Naira or Dollars).

5) Chapter 5

- i. Policy, regulatory and institutional framework – should focus more on the Nigerian situation.

COMMENT ON BASELINE SURVEY IN LEAD-IN-PAINT

1. Under Acknowledgement:

The sentence 'State MDAs particularly FMEnv, FMoH etc'

Comment: The FMEnv, FMoH are not under the State Government but under the Federal Government or does 'State' in this case refer to the Country (Nigeria)?

2. Under introduction:

Comment: The function of Lead-in-Paint is not limited to only pigment and driers. Probably other functions of Lead-in-Paint should be listed.

3. Under Section 1.2

Comment: 'Use of Lead-in-Paint' should be separated from 'Alternative'. They should be discussed separately.

4. In section 4.3, the statement 'most active segment of the chemical industry in Nigeria is in the manufacturing of Paints'

Comment: Is the statement generally accepted and documented;

5. Was data taken from Micro and Small Enterprises Paint companies? These Small and Micro companies are quite many and could contribute largely to Lead-in-Paint pollution.