

Update on the Global Status of Legal Limits on Lead in Paint September 2018



Global Perspective

NEW in the 2018 Global Update

NEW LAWS: Cameroon, Ethiopia, and Iraq have established new laws to address lead in paint.

NEW TOOL: UN Environment published the [Model Law and Guidance for Regulating Lead Paint](#), a resource for countries establishing new laws. Currently available in English, French, Russian and Spanish.

NEW POLICY STATEMENTS: The third meeting of UN Environment Assembly (UNEA 3) adopted a resolution calling for action to eliminate exposure to lead paint. In addition, the American Bar Association passed a resolution which has galvanized legal experts to support the development of lead paint laws globally.

Global Progress Toward Eliminating Lead Paint

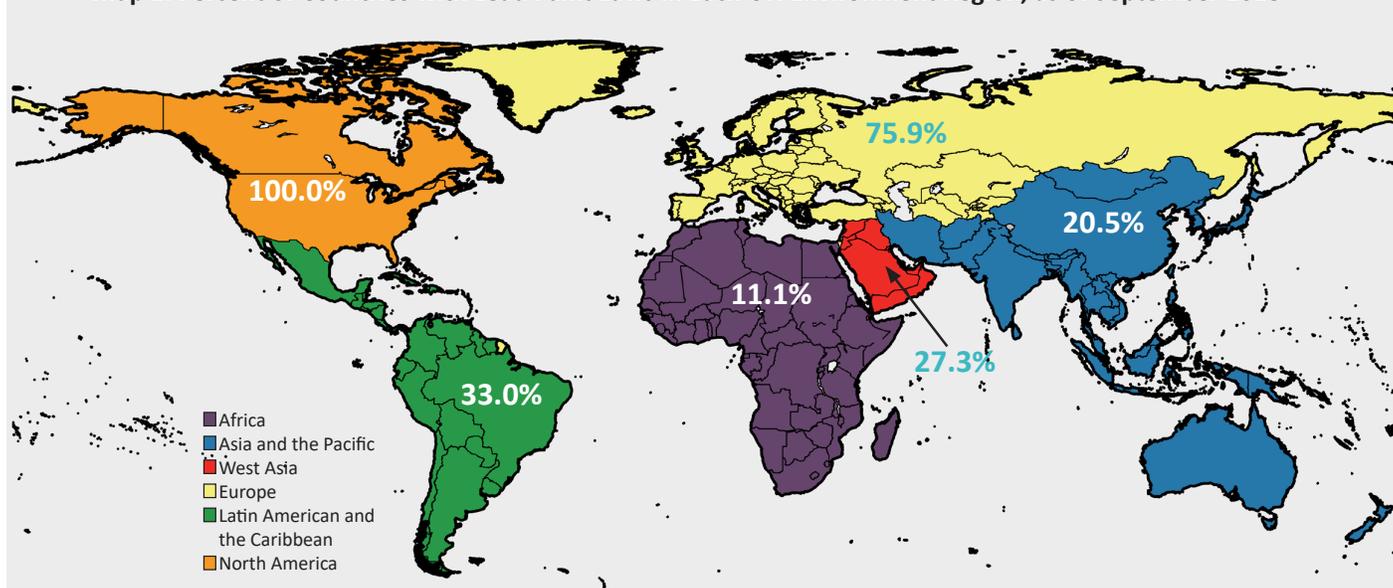
As of 30 September 2018, 71 countries have legally binding controls to limit the production, import and sale of lead paints, which is 36.8% of all countries. In many countries, using lead paint in homes and schools is not prohibited, creating a significant risk of children's exposure to lead. The most effective means of preventing lead exposure from paints is to establish national laws, including legislation, regulations and/or legally binding standards as appropriate, that ban the use of lead additives in paints. Countries that have not yet done so are urged to enact and enforce effective national legislation, regulations and/or standards to, at a minimum, stop the manufacture, import and sale of household decorative lead paints. Countries are also encouraged to consider limiting lead in all types of paints.

This update is provided annually by the United Nations Environment Programme (UN Environment) in support of the Global Alliance to Eliminate Lead Paint (Lead Paint Alliance). UN Environment and the World Health Organization (WHO) serve as the joint Secretariat for this international voluntary, collaborative initiative (see Endnote 1). The goal of the Lead Paint Alliance is for all countries to have lead paint laws in place by 2020.

Countries that have only put in place legally binding controls on lead coatings used on children's toys are not counted toward this Alliance goal. Eliminating lead paint on children's toys provides only partial protection, since it does not address household decorative paints. Likewise, countries that have only ratified the International Labour Organization (ILO) White Lead (Painting) Convention, 1921 (No. 13), which prohibits the use of lead carbonate and lead sulphate in paints, are also not included in this update. Since these lead compounds are no longer widely used in paints, the ILO Convention alone provides little benefit in protecting against lead exposure.

The map below shows the percentage of countries as of September 2018 with lead paint laws within each of the six UN Environment regions (see page 6 for a list of countries by UN Environment region). Table 1, on the following page, lists the specific countries with lead paint laws by region.

Map 1: Percent of Countries with Lead Paint Laws in Each UN Environment Region, as of September 2018



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Unless otherwise noted, all the data in the maps, tables and figures are from WHO: Regulations and controls on lead paint, 30 September 2018 (database) (see Endnote 2).

Table 1: Countries with Confirmed Lead Paint Laws in Each UN Environment Region

| Africa | Asia and the Pacific | West Asia | Europe | | | Latin America and the Caribbean | North America |
|--|---|-------------------------|---|--|---|--|-------------------------|
| Algeria Cameroon* Ethiopia*^ Kenya South Africa United Republic of Tanzania | Australia China India Nepal New Zealand Philippines Sri Lanka Thailand | Jordan Iraq* Oman | Armenia Austria Belarus Belgium Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland France Germany Greece Hungary Iceland Ireland Italy | Kazakhstan* Kyrgyzstan Latvia Liechtenstein Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Romania Russian Federation Serbia Slovakia | Slovenia Spain Sweden Switzerland The Former Yugoslav Republic of Macedonia United Kingdom | Argentina Brazil Chile Costa Rica Cuba Dominica Guyana Mexico Panama Trinidad and Tobago Uruguay | Canada United States |

*New since 1 October, 2017

^The law has been passed, but it has not been put into force

+Status change in WHO database

Lead Exposure from Paint

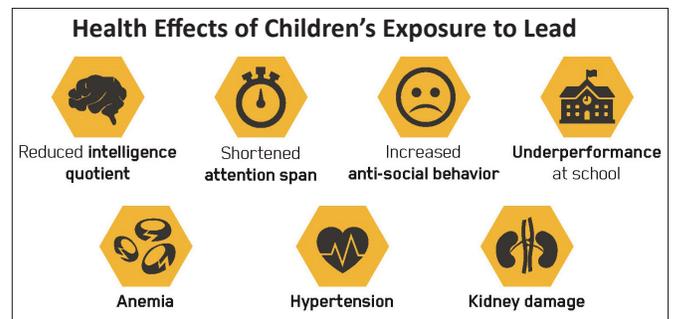
Historically, lead compounds have been added to oil-based decorative and industrial paints and other coatings to enhance colour, reduce corrosion on metal surfaces or shorten drying time. Today, non-lead pigments, driers and anti-corrosive ingredients are widely available for use in most oil-based paints.

After the application of lead paint, weathering, peeling or chipping of the paint releases lead particles into dust and soil in and around homes, schools, playgrounds and other locations. Decorative paint for household use has been identified as the main source of children's lead exposure from paints. Lead-containing dust can also be brought into the home on the clothes of those who work in industries where such dust is generated, including paint factories where lead additives continue to be used.

Lead-contaminated soil and dust are easily ingested and absorbed, particularly by young children when they play on the floor or outdoors and put their hands or other objects in their mouths. Children also ingest lead if they mouth and chew toys painted with lead paint. Both children and adults can be exposed to lead in paint chips and dust during the removal of old lead paint.

Negative Health Effects from Lead Exposure

There is no known level of lead exposure that is considered safe. Lead can cause permanent damage to the brain and nervous system, resulting in decreased IQ and increased behavioural problems. It can also cause anemia, increase the risk of kidney damage and hypertension, and impair reproductive function. Young children and pregnant women (whose developing fetus can be exposed) are especially vulnerable to the adverse effects of lead. Even relatively low levels of exposure can cause serious and irreversible neurological damage. The Institute for Health Metrics and Evaluation has estimated that, based on 2016 data, lead exposure accounted for 540,000 deaths and 13.9 million years lost to disability and death due to long-term health effects (see Endnote 3).



Preventing Health Effects and Related Economic Costs

The negative impacts on children's developing brains resulting from exposure to lead has staggering economic costs that are borne by the affected children, their families and societies at large. These include health care costs, productivity losses and intellectual disability.

The largest economic burden of lead exposure is borne by low- and middle-income countries. Estimated annual costs (in international dollars) of lead exposure by global region, based on loss of IQ, include the following: Africa - \$134.7 billion; Latin America and the Caribbean - \$142.3 billion; and Asia - \$699.9 billion. For annual costs by country, visit the New York University map of Economic Costs of Lead Exposure (see Endnote 4).

The cost of removing existing decorative lead paint from surfaces in homes, schools and other buildings can be substantial. By contrast, the economic cost is low for eliminating the use of lead compounds in new decorative paints. In fact, many manufacturers have already successfully reformulated their paint products to avoid the intentional addition of lead. According to the paint industry, the reformulation of residential and decorative paints to eliminate lead additives is feasible, and the technical and cost impacts are manageable. Increasingly, paint producers are publicly stating that it is possible to eliminate lead additives in all types of paint.

Global Activity

Lead is a cumulative toxicant that poses serious risks to human health and development, with children being especially vulnerable. Lead-containing paint remains one of the major sources of lead exposure for children globally. The international community, governments, industry and non-governmental organizations are working together to promote the establishment of lead paint laws in all countries.

In 2009, the second International Conference on Chemicals Management under the Strategic Approach for International Chemicals Management (SAICM) policy framework endorsed a global partnership to promote the phasing out of lead paint and invited UN Environment and WHO to serve as the joint Secretariat for this partnership. Subsequently the Global Alliance to Eliminate Lead Paint (Lead Paint Alliance) was established with the goal of phasing out the manufacture, import and sale of paints containing lead and eventually to eliminate the risks from such paint. This timeline provides an overview of the Lead Paint Alliance's accomplishments, which have increased in recent years.

2011 – Lead Paint Alliance: UN Environment and WHO published the Lead Paint Alliance operational framework.

2012-2015 – SWITCH-Asia Lead Paint Elimination Project: The European Union (EU) funded work led by the International POPs Elimination Network (IPEN) in seven Asian countries to help phase out lead paint, five of which ended up passing lead paint laws.

2014-2017 – Global Environment Facility (GEF) UN Environment Lead Paint Elimination Project in Africa: IPEN worked directly with four countries and reached out to additional countries in Africa to promote lead paint phase out. Three countries ended up passing lead paint laws.

May 2017 - WHO Chemicals Management Roadmap: The Roadmap included an action item for WHO Member States to establish lead paint laws.

June 2017 - Two-Year Lead Paint Alliance Action Plan: The Two-Year Lead Paint Alliance Action Plan laid out concrete actions for partners to promote lead paint elimination.

August 2017 - American Bar Association (ABA) Resolution: The ABA encouraged their members to support lead paint laws worldwide.

September 2017 - 2017 Update on the Global Status of Legal Limits on Lead in Paint: UN Environment provided lead paint background information and an update on progress toward establishing laws.

November 2017 - Model Law & Guidance for Regulating Lead Paint: UN Environment provided lead paint background information and a model template for a lead paint law.

December 2017 - UNEA 3 Resolution on Lead Paint: Member States passed a resolution calling for the global elimination of lead paint through the establishment of lead paint laws.

2018 – 2021 - SAICM GEF Project: The project will assist governments to establish lead paint laws in at least 40 countries and provide guidance to industry to facilitate the shift to producing non-lead paints.

Global Alliance to Eliminate Lead Paint

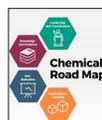
2011 - Global Alliance to Eliminate Lead Paint formally launched



2012-2015 - SWITCH-Asia Lead Paint Elimination Project



2014-2017 - GEF Lead Paint Elimination Project in Africa



May 2017 - WHO Chemicals Management Roadmap



June 2017 - Two-Year Lead Paint Alliance Action Plan



August 2017 - ABA Resolution on Lead Paint



September 2017 - 2017 Global Status Update



November 2017 - Model Law & Guidance for Regulating Lead Paint



December 2017 - UNEA 3 Resolution on Lead Paint



2018-2021 - SAICM GEF Project

Global Status of Lead Paint Laws

The map below shows data on the status of countries' lead paint laws as provided by governments to UN Environment and WHO (see Endnote 2). As of 30 September, 2018, 71 countries had confirmed that they have legally binding controls on lead in paint, 78 stated that they do not, and information was unavailable for the remaining 44 countries.

Map 2: Countries with Lead Paint Laws, as of September 2018

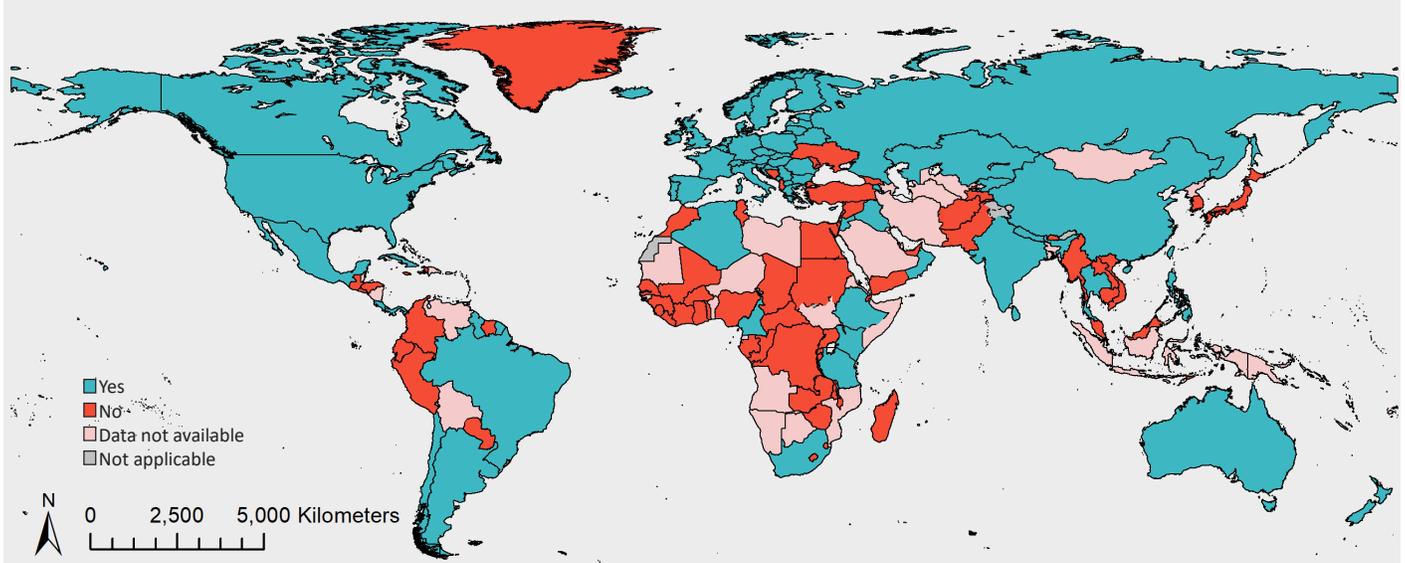
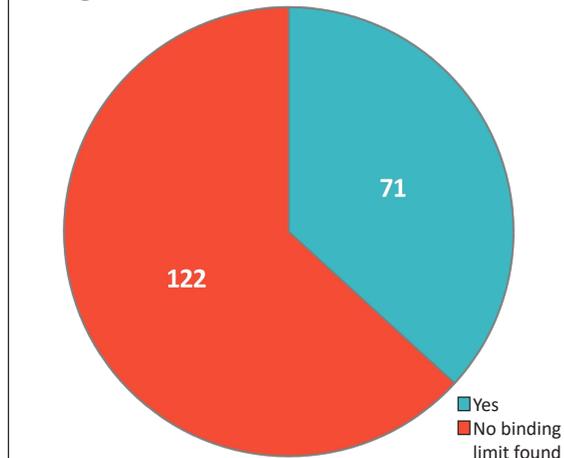


Figure 1: Countries with Lead Paint Laws



Currently **71** countries have lead paint laws and more countries are passing new laws every year.

Lead is Still Present in Paint in High Levels in Many Countries

Since 2009, more than 100 studies have shown that lead paints are still widely sold in low- and middle-income countries. Most of the paints tested for lead were found to exceed the 90 parts per million (ppm) or 600 ppm legal limit that has been set by many countries as an achievable limit. In addition, many of these paints contained very high levels of lead: above 10,000 ppm of the dry weight of the paint. To see paint testing results by country, go to the link for the IPEN map entitled "Lead Levels in Paint Around the World" (see Endnote 5). IPEN is a Lead Paint Alliance partner and is an international public interest, non-profit organization comprised of hundreds of participating environmental and public health organizations in over 100 countries, primarily in developing and transition countries.

The Importance of Lead Paint Laws

The elimination of lead exposure at its source is the single most effective action to protect people from the harmful effects of lead. Most industrialized countries adopted laws or regulations to control the lead content of residential and decorative paints in the 1970s and 1980s, based on clear findings that lead-containing household paint is a major source of lead exposure in children. However, the continued use of lead in paint in many parts of the world remains a significant environmental source of human exposure. To protect human health, laws, regulations or enforceable standards are needed in every country to stop the manufacture, sale and import of lead-containing paints.

Global Approaches to Lead Paint Laws

Countries that have enacted laws to limit the lead content in paint have generally used one of two approaches: (1) establish a single regulatory limit on the total concentration of lead in paint from all sources (currently used in 31 countries) or (2) establish a set of chemical-specific regulatory limits based on the management of risks of individual lead compounds that are used as additives in paint (currently used in the EU's Registration, Evaluation, Authorisation and Restriction of Chemical (REACH) regulation). Both approaches have been effective in limiting the lead content in paint.

The concentration limit recommended in UN Environment's "Model Law and Guidance for Regulating Lead Paint" is **90 ppm** total lead (see Endnote 6).

Legal Approach 1: Regulatory Limits on Total Lead Concentration

Of the 71 countries with lead paint laws, 33 countries have established a single regulatory limit on the total or soluble lead concentration in paint (in parts per million). These existing lead limits range from 90 ppm to 1,000 ppm or higher. Twenty-seven countries have a limit of 90, 100 or 600 ppm, which are all relatively low levels and indicate that lead compounds have probably not been added to the paint. Among countries with low limits, only one country uses a regulatory limit on soluble lead content, which is somewhat less protective than a limit on total lead content. There may be additional countries that also currently use a regulatory limit on soluble rather than total lead.

Table 2: Countries with Limits on Total Lead Concentration

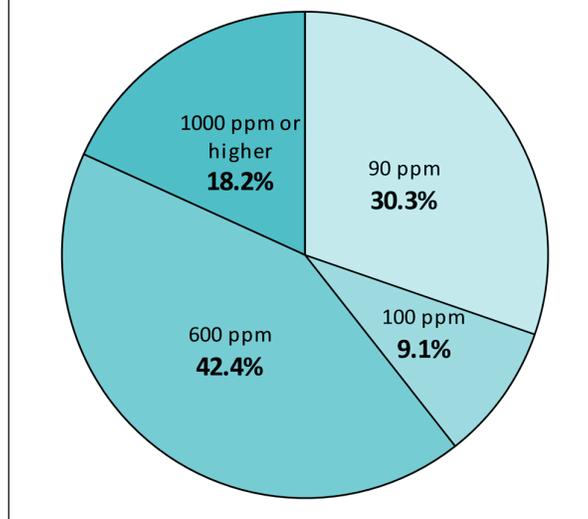
(s) - limit applies to soluble lead content only

| 90 ppm | 100 ppm | 600 ppm | 1000 ppm or higher |
|---|--|---|---|
| Canada Cameroon* China (s) Ethiopia** India Iraq* Kenya Nepal Philippines United States | Switzerland Thailand United Republic of Tanzania | Argentina Brazil Chile Costa Rica Dominica Guyana Jordan Mexico Oman Panama South Africa Sri Lanka Trinidad and Tobago Uruguay | Algeria Armenia Australia Belarus Cuba New Zealand |

*New since 1 October, 2017

**The law has been passed, but it has not been put into force

Figure 2: Percentage of Countries by Lead Concentration Limit



Legal Approach 2: Chemical-Specific Regulatory Limits

Chemical-specific regulatory limits are used by 38 countries, of which 31 have adopted the EU REACH regulation on lead compounds in paints. EU REACH restricts the addition of certain specific lead compounds to paints intended for supply to the general public, based on risk management assessments. Some specific lead compounds for use in paints are subject to an authorization procedure for manufacturers and importers that requires analyses of health and environmental risks and the availability of non-lead alternatives.

Table 3: Countries with Chemical-Specific Regulatory Limits

| | | | | | | | |
|-----------------------|-----------------------------|----------------------|----------------------------|-------------------------|--------------------------|-----------------------|---------------------------------|
| Austria [^] | Czech Republic [^] | Germany [^] | Italy [^] | Lithuania [^] | Netherlands [^] | Russian Federation | Sweden [^] |
| Belgium [^] | Denmark [^] | Greece [^] | Kazakhstan* | Luxembourg [^] | Norway [^] | Serbia | The Former Yugoslav Republic of |
| Bulgaria [^] | Estonia [^] | Hungary [^] | Kyrgyzstan | Malta [^] | Poland [^] | Slovakia [^] | Republic of |
| Croatia [^] | Finland [^] | Iceland [^] | Latvia [^] | Monaco | Portugal [^] | Slovenia [^] | Macedonia |
| Cyprus [^] | France [^] | Ireland [^] | Liechtenstein [^] | Montenegro | Romania [^] | Spain [^] | United Kingdom [^] |

[^]Countries that have adopted the EU REACH regulation
*Status change in WHO database

UN Environment Regions

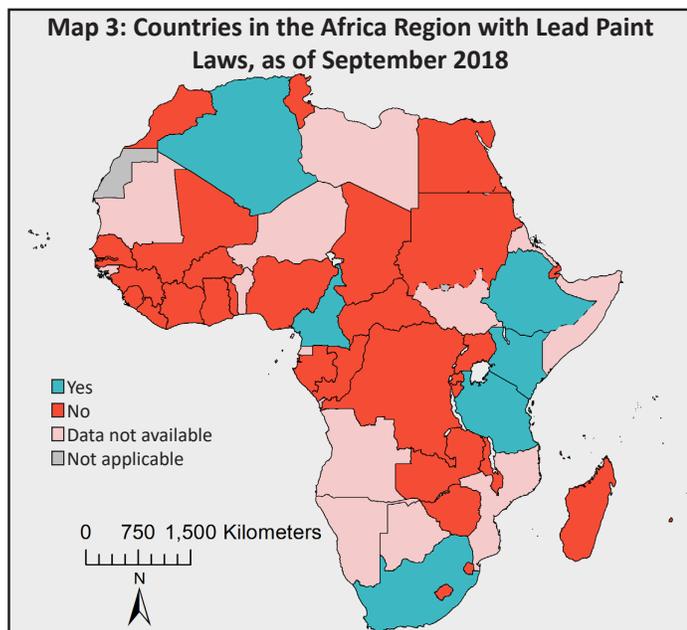
Table 4: Countries by UN Environment Region

(For the purposes of this report, countries are grouped into the six UN Environment regions.)

| Africa | | Asia and the Pacific | | West Asia | Europe | | Latin America and the Caribbean | North America |
|----------------------------------|-----------------------------|---|-------------------|----------------------|------------------------|---|----------------------------------|---------------|
| Algeria | Mauritius | Afghanistan | Papua New Guinea | Bahrain | Albania | Portugal | Antigua and Barbuda | Canada |
| Angola | Morocco | Australia | Guinea | Iraq | Andorra | Romania | Argentina | United States |
| Benin | Mozambique | Bangladesh | Philippines | Jordan | Armenia | Russian Federation | Bahamas | |
| Botswana | Namibia | Bhutan | Republic of Korea | Kuwait | Austria | San Marino | Barbados | |
| Burkina Faso | Niger | Brunei Darussalam | Samoa | Lebanon | Azerbaijan | Serbia | Belize | |
| Burundi | Nigeria | Cambodia | Singapore | Oman | Belarus | Slovakia | Bolivia | |
| Cameroon | Rwanda | China | Solomon Islands | Qatar | Belgium | Slovenia | Brazil | |
| Cape Verde | Sao Tome & Principe | Democratic Republic of Congo | Sri Lanka | Saudi Arabia | Bosnia and Herzegovina | Spain | Chile | |
| Central African Republic | Senegal | Iran | Thailand | Syrian Arab Republic | Bulgaria | Sweden | Colombia | |
| Chad | Seychelles | Japan | Timor-Leste | United Arab Emirates | Croatia | Switzerland | Costa Rica | |
| Comoros | Sierra Leone | Korea | Tonga | Yemen | Cyprus | Tajikistan | Cuba | |
| Congo | Somalia | Fiji | Tuvalu | | Czech Republic | The Former Yugoslav Republic of Macedonia | Dominica | |
| Côte d'Ivoire | South Africa | India | Vanuatu | | Denmark | Turkey | Dominican Republic | |
| Democratic Republic of the Congo | South Sudan | Indonesia | Vietnam | | Estonia | Turkmenistan | Ecuador | |
| Djibouti | Sudan | Islamic Republic of Iran | | | Finland | Ukraine | El Salvador | |
| Egypt | Togo | Republic of Lao, People's Democratic Republic | | | France | United Kingdom | Grenada | |
| Equatorial Guinea | Tunisia | Malaysia | | | Georgia | Uzbekistan | Guatemala | |
| Eritrea | Uganda | Maldives | | | Germany | | Guyana | |
| Eswatini | United Republic of Tanzania | Marshall Islands | | | Greece | | Haiti | |
| Ethiopia | Zambia | Micronesia (Federated States of) | | | Hungary | | Honduras | |
| Gabon | Zimbabwe | Mongolia | | | Iceland | | Jamaica | |
| Gambia | | Myanmar | | | Ireland | | Mexico | |
| Ghana | | Nauru | | | Israel | | Nicaragua | |
| Guinea | | Nepal | | | Italy | | Panama | |
| Guinea-Bissau | | New Zealand | | | Kazakhstan | | Paraguay | |
| Kenya | | Pakistan | | | Kyrgyzstan | | Peru | |
| Lesotho | | Palau | | | Latvia | | Saint Kitts and Nevis | |
| Liberia | | | | | Liechtenstein | | Saint Lucia | |
| Libya | | | | | Lithuania | | Saint Vincent and the Grenadines | |
| Madagascar | | | | | Luxembourg | | Suriname | |
| Malawi | | | | | Malta | | Trinidad and Tobago | |
| Mali | | | | | Moldova | | Venezuela | |
| Mauritania | | | | | Monaco | | | |
| | | | | | Montenegro | | | |
| | | | | | Netherlands | | | |
| | | | | | Norway | | | |
| | | | | | Poland | | | |

Source: UN Environment

Africa



Current Status

Six countries (11.1%) in the Africa Region have lead paint laws. In Ethiopia, the Council of Ministers has passed a lead paint law, but this has not yet entered into force. Côte d'Ivoire is drafting a law. In addition, two regional economic groups – the East African Community (EAC) and the Economic Community of West African States (ECOWAS) – are considering adopting a regional 90 ppm concentration limit standard for lead in paint (lead limit).

Paint testing has been conducted in 21 countries in the African Region. Depending on the country study and the target level, levels of lead exceeding target levels of 90 or 600 ppm ranged from 6% to 86% of samples (see Endnote 5). The annual economic cost of childhood lead exposure in the Africa region is estimated to be \$134.7 billion, or 4.03% of regional GDP (see Endnote 4).

Regional Activities

- February 2018: Lead paint was discussed at the SAICM Africa Regional Meeting.
- June 2018: IPEN and the Association of Environmental Education for Future Generations, co-organized a meeting in Tunisia on the "Substitution of Lead in Industrial Paint in Tunisia".
- September 2018: A side event on lead paint took place at the African Conference of Environment Ministers.
- Cameroon passed new legislation on lead paint.
- 17 events were held in 15 countries in the region during the 2017 International Lead Poisoning Prevention Week of Action (ILPPWA).

Figure 3: Number of Countries in the Africa Region with Lead Paint Laws

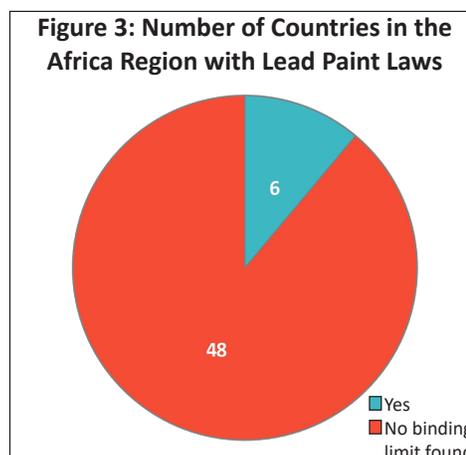


Table 5: 2018 Summary of Country-Specific Lead Paint laws in the Africa Region

| Country | Lead Paint Laws |
|---------|---|
| Algeria | 5000 ppm lead limit for manufacture, import and sale of paint |

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https://www.yunbaogao.cn/report/index/云报告?reportId=5_14386

