Project Completion Report on

Celebration of ILPPW 2021, Nepal with compliance monitoring of Lead Paint Standard towards its effective implementation



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Ministry of Health and Population (MOHP)





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Celebration of ILPPW 2021, Nepal with compliance monitoring of Lead Paint Standard towards its effective implementation

Background

Global Alliance to Eliminate Lead Paints (GAELP) is a global joint initiative of WHO and UNEP with the goal of preventing children's exposure to lead via paints containing lead and minimizing occupational exposures to lead in paint. With the continued efforts of all concerned and especially from the Government of Nepal, the Ministry of Forests and Environment (MoEF) enacted a mandatory standard of 90 ppm on 22 December 2014 and has already taken effect since 20^{th} June 2015. Good thing is that over the years compliance with enacted standards has increased however more needs to be done. Many canned enamels paints including Nepal Standards (NS) marked paints products and canned spray paints still need to improve their paint formulations towards meeting fully the standards concerning lead limits. Additionally, it is important to see the progress about full compliance of the lead paint standards with all enshrined three provisions: ≤ 90 ppm lead content, marking of lead content, and precautionary message to prevent occupational lead exposure.

In order to enhance full compliance with lead paint standards, it is necessary to do periodic compliance monitoring. A long time has passed since the lead paint standard became effective on 20 June 2015, there has not been large and comprehensive compliance monitoring carried out. Therefore, it is aimed to conduct a comprehensive lead paint standards compliance monitoring with some specific focus on NS Marked paints as well as canned spray paints that have never been monitored.

Furthermore, studies have shown elevated blood lead levels (>5 μ g/dl) among over 64 % of Nepalese children (NHRC 2015). 54 % of tested children toys contain most toxic heavy metal like Lead, Mercury, Cadmium, Chromium, and Bromine, etc. (CEPHED 2013), most popular snacks items like noodles tested lead positive (CEPHED 2020), schools classroom dust sample contains lead more than 10 μ g/ft2(CEPHED 2014). All these are contributing to high BLL among the Nepalese population especially children resulting in huge economic losses in Nepal. These all indicate the urgent need to have regular compliance monitoring and massive public awareness as well as sectoral capacity building etc.

Generate the new compliance monitoring data on lead in paints and share the results among all government agencies, business communities, and the general public towards eliminating leaded paint and achieving full compliance with the lead paint standard is aimed to be achieved. Popularization of standard, as well as customization of GAELP Campaign materials for 2021 in the Nepali language, its mass distribution, media campaign, and interaction program with all concerned government and other stakeholders in Kathmandu has been planned in line with the **celebrating International Lead Poisoning Prevention Week of Action (ILPPW), October 2021** aims at increasing public awareness, capacity building of central and provincial government and thus contributing to full and effective implementation of standard towards eliminating lead paint from Nepal. This results in the prevention of children and occupational exposure to lead in paint, also coherence with GAELP's objectives. This is also in line with WHO's continuous support in celebrating ILPPW since 2013.

Objectives of the program

Main objective: Compliance monitoring, awareness-raising, and capacity building to eliminate lead paint thus reducing lead exposure and associated health impacts through the celebration of ILPPW 2021.

The specific objectives are;

- Collection of 70 (50 paint can and 20 Spray paints) samples (new paints, NS marked, and spray) paints from different parts of Nepal of different paint industries and their lab analysis.
- Lab results will be analyzed, report preparation and publish the study report of both canned and spray paint separately and prepare brief for publication.
- Collection, Customization, preparation, production of GAELP New Materials for 2021 developed by WHO and UNEP and widely distributed as well as mass media (Radio and Television) awareness.
- Organization of the International Lead Poisoning Prevention Week (ILPPW 2021) cum Stakeholder Workshop Program and release of the Compliances Monitoring Report of paints (canned & spray) in Kathmandu.
- Advocacy Campaign for full compliance of standards and addressing high lead contamination issues of NS Marked paints and Spray paints.
- Prepare and submission of project completion report to donor and concerned government agencies.ls on lead and its health implications;

Implementation Process

The following procedure was adopted for achieving the above objectives.

(a) Compliance Monitoring of Lead Paint Standards in Nepal

A total of 62 (24 % more than originally 50 targeted) enamel paints samples from 37 industries and 41 different brands, 17 different shades grouped into 9 different colors were collected from some 20 different locations of all seven provinces of Nepal. Sample logs were prepared and send for the total lead concentration testing in a pre-arranged Government of Nepal Accredited Lab namely Nepal Scientific Services (NESS) Pvt. Ltd. using AAS (Atomic Absorption Spectroscopy) method.

The paints samples collected from all provinces of Nepal. The geopolitical distribution of samples can be shown as follows. Details of all enamel paints sampled is given in **Annex 1**.

Geopolitical locations	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudur Paschim
Metropolitan city	Biratnagar	Birgunj	Bharatpur, Kathmandu, Lalitpur	Pokhara			
Sub metropolitan city		Janakpur, Simara	Hetauda		Nepalgunj, Butwal		Dhangadhi
Municipality	Dhankuta	Bhardaha	Bhaktapur, Thimi , Mahalaxmi	Byas (Damauli)	Bardaghat	Birendranaga r	

Table 1: Geo political distribution of paint sample collection



Figure 1. Paint samples collection cities, districts, and provinces.

The result thus obtained of total lead concentrations were analyzed using MS Excel and data were compared against the mandatory standards of lead paint of 90 ppm and labeling provisions of the Government of Nepal. The results were interpreted in a more meaningful and stable format with the help of tables, graphs, and bars as well as pie chart diagrams.

30 out of 62 analyzed solvent-based paints (**48.39 percent of paints**) were not complying with the Government of Nepal's lead paint standard, i.e., they contained lead concentrations above 90 parts per million (ppm, dry weight of paint). Moreover, 7 paints (11.29 percent of paints) contained dangerously high lead concentrations above 10,000 ppm. The highest lead concentration detected was 22850.17 ppm (254 times more than the Government of Nepal lead paint standard of 90 ppm).



Figure 2. Enamel Paint Samples studied

On the other hand, 32 out of 62 solvent-based paints (51.61percent of paints) contained lead concentrations at or below 90 ppm, suggesting that the technology that produces paint without leaded ingredients exists in Nepal. 18 out of 62 (29 percent of paints) contain a Non-Detectable (ND) level of lead including many Nepalese brands.

Only 26 out of 62 paints (41.93 percent of paints) have Lead free or NO Added Lead...... labels. 6 out of 26 (23.91 percent) NO ADDED LEAD labeled paints contained lead concentration above 90 ppm. Moreover, paint cans labeled with leadfree or no added label have been found to contain a dangerously high level of lead, ranking 3rd (15273.42 ppm) is single red color and ranking 7th



Figure 3. Compliance status of lead paint standard in Nepal

(11880.57 ppm) is the golden yellow color of Renew brand of Tara Paint Industry Parsa.

Only 17 out of 62 paints (27.42 percent of paints) have **Nepal Standard (NS) Mark**...... labels. However, paint cans labeled with NS Mark have also contained a very high level of lead up to 2223.96 ppm (24.7 times more than GON Lead paint standard), which needs to be immediately and strictly regulated. 6 out of 17 NS Marked (35.29 percent) paints did not comply with the lead paint standard. The lead content in the non-complying NS marked paints ranges from 94.14 ppm to 2223.96 ppm.

None of the paints provided information about lead content & precautionary message as per the requirement of the Lead paint standard on their labels and most paints carried little information about any ingredients on can labels.

Final reports on the Compliance Monitoring of Lead Paint Standard were prepared, edited, designed, and printed with the support of the Ministry of Health and Population (MOHP), Government of Nepal, and World Health Organization (WHO) Country Office for Nepal.

(b) Study of Lead in Spray Paints in Nepal

A total of 21 (target 20) enamel paints samples from 8 industries and 8 different brands and 7 different colors were collected from different major cities of Nepal. Sample logs were prepared and send for the total lead concentration testing in a pre-arranged Government of Nepal Accredited Lab namely Nepal Scientific Services (NESS) Pvt. Ltd. using AAS (Atomic Absorption Spectroscopy) method. Details of all spray paints sampled is given in **Annex 2**.

The result thus obtained of total lead concentrations were analyzed using MS Excel and data were compared against the mandatory standards of lead paint of 90 ppm and labeling provisions of the Government of Nepal. The results were interpreted in a more meaningful and stable format with the help of tables, graphs, and bars as well as pie chart diagrams.

14 out of 21 analyzed aerosol spray paints (67 percent of paints) were complying with the Government of Nepal's lead paint standard, i.e., they contained lead concentrations less than 90 parts per million (ppm, dry weight of paint). 13 out of 21 (62 percent) of total and 13 out 14 (93 percent) of all complying paints has a lead concentration at non-detectable (ND) level. This demonstrates that the spray paints that only comply with the lead paint standard of Nepal can be produced as well as imported into Nepal to protect its country fellow especially children and the environment.

7 out of 21analyzed spray paints (33 percent) were non complying with the lead paint standard. This is the regulatory limit for lead in paint in Nepal for all kinds of paints being imported, produced, marketed, and used.

Moreover, 2 spray paints (9.52 percent of paints) contained dangerously high lead concentrations above 10,000 ppm. The highest lead concentration detected was 15618.62 ppm (173 times more than the Government of Nepal lead paint standard of 90 ppm). The other paint sample's second-highest lead concentration was 15070.49 ppm (167 times more than the lead paint standard of Nepal) paint sold. Another yellow color sample of the same LAZER brand of Nippon paints company contained the 4th highest lead concentration of 2549.81 ppm (28 times more than standard). The third highest lead concentration of 5357.14ppm (59 times more than the standard limit) was found in red color spray paints samples of nationally produced paints by National Auto and Spray Udhyog.

The final report on the "**Study of Lead in Spray Paints in Nepal**" was prepared, edited, designed, and printed with the support of the Ministry of Health and Population (MOHP), Government of Nepal, and World Health Organization (WHO) Country Office for Nepal.



Figure 4. Spray Paints samples studied in Nepal (CEPHED 2021) 33... 62... 5... 62...





Figure 6 New lead paint studies reports on compliance monitoring of lead in paints, Study of lead in spray paints, brief on lead in paints and compliance status in Nepal

(c) Stakeholder Workshop on Effective Implementation of Lead Paint Standards in Nepal

Center for Public Health and Environmental Development (CEPHED) Nepal with the support of the Ministry of Health and Population (MOHP), Government of Nepal, and WHO Country Office for Nepal successfully organized Stakeholder Workshop on Effective Implementation of Lead Paint Standards in Nepal on the occasion of celebrating International Lead Poisoning Prevention Week (ILPPW 2021) on October 24, 2021, participated by over 50 participants from Government(MOHP, MOFE, DoEnvt, Custom, Internal revenue, Industry, Bureau of standard, custom, Chemical Convention's DNA, NAST, NHRC, OSH Center, Metropolitan and Municipalities, etc.) Non-government (CEPHED, New ERA, LEADER, CCDL, RESPHEC, Green Path Nepal, Hospitals (KMC, BPKMCH,) WHO, FNCSI, Paint Industries, Academia, Scientists, OSH Experts, Medical Doctors, Nurses, Laboratory expert, Consumer advocates, Students, and media personnel's, etc.



Figure 7. Banner of Stakeholder Workshop on effective implementation of lead paint standard in Nepal



Figure 8. Group picture of participants and guest of stakeholder workshop

The major objective of national and provincial level programs was raising awareness and building the capacity to prevent lead exposure through the elimination of leaded paints in Nepal.

Programs were carried out with four sections: Inaugural Session; Technical Session; Interaction Question and Answer Session and Closing Sessions.

The Workshop program has been completed under the chairmanship of Mr. Mohan Katuwal, Vice President of FNCSI, President of Grill and Steel Fabricators, Nepal; Chief Guest Mr. Dhananjaya Paudyal, Joint Secretary, Ministry of Forests and Environment (MOFE) and Special Guests Mrs. Rita Bhandari Joshi, Chief, Multisector Coordination Division, Ministry of Health and Population (MOHP); Dr. Md Khurshid Alam Hyder, PHA, WHO Country Office for Nepal; Mr. Arbind Singh, Chief Manager-Plant and Operation Fashion Paint Industry.

On that occasion, three set of new studies reports was launched by Chief guest and special guests.

(a) National report, Compliance Monitoring of Lead Paint Standard in Nepal, 2021

(b) Study of Lead in Spray Paints 2021(c) Brief on Lead in Paints and its compliance status

Also, five different technical papers were presented in the technical session under the cochairmanship of Dr. Buddaram Shah, Sr. Scientist, NAST, and Mrs. Rita Bhandari Joshi, Chief of Multisector Coordination Division, MOHP.

Compliance Monitoring of Lead Paint Standards in Nepal by Mr. Ram Charitra Sah, Executive Director/Environment Scientist & Ms. Deena Prajapati, Program Coordinator, CEPHED. Briefly covered the new data about the status of the lead in enamel paints and its compliance with standards along with sector specific recommendations for improvements.

Study of Lead in Spray Paint (Pressurized Container): by Mr. Ram Charitra Sah, Executive Director/Environment Scientist & Ms. Sachita Banmala, Program Coordinator, CEPHED. Briefly covered the new data about the status of the lead in spray paints and its compliance with standards along with sector specific recommendations for improvements.

Blood Lead Level (BLL) among Nepalese Population and Needed Abatement Programs in Nepal, Dr. Vivek Panta, Samyak Diagnostic Pvt. Ltd. Kathmandu, Nepal. Briefly covered the new data about the blood lead level (BLL) in various sector e.g. Ayurvedic medicine consuming patient, waste worekrs along with that of children's in Kathmandu and Birgunj along with sector specific recommendations for avoidance of further exposure as well as improvements.

The role, responsibility, and program of LEAD PAINT ELIMINATION of Federal, Provincial and Local Government in Nepal: Mr. Bhupendra Sharma, Sr, Environment Inspector, Department of Environment/ MOFE, GON. Summarizes the role, responsibilities of all concerned responsible authorities as well as brief of all legislative frameworks at all level of government.

WHO initiatives towards prevention and control of Lead Exposure in light of ILPPW 2021. Mr. Raja Ram Pote Shrestha, National Professional Officer, WHO Country Office for Nepal. Briefly summarizes the initiative of WHO at national, regional and international level starting from introducing lead toxicity issues to the extend of problems to the corrective measures taken and way forward for the betterment etc.

Technical sessions were followed by live interaction and discussion and a Question-Answer session.

Finally, the closing ceremony was held with the gracious presence and remarks by Dr. Mahadev Humagai, Prasad Joint Secretary & DNA Rotterdam Convention. Prof. Dr. Sunil Kumar



Figure 9. Closing ceremony of Stakeholder Workshop

Joshi, Sr. OSH Expert, and Mr. Raja Ram Pote Shrestha, NPO, WHO Country Office for Nepal.

The full report of the workshop event can be found in **Annex 3 and** list of Participants in **Annex 4**.

NOTE: In the initial discussion the stakeholder workshop had been aimed to organize in two places Kathmandu and Nepalgunj. However, looking at the COVID situation with restricted mobility as well as all major stakeholder are based in Kathmandu. Based on the final discussion with National Professional Officer (NPO), we decided to hold only one stakeholder workshop in Kathmandu only and accordingly the budget was allocated and approved for just one event in Kathmandu. Therefore, stakeholder workshop in Nepalgunj has not been organized.

(d) Launching of New Study Reports

The final national report on the "Compliance Monitoring of Lead Paint Standard" and "Study of Lead in Spray Paints in Nepal" Study was prepared, edited, designed, and printed with the support of the Ministry of Health and Population (MOHP), Government of Nepal and World Health Organization (WHO) Country Office for Nepal. The reports were released through organizing a stakeholder program on effective implementation of lead paint standards in Nepal on 24th October 2021 on the occasion of ILPPW 2021 celebration kick-off days in Nepal



Figure 10. Launching of lead paint studies reports by Chief and Special Guests of the program

(e) Press Release, Mass Awareness and wider dissemination of the research findings

• **Press Release:** A detailed press release was made at the beginning and end of the weeklong ILPPW 2021 celebration events that were massively covered by the series of newspaper, online media, radio, and televisions news reporting. The PRESS RELEASE can be found in **Annex 5.**

- Radio and Television Interview: The events accomplished during the week, press released and new research findings and report released attracts many online, print, and
 - electronic news media. There were number of news reporting's, radio interview (Ujyalo Network, Thaha Sanchar, Nepali Radio Network, etc.) and an exclusive television show with Mr. Ram Charitra Sah, Executive Director and team leader of research, in mainstreaming TV News Channel named Kantipur Television's top show named Good Morning Nepal.



Figure 11. <u>https://www.youtube.com/watch?v=CL_4F7nGRMM</u> Kantipur Television Good Morning Nepal TV Show, 26th Oct 2021



Radio Program from Nepali Radio Network (NRN) on ILPPW 2021 on October 28th, 2021.

An exclusive radio interview with the senior radio journalist Mr. TP Bhushal about lead in paints associated socio-economic losses as well as the other health impacts of lead in paints and overall lead toxicity in case of Nepal.

Another exclusive radio interview on ILPPW 2021 about Lead, its impact, sharing information on new research of compliance monitoring of lead paint standards and study of lead in spray paints, its impact on health and environment and finally way forward to be prevented from THAHA SANCHAR listed nationwide.



Figure 13. Radio interview with RJ Mr. Om Bhandari, Thaha Sanchar Radio

• Massive Media Coverage: The events accomplished during the week, press releases, and new research findings and reports released attract many online, print, and electronic news media as there was numerous news reporting's.

Lead poisoning prevention week being marked

By A Staff Reporter Kathmandu, Oct. 25

The ninth International Lead Poisoning Prevention Week (ILPPW) began on Monday.

Environmental health and child health advocates, governments, and paint industries are uniting for IL PPW this week.

They have urged the governments to adopt and effectively implement the legislation to protect children's health.

Centre for Public Health and Environmental Development (CEPHED) at a press meet organised on Sunday in Laligur suid hat one in every three children have blood lead levels at or above 5 micrograms/ decliters. Over 65 per cent (6,719.235) of the total child population of Nepal have elevated blood lead levels above 5 micrograms/deciliters and some 3,512,007 children have had blood level even over 10 micrograms/deciliters that calls for immediate response, said Ram Charitra Sah, Executive Director of CEPHED and environment scientist.

Lead paint is a major source of childhood lead exposure. High blood lead levels are found in children aged between 6 months and 36 months in Kathmandu Valley.

Series of lead paints studies carried out by CEPHED and LEADERS Nepal from 2010 to 2015 have shown varied and high level of lead concentrations in the paints, produced, imported, sold, distributed and used in Nepal. The solvent-based Enamel

Paints and Spray Pits with high concentrations of lead have been still produced, imported and available to be sold in Nepal

Rising Nepal National Daily, 26th October 2021, P3

even six years after the standards came into effect.

Thirty two of 62 solventbased enamel paints contained lead concentrations at or below 90 PPM.

At the programme, two study reports 'Compliance Monitoring of Lead Paint Standard in Nepal' and 'Study of Lead in Spray Paints' were also made public. Centre for Public Health

and Environmental Development (CEPHED) with the support of National Health Education, Information and Communication Centre (NHEICC), governments of Province 1, 2, Bagmati and Lumbini and WHO country office for Nepal are organising various programmes in the centre and provincial level awareness and capacity building programme on "International Lead Poisoning Prevention Weak".

Figure 14. Lead poisoning prevention week being marked, published in the national newspaper Rising Nepal



प्रतितात वालव्यनिकाको रगतमा जेहाको मात्रा मेटिएको छ ।

विषद्वको विषयसाठ वजावटका लागि गणी बनारॉस्ट्रिव संपेताना सपाग्न-२०२२ का अवसरमा स्थानक द्वारा जरसंख्या सन्दालय र विरव स्थानका सङ्ग्रहन । वज्यावरण प्रवद्वेग केन्द्रने धापाल्या परेको वार्वापाला गर्दछा विक्रां एक देविनिट्ट रगतमा पाँच माहुनी द्यासरका वड़ी विक्रा विड्रा | रून नहर्तमा ने पालका वालवसलिकाको जगिरमा से भला वड़ी वाहार्यमा नानकारी विष्ट ।

धर, विधालय तथा अस्पतालका भित्रा, धालिपरमा स्वयाजे रहवा सिहको मात्रा प्रसरत हुने भाषात्राते रखस्तते स्वास्थ्य तथा वातायरणचा पार्वे समस्पाको विराकरण एवस् न्यूनीकरण गर्न जनपेतनाका साथि ध्रम्नता सॉक्सपृड्धि सन्पत्रमाका जोड दिष्टपूर्व छ.

हण्णुएजीकी नेपालनिकत कायोलयका जनस्माम्यक सल्मातकार जा. सुमिध जलम देदरले सरकारले साल क्यंकीय पेल्टमा तोकेको लंडपूर्वा साराए । उनके मुल्कुका लसने रोग वदिररोको सल्पर्भवा रक्षमा प्रयोग गरिए जिद्दमाई ज्यालमा राष्ट्री सीकी ध्याल गर्न सार्थान्द्रत निकायलाई जन्हरोध योर ।

कार्यक्रममा केन्द्रका कार्यकारी निर्देशक एकम् वातावरण वैज्ञानिक रामचरित्र साहले जिडले वालवालिकाको जारिंडरक



तथा सामांमक एवम सीहिक विकासमा मिठे स्वरू गये हुँदा माराज्य व्यक्तियत गर्भुवमेस जीड हिए। अरकारने २००९ पुत्र ७ तरे राज्यवास प्रवर्तामा वर्गे पेन्टरमा लिंद्र सम्यापी सेकेंको माठ्यकारी सार्थ्यपत्र १०० पिपिएससरन्तार्थ्य प्रयोग यार्थ पति उनले आग्रह गरे। उनका अनुमार सिंहने माताव्यको प्रदु लाग्र प्रजनन प्रधानीमा समेल क्वर गर्थदा। वात्रवासिकाको सरिरमा लिढको सामा हेरे काएस स्वरूप शीक्षमा हम आहमे नाउने दायी ये।

भी अवसंगम जाकाएयतन्य स्थाल्य तथा सुरक्षांका स्रोपन वस्तेतने कारिसा ६० साइकीएमास्थ्रम्पा सी किलाको माठा बेटिएमा उपचारमा लाग्त सुन्ताव दिए । काठमाडी मीडिकल क्लेज सामुसीचेक चिकित्सा विकासका प्रमुख दा मुनिसामुमार जोतीले माठी तथा रहेसा प्रमील स्वयुक्त जितले माठीनमक्षी पेठ सुवै राउको जीत हाडीमा समेल अवर सर्ग जाला।

मुलुकमा वाधुनिकता थिप्रिएसंगै वीनरहोका नयां सवनमा प्रयोग गरिने रहने आउँदा दिनमा मानिसकी तरीरमा कारकालावाई ध्यान दिन अनुरोध गर्नुपरे केल्द्रमें गरेको जावचनाग ताकेको पीपीएमजन्दा कम लेह पाइएको कम्पनी पोमल पेन्द्रम, उचीग हेटीहाका प्रमुख यावस्थ्याप्क अवित्य सिंगने नागर। वन तथा बाताबुरगा संव्यालयज्ञा

सहमाधिव धनाव्याप पीवेकाले केन्द्र सरकार वाचे नभाएर स्थानीय लगायल रोरसरकारी संस्था जीन संख्यात गया डोन ठोनवाट पेव्टरमा हुने चिन्द्रकी नकारात्मक प्रभाषवाट वापने उपारका सारे सा जानकारी हिन्दुकी खींची औरवाए ।

सरीकारबानाने सारी प्रदेशवाह ३० पंप्तस्य उप्रोगका नमूना महलन गरी ६२ विकिन्न रहका इनामेनका साथि २९ विभिन्न रहका उप्रे पंत्रस्यता नमूनामा प्रायणन गर्वा ६२ मध्ये ३२ वहा वर्षात् २२ परिकालमा माथ लोकिएको वैपिएस्वरूप कम प्रिंतगत पंत्रस्या वकी विवद्यो माथ कोट्रप्ला नामकारी विष्ठुपत्रे विप्रांत्रस्या जिड्रको माथा १० वैपिएस्वरूप विज्ञको माथा १० वैपिएस्वरूप विज्ञको माथा २२ इतार ६२० ज्योत् माथपण्ड कथा २२ इ



Figure 15. 65% of Children have elevated Blood Lead Level (BLL)

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६५ प्रतिशत बालबालिकाको रगतमा 'लेड'को मात्रा फेला



ललितपुर । मुलुकका ६५ प्रतिशत बालबालिकाको रगतमा 'लेड'को मात्रा भेटिएको छ ।

'लिडको विषयबाट बचावटका लागि नवौँ अन्तर्राष्ट्रिय सचेतना सप्ताह–२०२१' का अवसरमा स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय र विश्व स्वास्थ्य सङ्गठन (डब्लुएओ) को सहयोगमा जनस्वास्थ्य तथा वातावरण प्रवद्र्धन केन्द्रले यहाँ आयोजना गरेको कार्यशाला गोष्ठीमा विज्ञले एक डेसिलिटर रगतमा पाँच माइक्रो ग्रामभन्दा बढी सिसा (लेड) हुन नहुनेमा नेपालका बालबालिकाको शरीरमा सो भन्दा बढी पाइएको जानकारी दिए।

घर, विद्यालय तथा अस्पतालका भित्ता, फर्निचरमा लगाउने रङमा लेडको मात्रा प्रसस्त हुने भएकाले त्यसले स्वास्थ्य तथा वातावरणमा पार्ने समस्याको निराकरण एवं न्यूनीकरण गर्न जनचेतनाका साथै क्षमता अभिवृद्धि गर्नुपर्नेमा जोड दिइएको छ ।

डब्लुएओको नेपालस्थित कार्यालयका जनस्वास्थ्य सल्लाहकार डा खुर्सिद अलम हेदरले सरकारले सात वर्षअघि पेन्टमा तोकेको लेडको मापदण्डको व्यापक प्रचारप्रसार हुनुपर्ने बताए । उनले मुलुकमा नसर्ने रोग बढिरहेको सन्दर्भमा रङमा प्रयोग गरिने लेडलाई ध्यानमा राखी सोको ख्याल गर्न सम्बन्धित निकायलाई अनुरोध गरे ।

कार्यक्रममा केन्द्रका कार्यकारी निर्देशक एवं वातावरण वैज्ञानिक रामचरित्र साहले लेडले बालबालिकाको शारीरिक तथा मानसिक एवं बौद्धिक विकासमा सिधै असर गर्ने हुँदा यसलाई व्यवस्थित गर्नुपर्नेमा जोड दिए । सरकारले २०७१ पुस ७ गते राजपत्रमा प्रकाशित गरी पेन्टस्मा लिडसम्बन्धी तोकेको बाध्यकारी मापदण्ड ९० पिपिएम सम्मलाई प्रयोग गर्न पनि उनले आग्रह गरे ।

उनका अनुसार लिडले मानिसको मुटु, स्नायु र प्रजनन प्रणालीमा समेत असर गर्दछ । बालबालिकाको शरिरमा लेडको मात्रा धेरै भएमा स्मरण शक्तिमा ह्रास आउने साहले दाबी गरे ।

सो अवसरमा व्यवसायजन्य स्वास्थ्य तथा सुरक्षाविज्ञ खगेन्द्र बस्नेतले शरीरमा १० माइक्रोग्रामभन्दा बढी सिसाको मात्रा भेटिएमा उपचारमा लाग्न सुझाव दिए ।

काठमाडौँ मेडिकल कलेज सामुदायिक चिकित्सा विभागका प्रमुख डा सुनिलकुमार जोशीले ब्याट्री तथा रङमा प्रयोग भएका लेडले मानिसको पेट हुँदै टाउको अनि हड्डीमा समेत असर गर्ने बताए ।

मुलुकमा आधुनिकता भित्रिएसँगै बनिरहेका नयाँ भवनमा प्रयोग गरिने रङले आउँदा दिनमा मानिसको शरीरमा असर नगरोस् भनेर उत्पादित कारखानालाई ध्यान दिन अनुरोध गर्नुपर्ने केन्द्रले गरेको अध्ययनमा तोकेको पीपीएमभन्दा कम लेड पाइएको कम्पनी फेसन पेन्टस् उद्योग हेटौँडाका प्रमुख व्यवस्थापक अरविन्द सिंहले बताए ।

वन तथा वातावरण मन्त्रालयका सहसचिव धनञ्जय पौडेलले केन्द्र सरकार मात्रै नभएर स्थानीयलगायत गैरसरकारी संस्था अनि समुदाय तथा टोल–टोलबाट पेन्टस्मा हुने लिडको नकारात्मक प्रभावबाट बन्ने उपायका बारेमा जानकारी दिनुपर्ने खाँचो औँल्याए ।

सरोकारवालाले सातै प्रदेशबाट ३७ पेन्टस् उद्योगका नमूना सङ्कलन गरी ६२ विभिन्न रङका इनामेलका साथै २१ विभिन्न रङका स्प्रे पेन्टस्का नमूनामा अध्ययन गर्रदा ६२ मध्ये ३२ वटाअर्थात् ५२ प्रतिशतमा मात्र तोकिएको पीपीएमभन्दा कम लिड र बाँकी ३० नमूनाअर्थात् ४८ प्रतिशत पेन्टस्मा बढी लिडको मात्रा भेटिएको जानकारी दिइएको थियो ।

पेन्टस्मा लिडको मात्रा ९० पीपीएमसम्म हुुनुपर्नेमा हुँदा केहीमा २२ हजार ८५० अर्थात् मापदण्ड भन्दा २५४ गुणा बढी रहेको थियो । **रासस**

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- 40. <u>मुलुकका **६५ प्रतिशत बालबालिकाको रगतमा**'लेड'को मात्रा</u> https://sancharkarmi.com/news-details/65525/2021-10-28 28/10/2021 · ूललितपुर: मुलुूकका **६५ प्रतिशत बालबालिकाको रगतमा 'लेड'को मात्रा** ...
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शीशाको बिषबाट बचावटको लागि अन्तराष्ट्रिय सप्ताह सम्पन्न

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नेपालगन्ज १३ कार्तिक : स्वास्थ्य तथा जनसंख्या मन्त्रालय, बिश्व स्वास्थ्य संगठनको सहयोगमा जनस्वास्थ्य तथा वातावरण प्रबन्धक केन्द्र (सिफेड) काठमाण्डौले 'लेडयुक्त' पेन्ट उन्मुलनका निम्ति नबौ अत्र्तराष्ट्रिय सचेतना सप्ताह भब्यताकासाथ सम्पन्न गरेकोछ । लेडयूक्त (शीशायुक्त) पेन्ट उन्मुलनका निम्ती अन्तर्राष्ट्रिय सञ्जालद्वारा यही कार्तिक ७ देखी १३ गतेसम्म विभिन्न कार्यक्रमको आयोजना गरि लेडको विषबाट बचावटका लागि नबौ अत्र्तराष्ट्रिय सचेतना सप्ताह मनाएको हो ।

साता ब्यापी कार्यक्रमको शरुमा स्कूल, अस्पताल, घर तथा फर्निचर आदि रङ्गाउने रंङ्ग पेन्ट्सहरु सम्बन्धि सरोकारवालाहरुमा खासगरी केन्द्रिय सरकारी, गैर सरकारी, चिकित्सक, रङ्गहरु आयात, उत्पादन, विक्री वितरण, प्रयोग एवं उपयोग गर्ने ब्यावसायी तथा पेशागत संघसंस्थाहरु, बालबालिकाको स्वास्थ्य सम्बन्धि पेशागत संस्थाहरु लगायत आम सञ्चार माध्यम लगायत सबै सरोकारबालाहरुलाई नेपाल सरकारले २०७१ पौष ७ गते राजपत्रमा प्रकाशित तोकेको पेन्टमा हुनुपर्ने लेड सम्बन्धि बाध्यकारी मापदण्ड ९० पिपिएमबारे ब्यापक जनचेततना तथा क्षमता अभिबृद्धी गरिएको सिफेडका कार्यकारी निर्देशक एव वातावरण वैज्ञानिक राम चरित्र साहले जानकारी दिए ।

सिफेडले लेडको सम्पर्कबाट हुनसक्ने स्वास्थ्य र वातावरणीय समस्याहरुलाई निराकरण एवं न्यूनीकरण गर्ने उद्देश्यले सरोकारबालाहरुको सहभागितामा पेन्ट्समा लेड सम्बन्धि बाध्यकारी मापदण्डको प्रभावकारीता सम्बन्धि एक दिवशीय कार्याशाला गोष्ठिी मार्फत मापदण्ड प्रभावकारी भएको ६ वर्ष पछिको ईनामेल पेन्ट्स र स्प्रे पेन्टमा मापदण्डको परीपालनाको स्थिती सम्बन्धि प्रतिवेदनहरु सार्वजनिक गरेको थियो ।

सप्ताहब्यापी कार्यक्रम मनाउने क्रममा शनिबार सरकारी तथा विभिन्न संंघ संस्थाहरुको सहकार्यमा देशब्यापी सरसफाई अभियान र जुम मार्फत करिब ५० जनाको सहभातिामा एकदिने जनचेतना तथा क्षमता अभिबृद्धी सम्पन्न गरेकोछ ।

उक्त कार्यक्रम नेपाल घरेलु तथा साना उद्योग महासंघका बरिष्ठ उपाध्यक्ष तथा ग्रील तथा स्टिल फेब्रिकेटर्स महासंघ नेपालका अध्यक्ष मोहन कटुवालको अध्यक्षता एवं वन तथा वातावरण मन्त्रालयका सहसचिव धन्नजय पौडेयाल, प्रादेशिक वन, वातावरण तथा भुसंरक्षण मन्त्रालय, लुम्विनी र गण्डकी प्रदेशका सचिवद्वय पशुपति नाथ कोईराला एवं बद्रिराज ढुड्डाना, विश्व स्वास्थ्य संगठन, नेपाल स्थित कार्यालयका जनस्वास्थ्य सल्लहकार डाक्टर एमडी खुर्सिद आलम हैदर, नेपाल सरकारले तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा कम लेड पाएका फेसन पेन्ट उद्योग हेटौडाका प्रमूख ब्यवस्थापक एवं प्लान्ट सञ्चालक अरविन्द सिंह लगायतको विशेष सहभागिता रहेको सिफेडले जनाएकोछ ।

जुममार्फत गरिएको कार्यक्रमहरुमा एशियन, बरजर, डिजिटल लगायत पेन्टसका प्रतिनिधीहरुको पनि उपस्थिती रहेको थियो ।

यस वर्ष आयोजना गरीने साताब्यापी कार्यक्रमहरुको मूख्य उद्देश्य नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा) को मापदण्डको प्रभावकारी कार्यान्वयन गरी बालबालिका र आम जनस्वास्थ्यलाई लेडको सम्पर्कमा आउनबाट जोगाउन ठोस योगदान पु¥र्याउने र लेडयूक्त पेन्ट प्रतिबन्ध गर्ने, लेडको जोखिमबारे जान्ने आवस्यक कारबाही गर्ने तथा लेडयूक्त पेन्ट उन्मूलन गर्ने गराउन आवस्यक पहल गर्ने रहेको सिफेडका कार्यकारी निर्देशक एवम वातावरण वैज्ञानिक साहले जानकारी दिए ।

नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा) को मापदण्डको प्रभावकारीता सम्बन्धि अध्ययन मापदण्ड आएको पहिलो पल्ट सबै सातै प्रदेशहरुबाट संकलित ३७ पेन्ट्स उद्योगहरुका ६२ विभिन्न रड्डका ईनामेल पेन्ट्सहरुमा गरिएको अध्ययन प्रतिवेदनसंगै नेपालमै पहिलो पटक बृहतरुपमा आठ विभिन्न पेन्ट्सका २१ विभिन्न रड्डका स्प्रे पेन्ट्सका नमूनाहरुमा लेड सम्बन्धि गरिएको अध्ययन प्रतिवेदन तथा जानकारी पत्र पनि उक्त जुम कार्यक्रममा जानकारी गराइएको थियो ।

नेपालमा पाइने पेन्ट् समा प्राणघातक र सायन

मापदण्डभन्दा २५३ गुणा बढी 'लेड' भएका पेन्ट्स विक्री भइरहेकोछ : वातावरण वैज्ञानिक साह



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नेपालगन्ज १४ कार्तिक : नेपालमा पाइने पेन्ट्समा प्राणघातक रसायन (लेड)को मात्रा अधिक भएको पाइएकोछ । जनस्वास्थ्य तथा वातावरण प्रवद्र्धन केन्द्र, (सिफेड) काठमाण्डौंले हालै सम्पन्न गरेको एक सर्वेक्षणमा यस्तो पाइएको हो ।

नेपाल सरकार, स्वास्थ्य तथा जनसंख्या मन्त्रालय र विश्व स्वास्थ्य संगठनको सहयोगमा सिफेडले गत साउनदेखी भदौसम्म देशभरका विभिन्न स्थानबाट संकलन गरेको ईनामेल पेन्ट्सहरुमा लेड (शीशा)को मात्रा अधिक भएको पाइएको छ ।

सरकारले २०७१ साल पुष ७ गते प्राणघातक रसायन लेड (शीसायुक्त) सम्बन्धि मापदण्ड बनाई राजपत्रमा प्रकाशित समेत गरेको थियो । तर, उक्त मापदण्ड सार्वजनिक भएको ७ वर्ष पुग्नै लाग्दा नेपालमा विक्रीवितरणमा रहेका इनामेल र पेन्ट्समा मापदण्डविपरित बढि (लेड) रसायन पाइएकोछ । उक्त मापदण्ड अनुसार कुनैपनि ईनामेल र पेन्ट्समा ९० पिपिएम भन्दा कम मात्रा हुनुपर्ने व्यवस्था गरिएकोछ । लेडको मापदण्डको परीपालना सम्बन्धि अध्ययनको परीणाम मापदण्ड प्रभावकारी भएको ६ वर्ष भन्दा बढी भईसकेको भएपनि कार्यान्वयन निकै कमजोर रहेको पाईएको छ ।

सिफेडले हालै गरेको सर्वेक्षण अनुसार देशभरका कुल ६२ नमूना मध्ये ३२ वटा अर्थात ५२ प्रतिशत पेन्टमा मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा कम लेड पाईएको छ । भने ६२ नमूना मध्ये ३० वटा अर्थात ४८ प्रतिशत पेन्टमा मापदण्डमा तोकेको अधिकतम लेडको मात्रा ९० पिपिएम भन्दा बढी लेड पाईएको जनस्वास्थ्य तथा वातावरण प्रवद्रधन केन्द्र, (सिफेड) काठमाण्डौंका कार्यकारी निर्देशक एवं वतावरण बैज्ञानिक रामचरित्र साहले सेतोखरीलाई जानकारी दिए ।

उक्त अध्यनले देखाएको मापदण्डको परीपालनाको अवस्थामा सुधार देखिए पनि कुनै–कुनै पेन्टहरुमा अझै अत्याधिक मात्रामा लेड पाइएको छ । जसमा २२८५० पिपिएमसम्म लेड पाईएकोछ । अर्थात मापदण्ड भन्दा २५३ गुणा बढीसम्म लेड पाईरहेको अवस्थामा पेन्टमा लेडको मापदण्डको पुर्ण परिपालना र प्रभावकारी कार्यान्वयन गर्न गराउन सरकार असफल भएको वातावरण वैज्ञानिक साहले बताए ।

वातावरण वैज्ञानिक साहले भने –'अध्यनमा सम्मिलित कुल १७ वटा नेपाल गुणस्तर चिन्ह प्राप्त पेन्टहरुको नमूना मध्ये ११ वटा अर्थात ६५ प्रतिशत पेन्टमा मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा कम लेड पाईएको थियो भने ६ वटा अर्थात ३५ प्रतिशतमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा बढी लेड पाईको थियो ।'

यस्तै अध्यनमा सम्मिलित कुल २६ वटा लेड मूक्त वा लेड नमिसाईको लोगो अर्कित पेन्टहरुको नमूना मध्ये २० वटा अर्थात (७७ प्रतिशत पेन्टमा) मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा कम लेड पाईएको थियो भने ६ वटा अर्थात २३ प्रतिशतमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा बढी लेड पाईको वतावरण वैज्ञानिक साहले सेतोखरीलाई जानकारी दिए ।

उनका अनुसार विभिन्न सात अन्तर्राष्ट्रिय एव एक राष्ट्रिय स्प्रे पेन्ट्स उद्योगका गरी जम्मा २१ वटा स्प्रे पेन्ट्समा गरिएको लेडको अध्यनले पनि मापदण्डको परीपालनाको स्थिती त्यति उत्साहजनक पाईएन । २१ मध्ये १४ वटा अर्थात ६७ प्रतिशत स्प्रे पेन्टमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा कम लेड पाईएको थियो भने ७ वटा अर्थात ३३ प्रतिशतमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पिपिएम भन्दा बढी लेड पाईको थियो । यी स्प्रे पेन्ट्सका सात नमूनाहरुमा लेडको मात्रा ७५१.१ देखी १५६१८.६२ पिपिएम सम्म लेड पाईएको थियो । सेतोखरीसंग कुरा गर्दै वातावरण बैज्ञानिक साहले भने-' समग्र रुपमा हेर्दा हालै गरिएको अध्यन अनुसार मापदण्डको कार्यन्वयनको अवस्था अझै कमजोर रहेको पाईएको छ । प्राणघातक ईनामेल र पेन्टस्को विनाअबरोध विक्रीवितरण भइरहेकोछ । यसले मानव स्वास्थ्यलाई झन् जोखिममा पारिरहेकोछ ।'

उनका अनुसार हरेक दुईवटा ईनामेल पेन्ट्स किन्दा, एउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा)को मापदण्ड ९० पिपिएम भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ । भने हरेक तीनवटा नेपाल गुणस्तर चिन्ह प्राप्त ईनामेल पेन्ट्स किन्दा, एउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा)को मापदण्ड ९० पिपिएम भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ ।

त्यसैगरि हरेक चारवटा लेड मूक्त वा लेड नमिसाईएको लोगो ईड्ढित ईनामेल पेन्ट्स किन्दा, एउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा)को मापदण्ड ९० पिपिएम भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ । भने हरेक तीनवटा स्प्रे पेन्ट्स किन्दा, एउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड(सिसा)को मापदण्ड ९० पिपिएम भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ ।

नेपालमा लेडयुक्त ईनामेल र पेन्ट्स विक्री वितरण भइरहेको यसका लागि सरकारले मापदण्ड तय गरि कार्यान्वयन गरेको पनि छ तर त्यसको आवस्यक सुधारकोे नितान्त जरुरी रहेको वातावरण वैज्ञानिक साह बताउँछन् । उनले भने –'यसका लागि सम्बन्धित निकायहरु वातावरण विभाग, भन्सार विभाग र नेपाल गुणस्तर तथा नापतौल विभागबाट निरन्तर बजार र पेन्ट उद्योगको अनुगमन गरिनु पर्दछ । पेन्ट्स उत्पादक, आयत, विक्रिवितरण तथा प्रचार प्रसारमा लागेकाहरु लगायत आम उपभोक्ता सबैले अझ वातावरण र जनस्वास्थ्य प्रति बढी जिम्मेबारीपूर्ण भुमिका र दायित्व निर्वाह गराइनुपर्ने आजको आवस्यक्ता हो ।'

नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा) को मापदण्डको प्रभावकारीता सम्बन्धि अध्ययन मापदण्ड आएको पहिलो पल्ट सबै सातै प्रदेशहरुबाट संकलित ३७ पेन्ट्स उद्योगहरुका ६२ विभिन्न रड्डका ईनामेल पेन्ट्सहरुमा गरिएको अध्ययन प्रतिवेदनसंगै नेपालमै पहिलो पटक बृहतरुपमा आठ विभिन्न पेन्ट्सका २१ विभिन्न रड्डका स्प्रे पेन्ट्सका नमूनाहरुमा लेड सम्बन्धि गरिएको अध्ययन प्रतिवेदन तथा जानकारी पत्र पनि उक्त जुम कार्यक्रममा जानकारी गराइएको थियो।

सरकारले मिति २०७१ पौष ७ गते राजपत्रमा प्रकाशित गरी तोकेको पेन्टमा लेड सम्बन्धि बाध्यकारी मापदण्ड ९० पिपिएमबारे ब्यापक जनचेततना तथा क्षमता अभिबृद्धी गरी

प्रभावकारिता बढाई लेडको सम्पर्कबाट हुनसक्ने स्वास्थ्य र वातावरणीय समस्याहरुलाई निराकरण एवं न्यूनीकरण गर्ने तर्फ लाग्नुपर्ने वातावरण वैज्ञानिक साहको सुझाव छ ।

• Social Medial outreaches: The events accomplished during the week, press releases and new research findings and report released has been also widely disseminated, liked, commented and shared by many.



Figure 16. News shared on social media were liked and shared by many



Figure 17. News about events, programs, news article shared on social media were liked, read, commented and shared by many

Advocacy Campaign for full compliance of standards

Soon after publication and launching of the three sets of new lead paint study reports Viz: National Report on Compliance Monitoring of Lead Paint Standard in Nepal; Study of Lead in Spray Paints and Brief on Lead in Paints and Compliance Status in Nepal, the reports have been widely distributed among all the stakeholders participated into the stakeholder workshop on Effective implementation of the Lead Paint Standards in Nepal.

Additionally, all three sets of reports have been formally submitted to most of the concerned ministries and departments along with the formal letter indicating the required action to be taken by them for the sectoral improvements. So far letters and reports have been formally submitted: Federal ministries (Health, Environment, Industries) Department of Environment, Nepal Bureau of Standard and Metrology (NBSM), Provincial Ministry of Environment and Social Development of the Province No. 2.

Published reports, as well as links of the electronics reports, have been also shared with secretaries of all Seven Federal Ministries of Forest, Environment and Soil Conservation (MOFESC) and/ or Ministry of Industry, Tourism, Forest and Environment (MOITFE) are undoing wide distribution.

We will continue sharing the reports and our advocacy campaign for further betterments and improvements.

Meeting the Expected Outputs

- Status of Compliance of LEAD PAINT STANDARD has been known so as to envision robust regulatory action that contributes towards effective implementation of Lead paint standards.
- Compliance of standards and issues associated with NS Marked and Spray paints has been known and well conveyed to the NBSM for the required action for the improvements.
- Massive increased awareness and capacity building about the Lead Paint issues and associated risk of lead in paint.
- Massive increased awareness and capacity building of Federal, Provincial and Local government and paint industries.
- Improved overall chemicals safety status
- Updated report on compliance of standard on lead in paint has been prepared, published, and formally handed over to all concerned federal ministries (Health, Environment, Industries), Department of Environment, Nepal Bureau of Standard and Metrology (NBSM), Federal Ministry of Environment and Social Development of the Province No. 2. Electronics copies have been also shredded with all concerned ministries of all Seven provinces.

Annexes

Annex 1: Details of enamel paint samples included in compliance monitoring study.

Sample ID	Province wise place of purchase	Company name	Brand name	Color
		Reliance Paints Industries Pvt. Ltd, Jorpati		
NPL 7	Dharan Road Biratnagar	Kathmandu, Nepal	Sangri-La	PO Red
		Reliance Paints Industries Pvt. Ltd, Jorpati		
NPL 8	Dharan Road Biratnagar	Kathmandu, Nepal	Sangri-La	Golden Yellow
NPL 9	Dharan Road Brt2	Pashupati Paints Pvt. Ltd, Biratnagar	Danfe	Golden Yellow
NPL 10	Dharan Road Brt2	Pashupati Paints Pvt. Ltd, Biratnagar	Danfe	PO Red
NPL 11	Biratnagar	KNP Japan Pvt. Ltd, Adarshanagar-13, Birgunj	Goldlac	Black
NPL 12	Biratnagar	KNP Japan Pvt. Ltd, Adarshanagar-13, Birgunj	Goldlac	Phiroza
NPL 13	Biratnagar	Akzo nobel India Ltd, Kolkata, India	Dulux	Dark Brown
NPL 14	Biratnagar	Akzo nobel India Ltd, Kolkata, India	Dulux	Black
NPL 15	Dhankutta	Pashupati Paints Pvt. Ltd, Biratnagar	Danfe	Orange
		Berger jenson and nicholson (Nepal) Pvt Ltd,		
NPL 16	Dhankutta	Byansi tole, Bhaktapur	Umbrella	Gulf Red
NPL 17	Dhankutta	Baba Paints Pvt. Ltd, sonapur, Sunsari, Nepal	Baba	White
NPL 18	Dhankutta	American Paints Pvt. Ltd, Bharatpur-5, Chitwan,	American	Phirozi
NPL 29	Biratnagar	Suryodaya Paints Nepal Pvt Ltd, Chiwan, Nepal	SPN Marco	Golden Yellow
NPL 30	Biratnagar	Surya Paints Pvt Ltd, Chiwan, Nepal	Marco	Signal Red
NPL 1	Bhardaha , Saptari	Manjari Paints , Ithari-12,Sunsari	SMART	White
NPL 2	Bhardaha, Saptari	Manjari Paints , Ithari-12,Sunsari	SMART	GoldenYellow
NPL 3	Bhardaha , Saptari	Manjari Paints , Ithari-12,Sunsari	SMART	Deep Orange
NPL 4	Bhardaha , Saptari	Tara Paints and chemical ind., Birgunj, Parsa, Nepal	Renew	Golden Yellov
NPL 5	Bhardaha , Saptari	Tara Paints and chemical ind, Birgunj, Parsa, Nepal	Renew	Sky Blue
NPL 6	Bhardaha, Saptari	Tara Paints and chemical ind, Birgunj, Parsa, Nepal	Renew	Signal Red
NPL 19	Birgunj	Jain Paints and Chemicals, Dhelii, India	Timex	Phiroza
NPL 20	Birgunj	Dalmia Paints and Chemicals industries, Birgunj,	dalmia	PO Red
NPL 21	Birgunj	Rico Paints and chemical Industries, Birgunj, Nepal	Raunak	Oxford Blue
NPL 22	Simara	Himal Home care, Biratnagar	Sunlight	Black
NPL 23	Simara	Tara Paints & Chemical industries, Bara, Nepal	Tara gold	Leaf brown
NPL 31	Janakpur	Apollo paints Pvt Ltd, Chitwan, Nepal	Apollo GP	PO Red
NPL 32	Janakpur	Asian Paints Nepal Pvt Ltd, Hetauda, Nepal	Tractor	PO Red
		Berger Jenson and Nicholson (Nepal) Pvt Ltd,		
NPL 33	Janakpur	Byansi tole, Bhaktapur	Brolac	PO Red
NPL 24	Hetauda	Fashion Paints Pvt Ltd. Hetauda, Makwanpur	Fashion	PO Red
NPL 25	Hetauda	Fashion Paints Pvt Ltd. Hetauda, Makwanpur	Fashion	Black
NPL 26	Hetauda	Fashion Paints Pvt Ltd. Hetauda, Makwanpur	Fashion	Golden Yellow
NPL 27	Hetauda	Fashion Paints Pvt Ltd. Hetauda, Makwanpur	Fashion	Bus Green

NPL 28	Hetauda	Birai Paints Pyt Ltd., Chitwan, Nepal	B-Eden	PO Red
NPL 34	Thimi	Yeti Paints Nepal Pyt Ltd. Hetauda, Nepal	Yeti	Leaf Brown
NPL 35	Bhaktapur	Mahalaxmi paints. Bhaktapur	Color lite	Blue
NPL 36	Patan.Lalitpur	Indigo Paints Pyt Ltd. Tarkeshwor-9. Kathmandu	Mava	Golden Yellow
NPL 37	Lagarnkhel.Lalitpur	Nepal Paint industries Pyt Ltd. Bhaktapur, Nepal	Starlite	Phiroza
NPL 38	Lagankhel, Lalitpur	Nepal Paint industries Pvt Ltd., Bhaktapur, Nepal	Swallow	Signal red
NPL 39	Babarmahal Kathmandu	Jenish Paints and chemicals. Kathmandu, Nepal	Rainbow	Black
NPL 40	Soltimode.Kathmandu	ICI Dulux Paints. USA	Super	Golden Yellow
NPL 41	Soltimode Kathmandu	Taveepaibul Co. Ltd. Thailand	Compac	PO Red
NPL 42	Bharatpur, Chitwan	Jasmine Paints Pyt Ltd. Chitwan, Nepal	Ouitelite	Golden Yellow
NPL 43	Bharatpur, Chitwan	Jasmine Paints Pvt Ltd, Chitwan, Nepal	Always	PO Red
NPL 44	Bharatpur, Chitwan	Jagannath group of industries Pvt Ltd, Bharatpur- 16, Chitwan	Euro	PO Red
		Surya Paints and chemical industriesPvt Ltd,	syntec	
NPL 45	Imadol, Lalitpur	Hetauda, Nepal	gleam	PO Red
NPL 52	Narayanghat, Chitwan	Tirupati Paints Pvt Ltd, Ratna Nagar-1 Chitwan	Ruby	Chocolate
NDL 16	Nanalauni Danka	Ashirbad Paints Private Limited, Nepalgunj	Convos	Dlash
NPL 40	Nepaigunj, Danke	Ashirhad Paints Private Limited Nepalguni	Canvas	DIACK
NPL 47	Nepalguni, Banke	Indusrial Estate-13-Banke, Nepal	Canvas	PO Red
NPL 51	Butwal, Rupandehi	Tirupati Paints Pyt Ltd. Ratna Nagar-1 Chitwan	Ruby	Black
NPL 53	Butwal, Rupandehi	Everest Colour Pvt. Ltd, Chitwan, Nepal	Jureli	Chocolate
NPL 54	Bardaghat Nawalparasi	Apollo paints Pvt Ltd, Chitwan, Nepal	Apollo GP	Golden Yellow
NPL 48	Birendranagar, Surkhet	Sarvotam Paint Industries Pvt. Ltd, Attaria-04, Kailali, Nepal	Sarvottam	Black
		Sarvotam Paint Industries Pvt. Ltd, Attaria-04,		Golden
NPL 49	Birendranagar, Surkhet	Kailali, Nepal	Sarvottam	Yellow
NDI 50		Tata Paints & Chemicals Industries Pvt Ltd,	The second se	
NPL 50	Birendranagar, Surkhet	Chitwan, Nepal	Tata	Buss Green
NPL 55	Dhangadhi	Ashoka paint and chemical industries, Birgunj, Parsa Nepal	Apcolac	Golden Vellow
1111155	Dhungudin	Berger Jenson and Nicholson (Nepal) Pvt Ltd.	Tipeolae	
NPL 56	Dhangadhi	Byansi tole, Bhaktapur	Umbrella	Buss green
NPL 57	Dhangadhi	Asian Paints Nepal Pvt Ltd, Hetauda, Nepal	Premium	Buss Green
NPL 58	Byas Municipality, Damauli	Asian Paints Nepal Pvt Ltd, Hetauda, Nepal	Premium	Phirozi
		Berger Jenson and Nicholson (Nepal) Pvt Ltd,		
NPL 59	Byas Municipality, Damauli	Byansi tole, Bhaktapur	Brolac	Truck brown
NDL (0	D 11	Aarati paints udhyog Pvt.Ltd, Industrial Estate,		D1 1
NPL 60	Poknara	POKNARA Agrati points udbyog Dyt I to Industrial Estate	Mayur	ВІаск
NPL 61	Pokhara	Pokhara	Mayur	Phiroza
		Aarati paints udhyog Pvt.Ltd, Industrial Estate.		- mozu
NPL 62	Pokhara	Pokhara	Mayur	PO red

Annex 2: Details of Spray paint samples included in compliance monitoring study.

Sample ID	Place of Purchase	Company	Brand	Color
NPL 1	Biratnagar	RJ London Chemical , Thailand	Bosny	Light Yellow
NPL 2	Biratnagar	RJ London Chemical, Thailand	Bosny	Green
NPL 3	Biratnagar	RJ London Chemical, Thailand	Bosny	Red
NPL 4	Biratnagar	NIPON Paints,	Lazer	Red
NPL 5	Biratnagar	NIPON Paints	Lazer	Yellow
NPL 6	Biratnagar	NIPON Paints	Lazer	green
NPL 7	Biratnagar	R.G.	Shell	Gray Silver
NPL 8	Biratnagar	Mr. Link	Mr. Link	Blue
NPL 9	Hetauda	National Auto and Spray Udhog Hetauda	NAAS	green
NPL 10	Hetauda	Anjali chem India	Mr Magic	Black
NPL 11	Hetauda	NIPON Paints	Lazer	Yellow
NPL 12	Birgunj	Mr Link	Mr. Link	Black
NPL 13	Birgunj	Mr. Link	Mr. Link	Blue
NPL 14	Birgunj	Mr. Link	Mr. Link	Yellow
NPL 15	Birgunj	Mr. Link	Mr. Link	Red
NPL 16	Lalitpur	NIPON Paints, Thailand	Lazer	golden
NPL 17	Kathmandu	RJ London Chemical, Thailand	Bosny	golden
NPL 18	Kathmandu	COMPAC industries, Thailand	Compac	green
NPL 19	Bhaktapur	R.G.	Shell	Silver
NPL 20	Butwal	CUBE	CUBE	Orange Red
NPL 21	Pokhara	National Auto and Spray Udhog Hetauda	NAAS	Red

Annex 3: Report on Stakeholder Workshop on Effective Implementation of Lead Paint Standards in Nepal"

Center for Public Health and Environmental Development (CEPHED) Nepal with the support of the Ministry of Health and Population (MOHP), Government of Nepal, and WHO Country Office for Nepal successfully organized Stakeholder Workshop on Effective Implementation of Lead Paint Standards in Nepal on the occasion of celebrating International Lead Poisoning Prevention Week (ILPPW 2021) participated by over 50 participants from Government, Non-government, Paint Industries, Academia, Scientists, OSH Experts, Medical Doctors, Nurses and media personnel's, etc.



Figure 18. Banner of Stakeholder Workshop



Figure 19. Stakeholder Participants representing various government, non-government, WHO Country office for Nepal, health professional, NGOs, OSH Experts, Consumer right activities, media personals etc.

The major objective of national and provincial level programs was raising awareness and building the capacity to prevent lead exposure through the elimination of leaded paints in Nepal.

Programs were carried out with four sections: Inaugural Session; Technical Session; Interaction Question and Answer Session and Closing Sessions.

Inaugural session

Ms. Deena Prajapati, Program Coordinator of CEPHED formally started the inaugural session by calling the chair, chief guest, and other special guests to the podium.

The inaugural session of the workshop program was held under the chairmanship of Mr. Mohan Katuwal, Vice President of FNCSI, President of Grill and Steel Fabricators, Nepal; Chief Guest Mr. Dhananjaya Paudyal, Joint Secretary, Ministry of Forest and Environment (MOFE) and Special Guests Mrs. Rita Bhandari Joshi, Chief, Multisector Coordination Division, Ministry of Health and Population (MOHP); Dr. Md Khurshid Alam Hyder, PHA, WHO Figure 20. Inaugural session with Guests on the podium. Country Office for Nepal; Mr. Arbind Singh, Chief Manager-Plant and Operation Fashion Paint Industry



Welcome Speech and program highlights

Mr. Ram Charitra Sah, Executive Director of CEPHED welcomed all distinguished guests on the podium along with all the participants including paint industries and media personnel, and highlight the aims of today's stakeholder program was to raise the awareness and capacity building of all stakeholders to enhance the effective implementation of lead paints standards in Nepal.

Highlighting the week-long program including this stakeholder program on effective implementation of lead paint standard in Nepal that has been conducted in four sections comprising inaugural, new study launching, technical session, and closing sessions.

During the welcome speech, Mr. Sah draw the attention of the imminent gathering along with the guests present at the inaugural session on the following important issues and called for immediate actions from all concerned.

- Compliance with lead paint standards has been improving welcome speech and program highlights. but more needs yet to be done.
- Immediate needs of adoption of National Blood Lead Level (BLL) screening policy and program along with the development of BLL testing infrastructure in all provinces.
- Huge annual economic losses in Nepal from lead exposure.



Figure 21. Mr. Ram Charitra Sah, ED of CEPHED

• Stressing the need for effective implementation of Lead Paint Standard through having a

- regular market and industry monitoring from all concerned including MOFE, MOICS, DoEnvt., Dept of Industry and NBSM.
- Strictly monitoring of labeling provision of standards and misuse of NS Marked, No Added Marked paints as some of the paint's companies have misused the labeling.

Inauguration by Chief Guest

The workshop was inaugurated by **Chief Guest Mr. Dhananjaya Paudyal, Joint Secretary of Government of Nepal, Ministry of Forest and Environment (MOFE)** by irrigating water to the plant symbolizing protection of the environment as well as playing the radio jingle popularizing lead paint standards in Nepal.

The major highlights of the distinguished guests including Chief Guest and Specially Invitees from different concerned sectors are as follows.

Special Guest Dr. Md Khurshid Alam Hyder, PHA, WHO Country Office for Nepal while delivering his inaugural remarks highlighted the need for massive dissemination of the Lead Paint Standard enacted by the Government of Nepal. While the incidence of noncommunicable diseases (NCD) increases, it is important to take into consideration effectively regulating continued uses of lead in paints by the concerned authorities with high priority. He also appreciated the organizer CEPHED and supporting ministry of Health and Population as well as other stakeholders and wished the success of the events.

> **Mr. Arbind Shingh, Chief of Operation and plant manager of Fashion Paints Paint industries** stressed the needs of paint industries should be paid attention not to pose health impact from the use of the lead in paints that has been applied on the new building coming with the modernization. Fashion paint all four samples were found to be complying with the maximum standard lead limit of 90 ppm. He also committed to adhere the lead paint standard all the times and will also urge all other paint industries to improve their products and fully comply the standard of lead limit as well as labeling provisions.

Figure 24. Mr. Arbind Shingh, Chief of Operation and plant manager of Fashion Paints Paint industries inaugural remarks

Figure 22. Chief Guest Mr. Dhananjaya Paudyal, Joint secretary, MoFE, formally inaugurating the program







Figure 25Mrs. Rita Bhandari, Joshi, Chief, Multisector Coordination Division, Ministry of Health and Population (MOHP), Government of Nepal's inaugural remarks

Mrs. Rita Bhandari, Joshi, Chief, Multisector Coordination Division, Ministry of Health and Population (MOHP), Government of Nepal wishes to strengthen the Blood Lead Level (BLL) testing infrastructure in all provinces and assured taking initiatives of formulating the enabling national

BLL screening policy and programs along with the infrastructure throughout the country. She also appreciated the organizer CEPHED and supporting agencies like World Health Organization (WHO) as well as other stakeholders and wishes the success of the events.

Chief Guest, Mr. Dhananjaya Poudyal, Joint Secretary, Ministry of Forest and Environment (MOFE) emphasized the need for collaborative efforts of all stakeholders towards enhancing the compliance status of the lead paint standards. Ministry and its department will take necessary steps towards regulating lead in paints exceeding the standard limits. He also highlighted the needs of massive awareness from all stakeholder and agencies from grass root level up to the provincial and federal and nationwide. Role of Department of Environment needs to be enhanced and



Figure 26.Chief Guest, Mr. Dhananjaya Poudyal, Joint Secretary, Ministry of Forest and Environment (MOFE)'s inaugural remarks

increasingly engaged with the regular marker and paint industries monitoring.

Finally, the inaugural session was formally closed by delivering the chair remarks by Mr. Mohan

Katuwal, Vice President of Federation of Nepalese Chamber of Small and Cottage Industry (FNSCI), President of Federation of Grill and Steel Fabricators, Nepal (NGSFN) and Advisor of CEPHED thanked all the guests and participants on behalf of the CEPHED and organization he represents for the active participation as well as expressing the commitment for sector improvement and providing best wishes for the successful completion of the events.

With all concerned efforts, we have got the mandatory standard, now the time has come to work together for its effective implementation of lead paint standard through regular monitoring, strengthening the mechanism of

compensation for any health and environmental damage from any counterfeit products including leaded paints. Government, as well as the private sector, should regulate the import and production of leaded paints where the role of the private sector is also very important to improve their products as there is no alternative to it. He also emphasizes the need of regulating the problems of lead in paints, children's toys, and even different food items by all concerns, and the role of media is even important to inform the public about these issues and bring the attention of the concerned regulatory authorities.



Figure 27.Mr. Mohan Katuwal, Vice President of Federation of Nepalese Chamber of Small and Cottage Industry (FNSCI), President of Federation of Grill and Steel Fabricators, Nepal (NGSFN) and Advisor of CEPHED's closing remarks of the inaugural session.

All guest and special invites express their thanks and wishes for the successful accomplishing of the events.

New studies report launching

- On that occasion, three sets of new study reports on lead paint in enamel paints and spray paints were launched during the stakeholder workshop scheduled under WHO Supported program on 24th October 2021. <u>http://cephed.org.np/ilppw-2021-celebration-successfully-in-nepal/</u>
- (a). National report, Compliance Monitoring of Lead Paint Standard in Nepal, 2021 <u>http://cephed.org.np/wp-content/uploads/2021/10/Compliance-Monitoring-of-Lead-Paint-Standard-in-Nepal-Print-FIle-NEW-FILE.pdf</u>
- (b) Study of Lead in Spray Paints 2021 <u>http://cephed.org.np/wp-content/uploads/2021/10/Study-of-Lead-in-Spray-Paints-Nepal-PRINT-File-NEW-file.pdf</u>
- (c) Brief on Lead in Paints and its compliance status

http://cephed.org.np/wp-content/uploads/2021/10/Leaflet-Lead-in-Paints-PRINT-file-NEW.pdf



Figure 28. CEPHED's new study reports



Figure 29. Launching of the reports by Chief Guest and Special Guests



Figure 30. Group pictures of all participants and guests

At the end of the inaugural session, group pictures with all guests and participants were taken.

Technical Session

Five different technical papers were presented in the technical session under the co-chairmanship of Dr. Budharam Shah, Sr. Scientist, Nepal Academy of Science and Technology (NAST), and Mrs. Rita Bhandari Joshi, Chief of Multisector Coordination Division, MOHP.

The first paper entitled "Compliance Monitoring of Lead Paint Standards in Nepal" was presented by Mr. Ram Charitra Sah Executive Director/Environment Scientist & Ms. Deena Prajapati, Program Coordinator, CEPHED.

Mr. Sah started his presentation by enlisting ten chemicals of major public health concern e.g., Hazardous Pesticides, Mercury, Lead, Fluoride, Dioxin, Cadmium, Benzene, Asbestos, Arsenic, and Air Pollution. Further highlighted some facts about lead-related poisoning incidences and associated socio-economic losses thus emphasizing the need for effective enforcement of lead paint standards.

Briefly highlighted lead-based paints as a most common source of lead among others. Further illustrates **sources** (industry, mining, pesticides, fertilizers, corroded plumbing or lead soldered, food processing equipment's and food containers, petrol, paints air, dust, food, water, soils, and sediments, etc.), **exposure routes** (absorption through skin and mother to fetus, ingestion through eating and swallowing, respiration through blood in veins and arteries) and **impacts on target organs** (lungs, hears, liver, fetus, kidney, etc.)

Mr. Sah formally started his presentation by briefly introducing his organization CEPHED, its goal, vision, activities, global and regional linkages, and national as well as international recognition. He then straightway enters the presentations on National Reports on Compliance monitoring of lead paint standard in Nepal and briefly covered the background, objectives, study area, procedure, results, conclusion, and recommendations.

Legacy of lead in paints, high rate of non-compliance before standard enactment followed by permutation of lead paint standard through four years of rooted research-based advocacy followed by very slow compliance improvements over the years strongly justify the needs of carrying out the compliance monitoring from non-governmental sector.

The lead paint standards were promulgated by the Government of Nepal, Ministry of Forest and Environment-MOFE (the then MOEST) through a gazette notification dated 22 December 2014 with its effective dates 181 days after this notification i.e., from 20th June 2015. It has three important provisions: (a). Maximum lead-in paints imported and domestically produced in Nepal to be not more than 90 ppm; (b) Each paint can be labeled with lead content in the paint it contained, and (c) Each paint can should also be labeled with a protective precautionary message for occupational safety.

The objective of the study was to carry out compliance monitoring lead paint standards in Nepal, prepare, publish and widely disseminate the results through organizing stakeholder workshops during the ILPPW 2021. The study area covered: All 7 Provinces of Nepal,100% (6 of 6) metropolitan cities, 54% (6 of 11) sub-metropolitan cities, and 2.9% (8 of 276) municipalities.



Country-level compliance status of lead in Paints standard

Every Second (1 of 2) Enamel Paints you purchase is likely to contain lead concentration more than the Government of Nepal Lead Paint Standard limit of 90 ppm.

He then briefly described the study procedure including sample collections that encompass 62 solvent enamel paints of 37 different paint industries represented by 41 Brands, 17 different shades (grouped into 9 different colors were collected from all seven provinces, and some 19 different locations. Sample logs were prepared and send for total lead test into NESS laboratory using AAS Method.

The results thus obtained were compared with all three important provisions of the lead paint standards in Nepal and analyzed information was presented in the form of bar diagrams, pie charts, and tables.

Further compliance monitoring results were described over the years showing a slight improvement trend but more needs to be done stressed by Mr. Sah during his presentation and call for the jointly working together of all concerned agencies.

The compliance of standards in the labeled paints (NS Marked and NO ADDED LEAD labeled paints. Only 26 out of 62 paints (41.93 percent of paints) have Lead free or NO Added Lead...... labels. 6 out of 26 (23.91 percent) NO ADDED LEAD labeled paints contained lead concentration above 90 ppm.



Only 17 out of 62 paints (27.42 percent of paints) have **Nepal Standard (NS) Mark**...... labels. However, paint cans labeled with NS Mark have also contained a very high level of lead up to 2223.96 ppm (24.7 times more than GON Lead paint standard)

6 out of 17 NS Marked (35.29 percent) paints did not comply with the lead paint standard. The lead content in the non-complying NS marked paints ranges from 94.14 ppm to 2223.96 ppm.

The compliance rate of lead paint standard in all seven provinces was found as Province No1 (78.57%), Province No.2 (14.29%), Bagmati Province (61.11%), Gandaki Province (60%), Lumbini Province (40%), Sudur Paschim Province (66.67%) and Karnali province (33.33%) respectively. Lead paint standard compliance was found much effective in Province No.1 whereas worst in Province No.2.

Furthermore, the companies have suspected of adopting double standard quality concerning lead content highlighted with the call for a larger study to



content highlighted with the call for a larger study to verify these claims.

Brands and industries-wise lead concentration and their distribution were also presented. The current study of 62 samples from 37 different industries was purchased and analyzed. 30 out of 62 analyzed solvent-based paints (**48.39 percent of paints**) were not complying with the **Government of Nepal's lead paint standard**, i.e., they contained lead concentrations above 90ppm.

- 32 paint samples coming at least one from 23 brands of 22 paint industry comply the lead paint standard limit of 90 ppm.
- 30 paints samples coming at least one from 25 brands and 24 industries are not complying with the standard.

• 7 Paint samples coming from at least one from 5 different brands and 5 different paint industries were even contained lead concentration dangerously high over 10,000 ppm.

Color-wise sample and their lead concentration distribution were also analyzed and presented. According to which, each brighter color paints of Red, Yellow, Black, Phiroza, Brown, Green, and Blue color paints samples contained lead concentration Non-Detectatnle and below 90 ppm. Whereas some brighter color paints were found to contain lead concentration more than 90 ppm i.e. non-compliance with the 90 ppm of standards limits. Even white color enamel paints have got the lead concentration above 600 and 1000 ppm

Mr. Sah has concluded his presentation by highlighting the finding of the study.

- Study shows that solvent-based enamel paints with high concentrations of lead are still sold and available in Nepal
- 32 out of 62 paints (52%) contained lead concentrations below 90 ppm including even 18 of 62 (29%) even have non-detectable (ND) levels of lead indicate that the technology to produce paints without added lead exists in Nepal.
- NS Mark, NO ADDED LEAD labeled paints did not guarantee of containing low lead or lead-free all the times.
- None of the paints meets the mandatory provision of labeling of lead contained and precautionary message for preventing occupational exposure.
- 30 out of 62 paints (48%) contained lead concentrations above 90 ppm even after six years of the standard became effective.

Based on study findings, several recommendations have been made indicating the prime responsible agencies as follows with the highest demands from the responsible agencies towards effective implementation of the lead paint standard to reduce and/or eliminate one of the major sources of lead exposure among Nepalese communities, especially children.

Institutions	Recommendation
Federal; MOFE and Dept. of Environment, & Provincial Ministry of Industry, Tourism, Forest and Environment (MOITFE)	 Market and industry monitoring and results release to the public Ban leaded pigments, driers, and fillers and opt for listing in the RC PIL list.
Nepal Bureau of Standard and Metrology (NBSM), Ministry of Industry, Commerce and Supplies.	 Incorporation of Lead paint mandatory standard of 90 ppm in NS criteria and regulate all paint industries as per the mandatory standard. Regulate labeling seriously.
Ministry of Industry, Supply and Commerce & Department	Regularly market monitoring for compliance of lead paint standards and labeling.Regulate imported paints

of Commerce, Supplies & Consumer Protection.	
Ministry of Education, Science, and Technology (MOSTE) & Department of Education	 Establish programs at the district level to raise awareness among school children Inclusion of toxic chemical issues including lead in Curricula (school to higher education. Declare daycare center, school, hospital lead-free zones
Ministry of Finance and Department of Custom	Circulate the government decision among all the custom points.Strictly regulate the import of paints and paints ingredients
Ministry of Health and Population (MOHP), DoHS, and Nepal Pediatrics Society of Nepal.	 Adopt National BLL Screening Policy and Programs Establish fully functional infrastructures for BLL Screening in all provinces
Paint Industry, Nepal Paint Manufacturers Associations, and Chamber of Commerce Organizations	 strong cooperation mechanism between manufacturing industries Adhere/comply fully with the GON lead paints standers and labeling Do not adopt double standards concerning the quality & lead
Paints Dealers, Retailers, and Their Associations	Only import, sale and distribute paints complying with the government mandatory standard
Awareness Raising	Government agencies, as well as non-governmental organizations, Media personals, and modeling agencies, should play an important role
Consumers	Check the labeling on paint products when purchasing paint and demand only lead-free paints

The second paper entitled "**Study of Lead in Spray Paint in Nepal**" was presented by Mr. Ram Charitra Sah Executive Director/Environment Scientist & Ms. Sachita Banmala, Program Coordinator, CEPHED

The study of lead in spray paints, the first-ever larger study carried out by CEPHED with the support of the WHO Country Office for Nepal has been presented during the workshop. The main aim was to bring new data on the status of the lead in the spray paints. All together 21 spray paint samples from 8 different brands from 8 different paint industries of 7 different colors were collected from all major cities of Nepal and analyzed for the total lead concentration using AAS methods.

The results thus obtained have been presented using the bar and pie diagrams and compliance status has been inferred by comparing the data obtained from the laboratory study with the mandatory lead paint standard lead limit of 90 ppm and labeling provision of the indicating exact lead content and precautionary message on the paints cans.

14 out of 21 analyzed aerosol spray paints (67 percent of paints) were complying with the Government of Nepal's lead paint standard, i.e., they contained lead concentrations less than 90 parts per million (ppm, dry weight of paint). 13 out of 21 (62 percent) of total and 13 out 14 (93 percent) of all complying paints has a lead concentration at non-detectable (ND) level. This



demonstrates that the spray paints that only comply with the lead paint standard of Nepal can be produced as well as imported into Nepal to protect its country fellow especially children and the environment. 7 out of 21analyzed spray paints (33 percent) were non complying the lead paint standard. This is the regulatory limit for lead in paint in Nepal for all kinds of paints being imported, produced, marketed, and used.

Moreover, 2 spray paints (9.52 percent of paints) contained dangerously high lead concentrations above 10,000 ppm. The highest lead concentration detected was 15618.62 ppm (173 times more than the Government of Nepal lead paint standard of 90 ppm)

Brand	Paint Industries	Color	No. of Samples Above 90 ppm	No. of Samples Above 600 ppm	No. of Samples Above 10,000 ppm	Maximum Lead Content (ppm)	Times > Standard 90 ppm
Lazer	NIPON Paints, China	Yellow	1	1	1	15618.62	173.54
Lazer	NIPON Paints, China	Green	1	1	1	15070.49	176.45
NAAS	National Auto and Spray Udhog Hetauda, Nepal	Red	1	1		5357.14	59.52
Lazer	NIPON Paints, Thailand	Yellow	1	1		2549.81	28.33
Lazer	NIPON Paints, China	Red	1	1		2157.41	23.97
Cube	CUBE	Red	1	1		920.31	10.23
Bosny	RJ London Chemical, Thailand	Yellow	1	1		751.1	8.35
Total	5	3	7	7	2		

Top Seven lead concentrations in spray paints have been listed below.

- No Spray paints have got NS Mark in Nepal
- 4 of 21 (19%) Spray paint sample has Lead Free or lead-related labeling.
- 1 of 4 (25%) lead-free labeled spray paints have got Lead concentration of 751.1 ppm (8 times > 90 ppm std.)

Brand wise, spray paints do also contain high lead concentration. 4 out of 8 analyzed brands (50% percent of paint brands) sold at least one paint with high lead above 90 ppm. 2 paints of 1 brand sold paint with a dangerously high lead concentration above 10,000 ppm.

Color-wise, spray paints do also contain high lead concentration. Color-wise, 60% (3 of 5) red, 75% (3 of 4) yellow, and 25% (1 of 4) green contained lead concentrations above 90 ppm. Samples from Yellow, Red, and Green contained lead concentrations above 90 ppm to over 1000 ppm and even yellow and green color plaints have a dangerously high level of lead exceeding over 10,000 ppm. Yellow, Green, and red color spray paint most frequently contained high lead concentrations above 90 ppm to over 1,000 ppm.

Mr. Sah has concluded his presentation by highlighting the finding of the study of lead in spray paints.

- This study demonstrates that aerosol-based spray paints with high concentrations of lead are still sold and available in Nepal even after six years passed from the standard took effect.
- 7 of the 21(33%) analyzed spray paints had total lead concentrations above the regulatory limit, of which 28.57% (2 of 7) contained dangerously high lead levels exceeding 10,000 ppm, underscores this apparent need for effective compliance monitoring to ensure that only lead-safe paints are offered for sale to consumers.
- 14 out of 21 paints (67 percent of paints) contained lead concentrations below 90 ppm including even 13 of 21 (62 percent of paints) even have non-detectable (ND) including one sample from the national spray paint industry indicates that the lead-free spray paints or paints than fully comply with the regulatory limit of 90 ppm lead can only be imported and produced as technology to produce paints without added lead exists in Nepal.
- None of the spray paints also did meet the labeling provisions of the Lead Paint Standard.
- Every third (1 of 3) Spray Paint we purchase is likely to contain a lead concentration more than the Government of Nepal Lead Paint Standard limit of 90 ppm.
- The study results provide a strong justification to strictly enforce a regulation/standard that will ban the manufacture, import, export, distribution, sale, and use of all paints with total lead concentrations greater than the 90 ppm standard limit of GON.

Based on study findings, several recommendations have been made indicating the prime responsible agencies as follows with the highest demands from the responsible agencies towards effective implementation.

Concerned Authority	Recommendation
Department of Environment (DoEnvt)and Ministry of Forest and Environment (MOFE)	 Ban the import and use of leaded pigments, leaded driers, and leaded fillers, etc. Carry out market and industry monitoring regularly Raise mass public awareness

Department of Health Services (DoHS), MOHP, and Nepal Pediatric Society	 Envision national Blood Lead Level (BLL) screening policy and program for all Nepalese children Established BLL testing infrastructures in each province
For Department of Custom and Ministry of Finance	• Regulate strictly the importation of all paints including spray paints and allow only the paints that fully comply with the lead paint standard of Nepal.
Paint manufacturers, importers, and distributors	 Take back their remaining stocks of old lead-containing paints from all retail outlets. Only produce, import, sale distribute, and promote the use of paints that fully complying the lead paint standard.
Consumers	• Carefully look for the product information and to product safety and to stop buying inadequately labeled and uncertified paint products.
Stakeholders	• Support policies and programs that will contribute to reduced children's, women's, and workers' exposure to lead from lead-containing paint, dust, and soil.

Third paper entitled "Blood Lead Level (BLL) among Nepalese Population and Needed Abatement Programs in Nepal" was presented by Dr. Vivek Panta, Samyak Diagnostic Pvt. Ltd. Kathmandu, Nepal.

Dr. Vivek explained clearly the history of lead, lead toxicity, mechanism of lead intoxication, and associated health impacts were briefly presented. The high lead level among Nepalese children and its links with the leaded paints were established in the different researches summarized and presented in all four programs.

These Doctors groups presented the three pieces of research about the BLL carryout from their centers with a clear diagnosis and way forward for the abatement in all four programs.

Firstly, a study of BLL among children in Kathmandu and Birgunj Industrial area was presented. In the case of Kathmandu among 50 Children, on average BLL is $7.01\mu g/dL$ Situation among the Children of Birgunj among school children adjoin to an industrial area ware still very alarming. In Birgunj, among 50 Children, on an average BLL was $20.33 \mu g/dL$ with 100 % of children in the study have elevated BLL These findings were more or less coherence with the other previous studies carried out in Nepal as well as the reported from recent UNICEF and PRURE EARTH 2020 report.

Secondly, BLL among 50 Rag pickers study findings of evaluating blood lead level in Ragpicker working in a selected area of Kathmandu including hematological and biochemical parameters were also tested among them were presented.

The average BLL among paper and metals collectors were 7.35 μ g/dL; among Plastic, Metal, and Paper collectors 8.47 μ g/dL; plastic, Metals, paper, and Paint Container 8.47 μ g/dL and Plastic, Metals, Papers, Paints containers, and electronics waste workers were having average BLL 12.89 μ g/dL.

The findings of this study suggest that the Rag-pickers working in Kathmandu are at increased risk of lead toxicity and this occupational exposure to lead is attributed to the use of bare hands for handling solid waste. There has been a high possibility of transferring their lead exposure to their neared kin and family members.

Thirdly, the lead toxicity due to Ayurvedic Medicine use in 38-year-old people with acute abdomen pain health complications following intake of Ayurvedic medicines for increasing power was presented. He had an initial blood level was 82.3 \mug/dL. The used Ayurvedic medicine when analyzed for the presence of lead revealed a very high concentration of lead (102 ppm) against the prescribed limit is only 10 ppm by WHO.

Dr. Vivek has also revealed the new finding of high BLL from screening for blood lead level in reproductive age group individuals in Kathmandu. 170 reproductive age group (20 to 49 years) individuals-28.8% of male and 25.8% of female participants had BLL $\geq 3\mu g/dL$. The minimum detectable BLL in both males and females was 3.3 $\mu g/dL$ while the maximum elevated BLL was higher in males (15.5 $\mu g/dL$) than in females (8.4 $\mu g/dL$).

A list of lead poisoning prevention measures with major highlights as "**Lead Poisoning is 100% Presentable**" was given. Washing hands before eating; washing toys regularly; do not use old or imported toys unless you know they are lead-free; clean surface with wet mop weekly, chipping, penning paints chips; moisture, molds and mildew and calcium and iron supplements can help to prevent the absorption of Lead.

The fourth paper entitled "Role, Responsibility, and Program of LEAD PAINT ELIMINATION of Federal, Provincial and Local Government in Nepal" was presented by Mr. Bhupendra Sharma, Sr, Environment Inspector, Department of Environment/MOFE, GON.

The major highlights of this paperware role and responsibility of all three level governments for lead paint elimination namely the role of Federal, provincial and local level and more specifically the role and responsibilities of the MORE, MOICS, MOGP, MOITFE, and other like paint producing industries as well as importers, paints, distributors and even role of consumers.

Mr. Bhupendra enlisted the role and responsibilities of all three levels of government were:

- Standard formulation based on the research, study, and needs
- Regulating import and Quarantine
- Compliance monitoring
- Confirm the implementation (facilitation, rewards, punishments, certifications (e.g., pollution control)
- Clearance or closure or Seize

Mr. Bhupendra also highlighted the role and responsibilities of the Paint industries

- Internal monitoring or self-monitoring
- Import and uses of lead-free raw materials
- Produce and promote lead-free products

• Import, distribute, and marketing of lead-free products

Mr. Bhupendra also highlighted the role and responsibilities of the Painters and distributors

- Suggesting and encouraging or enforcing to buy lead-free products
- Using only lead-free paints.

Mr. Bhupendra also highlighted the role and responsibilities of the consumers

- Confirmation of labeling
- Choose or buy lead-free paints
- Use lead-free paints or products

After he sighted the Constitutional fundamental right to live in a healthy environment (Art. 30), provision of federal EPA, EPR, Provincial EPA, and EPR as well as Gazette Notification of Lead Paint Standard and its content and compliance status. He focused on the need to do effective IEE, EIA depending upon the location and investment ownership of the proposal that has adverse impacts on the environment. He also emphasized the need for effective implementation of the laws and standards. He provides the suggestion for the paint industry to produce the paints complying with the standards as well as put the uniform label about the lead content on the can as per the standards.

He then also explained the provision of penalty in the EPA and EPR in case of violating the IEE and EIA provisions up to 3 Lakh Nepalese Rupees. He then explained briefly about other provisions of the EPA 2019: Nobody shall create pollution; in case of violation of the act, prescribed necessary terms in regards thereto or may prohibit the carrying out of such as act; the ministry may, by notification in the Nepal Gazette, forbid the use of such substances, fuel, tools or devices.

He briefly also touched upon the provision of EPR 2020: The Lead paint standard that was enacted based on the earlier EPR 1997 has been considered as formed under EPR 2020; pollution control provisions; hazardous substance import-related provisions, laboratory establishment operation and management at the Department of Environment (DoEnvt) related provision; use of other laboratories for testing; sample collection, testing, and analysis provision, etc. He finally also briefly explained the role and responsibilities of the Environmental Inspectors.

Explained about the gazette lead paint standard (22 December 2014) and its important provisions of maximum allowable lead content of 90 ppm, became effective on June 20^{th,} 2015; Case filed against the standard by Paint Industries and their umbrella organization Nepal Paint Manufacturers Association (NPMA) on 17th June 2015; the Supreme Court dismissed the case and gave a verdict on the favor of standard on 1st January 2018. He further highlighted that the standard became effective more than 6 years ago and it is time to fully comply by all. He also pointed out the 0.1 mg/L limits of lead parameter for the paint industry effluents standard.

He also summarizes the legal mechanism related to regulating lead in paints issues in Nepal.

- Environmental Assessment Reports
- Pollution Control and Management

- Integrated Pollution Control System
- Environment Protection Fund and Council
- Liabilities, Punishment, and Compensations
- Black listing of the companies/proponent violating the laws
- Realization of the compensation

Mr. Bhupendra also touched upon the provision (Schedules) of federal state's power as confirmed under the Constitution of Nepal 2015.

- Schedule-5: Federal Power in the Constitution (Health, standards, quality, monitoring)
- Schedule-6: List of province power in the constitution (Health services, factories, industrialization, trade, and business)
- Schedule-7: List of concurrent powers of Federation and provisions in the Constitution (environment protection and sanitation)
- Schedule-8: List of Local Level Power in the Constitution (town policy)
- Schedule-9: List of Concurrent Powers of Federation, State and Local Level in Constitution (health and environment)

Finally, he concluded his presentation with a listing of some important work accomplished by the ministry and department such as promulgating lead paint standards, paint industries effluent standards, making several rounds of visits to the paint industries, and planning for compliance monitoring.

He recommends and stressed the need for the following things to enhance the standard compliances:

- (a) Full compliance of standard with respect to all its three provisions of 90 ppm lead limit and mandatory labeling of lead content and precautionary messages.
- (b) Responsible advertisements by industries, celebrities, medical houses, etc.
- (c) Needs uniform labeling and messaging about the lead-safe point.
- (d) Self-monitoring and reporting
- (e) Needs NS Mark Harmonization with Lead Paint Standard.

Fifth paper entitled "WHO initiatives towards prevention and control of Lead Exposure in light of ILPPW 2021 were presented by Mr. Raja Ram Pote Shrestha, National Professional Officer, WHO Country Office for Nepal.

The fifth paper covered many sectors including health and economic impacts of environmentrelated exposure (23% of all global death) including top 10 causes of deaths, which is responsible for 8.2 million (of 12.6 million) deaths. It is also linked with lead exposure. Enlisted 10 major chemicals of public health concern.

Mr. Raja Ram briefly explained the versatile nature of lead thus widely used (7.1 MT/Yr.), the reason for using lead in paint to obtain specific characteristics e.g., color, speed drying, corrosion resistance, etc., leaded paint is a major source of lead exposure that can be prevented by using nonleaded paint additives. He highlighted the fact that "Lead exposure is preventable". Lead exposure is especially dangerous to children's developing brains and can result in reduced

Intelligence Quotients (IQ) and attention span; impaired learning ability, and increased risk of behavioral problems.

He highlighted the health effects of lead which is a well-recognized toxicant with a wide range of health impacts including all important organs and systems of human bodies. Young children are most vulnerable resulting in reduced IQ. According to IHME 2019 estimates, lead exposure accounted for 0.9 million death and 21.7 million years lost to disability and death due to prolonged health effects, with the highest-burden in developing regions.

Lead exposure also results in huge economic losses with total losses estimated at approximately \$ 977 billion due to reduced IQ is 1.2 % of global GDP (Gross Domestic Products). Highest losses in Asia approximately \$699.9 billion (1.88 % of Regional GDP. This study estimates a total annual loss due to lead exposure in Nepal is \$1.5 billion, 4% of Nepalese GDP.

He then described briefly the role and responsibility of WHO played globally, regionally, and nationally towards addressing the needs of health-related problems that include:

- Providing leadership on matters critical to the health
- Sharing the research agenda and stimulating the generation, translation, and dissemination of valuable knowledge
- Setting norms and standards and promoting and monitoring their implementation
- Articulating ethical and evidence-based policy options
- Providing technical support, catalyzing change, and building suitable institutional capacity
- Monitoring the health situation and assessing health trends etc.

WHO responses remain remarkable in eliminating lead paint and associated health and other socioeconomic implications around the globe.

- Establishment of Global Alliance to Eliminate Lead Paints (GAELP)
- GAELP is contributing to the World Summit on Sustainable Developments as well as to the resolution II/4B of the Strategic Approach to International Chemical Management (SAICM) both aims at **phasing out lead paints.**
- WHO Chemicals Roadmap, 2017 (adopted from 70th WHA)
- WHO's Thirteenth General Program of Work, 2019-2023, Three Strategic priorities
 - Achieving universal health coverage
 - Addressing health emergencies
 - Promoting healthier populations
- WHA 72 (2019): Global strategy on health, environment and climate change
- SEARO/RC 72 (2019): Regional Plan of Action for the WHO Global Strategy on health. Environment and climate change.
- Shared recent publications:
 - Toolkits for establishing laws to eliminate lead paints
 - WHO Guideline for Clinical Management of Exposure to Lead (28th October 2021)

With much improvement in the overall situation, leaded paint is still permitted in many countries. Still, more than 50% of the countries need to adopt lead paint regulations in place. There is vast regional differentiation about the adoption of lead paint laws UNEP (2020): Africa (11%); Asia and the Pacific (28%); West Asia (45%); Europe (78%); Latin America and the Caribbean (38%) and North America (100%).

Briefly explain, the ILPPW 2021, he informed that it aims to raise awareness about the health effect of lead exposure; highlight the efforts of countries and partners to prevent lead exposure particularly in children, and urge further action to eliminate lead paints through regulatory action at the country level.

He finally listed out many types of information and educational materials WHO has been producing and massively disseminating to the lead-related sectors:

- Guidance on organizing advocacy or awareness-raising campaigns on lead paint
- Communication materials
- Technical information
 - Exposure to lead: a major public health concern 2^{nd} edition
 - Status of lead paints laws (interactive map WHO GHO)
 - Technical and policy brief on Global elimination of lead paints
- Brief Guide to an analysis of lead in paints
- WHO Fact Sheet etc.

He closes his presentation by calling for the need to discuss these important issues of lead paint and associated health impacts concerning three important questions:

- (a) What can Government do?
- (b) What can Industry do?
- (c) What can Civil Society do?

Final Press Release and Review of the weeklong program:

Press release highlights the status of lead paint standard compliance monitoring, finding of lead in enamel and spray paints, BLL, Socio-economic impacts, and also for the required control measures from different sectors especially from the concerned government agencies. The major review was, despite the ongoing COVID, the weeklong proposed, planned activities to celebrate ILPPW 2021 in Nepal were completed with increased awareness among federal, provincial, and local government as well as stakeholder level with the great realization of needs of effective implementation of lead paint standard in Nepal and inclusion of lead paint and other chemical safety issues in provincial level laws, regulation, policy, and programs along with effective implementation mechanism in place.

Question Answer and Contribution session.

The technical session was followed by live interaction and discussion and a **Question-Answer** and **Contribution session** where several participants have raised very important issues raised very good questions as well as contributed immensely. The section below summarizes and enlisted the contribution as well as raised questions.

• The existing legal framework will be enough to address the issues of source control of the lead contamination as we have lead standards for paints and the definition of paint should encompass all kinds of paints, inks, coloring agents, packaging printing materials, etc.

- Increased complaint file in Department of Commerce. Supplies and Consumer Right Protection & Department of Environment (DoEnvt) as there is a huge penalty provision of NRs 300,000.
- There should be also a compliance monitoring study of the Paint industries effluent standard in Nepal towards further strengthening of the lead paint regulation in Nepal.
- The sampling size is not corresponding with the paint market sharing thus may not reflect the market scenario countrywide.
- The price comparison should be also included.
- Blood Lead Level (BLL), high BLL found in low-income groups, MOHP Secretary were promised to develop the BLL Testing facilities before 5 years but not a single facility so far established in Nepal. Needs to develop soon.
- BLL testing is mandatory in the USA before enrolling the children in school and hence similar provision needs to be adopted in Nepal.
- Multinational industries' products were found to be much improved. As we have found their product was found to be achieved most of the time.
- Wish to know about the instrumental techniques of lead test Ayurvedic Medicine.
- All attractive items in our library, paints have been used in many kinds of paints, different children's products in the library were colorful, we do not know the status of all these items, high BLL among rag pickers, there are many types of ink being used in the newspaper and people found using of this paper in eating some moist snacks and hence here has been a high chance of getting lead exposure from these as well.
- Why not WHO request other countries to develop standards? as only 70 countries have lead paint laws in place.
- What is the scientific tool to measure the change of people's behaviors?
- Self-monitoring by sending the sample to the laboratory but is it is possible to test the raw materials? Feasibility of writing precaution message, the question of double standards needs to further elaborate.
- What is the Enamel contribution? Categories of paints different lead levels in different paints? 90 ppm is for what categories? Non-Detective below 25 ppm as per the paint industries? Status of labs and accessibility to the paint industries? What is the future plan for mercury testing and identifying?
- Shall we verify the Asian Paint sample showing high lead? Other sectors should also make monitored and tested? Pollution control certificate receiving methods? Asian paint is interested to receive a pollution control certificate? Waste management of disposal of leaded paints.
- Does Jingle need to be made in a different language? How we can be informed about the lead effects?
- 62 samples are not enough to declare 2, 3, 4 paints, can we broadly call it? 72 paint industries, advise all 72 paint industries for making Broder inference.
- Lead exposure can happen from parent to children, today the aim is to prevent lead in paints, how we can make lead free environment?
- BLL test should be mandatory for all children.
- How does this team coordinate to what extent and suggest coordination with NAST?

Mr. Ram Charitra Sah, team leader of study team responded most of the questions and appreciated all for their active participation in the live discussion. He promised to continue for the sectoral improvements and try to accommodate all the positive suggestions made by the distinguished participants and repetitive from the various concerned sectors.

Concluding remarks from Chair of Technical session.

Dr. Budhharam Sah: Excellent session, great discussion, and also linked to the social aspect more than the technical and scientific session. Thank you for all this discussion.

All five presentations were much interesting and important that has been proved based on the huge interaction induced from the floor. I hope today interaction and message will not remain within this room rather it will definitely well be discussed and widely disseminated outside this room,

So far today discussion is concerned with lead in paint, just the one toxic chemical but there are more issues raised today about the other chemical of concern as well that we as the representative from the concerned health ministry will also be happy to discuss and move toward finding a good and required solution in coming days. From a health viewpoint, all the presentation has proved to sensitize MOHP. I have already recalled all these discussions and hence MOHP will wish to address and commit to addressing from our end. Thank you one and all.

Closing ceremony

Finally, the closing ceremony was held with the gracious presence and remarks by Dr. Sahadev Prasad Humagai, Joint Secretary & DNA Rotterdam Convention (RC), Prof. Dr. Sunil Kumar Joshi, Sr. OSH Expert, and Mr. Raja Ram Pote Shrestha, NPO, WHO Country Office for Nepal.

Dr. Sahadev Humagain: Joint Secretary and Chief, Plan Quarantine and Pesticide Management Center (PQPMC)

He made his closing remarks with high appreciation of organizing such an important event and has successfully carried out research work and bring the actual status of the lead paint standard in place. He ensured his high commitment for processing for the enlisting of the LEAD PIGMENT in the RC Convention PIC III lists so that it will help to clean up the source of all possible lead contamination in the paints. We all stakeholders will work together and try to address them all-important issues raised as all these valued contribution are very important needs to be addressed.

Prof. Dr. Sunil Kumar Joshi, Chief, HOD, Department of Community Medicine, KMC.

In a real sense, today Mr. Ram Charitra Sah has done **FACE SAVING** to many concerned ministries despite it is not his role to do this compliance monitoring and bring this important information about the status of lead in paints after six years of the passing of lead paint standards enacted and became effective. Mr. Sah mush to congratulate for this face-saving work he accomplished. Most of the questions raised today should be raised with the concerned government agencies, these should be answered by respective ministries and departments responsible for monitoring these kinds of issues.

Most important is that, Policy should be evidence-based and surveillance-based. There is neither surveillance of lead in paint nor the lead in blood. Why our national standard has not been implemented? So, there should be time bond effective implication strategy should be developed and implemented. Reward and punishment are also there. Environment safety, health safety should be our ultimate goal to protect the public health of Nepalese.

For this control at source is a must, we do not need, control at medium and control at the consumer, receiver level is not required. Behavioral change intervention is only required at the end of other things that do not work.

The individual is not at all should think of it, a person making their house should always think of making it more economic ways by purchasing and applying cheap paints, it is all the concerned government agencies should make sure that even cheapest paints any consumer buy should not be the source of lead exposure to him/her and their family. It should be always safe for all users and consumers all the time.

MOHP & MOFE are responsible for IEE and EIA which are not sufficient. They should be doing EHIA (Environmental and Health Impact Assessment). Another thing is that the culture of public-private partnership (PPP) needs to be developed as ministries and department is not able to do all things on their own. Research-based organizations like CEPHED, academic institutions need to ring together.

There are already Occupational diseased related laws with the process of doing an assessment. If there is lead-related exposure evidence should be compensated as per the Labor Act and Regulation. Thus, urge to raise and file the lead exposure issues for compensation as well. Let's work together and today interaction has gone in the right direction and we are very happy about that.

Mr. Raja Ram Pote Shrestha, NPO, WHO Country Office for Nepal

Thank you for inviting me for closing remarks and providing me this opportunity to participate in the important discussion and thank you all for the active participants. More discussion needs to be done and should not be limited only in this week. We thank the CEPHED and Mr. Ram Charitra Sah for the continuation from the long back of the advocacy, research and reached this stage. Globally process is ongoing but it is slow. In the case of the Asia and Pacific region, earlier only 23 %, then 26 %, and now 28% countries have lead paint law in place. Good thing is that in the case of Nepal, we have a mandatory lead paint standard.

Today discussion has clearly shown the importance of working in collaboration for the effective implementation of the lead paint standard in one hand whereas needs to be heavily engaged with the discussion about the types of paints, batches, labeling, products level studies need to be carried out, which also linked with the health.

He hoped that more discussion will be organized with the MOHP and MOFE to work and address specific issues raised today. With this I declare the program has been formally closed.

Program Schedule of the Workshop

Program Title	ILPPW 2021 Kick-Off and Stakeholder Workshop on Effective implementation of Lead Paint Standards in Nepal
Program Aim	Effective Implementation of Lead Paint Standards Thus Prevention of Lead Exposure and release of studies reports
	on compliance monitoring and study of lead in spray paints.
Program Date	October 24 2021 (Kartik 7, 2078 BS) Sunday 9:45 AM to 3:00 PM
Supported	Organized by CEPHED and supported by MOHP, Government of Nepal, and WHO Country Office for Nepal
Expected	About 50, representing Health, Industry, Environment, Education, OSH, EHS, Metal fabrication and steel furniture,
Participants	Paint Industry/Dealer and Painters; Health & Environment Journalists, etc.
9:45 to 10:15	KEGISIKATION AND TEA & COFFEE INAUCUDAL SESSION
10.13 to 11.00	Invitation of Guest by MC of the Program: Ms Deena Prajanati and Ms Sachita Banmala Program
	Coordinators, CEPHED
	Chair: Mr. Mohan Katuwal, Vice President, FNCSI (Objective)/Advisor of CEPHED
	Chief Guest: Mr. Dhananjaya Paudyal, Joint Secretary, Ministry of Forest and Environment (MOFE)
	Special Guest: Dr. Md Khurshid Alam Hyder, PHA, WHO Country Office for Nepal.
	Special Guest: Mr. Arbind Shingh, Chief of Operation and Plant Manager, Fashion Paint Industry, Hetauda
	Organizer Representative: Ram Charitra San, Executive Director, CEPHED
	Welcome Speech and Program Highlights- Mr. Ram Charitra Sah, Executive Director, CEPHED
5 Min	Inauguration of Program by Chief Guest by playing Radio Jingle on Lead Paints standard of CEPHED and irrigating the plant as the symbol of environment conservation.
5 Min	Releasing of Study Reports by Chief Guest and Other Special Guest
	(a). National report, Compliance Monitoring of Lead Paint Standard in Nepal, 2021
	(b) Study of Lead in Spray Paints 2021
536	(c) Brief on Lead in Paints and its compliance status
5 Min	Remarks: Special Guest: Dr. Md Khurshid Alam Hyder, PHA, WHO Country Office for Nepal
20 Min	Remarks Chief / Special Guests and Sectorial Commitments for effective implementation of lead paint
11:00 to 12: 30	Technical Session and O & A
	Compliance Monitoring of Lead Paint Standards in Nepal by Mr. Ram Charitra Sah Executive
20 Min	Director/Environment Scientist /Ms. Deena Prajapati, Program Coordinator), CEPHED.
10 Min	Study of Lead in Spray Paint (Pressurized Container): by Mr. Ram Charitra Sah Executive
	Director/Environment Scientist /Ms. Sachita Banmala, Program Coordinator), CEPHED.
20 Min	Blood Lead Level (BLL) among Nepalese Population and Needed Abatement Programs in Nepal Dr
20 10111	Dr. Vivek Panta, Samyak Diagnostic Pyt. Ltd. Kathmandu, Nepal
20 Min	The role Responsibility and Program of LEAD PAINT FLIMINATION of Federal Provincial and Local
20 10111	Government in Nepal : Mr. Bhupendra Sharma, Sr, Environment Inspector, Depat. of Environment/ MOFE, GON
15 Min	WHO initiatives towards prevention and control of Lead Exposure in light of ILPPW 2021. Mr. Raja Ram
	Pote Shrestha, National Professional Officer, WHO Country Office for Nepal.
12:30 to 1:30	LUNCH BREAK
1:30 to 2:30	Question and Answer & Suggestion and Contribution Session
2:20 to 3:00	CLOSING REMARKS AND SECTORAL WAY FORWARD
	Dr. Sahadey Humagai, Joint Secretary and DNA Rotterdam Convention
	Prof. Dr. Sunil Kumar Joshi, KMC, HOD, Dept, of Community Medicine, Kathmandu.
	Mr. Raja Ram Pote Shrestha, NPO, WHO Country Office for Nepal
	PRESS RELEASE

	Place: H	lotel Himalava, kupond	Nepal	nal Date: October 24, 2021	
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Annex 4: List of Participants

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	Place: Hotel Himalaya, kupond	ole, Lalitpur, Ne	pai. Date: October 24, 2021	
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Registration for stakeholder Workshop on Effective implementation of Lead Paint Standards in Nepal

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Annex 5: Press Release

प्रेस विज्ञप्ती

<u>नेपालमा लेड (सिसा)को विषबाट बचावटका लागि अन्तर्राष्ट्रीय सचेतना सप्ताह भब्यताका साथ समापन एंव</u> पेन्ट्समा लेड (सिसा) को वाध्यकारी मापदण्डको प्रभावकारीता बढाउनमा जोड

मिति २०७८।७१३ गते, काठमाण्डौ, नेपाल: आम जनस्वास्थ्य र खासगरी बालबालिकालाई लेड (सिसा) को विषाक्तता बाट जोगाउनका निम्ती नेपाल सरकारं, स्वास्थ्य तथा जनसंख्या मन्त्रालय(MOHP) र विश्व स्वास्थ्य संगठन (WHO) को सहयोगमा जनस्वास्थ्य तथा वातावरण प्रवर्द्धन केन्द्र (CEPHED) काठमाण्डौले लेडयक्त पेन्ट उन्मुलनका निम्ती अन्तर्राष्ट्रीय सन्जाल (Global Alliance to Eliminate Lead Paint-GAELP) द्वारा सन् २०२१ अक्टोवर २४ देखी ३० (२०७८ कार्तिक ७ देखी १३ गते) सम्म **लेडको विषबाट बचावटका लागि नबौ अर्न्तराष्ट्रीय सचेतना सप्ताह** (International Lead Poisoning Prevention Week-ILPPW 2021) को श्भारम्भ आजैबाट भएको छ। साता ब्यापी कार्यक्रमको शरुमा स्क"ल, अस्पताल, घर तथा फर्निचर आदि रङ्गाउने रंङ्ग पेन्टसहरु सम्बन्धि सरोकारवालाहरुमा खासगरी केन्द्रिय सरकारी, गैर सरकारी, चिकित्सक, रङ्गहरु आयात, उत्पादन, विक्री वितरण, प्रयोग एवं उपयोग गर्ने ब्यावसायी तथा पेशागत संघ, संस्थाहरु, बालबालिकाको स्वास्थ्य सम्बन्धि पेशागत संस्थाहरु लगायत आम सञ्चार माध्यम आदि सबै सरोकारबालाहरुमा नेपाल सरकारले मिति २०७१ पौष ७ गते राजपत्रमा प्रकाशित गरी तोकेको पेन्टमा लेड सम्बन्धि बाध्यकारी मापदण्ड ९० पि.पि.एम.बारे ब्यापक जनचेततना तथा क्षमता अभिबद्धी गरी प्रभावकारिता बढाई लेडको सम्पर्कबाट ह'नसक्ने स्वास्थ्य वातावरणीय समस्याहरुलाई निराकरण एवं न्य"नीकरण ₹ गर्ने उदेश्यले सम्बन्धित सबै सरोकारबालाहरुको सहभागितामा **पेन्टसमा लेड सम्बन्धि बाध्यकारी मापदण्डको** प्रभावकारीता सम्बन्धि एक दिवशिय कार्याशाला गोष्ठि मार्फात मापदण्ड प्रभावकारी भएको ६ वर्ष पछिको ईनामेल पेन्टस र स्प्रे पेन्टमा मापदण्डको परीपाल्नाको स्थिती सम्बन्धि प्रतिवेदनहरुको सार्वजनिक गरीएको थियो र मिति २०७८ कार्तिक १३ गते विभिन्न संघ संस्थाहरु जस्तै Nepal Environment Society (NES), Forum for Protection of Consumer Right Nepal (FPCRN), District Youth Network, Dhanusha, Youth Helping Society Bharatpur, NEWA DEY DABOO, PRO PUBLIC and Federation of Grill and Fabricators. and महिला बालबालिकाको Steel Nepal (FGSFN) एवं पहलमा देशब्यापी सरसफाई अभियान, नेपालकोसहकार्य र International Pollutant Elimination Network (IPEN) को सहयोगमा र जम मार्फत करिब ४० जनाको सहभातिामा एकदिने जनचेतना तथा क्षमता अभिबुद्धी सम्पन्न भएको छ ।

कार्यक्रमहरु नेपाल घरेल' तथा साना उष्ठोग महासंधका बरिष्ठ उपाध्यक्ष तथा ग्रील तथा स्टिल फेब्रिकेटर्स महासांघ नेपालका अध्यक्ष श्री मोहन कट'वालको अध्यक्षता एवं बन तथा वातावरण मन्त्रालयका सहसचिव धन्नजय पौडेयाल, प्रादेशिक वन, वातावरण तथा भ'संरक्षण मन्त्रालय, ल'म्विनी पर गण्डकी प्रदेशका सचिवज्य"हरु पश'पति नाथ कोईराला एवं बद्रिराज ढ'गनाको प्रम"ख एवं विशेष आतिथ्यता लगायत विश्व स्वास्थ्य संगठन, नेपाल स्थित कार्यालयका जनस्वास्थ्य सल्लहकार Dr. MD. Khurshid Alam Hyder एवं हालै सम्पन्न ईनामेल पेन्ट्सहरुमा लेडको अध्ययनमा समावेश गरीएका सबै नम"नाहरुमा नेपाल सरकारले तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम. भन्दा कम लेड पाएका फेसन पेन्ट उष्ठोग हेटौडाका प्रम"ख ब्यवस्थापक एवं प्लान्ट सञ्चालक अरविन्द शिहज्य" लगायतको विशेष आतिथ्यतामा सम्पन्न भएको थियो। कार्यक्रमहरुमा अन्य पेन्ट्स उधोगहरु जस्तै एशियन, बरजर, डिजिटल आदि पेन्टसका प्रतिनिधीहरुको पनि उपस्थिती रहेको थियो।

यस वर्ष आयोजना गरीने साताब्यापी कार्यक्रमहरुको मूख्य उदेश्य नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा) को मापदण्डको प्रभावकारी कार्यान्वयन गरी बालबालिका र आम जनस्वास्थ्यलाई लेडको सम्पर्कमा आउनबाट जोगाउन ठोस योगदान पुर्ज्याउने र लेडयूक्त पेन्ट प्रतिबन्ध गर्ने (Ban Lead Paint), लेडको जोखिमबारे जान्ने (Learn the risks) आवस्यक कारबाहीगर्ने (Take Actions) तथा लेडयुक्त पेन्ट उन्म"लन (Eliminate Lead Paint) गर्नेगराउन आवस्यक पहल गर्ने रहेको छ ।

नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा) को मापदण्डको प्रभावकारीता सम्बन्धि अध्यन मापदण्ड आएको पहिलो पल्ट सबै सातै प्रदेशहरुबाट संकलित ३७ पेन्ट्स उष्ठोगहरुका ६२ विभिन्न रग्का ईनामेल पेन्ट्सहरुमा गरीएको अधयन प्रतिवेदन संगै नेपालमै पहिलो पटक बृहतरुपमा आठ विभिन्न पेन्ट्सका २१ विभिन्न रग्का स्प्रे पेन्ट्स (Spray Paint), नम"नाहरुमा गरीएका लेड सम्बन्धि अध्यन प्रतिवेदनहरु लगायत जानकारी पत्र पनि कार्यक्रमका प्रम"ख अतिथि एवं विशेष अतिथीहरुबाट संय"क्त रुपमा विमोचन गरी सार्वजनिक गरीएको थियो ।

नेपाल सरकार, स्वास्थ्य तथा जनसंख्या मन्त्रालय(MOHP) र विश्व स्वास्थ्य संगठन (WHO) को सहयोगमा जनस्वास्थ्य तथा वातावरण प्रवर्द्धन केन्द्र (CEPHED) काठमाण्डौले हालै २०७८ साउन देखी भदौ सम्म गरेको ईनामेल पेन्ट्सहरुमा लेडको मापदण्डको परीपाल्ना सम्बन्धि अध्ययनको परीणाम मापदण्ड प्रभावकारी भएको छ वर्ष भन्दा बढी भईसकेको भएपनि कार्यान्वयन निकै कमजोर रहेको पाईएको छ। जस अन'सार क'ल ६२ नम"ना मध्ये ३२ वटा (४२००) पेन्टमा मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा कम लेड पाईएको छ भने ६२ नम"ना मध्ये ३० वटा (४८००) पेन्टमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा कम लेड पाईएको छ भने ६२ नम"ना मध्ये ३० वटा (४८००) पेन्टमा परीपाल्नाको अवस्थामा स'wf/ देखीए पनि कुनै कुनै पेन्टहरुमा अभै अत्यधिक मात्रामा (२२८४० पि.पि.एम. सम्म लेड पाईएको, अर्थात मापदण्ड भन्दा २५३ ग'णा बढी.) सम्म लेड पाईरहेको अवस्थामा पेन्टमा लेडको मापदण्डको **पुर्ण परीपाल्ना** र **प्रभावकारी कार्यान्वयन** गर्न गराउन आवस्यक रहेको कार्याशाला गोष्ठीको निस्कर्ष रहेको थियो ।

साथै अध्यनमा सम्मिलित क'ल १७ वटा नेपाल ग'णस्तर चिन्ह (NS Mark) प्राप्त पेन्टहरुको नम"ना मध्ये ११ वटा (६५००) पेन्टमा मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा कम लेड पाईएको थियो भने ६ वटा (३५००)मा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा बढी लेड पाईको थियो ।

त्यसैगरी अध्यनमा सम्मिलित क'ल २६ वटा लेड म"क्त वा लेड नमिसाईको (Lead Free and/or No Added Lead) लोगो अ°ित पेन्टहरुको नम"ना मध्ये २० वटा (७७००) पेन्टमा मात्र मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा कम लेड पाईएको थियो भने ६ वटा (३५००)मा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा बढी लेड पाईको थियो।

अर्को महतवप"र्ण तथा नेपालमा सर्वप्रथम विभिन्न सात अन्तर्राष्टि«य एव एक राष्टि«य स्प्रे पेन्ट्स उBोगका गरी जम्मा २१ वटा स्प्रे पेन्ट्समा गरीएको लेडको अध्यनले पनि मापदण्डको परीपाल्नाको स्थिती त्यति उत्साहजनक पाईएन । २१ मध्ये १४ वटा (६७∞) स्प्रे पेन्टमा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा कम लेड पाईएको थियो भने ७ वटा (३३∞)मा मापदण्डमा तोकेको अधिक्तम लेडको मात्रा ९० पि.पि.एम.भन्दा बढी लेड पाईको थियो । यी स्प्रे पेन्ट्सका सात नम"नाहरुमा लेडको मात्रा ७४९.१ देखी १४६१८.६२ पि.पि.एम.सम्म लेड पाईएको थियो ।

समग्र रुपमा हेर्दा हालै गरीएको अध्यन अन'सार मापदण्डको कार्यन्वयनको अवस्था अभौ कमजोर रहेको पाईएको छ ।

- हरेक दुईवटा ईनामेल पेन्ट्स किन्दा, ऐउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड (सिसा)को मापदण्ड ९० पि.पि.एम. भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ।
- हरेक तिनवटा नेपाल गुणस्तर चिन्ह प्राप्त ईनामेल पेन्ट्स किन्दा, ऐउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड(सिसा)को मापदण्ड ९० पि.पि.एम. भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ।
- हरेक चारवटा लेड मूक्त वा लेड नमिसाईएको लोगो ईड्डित ईनामेल पेन्ट्स किन्दा, ऐउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड(सिसा)को मापदण्ड ९० पि.पि.एम. भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ।
- हरेक तिनवटा स्प्रे पेन्ट्स किन्दा, ऐउटामा नेपाल सरकारले पेन्ट्समा तोकेको लेड(सिसा)को मापदण्ड ९० पि.पि.एम. भन्दा अत्यधिक लेड पाउने सम्भाबना बढी छ।

त्सर्थ, आवस्यक स'धारको नितान्त जरुरी रहेको र सो का लागि सम्बन्धित निकायहरुमा वातावरण विभाग, भन्सार विभाग र नेपाल ग'णस्तर तथा नापतौल विभागबाट निरन्तर बजार र पेन्ट उष्ठोगको अन'गमन गरीन' पर्दछ भने पेन्ट्स उत्पादक, आयत, विक्रिवितरण तथा प्रचार प्रसारमा लागेकाहरु लगायत आम उपभोक्तासबैले अभ वातावरण र जनस्वास्थ्य प्रति बढी जिम्मेबारीप"र्ण भ'मिका र दायित्व निर्वाह गर्न'पर्ने आजको आवस्यक्ता हो ।

साताभरी सम्पन्न भएका कार्यक्रमहरु यसप्रकार रहेको थियो

- मिति २०७७७७ विश्वब्यापी अन्तर्राष्ट्रिय सचेतना सप्ताहको स'भारम्भ एव पेन्ट्समा लेड सम्बन्धि बाध्यकारी मापदण्डको प्रभावकारीता सम्बन्धि एक दिवशिय कार्याशाला गोष्ठि।
- मिति २०७७७७ देखी १३ गते सम्म विश्वव्यापी अन्तर्राष्ट्रिय सचेतना सप्ताहको सुभारम्भ एव पेन्ट्समा लेड सम्बन्धि बाध्यकारी मापदण्डको प्रभावकारीता अध्यन सम्बन्धि सञ्चार माध्यमहरुबाट प्रचार प्रसार गर्ने गराउने ।
- मिति २०७७७९० लेडय"क्त पेन्ट्सहरुको उन्म"लन बारे अन्तराष्टि«य स्तरीय वेवीनारमा सहआयोजना गरीएको थियो ।
 27 October 2021, 12:00 -13:00 Amsterdam, Berlin, Rome, Stockholm, Vienna,
- मिति २०७७७९३ गते लेडको विषबाट बचावटका लागि अर्न्तराष्ट्रीय सचेतना सप्ताह (International Lead Poisoning Prevention Week-ILPPW 2021) विभन्न प्रादेशिक सम्बन्धित मन्त्रालयहरु र विभिन्न संघ संस्थाहरुको सहकार्यमा वेबीनार मार्फत आयोजना गर्ने ।
- साता भरी रेडियो, टेलिभीजन, पत्र पत्रीका, सामाजिक सञ्जाल, अनलाईन सञ्चार माध्यमहरु मार्फत नेपाल सरकारले तोकेका पेन्टमा लेडको मापदण्डको परीपाल्नाको प्रभावकारीता अधयन परीणाम, नेपाली बालबालिकाको रगतमा लेडको अध्ययन परीणाम लगायन लेडमा तोकेको बाध्यकारी मापदण्डको बारेमा मा बयापक प्रचार प्रसार गरी जनचेतना फैलाउने काम भएको थियो।

धन्यवाद ।

राम चरित्र साह, कार्यकारी निर्देशक एवं वातावरण बैज्ञानिक, मोवाईल न. ९८०३०४७६२१,