

A report on COVID-19 impacts on Chemicals and Wastes

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Submitted By

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Introduction

COVID-19 is a corona virus disease that has caused a worldwide pandemic. COVID-19 is caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). According to the recent figures, India has the second highest number of confirmed cases in the world, followed by the United States.

As per the data collected by CPCB using the biomedical waste management (BMW) application, India has generated 45,954 tonnes of COVID-19 related biomedical waste between 1st May 2020 and 10th May 2021 with an annual average generation of 126 tonnes per day. This was over and above the 614 tonnes per day of biomedical waste generated regularly, indicating a 20% increase in the overall biomedical waste generation¹.

The COVID-19 pandemic widely impacted human health and the economy hence government have urged to treat waste management, including medical, household, and other hazardous waste, as an urgent and essential public service to minimize possible secondary impacts such as public health issues, public safety issues, employment-related issues, etc.

The impact of COVID-19 was felt by all levels of society, and, even though there were regular announcements and guidelines issued by the central and state pollution control boards² regarding precautions and waste management, it was observed that at the rural level people were not taking it seriously due to a lack of awareness.

In this context, the Lok Kalyan Seva Kendra (LSKK), Dumka, attempted to create awareness among the rural communities regarding precautions on waste management. The organization is working in the rural part of the Dumka district of Jharkhand, therefore it has targeted some of the rural areas of Dumka district.

Activities

- Collection of phone number of family head
- WhatsApp communication to the family head on waste management
- Phone call to the families that don't have WhatsApp

¹ <https://www.cseindia.org/managing-covid-19-biomedical-waste-in-india-10861>

² <https://jspcb.nic.in/upload/whatsnew/5eb10c253ce1brevised%20guidelines%20for%20handling,%20treatment%20and.pdf>

- Displaying the banner containing information on COVID waste management (gloves, masks, and PPE) at important face points
- Small video preparation involving local artists in Santhali language on COVID waste management.
- Leaflet / poster printing and distribution in Santhali/Hindi/Bengali
- Submission of demand letter to DC/CEO Municipality
- Media interaction on waste management

Expected Impact

- People become aware of waste management linked with COVID-19
- Knowledge enhancement and behavior change

The LKSK carried out the following on-ground activities to conduct the awareness program on COVID-19 impacts on waste management:

- Identification of the area
- Reaching out to the communities
- Collection of communication details of the villagers
- Identification of social media users (from the collected data)
- Creation and circulation of information, education, and communication (IEC) material
- Creation of audio or video message
- Liaising with local and district level government officials
- Conducting in-person meetings and awareness programs wherever possible (by following COVID-19 guidelines)

District information

Dumka district is part of Santhal Pargana and is located in the northeastern part of the Jharkhand state. It is one of the most spectacular districts of Jharkhand state and has the privilege of being the sub-capital of this state³ (Image 1). The population of Dumka district in 2021 is 1,475,112. As per the 2011 census of India, Dumka district has a population of 1,321,442, of which 668,514 are male and 652,928 are female. Literate people are 672,409, of which 406,275 are male and 266,134 are female. People living in Dumka district depend on multiple skills. The total number of workers are 624,779, of which 367,108 are male and 257,671 are female. A total of 83,224 persons are cultivators and dependent on agriculture farming, of which 60,983 are men and 22,241 are women. 72,157 people work in agricultural lands as laborers, of which 46,876 are men, and 25,281 are women. The Dumka district gender ratio is 977 females per 1000 males.⁴



Image 1 - Map of the Dumka district

³<https://cdn.s3waas.gov.in/s363538fe6ef330c13a05a3ed7e599d5f7/uploads/2020/10/2020100757.pdf>

⁴https://www.indiagrowing.com/Jharkhand/Dumka_District

Awareness program

The organization reached up to 5000 individuals between December 2020 to March 2021 while conducting different activities. At the beginning of the program, with the help of local representatives (Image 2), approachable locations with easy access were identified and the communication details were collected (and WhatsApp users were identified in order to share the information and media directly). Due to lockdown and travel restrictions, it was difficult to travel on a regular basis; therefore, in order to reach the mass population, the organization communicated on mobiles and shared information on WhatsApp. Similarly, limited in-person meetings and awareness programs were conducted among the society.



Image 2 - Collection of information

The organization conducted an awareness program in the Dumka district of Jharkhand only⁵. The information reached up to 5000 individuals, comprised of approximately 2000 males and 3000 females. The aim in reaching to them was to inform them about COVID-19 and to encourage them to adopt safer waste management practices (information was adopted from state government pollution control board documents⁶). The information provided through telephone calls is presented in box 1.

Information in the forms of flyers, audio messages, etc. were shared among them. Some positive responses were observed from them, as they were not receiving such information earlier. The shared

⁵<https://www.mapsofindia.com/maps/jharkhand/tehsil/dumka.html>

⁶<https://cdn.s3waas.gov.in/s32b8a61594b1f4c4db0902a8a395ced93/uploads/2020/03/2020032080.pdf>

information was well adopted as some of them were re-forwarding the received media to other friends and relatives for spreading awareness.

Box 1 - Information shared with the villagers

The following information was provided to the villagers on phone calls:

1. Avoid close contact with people who are sick.
2. Wear a mask in indoor public places.
3. Follow social distancing and put 6 feet of distance between yourself and people who don't live in your household.
4. Try to wash your hands after certain intervals (before eating or preparing food, before touching your face, after using the restroom, after leaving a public place, after blowing your nose, coughing, or sneezing, after handling your mask, etc.).
5. Use soap and water, or an alcohol-based hand rub.
6. Dispose of used masks properly.
7. Choose open, well-ventilated spaces over closed ones. Open a window if indoors.
8. Get vaccinated when it's your turn. Follow local guidance about vaccination.
9. Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
10. Stay home if you feel unwell.
11. If a cold, fever, etc. is observed, immediately contact on 104.
12. For more information contact 6201134869.
13. Information shared on how to manage the waste during COVID-19 (e.g., proper disposal of used mask and hand gloves, safe disposal of sanitizer bottles, washing hands regularly, etc.).

Banner or Hoarding Display

As a part of the campaign, big banners were installed at different locations such as roadsides and in the village (Image 3 and 4) as well as the other spots (dispensary/clinic) (Image 5) and as a hoarding on the roadside to catch the public attention. The information on these banners was in Hindi and English, but for the local and rural public, some other materials such as audio clips and flyers were developed in local language (Santhali) and Hindi, respectively. A large number of WhatsApp messages were also shared as a part of the awareness campaign.



Image 3 - Banner displayed at the roadside



Image 4 - Banner displayed at the village



Image 5 - Banner displayed at the clinic

Information Education and Communication material

A flyer was developed (Image 6) to circulate to the mass population. This was developed in Hindi and English. It was circulated among 5000 individual villagers (male and female) as well as given to the different market places. There was a good response from people, as many of them were contacting us to understand the disposal process and appreciating us for our initiative.

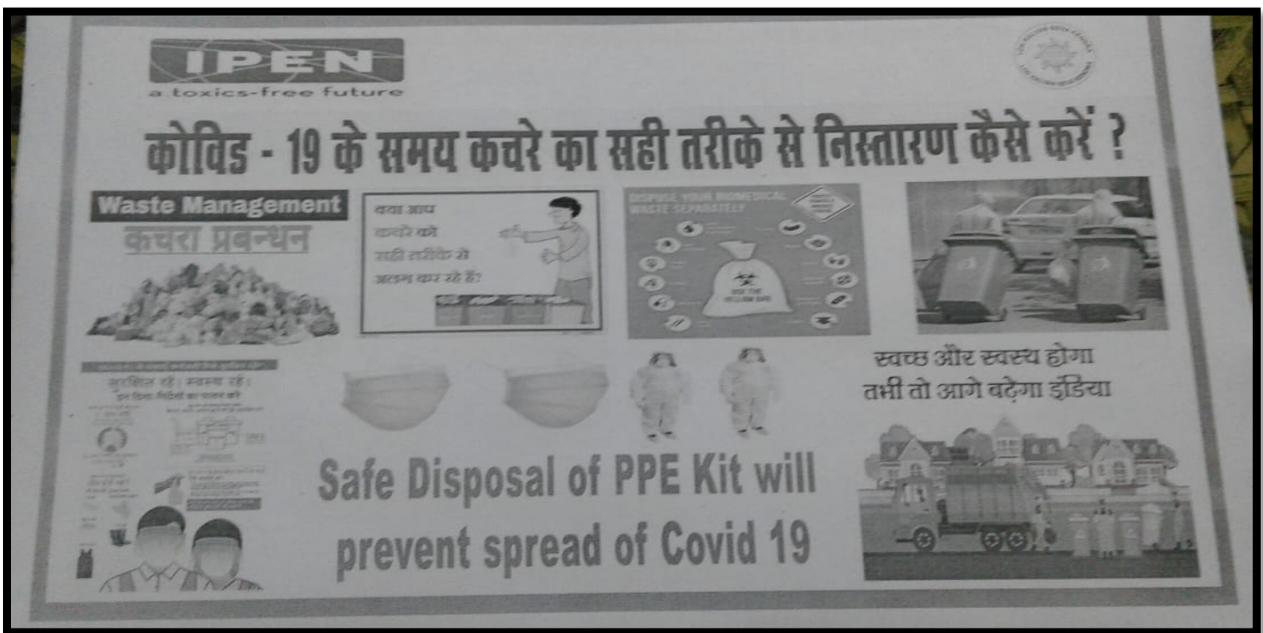


Image 6 - Information material on waste management

Digital media use in the campaign

Digital media plays an important role in such a campaign, therefore a small audio clip in a local language (Santhali) was developed and shared among the villagers via WhatsApp (Image 7). The purpose of making it in a local language was to circulate it in a very remote area of the district, where there is less access to television and newspapers. Earlier there was a plan to develop a small video for awareness purposes, but, due to the lockdown we were unable to create it, therefore only an audio message was created and circulated. Those who were unable to receive it attempted to hear it on a laptop in a small group (when there was relaxation in the lockdown) (Image 8). Similarly, a local level meeting was conducted with the nurses and other officials to share the information (Image 9 and 10).

The audio clip contained the message presented in the box. (Box 2)

Box 2 – Information of audio message

Audio clip states: "Please use a mask whenever you go out and dispose of once used, use hand sanitizers, follow regular hand washing after some intervals, keep six feet of distance whenever in public and manage the COVID19 waste properly, Thanks!".

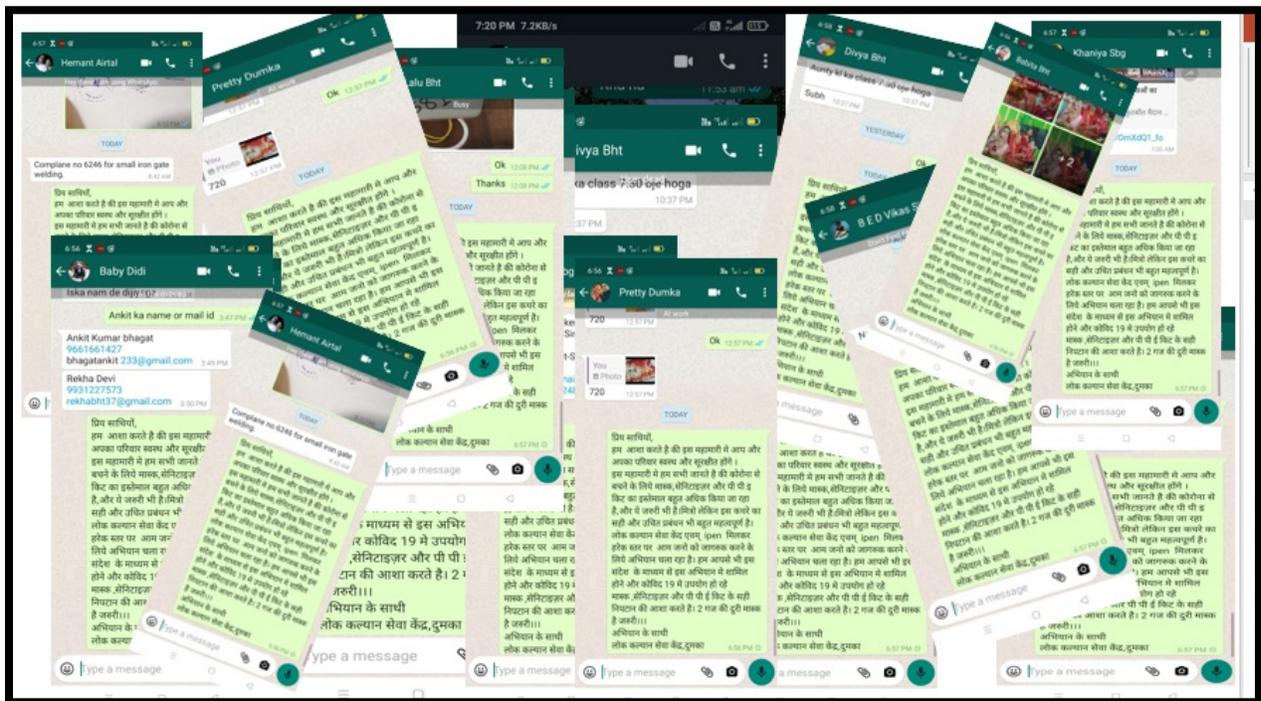


Image 7 - Snapshot of the information shared through WhatsApp



Image 8—Playing the audio message to the women’s group





Image 10-Group discussion at the local level

Liaison with government departments

In addition to the public campaign, a discussion took place with the government officials (Image 11) and letters were submitted (on 27 Feb 2021) to the Deputy Commissioner, Dumka, and the Chief Executive Officer, Dumka Municipality (Image 12) requesting them to support organizations' activities on the management of waste produced during COVID-19, which includes masks, sanitizers, PPE kits (in some cases), etc. The detailed discussion was done during the submission of the letter and meeting with both of these officials.

There was a positive response received from both of the departments as they instructed their on-ground staff and local staff to take precautions and support the organization in the campaign of waste management. Further, there was continuous follow-up to achieve the desired goal. The organization decided to work and support these departments in the future with mutual understanding. The copies of the letter are presented below.



Image 11 - Discussion with the government department

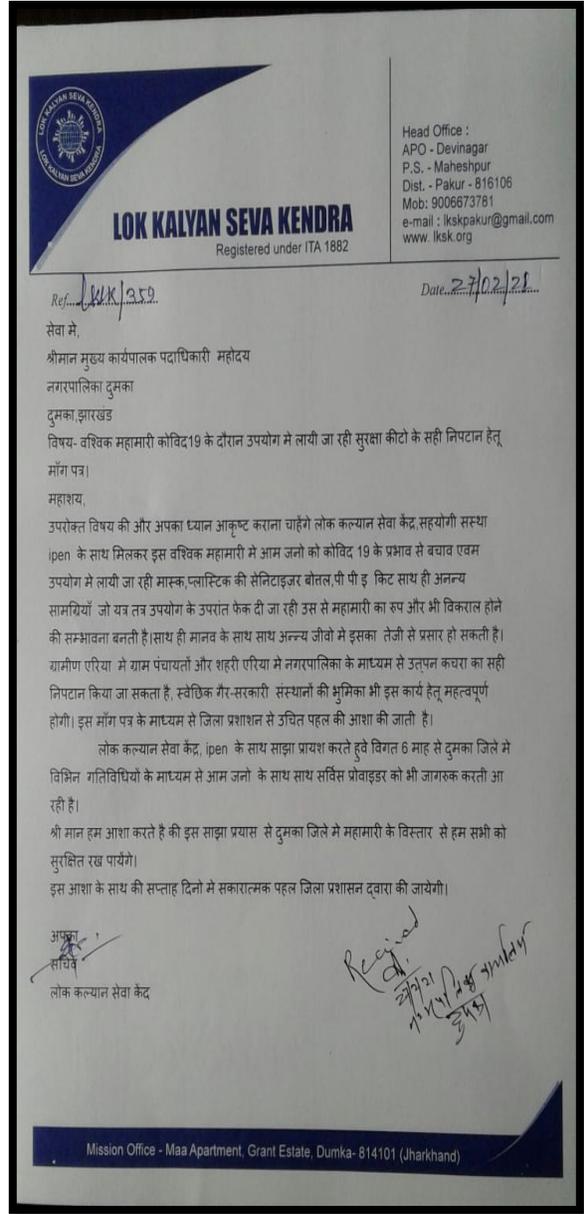
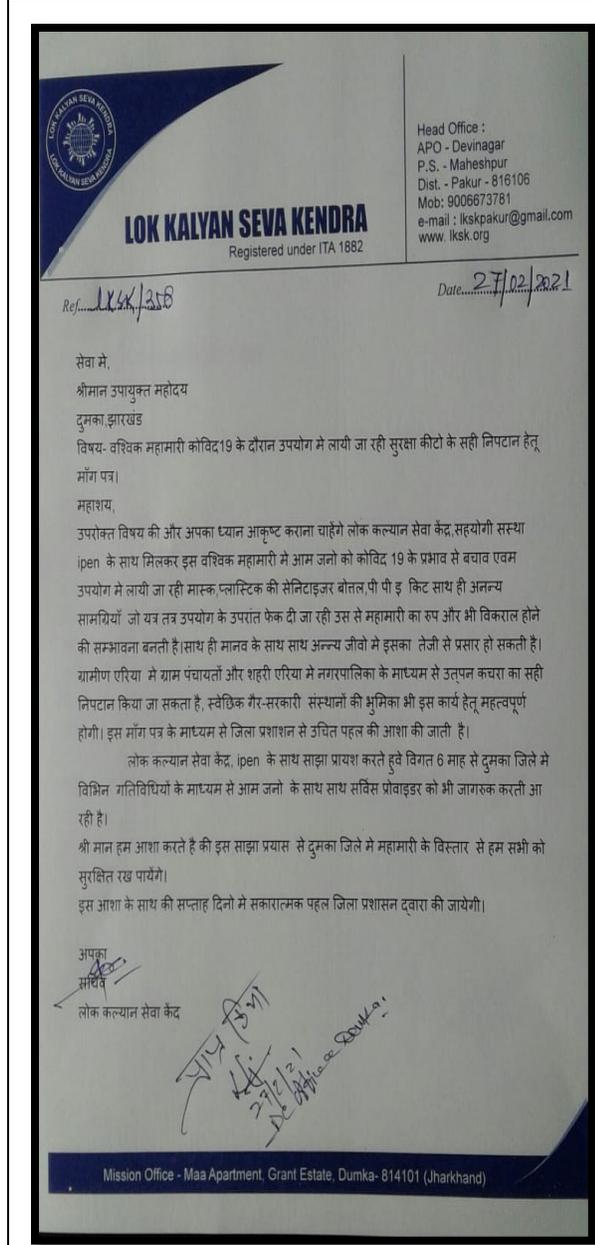


Image 12 - Letters that were submitted to the government officials

Media coverage

The campaign on awareness on waste management conducted at Dumka was well recognized by the local media. This local media Prabhat Khabar has a wide reach to the rural part of the Dumka district (Image 13).



Image 13 - Media coverage

Observation

The spread of COVID-19 has posed significant challenges in the management of household waste, and has put the waste collection personnel and concerned bodies under massive pressure. During our overall interventions (such as field visits, interaction, meetings, and awareness programs), it was observed that there is a huge impact of COVID-19 on waste management practices. The chain of collection, segregation, recycling and disposal of household-generated wastes has been interrupted. Therefore, the attempt was made to inform the public in rural areas about the impact of COVID-19, adoption of the mask, sanitizers, hand washing practices, social distancing, and sound management of wastes that they generate.

Case study

During an intervention at the village level in Dumka district, it was observed in some places that a single mask was being used by the whole family one by one (whenever it is required), and some families were using only one mask for many days. They were not at all aware about the proper use of masks, precautions, etc. In one of our field visits, the team observed that kids were collecting the used masks (the good ones) that were thrown away after use and reusing them. It was surprising that, even though the government is trying to educate society regarding COVID-19 impacts, precautions, dos and don'ts, in an extremely rural part of the district they are still unaware about all of it and not taking such precautions. Therefore, the team decided to reach out to them, educate them, and spread awareness (Image 14 and 15). Further, it was observed that people are not necessarily conscious about nor following the instructions to safeguard themselves and their families.



Image 14 - Awareness program for management of wastes



Image 15 - Awareness program at village level

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