



Toxics Link
for a toxics-free world

Roundtable

On

“City Hotspots – Way Ahead”

On

25th September 2014

at

India Islamic Cultural Centre, New Delhi



1. Workshop Background

Delhi has been a seat to various industrial and semi-industrial activities which take place within the city's boundary. These areas cater to many kinds of industries, including plastic, metal, textile, etc. The city is also host to one of the largest recycling markets in the world, catering to all sorts of wastes and materials, with a vast population engaged in formal and informal processing of a mix of toxic and non-toxic waste. Years of such activities have had an impact on the city's environment, contaminating the soil, water and air. Poor implementation of environmental norms has made many of these locations potential hotspots of pollution.

'On the Edge' is first of its kind study in Delhi, mapping the city's polluting centres. These sites are regularly contaminating the city's environment by releasing toxic pollutants and thereby creating health concerns. This study focuses on identifying these sites as well as gathering and compiling information related to these sites. There are many such hotspots existing across the country and still no strict action has been taken till date to develop a concrete plan of action.

The roundtable meeting provided a platform to facilitate a discussion amongst various stakeholders to deliberate upon the findings of the report and to ascertain if there is an urgent need to look at the current activities in any of these sites.

2. Welcome address

Mr. Ravi Agarwal welcomed all the participants and hoped that the roundtable will be able to discuss some of the concerns raised in the report and offer solutions. He introduced the report and the importance of such research in the current scenario of environmental degradation. He mentioned that the report is one in the series of many such reports aimed at scientifically mapping out toxicity impacts of activities happening in the city at different sites. The reason the organization is doing such research is that the idea of toxicity

and contamination is generally ignored. It's observed that there is a lack of data on specific kinds of contamination and this is an attempt to map-out that, the possible implications on the city and how the city could be planned further.

He then spoke about Delhi's profile as a city and how it has grown from just a city to a region. This growth has had many consequences, one of which is the increasing pressure on the Government mechanisms. One major impact of the increasing urban mass in the city is the pressure on environment and its degradation. Many industrial activities continue to happen in the city, with some of them like recycling of lead acid batteries happening in spite of the existence of a ban on them within the city boundaries. He also emphasized on the lack of sufficient formal investment in



recycling sector and proper standards for recycling, highlighting that even the new Municipal Solid Waste rules (draft) do not focus on recycling. He pointed out the need to look at the required infrastructure, skills development, legislation etc. for such industrial, especially recycling activity and good quality data in this regard. The report is an attempt in this direction.

A round of introduction was done at the end of the welcome address.

3. Presentations and Discussion

A. On the Edge – Presentation



The first presentation, made by **Ms. Priti Mahesh (Chief Programme Coordinator, Toxics Link)**, brought forward the findings of the study report 'On the Edge – Potential Hotspots in Delhi'. She began by stressing that although Delhi is the country's political capital and home to millions, the preferred city for many of the migrants; it is not really offering quality health and environment to its citizens. The report is an attempt to capture some of the activities within the city which might be

making many sites potential hotspots and push for positive change. She presented a brief methodology of the study which included assessment of 51 shortlisted sites (mix of authorized and non-authorized industrial areas) based on secondary research and field study that consisted of surveys and interviews. The findings were shocking as 18 sites were identified as probable hotspots (based on different parameters), spread across the city and host to more than 7000 industrial units that together employ more than 150,000 people. Many of such units violate the land use norms and run illegally. Most of these operations are happening close to residential areas, putting health of millions at risk. The activities at these sites include many banned processes like lead-acid battery recycling, e-waste handling, pickling and open-furnace operations.

Ms. Mahesh highlighted some of the most critical sites – Prem Nagar, Wazirpur, and Moti Nagar. Prem Nagar located on Delhi-UP border and administratively a part of UP, interestingly draws water and electricity from Delhi. It's a major lead acid battery recycling hub. Wazirpur was found to be one of the dirtiest areas, with pickling, that employs concentrated acids in the operations, being the main business. During the team's visit, the acid fumes were so strong that the team found it difficult to even stand there. Although gloves were being used but they're of very low quality and failed to serve the purpose, which was evident by the swollen hands of the people working there. Moti Nagar located in the heart of a residential area houses a CFL assembly and reassembly industry. Almost every house has a section doing these activities, and probably releasing toxic elements like lead and mercury.

She also spoke about the hubs for e-waste recycling in the city – Old Seemapuri, Shastri Park and Gokulpuri, and how processes like CRT regunning and e-waste dismantling are contaminating the city. The study also looked at the city's three landfills that are overburdened and have no mechanism for leachate collection, leading to ground water contamination. She also spoke of the legacy sites in the city in terms of pollution, for which data was difficult to get as people weren't ready to talk about them. These included fly-ash dumping sites in the city, Tilak Bazaar – the chemical market where one can still buy Mercury and other hazardous chemicals, and the river Yamuna. Ms. Mahesh stressed that there has been hardly any study/report on these as well, no reports of any assessment for contamination or plans for remediation.

Ms. Mahesh cautioned the participants that these operations were on rise, spreading to neighboring areas –like Ghaziabad, Loni, Faridabad, with no action being taken against them, and raised the question that whether it's the lack of planning, resources or corruption at different levels that these operations are still going on. She said that one of the major concerns is that there are probably more Delhis thriving in the country, and there is an urgent need to look for the cities that are on the edge and start planning the remediation.

The presentation was followed by a discussion on the points stated.

B. Open Discussion I

Dr. Rajendra Prasad (Vice President, Indian Network for Soil Contamination Research) put forth the question that did the study involve collection and analysis of soil, air and water samples and was any correlation drawn with disease patterns to bring forth scientific evidence that can further help chalking out relevant appropriate policies and technology development. Ms. Mahesh (Toxics Link) responded by saying that soil, water, or air samples were not analyzed in this particular study, as there were limitations. But there have been water and soil study done by Toxics Link on two e-waste recycling sites (Mandoli and Loni). Ravi Agarwal (Toxics Link) also pointed out a Toxics Link study on Mercury where the idea was proposing mercury substitution in hospitals and hair sampling of nurses was done. But he pointed out the difficulties in health studies, especially the ethical issue involved.

He also added that it is important to understand what a study is trying to achieve and plan accordingly. For the present subject, it is important to analyze soil, water and air, but it's a large space and the issues are where the sampling should be done, what is more useful, what would it lead to? The idea of the meeting is also to start a conversation and assess the future needs.

Dr. Shyamala Mani (Professor, NIUA) talked about a spatial analysis on e-waste that has been done. Since according to DPCC e-waste collection is not allowed anywhere except in industrial estates, this analysis can help in understanding the infrastructure required for collection and dismantling of E-waste in the city. She said that the biggest issue was lack of information and data, and lack of knowledge on the kind of infrastructure required. She expressed NIUA's interest in supporting initiatives taken in this regard.

Dr. Seema Sharma (Assistant Professor, Department of Social Work, University of Delhi) said that they work closely with families in New Seelampur where wastes from wires with plastic insulation are handled. The activities take place in residential spaces, which are not more than 25 yards with hardly any ventilation. Mainly women are involved, along with their children and seem to suffer from many health issues. She added that they did approach the local MLA to initiate interventions in the area but did not receive any help. She said that there is lack of awareness about the possible health impacts of such activities and the releases. **Mr. Vinay Gangal (Scientist C, CPCB)** suggested that the way out would be training these people on how to remove the insulation in a safe and better way. **Ms. Mahesh** raised her concern that all these activities are illegal in nature and in fact need to be shut down. Responding to her concern, **Mr. A.S. Harinath (Environment Specialist, World Bank)** said there are 30,000-40,000 hotspots across the country and 80% of them would be from illegal operations. Though we do need to work at policy level, he suggested that strategies need to be devised to improve the situation at the local level.

Ms. Mahesh agreed with **Mr. Harinath's** point of designing local level strategies and action and said that it was for the same reason that representation from the city's three municipal corporations was invited for this round table, and in fact this also forms the base of this meeting and hoped that by the end of the meeting there would be some strategy on how to deal with the local bodies and how do we start working on that.

Citing a study that University of Delhi did on contamination of ground water in various sites of Delhi, **Dr. Suneel Pandey (Senior Fellow and Associate Director, Green Growth and Resource Efficiency Division, TERI)** said that the results of the Toxics Link study can be correlated with those of the DU study to carry out mapping. **Ms. Mahesh** responded by saying that some mapping has been done, for example Najafgarh basin, Anand Parbat, Wazirpur were reported for ground water contamination. But maybe it needs to be looked at more closely.

Mr. Anand Kumar (Scientist D, CPCB) said that though CPCB has been blamed for many such issues, they have a limited role. Many a times, the stakeholders for whom the guidelines are made oppose them and in such a scenario things get difficult for the board. He also expressed his concerns over the subsequent fate of the people employed in these units if they were to be shut down. They might migrate to some other place and start these activities there, and hence it's not a question of some agency doing its work alone, but instead requires cumulative efforts from all stakeholders. The problem is because of the failure of the entire system, and of every stakeholder in delivering its duty.

Mr. Agarwal raised his concern over illegal activities like pickling happening in the city and opined that there is a need to look for options for better job opportunities for these people, adding that such completely illegal activities cannot be justified.

C. Hotspots: Prevention is better than Cure – Presentation

Second presentation was by **Ms. Ankita Jena (Senior Programme Officer, Toxics Link)**, highlighting the regulatory framework in existence that is relevant to the problem. She started off by raising her

concern that though there have many talks on environmental pollution related to industrial activities since a long time, the situation has far from improved. She raised the pertinent questions: What is keeping us from moving forward? Why are we still creating hotspots? Is our regulatory framework not good enough or is the enforcement weak? Is enforcement lacking in terms of lack of assessment, monitoring, or lack of action on ground? Or, are the procedures in the rules not clear?

Ms. Jena then spoke about the current regulatory frameworks, the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981, both of which together cover most of the water and air pollution issues, the reins of whose implementation lie in the hands of the respective state pollution control boards/committees. The Environment (Protection) Act, 1986, an umbrella act which talks about procedures for preventing accidents, handling of hazardous waste, industrial processes which could lead to environmental pollution, et al and covers mostly all aspects of environment. She further spoke about the relevant provisions under the Hazardous Waste (Management & Handling) Rules, 2008, Manufacture,



Storage and Import of Hazardous Chemicals Rules, 1989, Bio-medical Waste (Management & Handling) Rules, 1998, Municipal Solid Waste (Management & Handling) Rules, 2000, Noise Pollution (Regulation and Control) Rules, 2000, Batteries (Management & Handling) Rules, 2001, Plastic Waste (Management & Handling) Rules, 2011, The Fly Ash Notification, E-Waste (Management & Handling) Rules, 2011. Apart from these, a number of licenses need to be taken for establishment and operation of the activities which can act as check points for the industries. But the question is, are these rules enough?

Speaking about enforcement, she said that Delhi has many strict notifications and bans; however, we don't see any action on ground. Delhi was one of the first cities to come out with a master plan (1962) but the plan failed completely and led to unauthorized constructions, land encroachments, mushrooming informal sector etc. The actual action happened in 1996, when M.C. Mehta filed a Public Interest Litigation regarding industries located in residential areas. This was actually a trigger point which led the Supreme Court to order all polluting industries to either shut down or shift out of Delhi. Subsequently, the Delhi government came out with the Delhi Master Plan 2001 and 2021.

Coming back to the purpose of the meeting, Ms. Jena said that we all know that such industries exist, but the question that needs to be discussed in the meeting is that why are these units operating even when we have the Delhi Master plan prohibiting their existence in the city, there are regulations in place, we have various enforcing agencies. Suggesting a solution, she said that there can be many points of check, for example, the water and electricity boards from where these units source the respective resources can take action by cutting off the supply. She further suggested that

proper implementation of rules needs to be done – either the illegal units need to shut down or relocated. Also there is a need to look into the livelihood options for the people working in these units as closing down might have severe implications. Assessment and remediation measures also need to be designed.

D. Open Discussion II



Mr. Satish Sinha, Associate Director, Toxics Link opened the discussion by putting forth his point that the situation in Delhi is not typical to the city and is probably the same across metro cities. He also raised the concern that if these units are asked to shift out of metros, they might establish themselves in smaller cities. What is the solution? He further opened the floor for suggestions in this regard.

Mr. Katheria (Kadam Enviro) pointed out that main concern in industrial waste management is lack of proper facilities and infrastructure for disposal.

On the above point, **Mr. Sinha** said that disposal infrastructure is not the only issue; rather the problem is existence of these units in spite of the Delhi Master Plan. Adding to it, **Ms. Mahesh** said it is mostly the legal units that are being regulated and hence the illegal ones operated without any hindrance.

Mr. Kumar (CPCB) pointed out that we need to find out the kind of contaminants, the spread of the contaminants and the extent of the pollution. He also stressed that since most of these units are in unauthorized settlements and within the households, it is quite difficult for any regulatory agency to identify and make them discontinue their activities. Adding to this, Dr Pandey (TERI) said that many of these units are on-job works and carry out their activities in their houses. Putting across her concerns, Ms. Mahesh responded by saying that not all are in unauthorized settlements, some of them are in legal and authorized areas as well. In a few cases, it might be on-job works but units such as pickling, lead acid battery recycling are large scale industries openly operating in recognized industrial areas, she added. Speaking on lead acid battery, **Mr. Kumar (CPCB)** expressed his concerns stating that the issue is not only of informal recycling but also of a nexus between formal and informal units in which the registered recyclers might be selling batteries back to the informal sector.

Mr. Sinha invited the participants to share their comments. **Mr. Aditya Bisht (Project Executive, Sycom)** shared his findings from a study that he conducted to understand the stakeholders' point of view on the e-waste rules. He interviewed various stakeholders such as producers, consumers,

government bodies and found that everyone is shying away from their responsibility. Both, producers and regulatory authorities are trying to put the blame on each other. **Mr. Agarwal** reiterated that even though all stakeholders are blaming each other, it was the producers who asked for the rules and EPR was introduced because they wanted to make it a level playing field for all.

Mr. Tobias Dorr (GIZ) questioned the research team whether the people involved were aware of the ill impacts of such operations on their health as he believes that if there is awareness then the problem can be solved to some extent. On his point, **Ms. Mahesh** replied that they received a mixed response. In most of the areas, the workers were aware of the short term impacts. For example, in case of acids and lead fumes, they faced concerns of burns and respiratory issues. However, they were not aware of the long term health impacts of these activities. She also added that in many of these cases even if there is a little awareness on adverse effects on health, workers are more concerned about their livelihood.

Mr. Apramey Saxena (Head - Lead Marketing, Hindustan Zinc) asked the participants if it would be possible to file PIL and RTI to obtain information from government bodies on lead acid battery recycling and to question them on their actions as per the Batteries (Management & Handling) Rules, 2001. Another question raised by him was that if government can come out with some pricing mechanism to control the existing nexus between formal and informal sector. As per the rules, battery manufacturers are supposed to collect 90% of the batteries sold in the market, but this is far from happening as the informal sector offers better prices for scrap batteries than a formal player. Because of this it's very difficult to compete with the grey market and it has been difficult to implement EPR on ground level.

Mr. Agarwal responded to him saying that it is the responsibility of the producer under the EPR to make sure that the registered dealers are directing the scrap batteries to the formal sector. Producers cannot put the blame on the informal sector for driving the market because industry can play a big role in turning the tables.

Mr. Harinath (World Bank) added that pollution control boards or committees lack capacity for monitoring. One solution would be community based initiatives. Regulatory authorities may not look at such initiatives as regulatory inputs but as guides for them to take action. He also suggested that along with mapping out the hotspots, a few indicators can also be developed, so that possible interventions can be planned, which may vary from governance improvement at national level and infrastructure improvement at local level. Citing reference to a World Bank study he said that it has been found that at times contamination is restricted to the top-soil and not the ground water. Until and unless we have standards for these sites, it will be difficult to actually call them hotspots or contaminated sites.

Dr. Mani (NIUA) suggested that if SPCB/SPCCs don't have capacity to do testing of samples, collaborations can be done with universities and CSIR labs that already have such capacities.

Mr. Sinha expressed his concern by saying that even after the SC order prohibiting these units from operating within the city, they continue to exist. He raised few questions, such as:

- Since most of these activities are related to recycling, is there a lack of recycling facilities in the country?
- Is there a nexus between formal and informal sector and how can this nexus be broken?
- How do we make sure that these illegal, polluting units are shut down and when they are, how to ensure that they don't come back and start their operations again?
- Who are the agencies responsible for this, for example, if a person gets to know about one such facility operating in a house in his neighborhood, whom should the person approach?

Ms. Shweta Dua (Technical Expert, GIZ) suggested that formalization of informal sector can be one of the solutions. NGOs can do rigorous sensitization and provide support amongst the recyclers in the processes of registration and getting licenses. **Mr. Agarwal** responded to Ms. Dua's suggestion saying that since many of these activities are clearly tagged illegal in Delhi, they cannot be done by formal or informal sector. **Mr. Sinha** agreed with him saying that formalization in-situ may not always be possible; for example, we can't have a CFL recycling facility legalized in a residential area. Several questions need to be answered, like what kind of recycling facilities do we need, where can they be set up, what kind of investments need to be made, because poor people get affected, there are long term impacts on human health.

Taking the example of Mandoli area where 500 small scale units operate, **Mr. Kumar (CPCB)** suggested that we can have a common area where recycling facilities can be set up, where all pollution control norms are adhered to, where all individuals who've till now been doing the activities at home can come and carry out their activities. There can be mechanisms to support such initiatives, for which government involvement would be crucial, Mr. Sinha added. Taking this idea forward, **Dr. Mani (NIUA)** said that we need data on how many such facilities are required, how many people can work in one area, what is the kind of infrastructure that is needed? **Mr. Sinha** added there is no proper regulatory tool set for checking compliance on EPR. For example, there has been no mechanism to check with battery manufacturers their annual sales figures and the relevant collection targets. **Mr. Kumar (CPCB)** said that the e-waste rules are being amended with the idea of making it more stringent, more responsibility being given to producers. **Mr. Agarwal** voiced his concern over poor enforcement, no matter how strict the rules are.

Dr. Mani (NIUA) suggested that if for recycling of a particular product, producers are not ready to take responsibility and regulators find it difficult to layout procedures for its safe management, such products be banned from the market permanently.

Mr. Sinha requested everyone to share a few suggestions on the way forward for the report. **Dr. Pandey (TERI)** suggested that Material Recovery Zones can be set up which can be regulated by various instruments. He gave the example of Gujarat where if a certain industry doesn't comply, their power is cut off. But even for implementing such regulatory instruments, first the units need to be registered otherwise household to household regulation is not possible. **Mr. Kumar (CPCB)** added to it, suggesting common processing areas can be set up for all materials, with environmentally sound technologies and proper pollution control equipments in place.

Mr. Sinha felt that it might be important to involve the citizens, but there is hardly any awareness on the kind of activities which are permitted in which areas, and even when people get to know, they are not sure about whom should they approach? **Ms. Mahesh** suggested that there should be some transparency in this regard that for every complaint lodged, information on the subsequent action taken should also be shared with the public.

Mr. Sinha questioned the participants on the need of doing scientific study as an add-on to the study in consideration, and further, the need for collaboration with another organization to carry out the scientific study for example air pollution, mercury contamination etc, and the possible organizations that the collaborations can be made with. **Mr. Harinath** suggested that Toxics Link can take forward the report in two ways: one would be to use it to create pressure on government agencies to take action who can take further action. The other way would be to do interventions in an area which can act as a model for the government agencies to take initiatives.

Mr. Sinha shared his closing remarks saying that these problems won't get solved unless people are the catalyst for the change. **Ms. Mahesh** added that the dialogues have been talking about remediation; there has been little focus on the need and ways to prevent more hotspots from being created. **Mr. Sinha** added saying that preventive measures need to be taken, the problem needs to be addressed with a sector based approach by looking at one sector at a time, and trying to create models for the country to replicate. For data creation, for example for lead acid batteries, organizations like Hindustan Zinc can take initiative to check the total capacity for recycling of the batteries, total collection, etc. In this regard, **Mr. Kumar (CPCB)** shared that there are 364 registered battery recycling units across the country with a capacity of recycling 18 lakh metric tonnes per annum. He added that lead scrap can be imported to the country by registered recyclers and some of the lead acid battery might be coming under this. **Mr. Agarwal** raised his concerns saying that when there is no solution for domestically generated batteries in the country then imports should be completely banned.

4. Key Recommendations

The key recommendations emerging from the discussions have been listed below:

- Separate standards for contaminated sites on the basis of which they can be monitored, managed and remediated
- Studies on identification of such sites in the entire country
- Designated areas or sites for recycling so that proper monitoring mechanisms can be in place
- Model creation for government agencies to take further initiatives
- Collaborative work between civil society organizations, research institutes and regulatory bodies to identify potential hotspots and initiate action in these areas
- Strict implementation of rules and stringent penalty clause

Agenda

1000– 1015 hrs	Welcome Address	Ravi Agarwal, Director, Toxics Link
1015 – 1035 hrs	On the Edge – Potential Hotspots of Delhi	Priti Mahesh, Toxics Link
1035 – 1045 hrs	Question & Answer	
1045 – 1100 hrs	Hotspots – Prevention is Better than Cure	Ankita jena, Toxics Link
1100– 1115 hrs	Tea Break	
1115 – 1315 hrs	Open Discussion Moderated by Satish Sinha	
1315 – 1330 hrs	Concluding Remarks Ravi Agarwal and Satish Sinha	
1330 onwards	Lunch	

List of Participants

S.no	Name	Organization	S.no	Name	Organization
1	Anand Kumar	CPCB	14	Suneel Pandey	TERI
2	Vinay Gangal	CPCB	15	A.S.Harinath	World Bank
3	Seema Sharma	University of Delhi	16	Ravi Agarwal	Toxics Link
4	Suresh Kennit	Embassy of Switzerland	17	Satish Sinha	Toxics Link
5	Shewat Dua	GIZ	18	Priti Mahesh	Toxics Link
6	Ramesh Nair	GIZ	19	Ankita Jena	Toxics Link
7	Tobias Dorr	GIZ	20	Vinod Kumar	Toxics Link
8	Apramey Saxena	Hindustan Zinc	21	Ankita Pandit	Toxics Link
9	Rajendra Prasad	INSCR	22	Shweta Arora	Toxics Link
10	Anuj Katheria	Kadam Enviro	23	Kankana Das	Toxics Link
11	Shyamala Mani	NIUA	24	Prashant Rajankar	Toxics Link
12	Pradeep Dadlani	Sycom	25	Piyush Mohapatra	Toxics Link
13	Aditya Bisht	Sycom			