

Break-up of E-Waste in India

**Composition of E-Waste** 

Other equipment

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**Landfills and Open Dumps** 

Improper Disposal: Much e-waste from households

and small businesses ends up in regular trash due to

Environmental Hazards: E-waste in landfills leaches

toxic substances like lead and mercury into the soil

and groundwater, causing environmental pollution

and health risks for nearby communities.

a lack of awareness and proper disposal channels,

leading to landfill dumping.

### The health risks associated with e-waste exposure

**Abandoned or Discarded** 

riverbanks, causing pollution.

causing long-term damage.

**Dumping in Informal Sites:** E-waste is sometimes abandoned in public areas, like urban outskirts or

Environmental Impact: This abandoned e-waste contributes to littering, harms wildlife, and allows

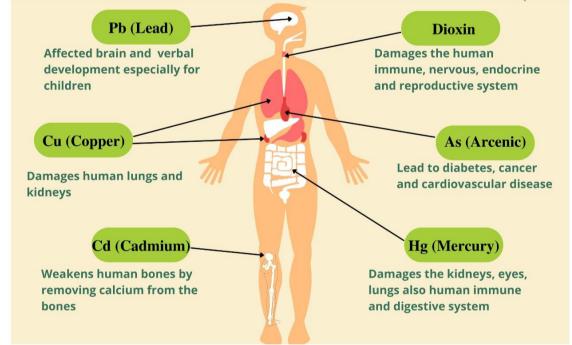
toxic components to leach into the environment,

Children and pregnant women are especially vulnerable to the effects of hazardous pollutants from informal e-waste recycling activities. Children are often involved in waste picking and scavenging, burning discarded e-waste and the manual dismantlement of items into component parts.children may serve as a source of cheap labour and their small hands give them an advantage in taking apart the smallest items. These

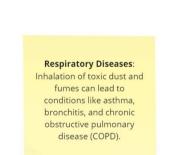
activities directly expose children to injury and high levels of hazardous chemicals. Additionally, children are highly sensitive to many of the pollutants released through e-waste recycling due to their rapidly developing bodies, including their respiratory, immune and central nervous systems. E-waste exposure may be linked to the following health effects during pregnancy and in infants and children:

· adverse neonatal outcomes, including increased rates of stillbirth and premature birth; · neurodevelopment, learning and behaviour outcomes, especially associated with lead released through informal e-waste recycling activities; • reduced lung and respiratory function and increased asthma incidence, which may be linked to high levels of contaminated air pollution that

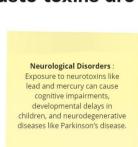
characterize many e-waste recycling sites. E-waste contains multiple known and suspected neurotoxicants, including lead and mercury, that may disrupt the development of the central nervous system during pregnancy, infancy, childhood and adolescence.

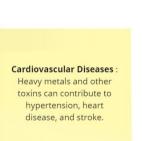


# E-waste toxins are linked to several serious health conditions













**Export to Other Countries** 

Illegal Exports: Some e-waste from India is illegally sent to countries in Africa and Southeast Asia with

Challenges in Tracking: The clandestine nature of these exports makes it difficult to trace the exact destinations and volumes, adding to the supply

lax environmental regulations and cheap labor,

turning them into dumping grounds.

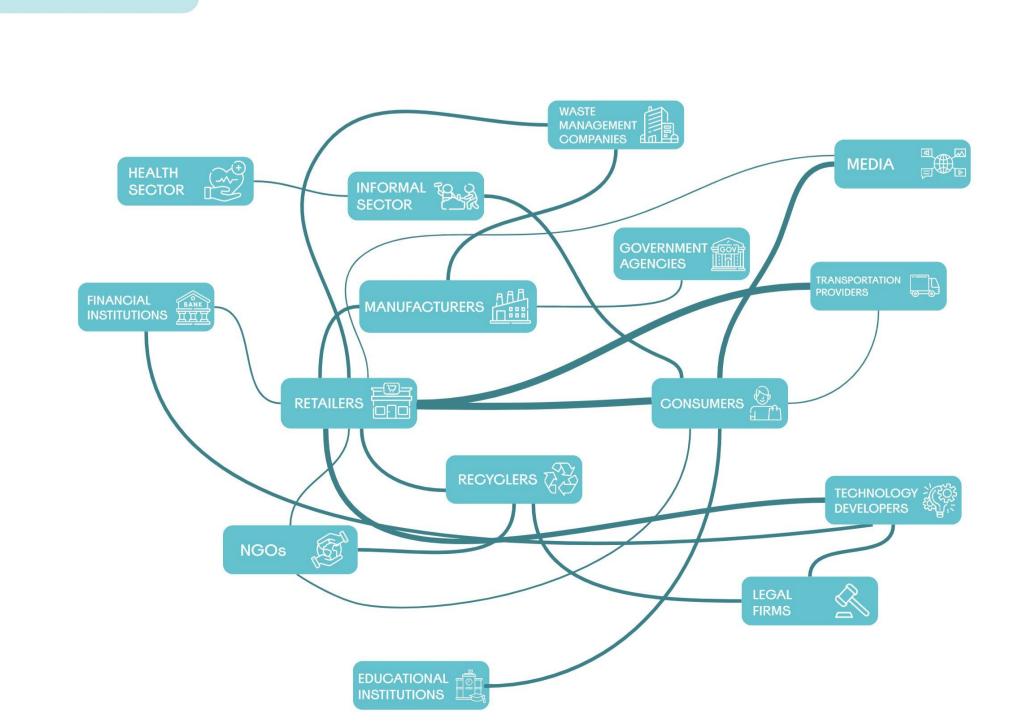
chain's "invisibility."



#### STAKEHOLDER MAPPING **TERTIARY** MEDIA **SECONDARY** PRIMARY RANSPORTATION PROVIDERS GOVERNMENT (AGENCIES FINANCIAL INSTITUTIONS MANUFACTURERS CONSUMERS RETAILERS 7 TECHNOLOGY DEVELOPERS RECYCLERS ( NGOs 📆 EDUCATIONAL INSTITUTIONS

# Interrelation of stakeholders

Thickness of line = Strength of Relationship



### A Day in the Life of India's E-Waste Workers

Dominance of Informal Sector: In India, much ewaste is handled by informal recyclers who operate

Impact: This process releases toxic by-products,

term environmental harm and health risks for workers

contaminating soil, air, and water, causing long-

valuable materials.

and local communities.

outside regulatory frameworks and manually extract

Life cycle of an electronic device



NEW DELHI—As dawn breaks, hundreds of men move in and out of the congested alleys of Seelampur, pulling carts and driving dump trucks loaded with discarded cellphones, computers, air conditioners, and almost any other electronic waste imaginable. Located on the outskirts of New Delhi, Seelampur is the country's largest market dedicated to dismantling old tech, and it's home to an estimated <u>50,000</u> men, women, and children whose livelihoods depend on e-waste.

Inside the labyrinth of alleys, hundreds of small establishments are packed with different electronic gadgets, which workers take apart mostly with their bare hands, a hammer, and pliers, hoping to extract precious metals like gold, silver, and tin—or any



As soon as the leftover cellphone scraps are thrown out, young children waiting outside rush forward, pulling each other back to get the best of it. He collects whatever possible with his bare hands and runs away. Sitting behind a car near the drainage canal, he opens his plastic bag to look at what he collected.

A worker looks for broken motherboards that can't be sent for further processing. Without protective gear, he dips them in a beaker filled with acid, hoping to extract copper, silver, or other metals that can be sold. Soon after, the small shop fills with clouds of white

Indeed, workers' constant contact with metals, acid, and other dangerous substances shapes their health and living conditions. "We need high-end "It makes me wonder "While working I get safety gear to deal what it's like to minor injuries, but I with this kind of work, breathe in the but it's way out of neglect them." fresh air." our budget."

M. Taj, a doctor popular in the area, has been working in Seelampur for 10 years. Each year, he said, things get worse. "Until the last few years, I used to see five to 12 patients in a day, now they have risen to 20 or 30," he said. Most of the cases, he explained, are related to skin infections and chronic obstructive pulmonary disease.

Taj cited a lack of awareness among e-waste workers about the causes of these health issues. "They burn wires, plastics, and parts of regular appliances, and dealing with hazardous chemicals is the cause of growing COPD cases in the area," he said. "I see cases of small children with COPD and breathing issues, which would indefinitely affect their lifespan, and it's really worrying."



