

CHILDREN AND E-WASTE KEY MESSAGES

AUDIENCE: ALL



Healthy Environments
for Healthy Children



The escalating consumption of newer electrical and electronic equipment every year has been likened to a tsunami of e-waste. Unmanaged and improperly managed e-waste is polluting soil, water and air, harming the health of communities, especially children. E-waste includes items such as refrigerators, washing machines, computers, cellphones and other consumer electronics.

As many as 18 million children and adolescents, and about 13 million women, are working in the informal sector, of which e-waste is a sub-sector.¹

With millions of children's lives at stake, we must take urgent action to end child labour and protect children's health from the effects of e-waste.

ESCALATING E-WASTE

E-waste is the world's fastest growing waste stream, increasing three times faster than the world's population.

- **In 2019, the world produced 53.6 million tonnes of e-waste**, which is projected to grow to 74.7 million tonnes by 2030.² Unsound recycling practices and our consumption patterns are escalating the problem.
- **Only 17.4 per cent of e-waste was formally recycled in 2019.**³ The remaining e-waste was likely stored, dumped, traded or recycled under inferior conditions. An unknown amount is exported, often illegally, to low- and middle-income countries where it is likely recycled in the informal sector. Toxic exposure risk is highest for informal workers, including children and pregnant women.
- **Today, 64 million people work in waste management globally.** By 2030, this could increase by 70 per cent, representing an additional 45 million people. Therefore, many jobs in the future will be in waste management, in the formal or informal sector, which could put even more children at risk to hazardous e-waste recycling.⁴
- **Because of the COVID-19 pandemic, an additional 9 million children will be at risk for child labour by the end of 2022.** If adequate social protection measures are not implemented, this number could increase to 46 million.⁵

¹ <https://www.who.int/news/item/15-06-2021-soaring-e-waste-affects-the-health-of-millions-of-children-who-warns>

² Forti V., Baldé C.P., Kuehr R., Bel G. The Global E-waste Monitor 2020: Quantities, flows and the circular economy potential. United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) – co-hosted SCYCLE Programme, International Telecommunication Union (ITU) & International Solid Waste Association (ISWA), Bonn/Geneva/Rotterdam.

³ *Ibid.*

⁴ Children and digital dumpsites: e-waste exposure and child health. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. <https://www.who.int/publications/i/item/9789240023901>.

⁵ International Labour Office and United Nations Children's Fund, Child Labour: Global estimates 2020, trends and the road forward, ILO and UNICEF, New York, 2021. License: CC BY 4.0. <https://data.unicef.org/resources/child-labour-2020-global-estimates-trends-and-the-road-forward/>. pg. 56.

THE E-WASTE HEALTH CRISIS IS HERE

The e-waste problem is growing because of higher consumption, shorter product life cycles and few repair options, coupled with low recycling capacity.⁶ E-waste also contains valuable elements such as gold, silver, copper, palladium and platinum that makes it attractive to recycle. When this is done in an unsound manner, it harms the environment and children's health.

Children and pregnant women working or living near e-waste sites could be exposed to contaminated air, water, soil, dust and food.



- Children could be exposed from family members bringing home toxic substances through contaminated clothing and footwear, home-based recycling practices and pollution in surrounding environments.
- Babies and young children face additional risks from breast milk and from direct contact through frequent hand-to-mouth behaviour or dermal exposure.
- For pregnant women, even very low exposure to toxicants can harm their unborn child and cause negative birth outcomes as well as short- and long-term health implications for the child.
- Adverse health impacts on children exposed to e-waste include impaired neurodevelopment and behaviour issues, changes to respiratory, thyroid and immune system function, and DNA damage. The risk of chronic illnesses later in life, including cancers and cardiovascular disease, also increases.⁷
- Children are exploited in the informal e-waste sector because of their small and dexterous hands, which helps them dismantle larger quantities of e-waste, exposing them to many toxicants.



⁶ <https://www.itu.int/en/ITU-D/Environment/Pages/Spotlight/Global-Ewaste-Monitor-2020.aspx>

⁷ Parvez, Sarker M., et al., *Health consequences of exposure to e-waste: an updated systematic review*. Lancet Planet Health, December 2021, 5: e905-20. [https://www.thelancet.com/journals/lanph/article/PIIS2542-5196\(21\)00263-1/fulltext](https://www.thelancet.com/journals/lanph/article/PIIS2542-5196(21)00263-1/fulltext)

URGENT ACTION IS REQUIRED

Children's developing bodies and brains make them uniquely vulnerable to the hazardous substances in e-waste. Therefore, effective action is urgently required to ensure environmentally sound management of e-waste and elimination of child labour. There must be measures to prevent exposure, detect evidence of harm and provide care and treatment for children and pregnant women affected by e-waste-related contamination.

Governments must eliminate child labour, prioritizing children engaged in waste and other hazardous industries.

- Establish children's environmental health surveillance and monitoring systems that include indicators related to hazardous e-waste.
- Develop and improve national legislation and enforcement to create a robust e-waste management system based on extended producer responsibility or the "polluter pays" principle.
- Provide adequate resources and financing for environmentally sound e-waste management including safe collection, segregation, recycling and disposal.
- Regulate industry to incentivize responsible manufacturing of electronics, using safer and less toxic materials and take-back mechanisms.
- Support consumers' rights to repair and reuse instead of having to buy new items.
- Strengthen regional capacities, following guidance from the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, other appropriate conventions and the Sustainable Development Goals (SDGs).
- Incorporate informal e-waste workers into the formal economy, providing training, protective equipment and other measures to ensure occupational safety, especially for pregnant women.
- Work with schools to actively prevent and respond to child labour by engaging with at-risk youths and families.
- Help families of at-risk children to access services that may protect them from child labour, such as social protection, documentation and birth registration.
- Deploy social services to help families remove children from the e-waste workforce.

The health sector can take leadership by highlighting e-waste health concerns and collaborating with other sectors.

- Develop and expand children's environmental health capacities within Ministries of Health and Environment to address concerns related to e-waste exposure.
- Improve the capacity of paediatric and primary health care to detect and diagnose children's illnesses related to e-waste and raise awareness among health professionals and the general public of this pollution concern.
- Create systems in health care facilities and poison centres to monitor and treat children and pregnant women who are exposed to environmental risks such as e-waste.
- Research and contribute to existing knowledge on the health impacts of pregnant women and children who are involved in the e-waste sector.



Industry partnerships to tackle e-waste can shift the world to a circular economy that is sustainable and resilient.

- Manufacture sustainable and long-lasting electrical and electronic equipment.
- Substitute hazardous components for safer alternatives where possible.
- Take on extended producer responsibility to include sound e-waste management and take-back mechanisms that properly recycle equipment.
- Invest in repairing, recycling and reusing within manufacturing and supply chains, rather than mining virgin materials.
- Raise awareness with employees and in communities on responsible consumption and environmentally sound waste management.

Caregivers and the public can apply pressure to governments and industries to protect children's health from e-waste pollution.

- Avoid bringing hazardous substances home by following safety and health protocols.
 - Ensure that children and pregnant women are not exposed to e-waste sites.
 - Learn what happens to e-waste in the community and advocate to ensure that it is safely managed.
 - Adopt a sustainable lifestyle which includes reducing, reusing and recycling electrical and electronic equipment.
 - Advocate for the right to repair electrical and electronic equipment with manufacturers and policymakers.
 - Empower children and adolescents to be a part of the solution to prevent and reduce e-waste as electronic consumers.
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