

## Children and digital dumpsites

E-waste exposure and child health

SUMMARY FOR POLICY-MAKERS



Children and digital dumpsites: e-waste exposure and child health. Summary for policy-makers

ISBN 978-92-4-002455-7 (electronic version) ISBN 978-92-4-002456-4 (print version)

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## Acknowledgements

This publication was coordinated by Marie-Noël Bruné Drisse (WHO, Climate, Environment and Health Department).

Fiona Goldizen and Julia Gorman (WHO consultants) provided initial literature reviews and drafted health and exposure sections. Initial drafting of chapters was developed by Fiona Goldizen, Julia Gorman, Elaine Fletcher and Marie-Noël Bruné Drisse. The same team worked on changes throughout document production, and incorporation of reviews and comments by expert reviewers and WHO colleagues. Drs Amalia Laborde (Universidad de la República, Uruguay), David O. Carpenter (WHO Collaborating Centre in Environmental Health, University of Albany, United States of America) and Fernando Diaz Barriga (WHO Collaborating Centre on Health Risk Assessment and Children's Environmental Health, Universidad Autonoma de San Luis Potosi, Mexico) provided several rounds of indepth technical reviews.

We are thankful to Vanessa Forti and Ruediger Kuehr at the United Nations University, and Shreya Ashu Goel and Casper Edmonds at the International Labour Organization, for their thoughtful contributions and information collaboration that has made this report possible. We are extremely grateful to the many colleagues and experts who provided technical reviews at different stages, advice, case studies and short text inclusions. Below are the affiliations at the time of contributions.

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We are also grateful to Kalpana Balakrishnan, WHO Collaborating Centre, Sri Ramachandra Medical College and Research Institute, India; Irena Buka, WHO Collaborating Centre, University of Alberta, Canada; Kimberley A. Gray, National Institute of Environmental Health Sciences, United States of America; Rokho Kim, WHO Regional Office for the Western Pacific; Emerson Rodrigues da Silva, Universidade de Caxias do Sul, Brazil; and Mathuros Ruchirawat, WHO Collaborating Centre, Chulabhorn Research Institute, Thailand, who contributed suggestions, studies and photos during the initial development stages of the report.

Technical edits, communication advice by Vallaurie Crawford and Elaine Fletcher. Final editing by John Dawson, Nairobi, Kenya.

This publication was made possible with financial support from the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Germany, and the Swedish International Development Cooperation Agency, Sweden.

### hands, cheapen labour.the crisis of e-waste and children's

#### Introduction

In 2019, some 53.6 million tonnes of e-waste were generated worldwide, a 21% increase over the past five years. Global e-waste generation is projected to grow to 74.7 million tonnes by 2030 (Figure 1) (1).

Meanwhile, an estimated 152 million children aged 5-17 years are involved in child labour, including 18 million children (11.9%) in the industrial sector, which includes waste processing. Some 73 million children worldwide engage in hazardous labour, with unknown numbers in the informal waste recycling sector (2).

In terms of women, it is estimated that between 2.9 million and 12.9 million women are involved in the informal waste sector, including an unknown number of women of childbearing age (3).

By endangering tens of millions of children and women of childbearing age, improper disposal of e-waste threatens the health and abilities of future generations.

The problem is most severe where impoverished city dwellers work in or live near informal dumps and landfills. These unmonitored sites in low- and middle-income countries receive a large share of global e-waste. E-waste is commonly defined as "electrical or electronic equipment which is waste, including all components, subassemblies and consumables, which are part of the equipment at the time the equipment becomes waste" (4).





Source: Global E-waste Monitor (1).

Fig. 1 E-waste generated by country, 2019

These e-waste volumes are spiralling as use of cell phones, smart phones and computers grows exponentially, and devices are replaced rather than repaired. Large electrical appliances, such as washing machines and refrigerators, were once known as "durable goods" as they were built to last, but the reverse is now often the case. Both small and large appliances are often designed in ways that make repairs difficult, instead encouraging more frequent device replacement, adding to the growing e-waste stream.

By 2030, global employment in waste management is expected to grow by 70%, or another 45 million jobs (5).

This growing waste stream contains valuable materials such as gold, silver, palladium, platinum, cobalt, and copper, as well as bulkier materials such as iron and aluminium. Informal scavenging for e-waste in unmanaged landfills has become a common income source for low-income communities nearby.

### Reprocessing increases risks and impacts

Informal processing of e-waste extracts valuable metals through open burning,

was recycled by informal workers. This waste stream's growth is driven by consumer habits in some developed countries, where the average mobile phone is replaced as often as every two years (Figure 2) (1).

Children and digital dumpsites: e-waste exposure and child health – the main report of which this document is a summary – builds on the World Health Organization (WHO) Initiative on E-waste and Child Health, extensively updating a 2013 systematic review on emerging issues and health impacts (6). Its four sections concern e-waste settings and exposure pathways, exposure impacts on children's health and development, action and policy agendas, and WHO's leadership role. Key messages from each section of the full report are briefly presented here.

82.6% or 44.3 Mt of global e-waste produced in 2019 was not documented



The fate of **43.7 Mt** of e-waste is unknown; this is probably dumped, traded or recycled under inferior conditions

17.4% or 9.3 Mt of e-waste is documented as collected and properly recycled



53.6 Mt

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