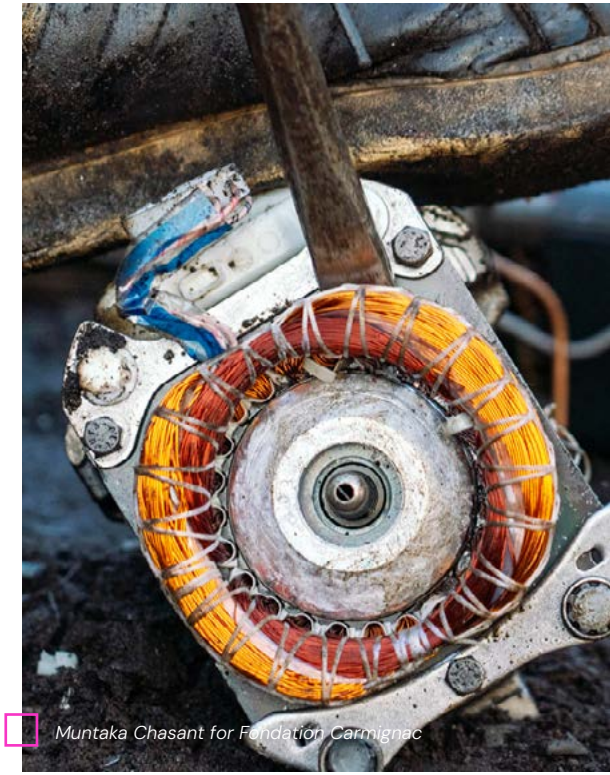
Foreword

The world is experiencing significant electronification, including a digital transformation, with technologies profoundly changing the way we live, work, learn, socialize, and do business. Many people own and use multiple electronic devices, and the increasing interconnectivity of urban and remote areas has led to a rise in the number of devices and objects linked to the Internet. This growth has seen a concomitant surge in the amount of EEE and e-waste. At the same time, the global e-waste collection and recycling rate is not keeping pace with this growth. The Global E-waste Monitor finds that by 2022, the world generated 62 billion kg of e-waste, or an average of 7.8 kg per capita. Only 22.3 per cent (13.8 billion kg) of the e-waste generated was documented as properly collected and recycled. In 2010, the world generated 34 billion kg of e-waste, and that amount has increased annually by an average of 2.3 billion kg per year. The documented formal collection and recycling rate has gone up as well, growing from 8 billion kg in 2010 at an average rate of 0.5 billion kg per year. The rise in e-waste generation is therefore outpacing the rise in formal recycling by a factor of almost 5. The Monitor highlights that growing amounts of EEE are being sold for the first time in developing countries; however, much of the equipment is originally used in developed countries and shipped for further use due to the subsequent relatively lower prices of devices.

Monitoring e-waste quantities and flows is essential for evaluating developments over time, for setting and assessing targets, and for gauging the extent to which electronics can help reduce the impacts of climate change and minimize resource scarcity. When used to augment sound collection and recycling, appropriate data and laws can be extremely effective in accelerating environmental protection and the retention of valuable materials. However, without a comprehensive and representative picture of the global e-waste challenge, the true extent of this waste stream, and the negative externalities it creates, will remain unknown. On the other hand, for industry and policymakers to truly exploit the positive circular economy potential of the electronics sector, reliable data must be freely available to inform decision making.



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Universal and meaningful connectivity are prerequisites of digital transformation, which among other things, includes the development and use of information and communication technology (ICT), applications and services and the closing of the digital divide. However, there are still 2.6 billion people worldwide without a connection to the Internet. In recent years, the rapid digitalization of economy and society, a significant shift to e-mobility and an evident transition to green and renewable energy solutions, have led to concerns by policymakers over the continued availability of rare-earth elements and critical raw materials to feed these transitions. While the digital, transport and energy sectors increasingly compete for similar raw materials of high importance, global supply chains have become progressively more sensitive to global pandemics and political tensions over resources.

E-waste is a special waste stream due to its varied nature which includes a complex composition of materials and components, a broad array of product types and a rapidly evolving product stream which increasingly comprises miniaturised parts, embedded electronics in traditional equipment, clothing, and toys etc., and more and more interoperable products having the ability to connect to the Internet. At the same time, electrical and electronic equipment - anything with a plug or a battery - holds enormous potential for the transformation of societies, through photovoltaics, solar energy and heat pumps, electric vehicles, smart houses, smart clothes and smart cities, intelligent logistics, smart agriculture, Artificial Intelligence, and the Internet of Things.

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ITU and UNITAR have joined forces in the Global E-waste Statistics Partnership (GESP). The GESP collects data from countries in an internationally standardized way and ensures that this information is publicly available via its open-source global e-waste database (www.globalewaste.org). Since 2017, the GESP has substantially boosted national and regional capacities to produce e-waste statistics in various countries. Ultimately, it supports national efforts to compile e-waste statistics that are useful for national policy-making using an internationally recognized, harmonized measurement framework. It is our pleasure to present to you The Global E-waste Monitor 2024. The fourth edition is an indispensable reference tool for policymakers and industry, that shows us the world where we stand in terms of the global e-waste challenge.

Mr. Nikhil Seth
United Nations Assistant Secretary-General, Executive Director,
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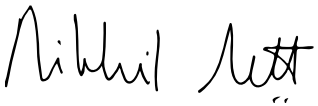

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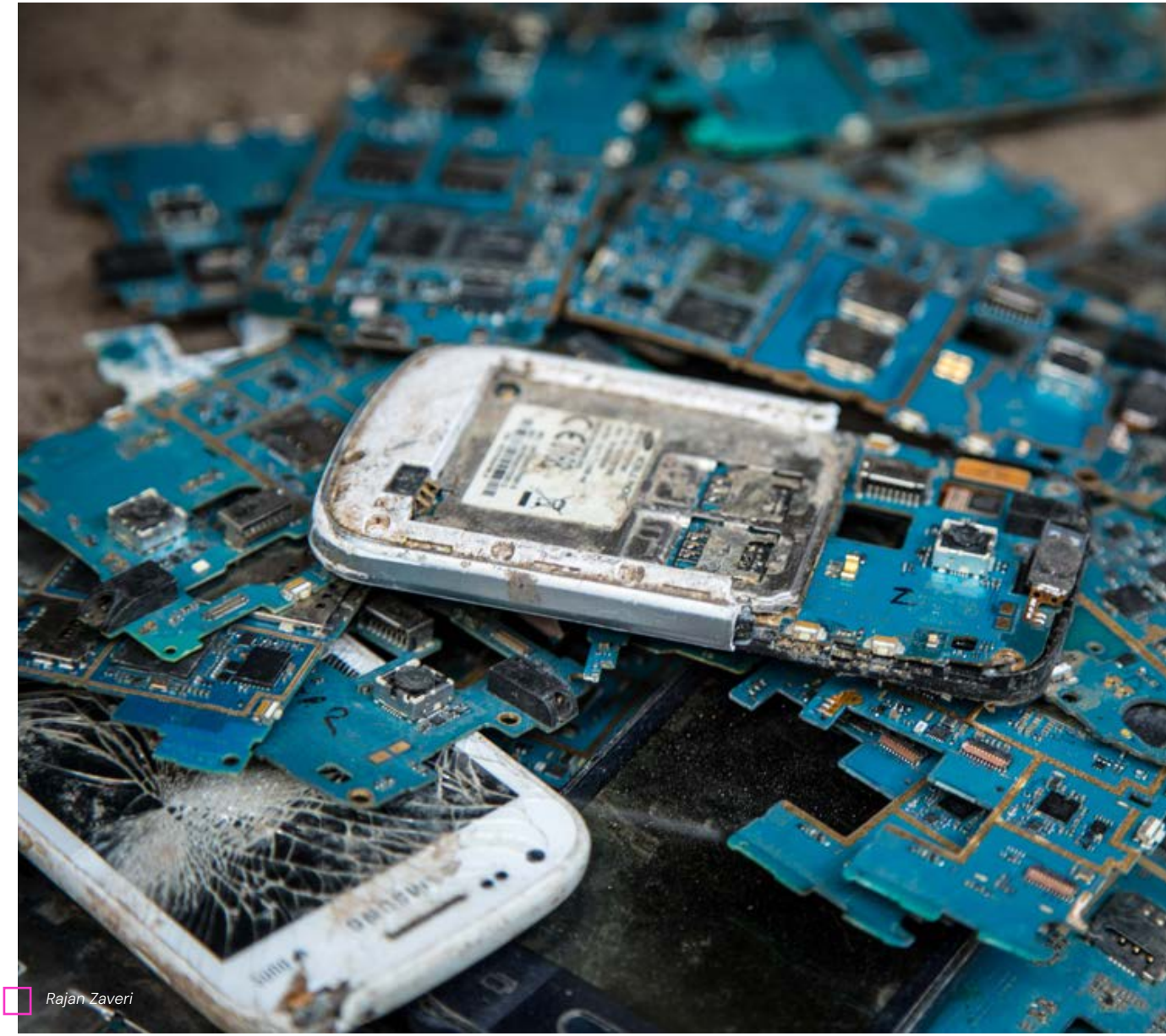

Rajan Zaveri