

Chapter 2

Global E-waste

Key Statistics

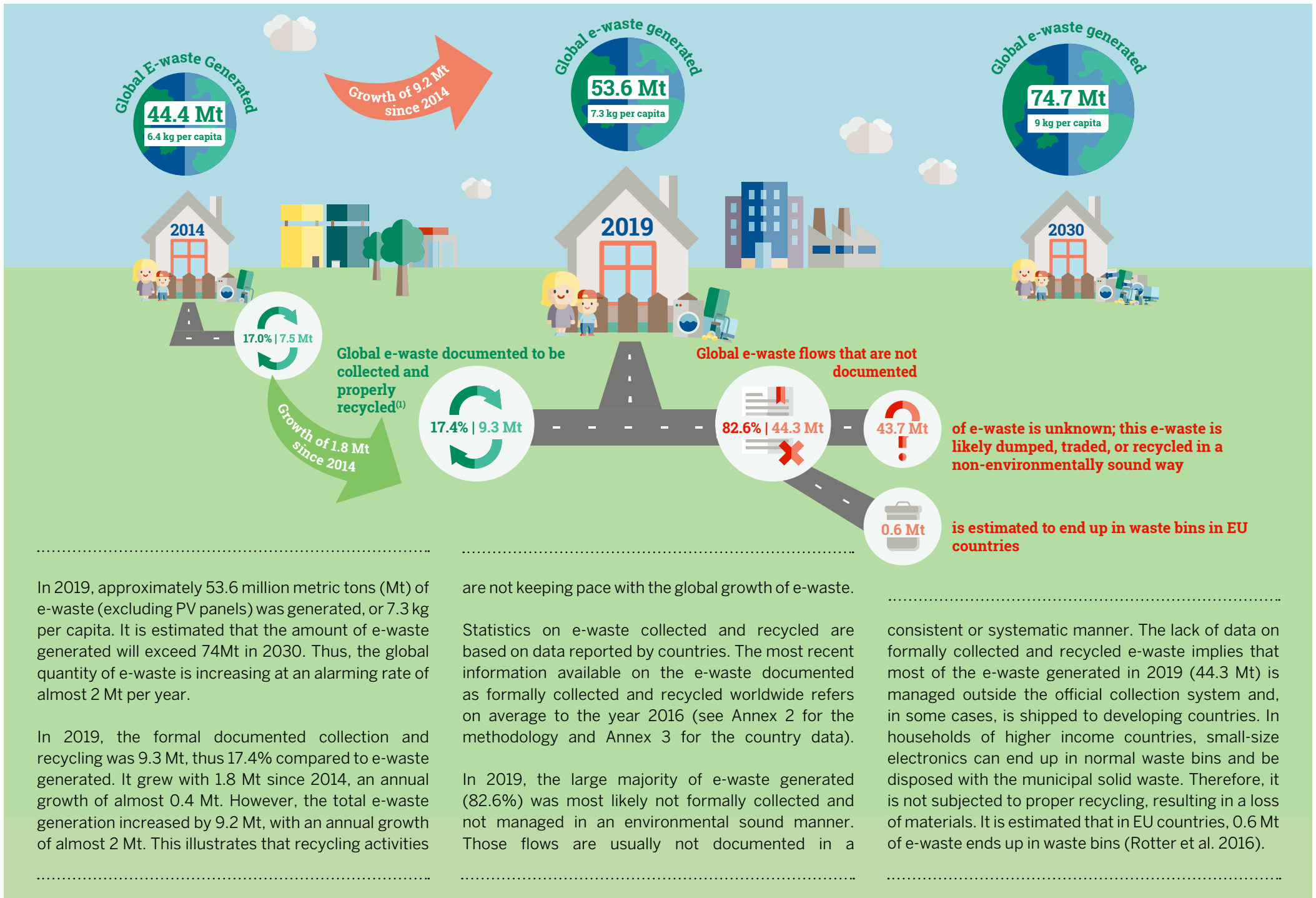


Electric and electronic products are an essential feature that contribute to global development and comprise a large variety of products that are used in daily life.

They can be found in households and businesses all around the world. However, ownership per capita varies per income level.

Global average number of selected appliances owned per capita, by country's income level





In 2019, approximately 53.6 million metric tons (Mt) of e-waste (excluding PV panels) was generated, or 7.3 kg per capita. It is estimated that the amount of e-waste generated will exceed 74Mt in 2030. Thus, the global quantity of e-waste is increasing at an alarming rate of almost 2 Mt per year.

In 2019, the formal documented collection and recycling was 9.3 Mt, thus 17.4% compared to e-waste generated. It grew with 1.8 Mt since 2014, an annual growth of almost 0.4 Mt. However, the total e-waste generation increased by 9.2 Mt, with an annual growth of almost 2 Mt. This illustrates that recycling activities

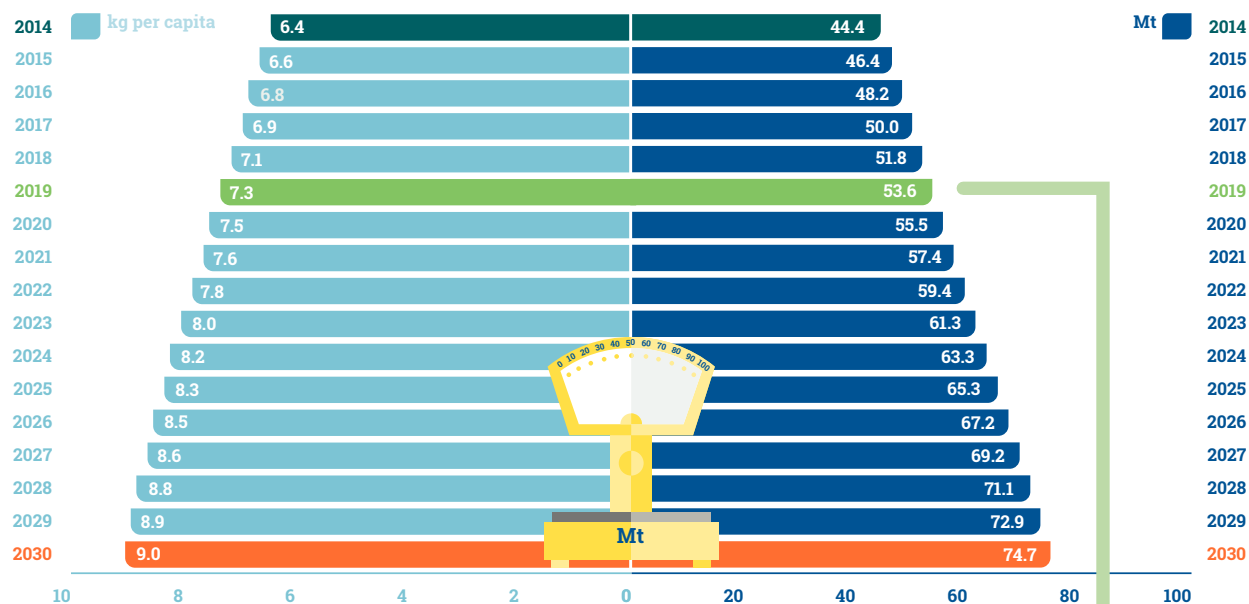
are not keeping pace with the global growth of e-waste.

Statistics on e-waste collected and recycled are based on data reported by countries. The most recent information available on the e-waste documented as formally collected and recycled worldwide refers on average to the year 2016 (see Annex 2 for the methodology and Annex 3 for the country data).

In 2019, the large majority of e-waste generated (82.6%) was most likely not formally collected and not managed in an environmental sound manner. Those flows are usually not documented in a

consistent or systematic manner. The lack of data on formally collected and recycled e-waste implies that most of the e-waste generated in 2019 (44.3 Mt) is managed outside the official collection system and, in some cases, is shipped to developing countries. In households of higher income countries, small-size electronics can end up in normal waste bins and be disposed with the municipal solid waste. Therefore, it is not subjected to proper recycling, resulting in a loss of materials. It is estimated that in EU countries, 0.6 Mt of e-waste ends up in waste bins (Rotter et al. 2016).

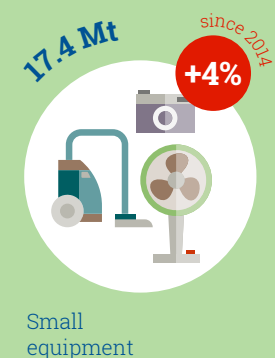
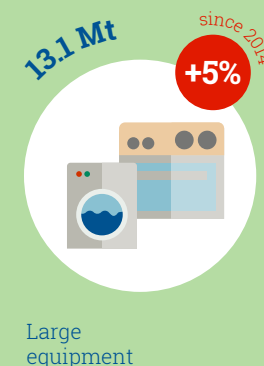
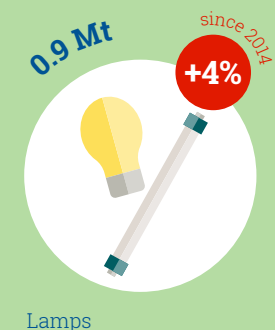
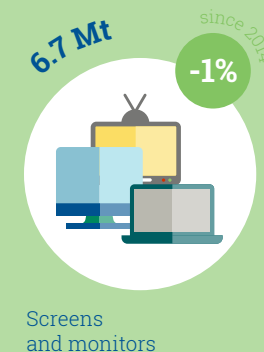
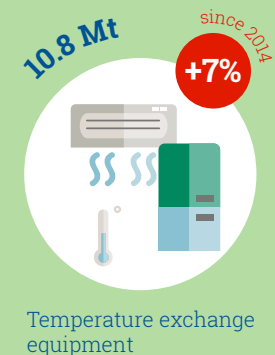
Global E-waste Generated by year

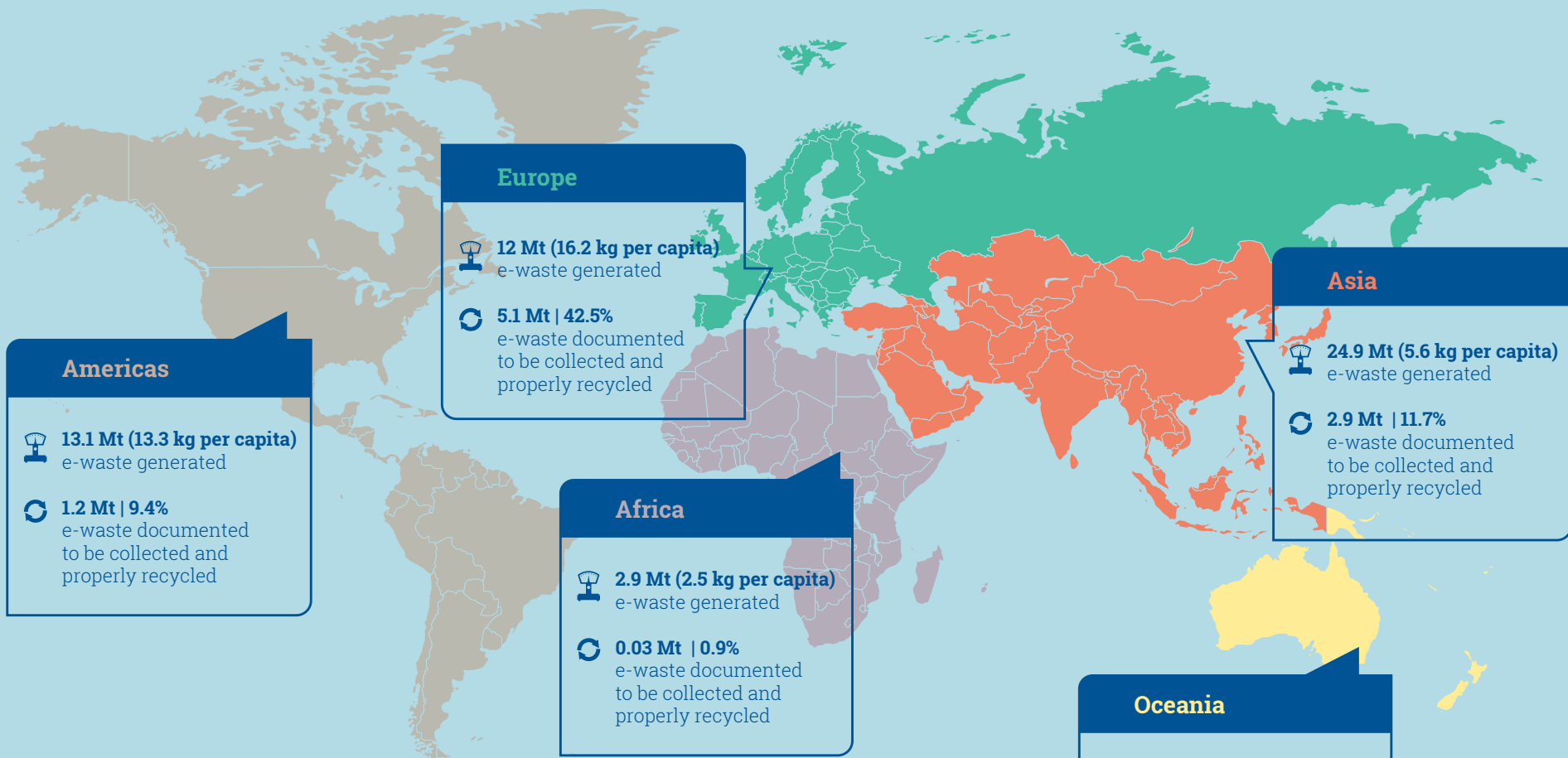


(Future projections do not take into account economic consequences related to the Covid-19 crisis)

The global quantity of e-waste in 2019 is mainly comprised of Small equipment (17.4 Mt), Large equipment (13.1 Mt), and Temperature exchange equipment (10.8 Mt). Screens and monitors, Small IT and telecommunication equipment, and Lamps represent a smaller share of the e-waste generated in 2019: 6.7 Mt, 4.7 Mt, and 0.9 Mt, respectively. Since 2014, the e-waste categories that have been increasing the most (in terms of total weight of e-waste generated) are the Temperature exchange equipment (with an annual average of 7%), Large equipment

(+5%), and Lamps and Small equipment (+4%). This trend is driven by the growing consumption of these products in lower income countries, where the products enhance living standards. Small IT and telecommunication equipment have been growing at lower speed, and Screens and monitors have shown a slight decrease (-1%). This decline can be explained by the fact that, lately, heavy CRT monitors and screens have been replaced by lighter flat panel displays, resulting in a decrease of the total weight even as the number of pieces continue to grow.





In 2019, most of the e-waste was generated in Asia (24.9 Mt), while the continent that generates the most in kg per capita is Europe (16.2 kg per capita). Europe is also the continent with the highest documented formal e-waste collection and recycling rate (42.5%). In all other continents, the e-waste documented as formally collected and recycled is substantially lower than the estimated e-waste generated.

Current statistics show that in 2019, Asia ranked second at 11.7%, the Americas and Oceania stood at 9.4% and 8.8%, respectively, while Africa ranked last at 0.9%. However, statistics can vary substantially across different regions as the consumption and disposal behavior depends on a number of factors (e.g. income level, policy in place, structure of the waste management system, etc.).⁽²⁾



As of October 2019, 71% of the world's population was covered by a national e-waste policy, legislation, or regulation. Improvements have been made since 2014 when only 44% of the population was covered. The high coverage rate is affected by the fact that the most populous countries, such as China and India, have national legal instruments in place. However, this population coverage equates to only 78 of the 193 countries. Thus, less than half of all countries in the world are currently covered by a policy, legislation, or regulation.

