



International  
Labour  
Organization

► **Sectoral Advisory Bodies**  
**18 – 20 January 2023**

**Brief on electronic waste management and circular economy  
(Background document for information)**

**SECTORAL POLICIES DEPARTMENT**

## 1. Background

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In 2019, the International Labour Organization (ILO) held the Global Dialogue Forum on Decent Work in the Management of Electrical and Electronic Waste (E-waste) in Geneva. The Forum [adopted points of consensus](#) to guide the work of the Office and the constituents of the ILO.

This brief has been prepared in response to paragraph 17 of the points of consensus, which reads as follows: *“The Office should undertake evidence-based research on decent work in the management of e-waste. This research is to inform possible future action of the ILO, including the possibility of convening a meeting to be decided by the Governing Body to develop guidelines or a code of practice to advance decent and sustainable work in the management of e-waste.”*

## 2. ILO research on decent work in e-waste management

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The ILO has been conducting research on decent work challenges and opportunities in e-waste management since 2012.

The first ILO report, entitled [The global impact of e-waste: Addressing the challenge](#), acknowledged that e-waste is one of the fastest-growing and most complex waste streams in the world, which must be treated in a manner that is environmentally sound and safe for workers. The paper found that there was a general lack of legislation or enforcement surrounding e-waste management. It also highlighted the high incidence of informality in the management of e-waste as well as the problem of illegal transboundary movements. It further detailed opportunities and challenges regarding occupational safety and health, formalization of the informal economy, the enforcement of labour legislation and standards regarding e-waste management, the need for raising awareness around e-waste management as well as the importance of eliminating environmental and health hazards and risks.

As mentioned in this first global study, much of the world’s e-waste ends up in developing countries where it is treated by micro, small and medium-sized enterprises and vulnerable workers in the informal economy. These enterprises are often unable to reach their full potential and e-waste workers have little power to negotiate better working conditions. They end up recovering only a fraction of the value in the recyclable materials while they risk contaminating themselves and surrounding communities. Therefore, investments in waste management infrastructure and systems, an enabling environment for sustainable enterprises, the upgrading of skills, improvement of working conditions, safety and health, and formalization of informal workers in this sector – along with other decent work strategies – is urgently needed.

In 2014, the ILO published the paper [Tackling informality in e-waste management: The potential of cooperative enterprises](#), which provided further insight into the e-waste sector. This report focused on challenges and opportunities to improve working conditions for e-waste workers through the promotion of cooperatives and other social and solidarity economy organizations.

In 2019, the ILO published the [report for discussion](#) at the above-mentioned Global Dialogue Forum on Decent Work in the Management of Electrical and Electronic Waste (E-waste). This report introduced the concept of the circular economy and highlighted several challenges in e-waste management, including high levels of informality, several safety and health risks, discrimination, instances of child labour, as well as barriers to the creation of sustainable small and medium-sized enterprises that repair, refurbish, collect or

recycle e-waste in the circular economy. The study also highlights the lack of legal frameworks or official guidance on e-waste management, particularly regarding the social dimensions.

Following the Global Dialogue Forum, the Office conducted additional evidence-based research on decent work in e-waste management, as recommended in the points of consensus. The Office developed three country studies on decent work challenges and opportunities in e-waste management, as follows:

[From Waste to Jobs: Decent work challenges and opportunities in the management of e-waste in India](#)

[From Waste to Jobs: Decent work challenges and opportunities in the management of e-waste in Nigeria](#)

[E-waste and employment in Argentina - Executive Summary](#) (full report in Spanish only)

The three in-depth value chain analyses provided a clear understanding of the different actors that are involved in the management of e-waste and the various challenges faced by each actor. For example, the studies showed that those working in e-waste management risked being exposed to hazardous substances, cuts and other injuries due to the use of rudimentary techniques and the lack of personal protective equipment. The studies conducted in India and Nigeria also highlighted the prevalence of discrimination against those working in waste management and showed that the jobs that could generate a higher income were often done by men. The country case studies also built upon the findings from the global studies regarding the high incidence of informality and the challenges faced by enterprises and workers in the informal sector.

The country case studies also investigated national and regional governance of e-waste and found that policies and measures related to improving working conditions and the creation of an enabling environment for sustainable enterprises in this sector were largely absent. However, the studies do highlight some good practices such as the recent establishment of formal e-waste management facilities in India or the introduction of legislation to combat transboundary movement of e-waste into Nigeria. They also outline successful pilot projects that can help identify broader solutions.

In conclusion, based on the research conducted by the Office since 2012 at the global level and the three country case studies conducted since the Global Dialogue Forum in 2019, additional guidance on advancing decent work in the management of e-waste could prove valuable for tripartite constituents in the sector.

### 3. Other research on decent work in e-waste management

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In addition to the research conducted by the ILO, several other organizations have attempted to understand the impact of e-waste in the world of work. The ILO has contributed to the research of selected organizations and have joined forces with others to incorporate a decent work perspective into their research and initiatives and to raise awareness of the need to engage ILO constituents.

For example, the ILO contributed to the report entitled [A New Circular Vision for Electronics Time for a Global Reboot](#). This report was the result of a collaboration with the UN E-waste Coalition and the World Economic Forum and was launched at Davos in January 2019. The report highlights the inherent value in e-waste and its ability to support livelihoods and fuel a new generation of enterprises.

Other organizations, such as the World Health Organization, have focused on more specific issues such as the negative effects of e-waste on the health and development of children. In 2021, the ILO contributed to the report entitled [Children and digital dumpsites: e-waste exposure and child health](#).

Finally, the ILO has also worked with the Platform for Accelerating Circular Economy (PACE) on PACE’s assessments of the impact of increasing circularity in electronics, textiles and capital equipment. In 2021, PACE published the [Circular Economy Action Agenda for Electronics](#) and the [Circular Economy Action Agenda for Textiles](#), which high the need to integrated and advance decent work in the transition to a circular economy for electronics and textiles, respectively.

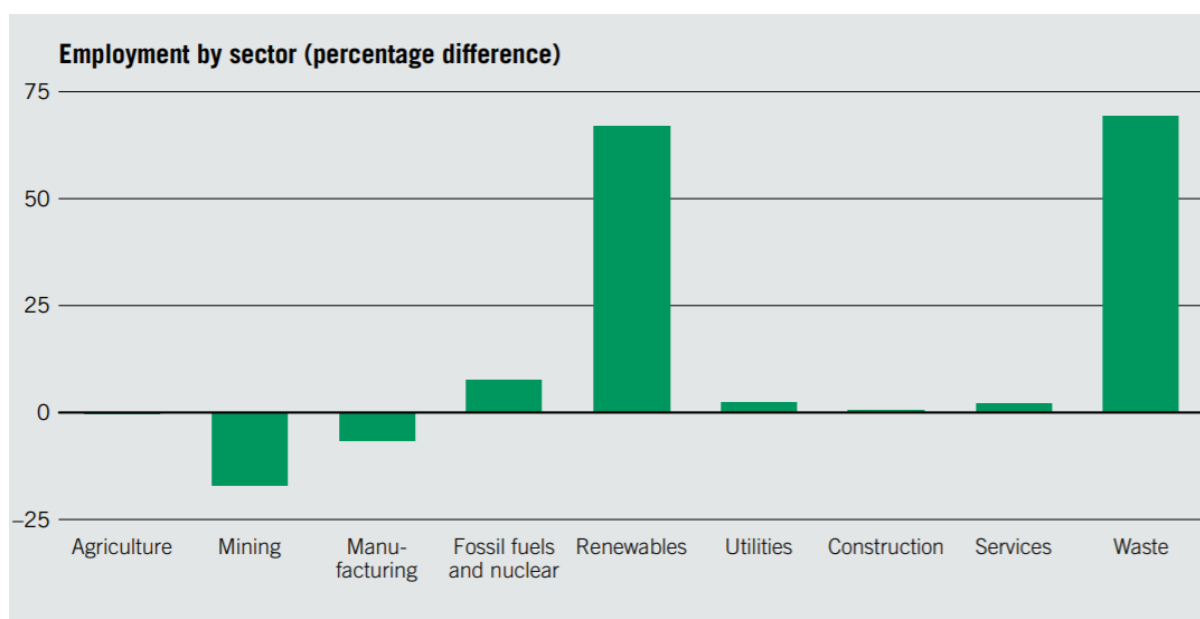
These and other publications highlight a clear need to advance full and productive employment and decent work in the circular economy. In doing so, however, they do not set out how governments, employers and workers can advance decent work. While a growing number of countries and regional groupings have adopted circular economy policies, it is of concern that many policies focus primarily on environmental dimensions without giving sufficient consideration to socio-economic or employment effects of the transition to circular economies globally, regionally, nationally and in different sectors.

## 4. Research on the circular economy in general

In 2018 the ILO published the report [World Employment and Social Outlook 2018: Greening with jobs](#), which was supplemented by the 2019 report [Skills for a greener future: a global view](#). These reports find that while 78 million jobs could be created as the world transitions to a circular economy, some 71 million jobs could be destroyed. The reports thus give an indication of the enormous impact the transition to the circular economy will have on the world of work.

The reports furthermore elaborate on the significant changes in employment by sector (Figure 1). Increases in recycling are associated with job losses in mining and manufacturing but also with increases in waste management and other service sectors, as repair and rental services gain in importance. It is estimated that the growth in services and waste management could lead to the creation of some 50 and 45 million jobs, provided the right mix of investment and policies are in place.

**Figure 1: The circular economy and employment by sector in 2030**



These potential employment gains are offset by employment losses in mining and manufacturing. This is largely due to the replacement of the extraction of primary resources and the production of metals, plastics, glass and pulp by the recycling and reprocessing of secondary metals, plastics, glass and pulp.

In addition to the employment effects, the reports highlight varying impacts on vulnerable population groups, informality, differences between developed and developing countries, and the need for investment in skills and lifelong learning.

Other organizations and researchers have also started to think about the impacts a shift to circularity could have on the world of work and advocate for more inclusive circular economy policies. According to [Chatham House](#), while technological progress can accelerate the transition towards circularity and increase productivity, it also has the potential to exacerbate wage inequalities, accelerate occupational shifts, and crowd-out small businesses and low-skilled workers. This calls for further understanding of the decent work challenges and opportunities for those who currently work in the circular economy, as well as the impact of transformative circular business models on decent work. It also underscores the need for universal access to comprehensive and sustainable social protection for all workers and ensure that they have voice and representation as well as to reskill or upskill workers within existing occupations and to promote the acquisition of new skills for all workers throughout their working lives to capture emerging employment opportunities and ensure a smooth transition in labour markets.

The transition to the circular economy may also introduce new occupational safety and health challenges, for example due to the exposure to hazardous substances when engaged in reverse logistics. In addition to anticipating future risks, there is an urgent need to address existing safety and health issues and poor working conditions, particularly among workers operating in the informal circular economy.

Given the challenges presented above, the rapid speed at which many countries are introducing circular economy policies, and the absence of social dimensions in those laws and policies, there is a risk that constituents of the ILO are ignored in the process and that the decent work dimension is overlooked. The [\*\*\*ILO Guidelines for a just transition towards environmentally sustainable economies and societies for all\*\*\*](#) provide a set of principles and a roadmap that ILO constituents can use to facilitate a just transition to the circular economy. However, the research on employment and decent work in the circular economy shows that there is a need to further increase the awareness and capacity of constituents to advance decent work in the circular economy as well as to develop and agree on more detailed guidance on how to do so.

Finally, [ILO research on circularity in other sectors than e-waste](#) shows that while each value chain has unique characteristics and dynamics, there are many similarities in terms of decent work challenges and opportunities across the circular economy. Tripartite constituents may therefore consider to broaden the scope of the recommendation of the Global Dialogue Forum in 2019 and call for the develop of guidance that could help advance decent work in the broader circular economy.