

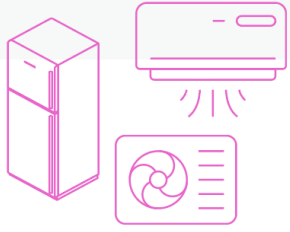
## ***An overview of the global e-waste challenges and opportunities***

Intergovernmental Group of Experts on E-commerce  
and the Digital Economy, 8th session

*Vanessa Forti*

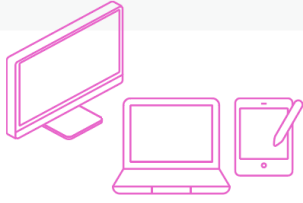
*Associate Programme Officer at UNITAR-SCYCLE*





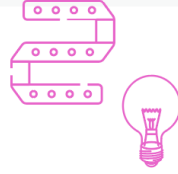
## 1. TEMPERATURE EXCHANGE EQUIPMENT:

More commonly referred to as cooling and freezing equipment, this category comprises items such as refrigerators, freezers, air conditioners and heat pumps.



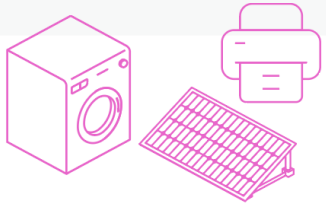
## 2. SCREENS AND MONITORS:

This category typically includes televisions, monitors, laptops, notebooks and tablets.



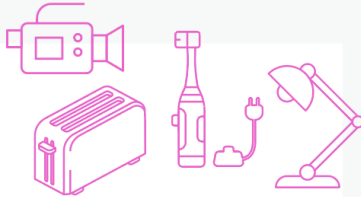
### 3. LAMPS:

This category typically includes fluorescent, high-intensity discharge and LED lamps.



#### 4. LARGE EQUIPMENT:

This category typically includes washing machines, clothes dryers, dishwashers, electric stoves, large printers, copying equipment and photovoltaic panels.



## 5. SMALL EQUIPMENT:

This category typically includes vacuum cleaners, microwave ovens, toasters, electric kettles, electric shavers, electronic scales, calculators, radios, video cameras, electrical and electronic toys, small electrical and electronic tools, small medical devices, small monitoring and control instruments, and e-cigarettes.



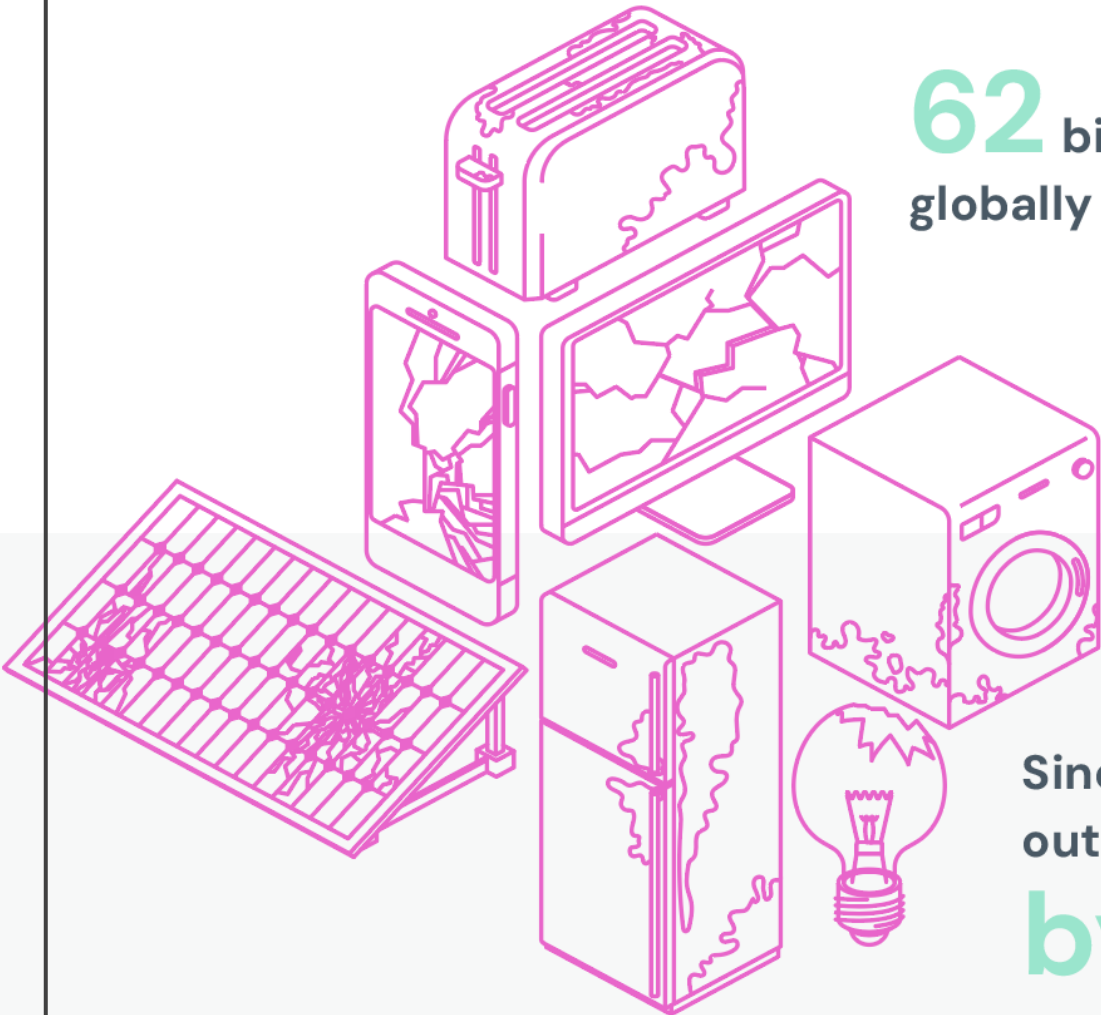
## 6. SMALL IT AND TELECOMMUNICATION EQUIPMENT:

This category typically includes mobile and other phones, personal computers, GPS devices, routers and printers.



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# What is e-waste



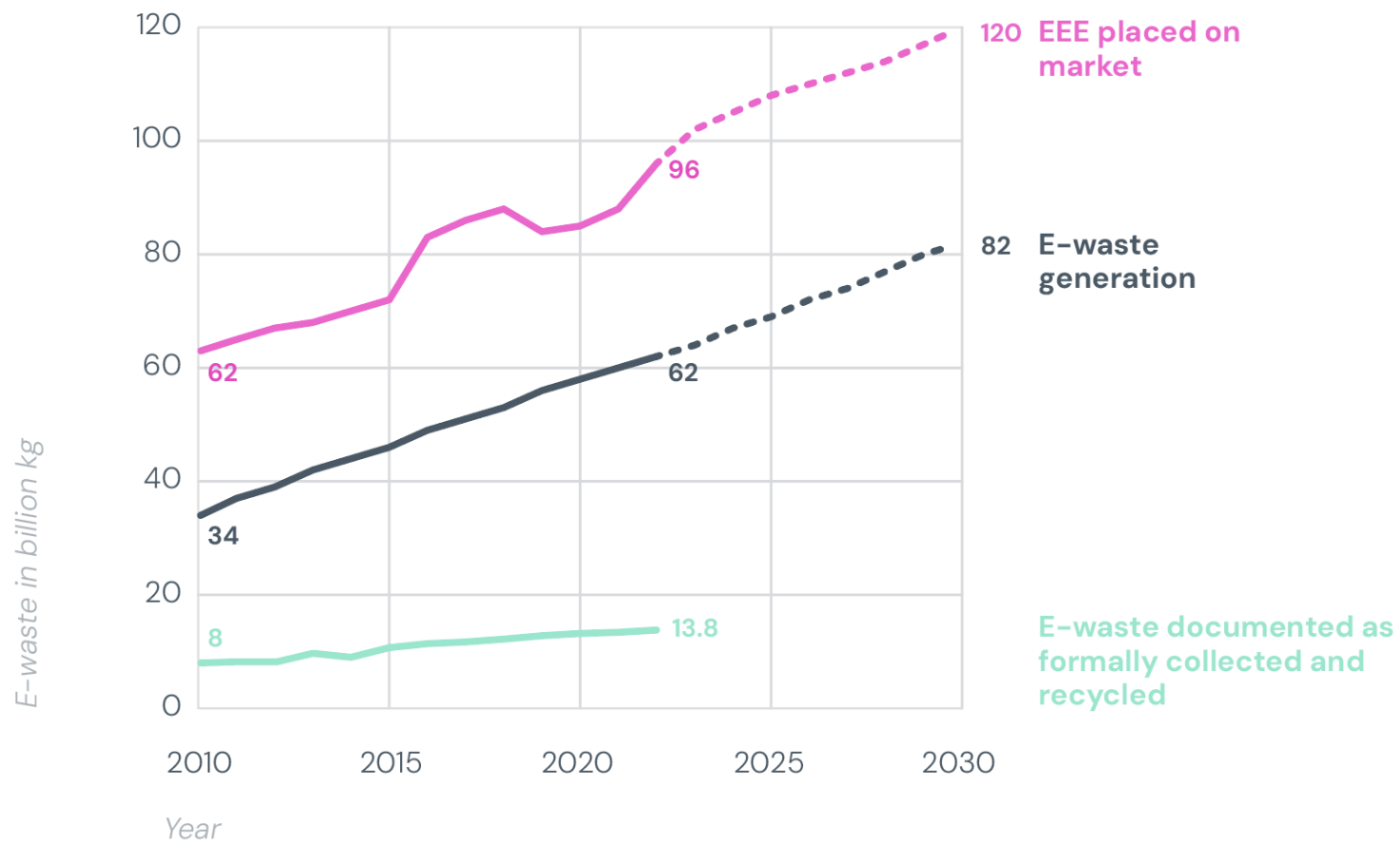
**62** billion kg of e-waste generated globally in 2022.

**7.8** kg per capita.

**22.3%** of this e-waste was documented as formally collected and recycled in an environmentally sound manner.

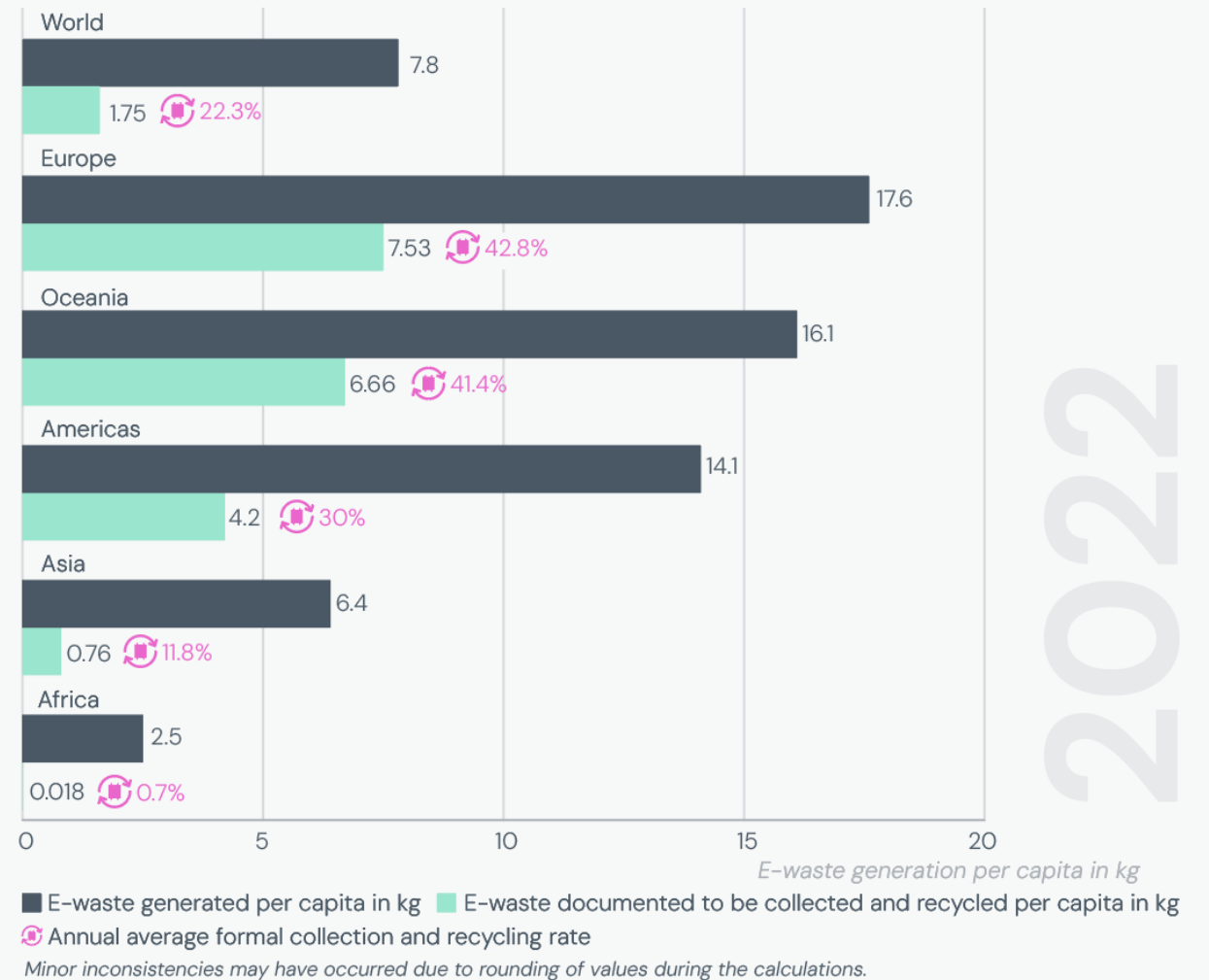
Since 2010, the growth of e-waste generation is outpacing the formal collection and recycling

**by almost a factor of 5.**



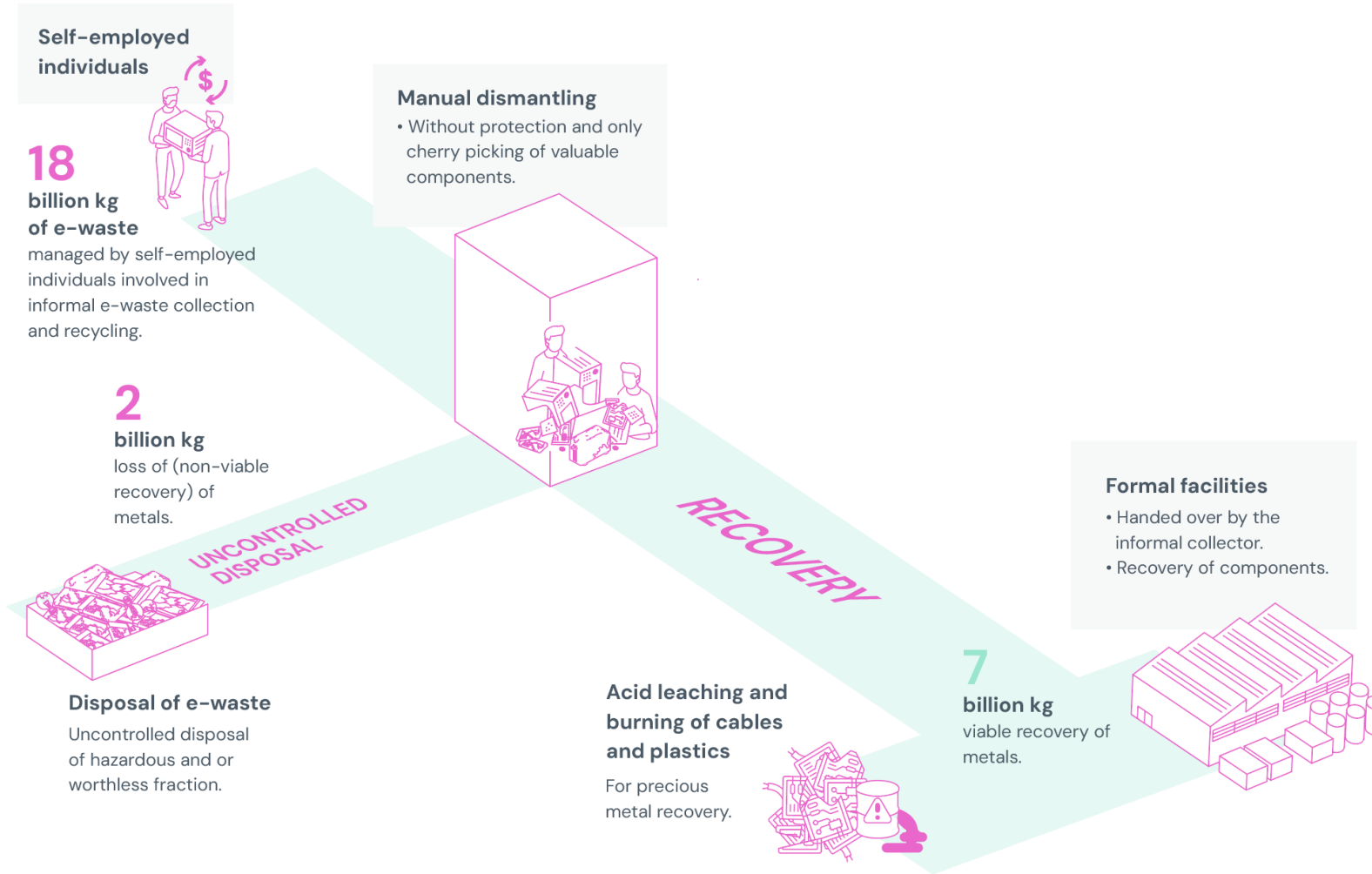
Evolution over time

## E-waste Generated and Documented as Formally Collected and Recycled by Region

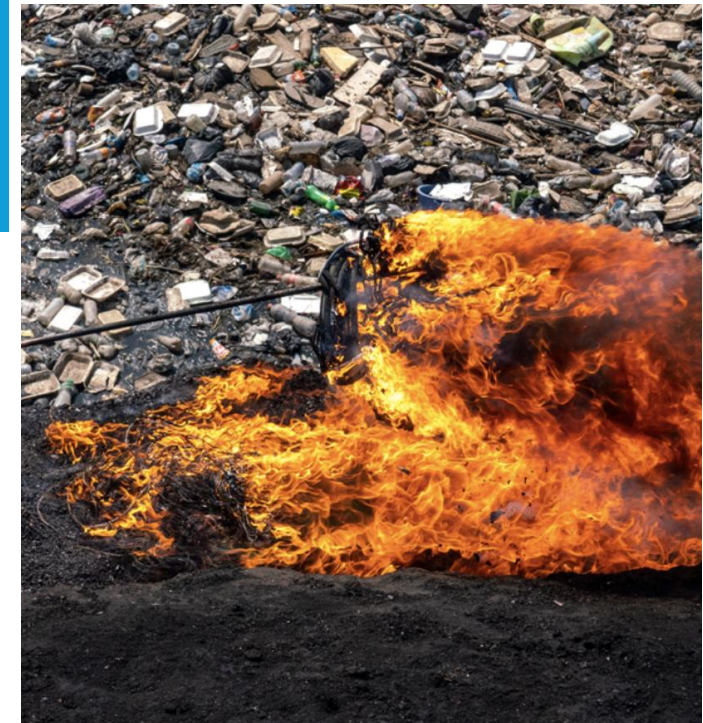


Source: The Global E-waste Monitor 2024

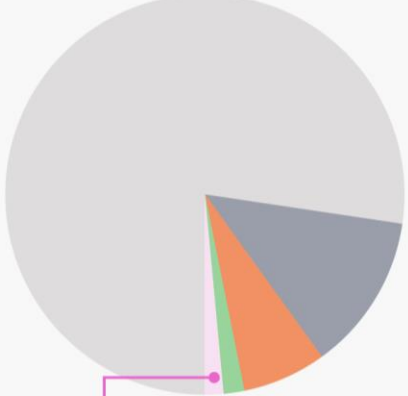
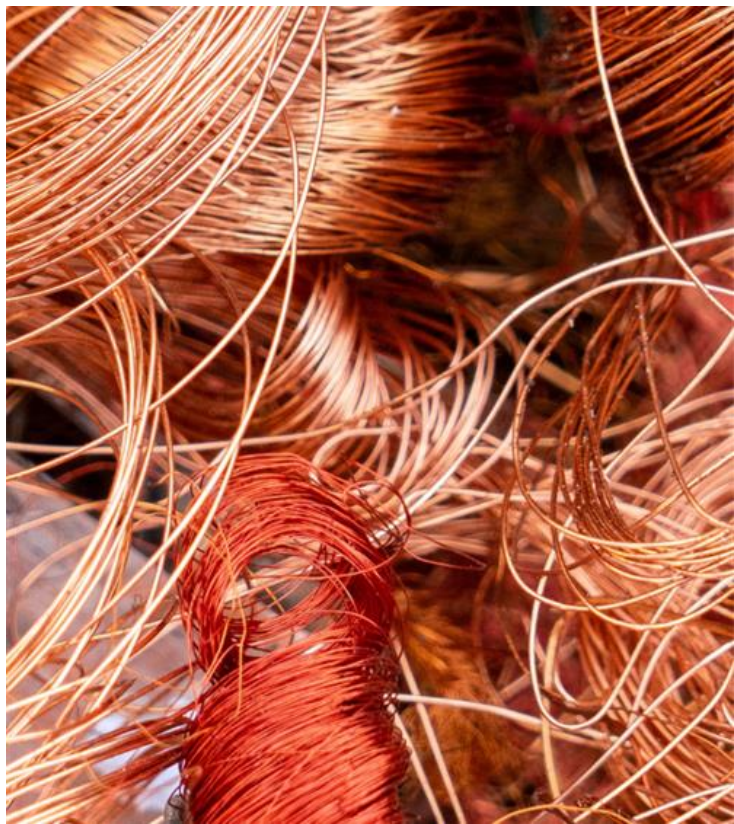
# E-waste collection and recycling outside formal systems



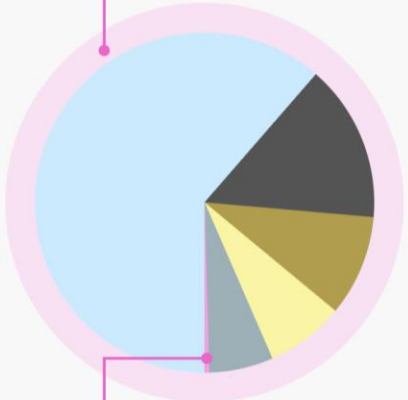
Source: The Global E-waste Monitor 2024



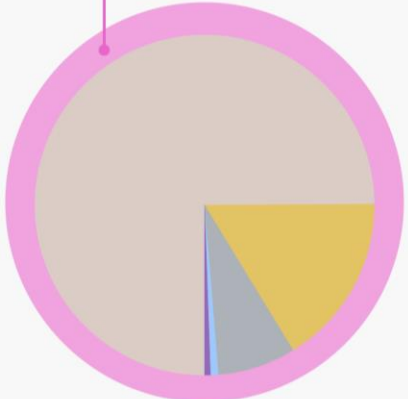
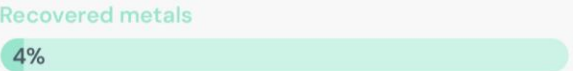
# Recovered and non-recovered metals in e-waste with current recycling practices



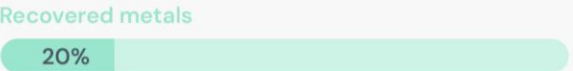
TOTAL METALS IN E-WASTE		
Fe	24 billion kg	
Al	4 billion kg	
Cu	2 billion kg	
Ni	0.52 billion kg	
Other	0.46 billion kg	



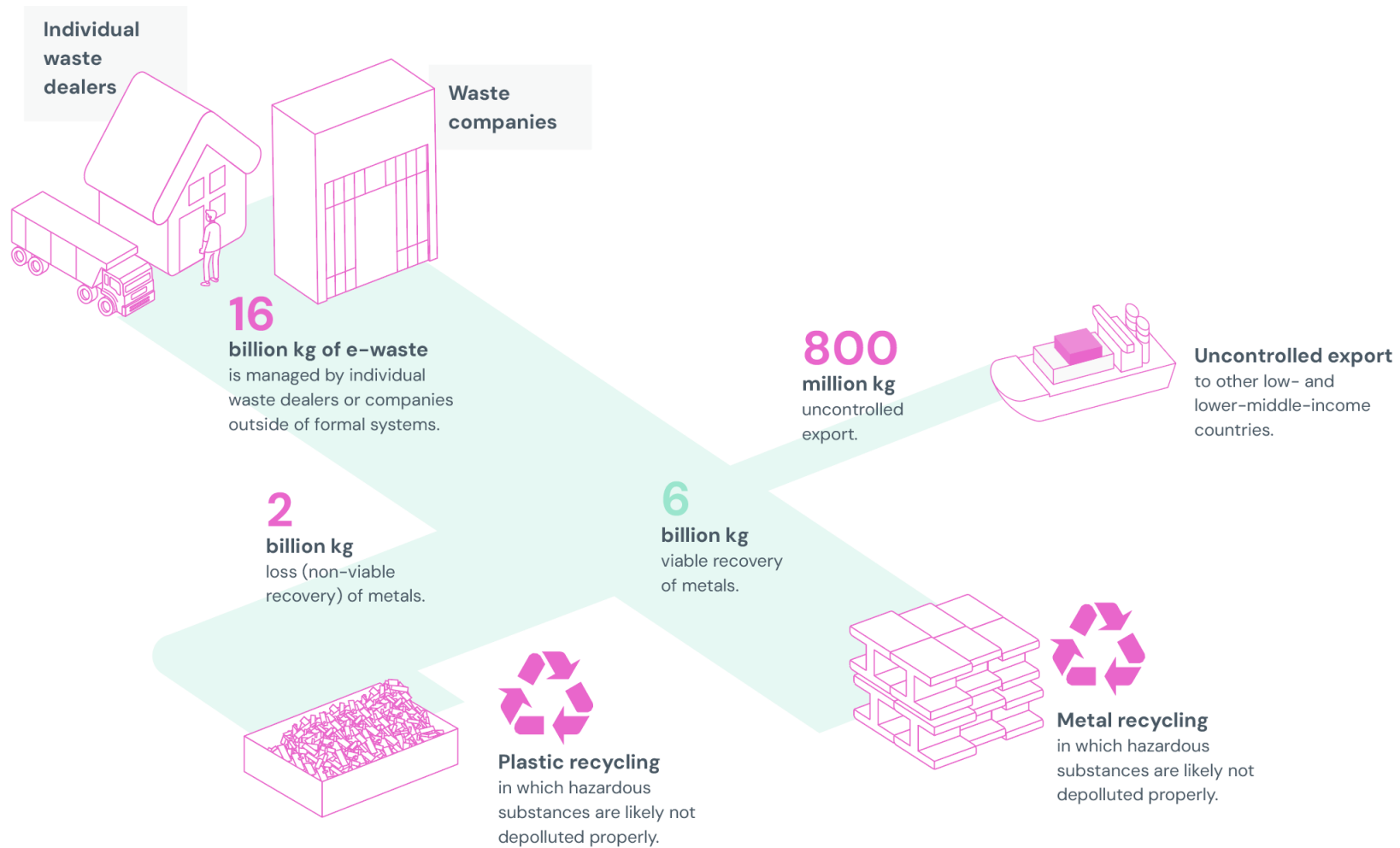
OTHER METALS IN E-WASTE		
Zn	280 million kg	
Pb	70 million kg	
Sn	44 million kg	
Co	34 million kg	
Sb	28 million kg	
Other	2 million kg	



PRECIOUS METALS IN E-WASTE		
Ag	1,200 thousand kg	
Au	270 thousand kg	
Pd	120 thousand kg	
Os	12 thousand kg	
Pt, Ir, Rh and Ru	9 thousand kg	



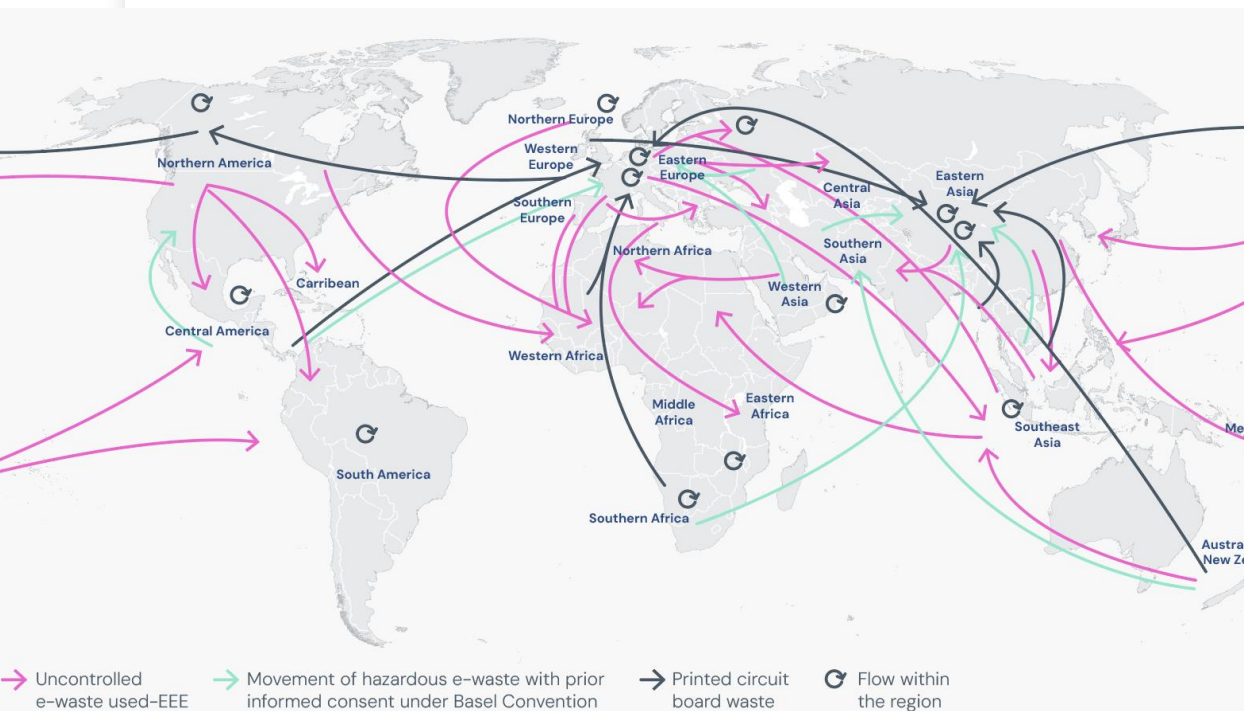
Source: The Global E-waste Monitor 2024



Source: The Global E-waste Monitor 2024

## Formal e-waste collection and recycling



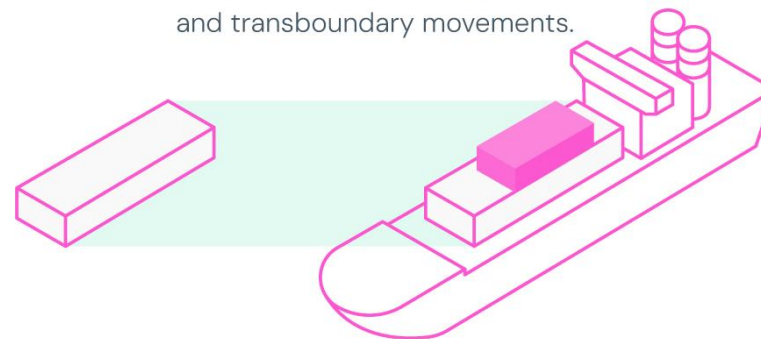


**5.1 billion kg**  
of e-waste is shipped  
across borders.

65%

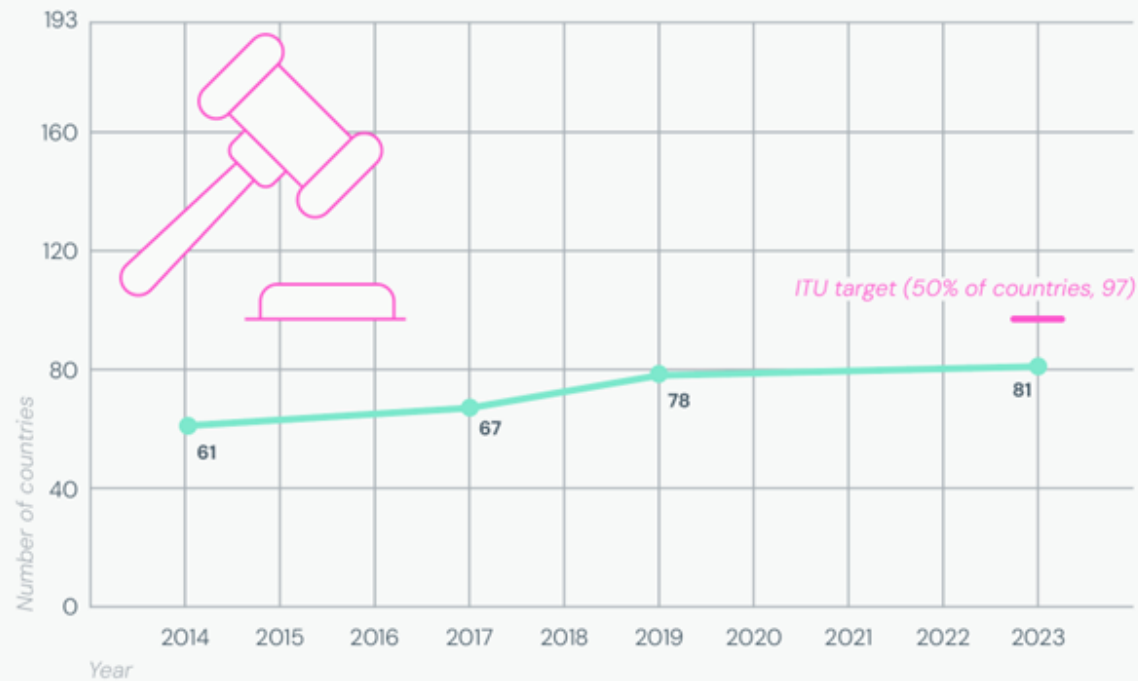
**3.3 billion kg**  
of e-waste is shipped through  
uncontrolled and undocumented  
and transboundary movements.

**0.8 billion kg**  
shipped uncontrolled from high  
income to middle- and low-income  
countries.



## Transboundary movement

## Importance of Legislation



Source: The Global E-waste Monitor 2024

**81 countries**

have adopted e-waste policy, legislation or regulation.

**67 countries**

have legal provisions on EPR for e-waste.

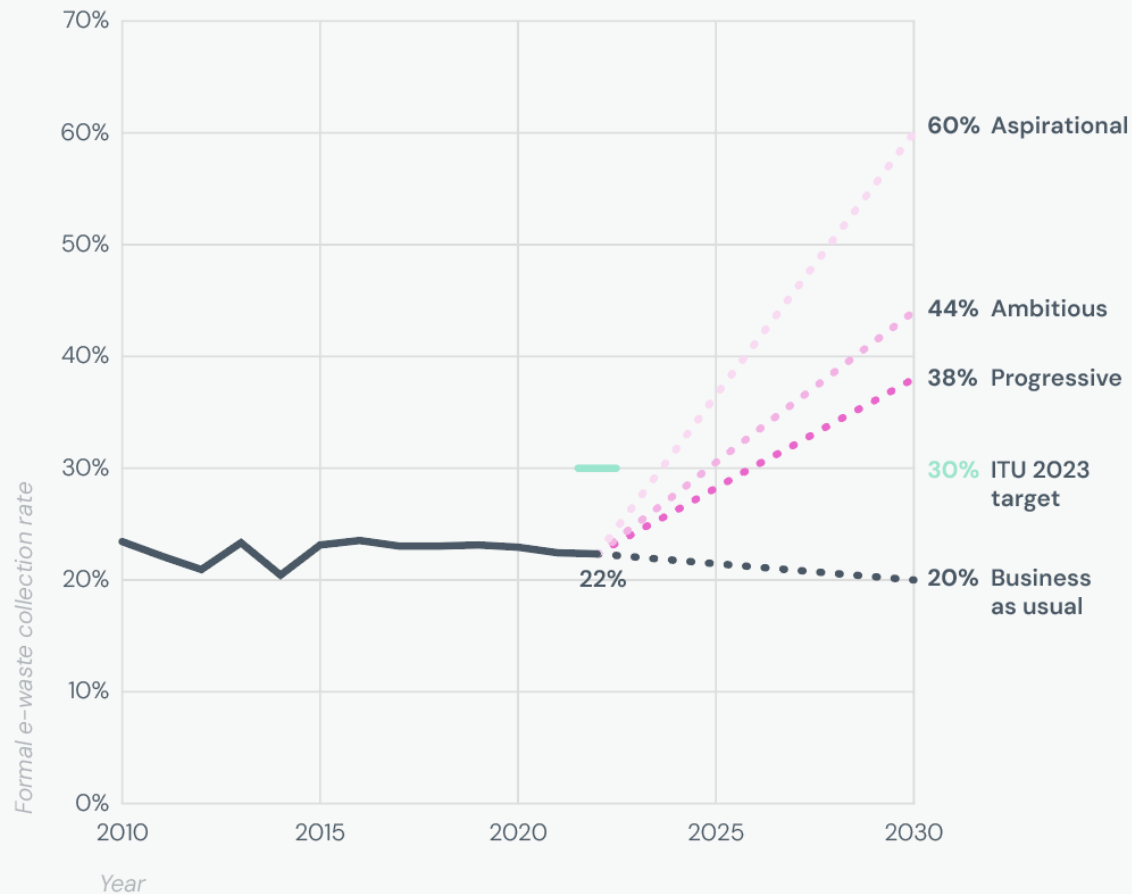
**36 countries**

have provisions on e-waste recycling rate targets.

**46 countries**

have provisions on e-waste collection rate targets.

Source: The Global E-waste Monitor 2024

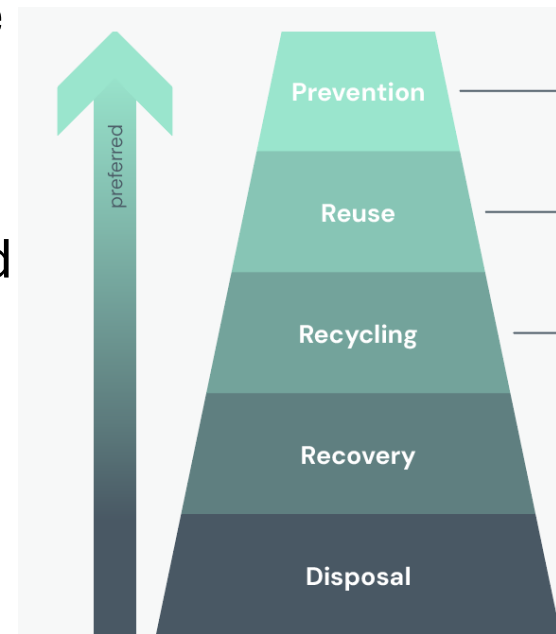


Source: The Global E-waste Monitor 2024

## Take away messages

**To achieve a global recycling rate of 60%, it is necessary to:**

- Control the transboundary movement of used EEE or e-waste and illegal dumping
- Improve the formal e-waste management
- Include the informal sector
- Improve the legislations and enforcement



# Thank you!

**Ms. Vanessa Forti**

*Associate Programme Officer - Sustainable Cycles (SCYCLE) Programme*

**United Nations Institute for Training and Research (UNITAR)**

UN Campus, Platz der Vereinten Nationen 1, 53113 Bonn, Germany

Tel. +49-228-825-0267

[vanessa.forti@unitar.org](mailto:vanessa.forti@unitar.org) | [www.unitar.org](http://www.unitar.org) | [www.scycle.info](http://www.scycle.info)