

# Chapter 8

## Status of E-waste Legislations





When establishing a new e-waste take-back and recycling system, it is vital to consider who will retain overall control and ultimately be responsible for the successful operation of the system. An entity must therefore be responsible for coordinating the specific actions of the stakeholders who have various roles and responsibilities within the system. In addition, an entity must also ensure that the system rules are enforced and compliance is ensured.

National e-waste policies and legislation play an important role because they set standards and controls to govern the actions of stakeholders who are associated with e-waste in the public and private spheres. Moreover, these policies and legislation shall frame the setting of a workable and fair financial and economic model, which must be sustainable and function properly. It is therefore vital that policymakers, together with stakeholders, establish a financial model to cover the collection sites and logistics along with the physical recycling itself. In addition, there is the need to raise awareness of the proposed system, and ensure that stakeholders are complying with their obligations, as well as setting up IT systems to receive and process the data.

Policy development was evaluated using the C2P database<sup>9</sup> with the purpose of assessing whether a country has national e-waste management regulations in force until January 2017. This is illustrated in Annex 3. Because of the large population in both India and China (both of which have national e-waste regulations in place), official policies and legislation currently cover around 4.8 billion people, which is 66% of the world population as opposed to 44% in 2014. However, the existence of policies or legislation does not necessarily imply successful enforcement or the existence of sufficient e-waste management systems.

Additionally, the types of e-waste covered by legislation differs considerably across the countries. This also explains the difficulties in coordinating collected and recycled e-waste amounts. Many of the countries that have already adopted e-waste legislation can still increase the coverage to include all products. For example, in the US, the consumer electronic products included in the EPA report series are electronic products used in residences and commercial establishments such as businesses and institutions, and are categorized as video, audio, and information products (U.S. Environmental Protection Agency, 2016). Therefore, many electric and electronic appliances are out of scope in the USA, such as all cooling and freezing equipment, most large equipment like dishwashers, dryers etc, some small equipment and lamps.

**Table 8.1: Percentage of population covered by legislation per sub-region, in 2014 and 2017**

	2014	2017
World	44%	66%
East Africa	10%	31%
Middle Africa	14%	15%
Northern Africa	0%	0%
Southern Africa	0%	0%
Western Africa	49%	53%
Caribbean	12%	12%
Central America	74%	76%
Northern America	98%	100%
South America	29%	30%
Central Asia	0%	0%
Eastern Asia	99%	100%
South-Eastern Asia	14%	17%
Southern Asia	0%	73%
Western Asia	37%	38%
Eastern Europe	46%	99%
Northern Europe	99%	100%
Southern Europe	100%	100%
Western Europe	99%	100%
Australian & New Zealand	81%	85%
Melanesia	0%	0%
Micronesia	0%	0%
Polynesia	0%	0%

The sub-regions where e-waste legislation is most developed are found in Europe. In Europe, the e-waste amounts documented to be collected and recycled are also highest. Other countries with developed e-waste recycling and collection are in Northern America, Eastern Asia, and Southern Asia. In several regions, national e-waste legislation is completely absent, such

as in large parts of Africa, Caribbean, Central Asia, Eastern Asia and Melanesia, Polynesia, and Micronesia.

In addition, e-waste policies that are already present should contribute to the development of circular economy models through policy measures that don't only favour collection and recycling. Concrete actions are needed to change the direction of policy measures towards reusing, refurbishing, and remanufacturing the end-of-life of EEE. Legislation on e-waste should encourage a better product design at the production stage. This is the key to facilitate recycling and to produce products that are easier to repair or more durable. In addition, policies should point towards both a more efficient use of resources to improve production processes and to the recovery of valuable materials incorporated in EEE.

Most legislation and policies currently refer to the principle of "Extend Producer Responsibility", which emerged in academic circles in the early 1990s. It is generally seen as a policy principle that requires manufacturers to accept responsibility for all stages in a product's lifecycle, including end-of-life management.

There are three primary objectives of the EPR principle:

- Manufacturers shall be incentivised to improve the environmental design of their products and the environmental performance of supplying those products.
- Products should achieve a high utilisation rate.
- Materials should be preserved through effective and environmentally-sound collection, treatment, reuse, and recycling.

The key principle behind the reasoning that producers or manufacturers should be primarily

responsible for this post-consumer phase is that most of the environmental impacts are predetermined in the design phase.

The EPR principle is implemented in a variety of legislations and policies. Under an EPR principle, responsibility can be assigned either individually, where producers are responsible for their own products, or collectively, where producers in the same product type or category fulfil the responsibility for EoL management together. A system as close as possible to Individual Producer Responsibility (IPR) can more easily stimulate the improvements in the design phase because the producer is interested in the benefits obtained by the improved design. However, the complexity of such a system has so far prevented its development, resulting in policies and legislation that refer to collective responsibility rather than individual.

However, in developing countries, a major hurdle to the producer adopting responsibility results from the lack of treatment facilities (TF) that are compliant with international standards and a lack of collection infrastructure that channels e-waste to these sites. This can be addressed by harnessing government support directed at ramping up compliant TFs or by market-orientated approaches that aim to leverage compliant recyclers to create their business case.

**Illustration 8.1: The primary objectives of the EPR principle**



### Box 8.1: International Laws on E-waste

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is a multilateral treaty aimed at suppressing environmentally and socially detrimental hazardous waste trading patterns. The convention was signed by 186 countries<sup>10</sup>. E-waste, due to its constitution, often contains hazardous elements. Therefore, the Convention affirms that in order to protect human health and the environment, hazardous waste should not be traded freely like ordinary commercial goods, and thus it establishes a written notification and approval process for all cross-border movements of hazardous wastes. But the Basel Convention's regulatory exemption

on equipment that's destined for reuse is entirely compatible with its prime environmental objective to prevent waste generation, as reuse extends the lifecycle of EEE and therefore mitigates the generation of hazardous waste. By prolonging the functionality of electronics, reuse promotes natural resource conservation and at least temporarily diverts the need for recycling or disposal. However, the distinction of whether something is waste or not, and therefore intended for re-use, is a long-standing discussion under the Basel Convention. The most recent Conference-of-Parties (COP13) could not reach a final consensus.



