

National WEEE Assessment 2026

Antigua and Barbuda



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National WEEE Assessment 2026

Antigua and Barbuda

Abstract & Authors

This national assessment report provides a comprehensive assessment of WEEE management in Antigua and Barbuda, including material flow analysis, economic evaluation, infrastructure assessment, and technical capacities.

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Please cite this publication as:

V. Luda di Cortemiglia, E. Fernandez Cubillo, V. Forti, E. D'Angelo, L. Somwaru, United Nations Institute for Training and Research, "National WEEE Assessment 2026 – Antigua and Barbuda", 2026, Bonn, Germany

Acknowledgements:

The authors wish to express their sincere appreciation to all individuals and institutions who contributed to the development of this report.

This work was undertaken as part of the Global Environment Facility (GEF)-funded Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS) Programme, a global initiative designed to reduce the impacts of chemicals and waste in Small Island Developing States (SIDS) through integrated, sustainable, and innovative management approaches. The Programme is implemented by the United Nations Environment Programme (UNEP) in collaboration with a range of executing partners and participating countries.

Special appreciation is extended to the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean

(BCRC-Caribbean), which served as the regional executing partner and provided overall coordination, technical guidance, and support throughout the implementation of the activities.

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List of Abbreviations

Abbreviations	
ABWREC	Antigua & Barbuda Waste Recycling Corporation
ACHS	Advisory Council for Health and Safety
BATs	Best Available Techniques
BEPs	Best Environmental Practices
CSO	Civil Society Organizations
EEE	Electrical and electronic equipment
EPR	Extended Producer Responsibility
EU	European Union
GDP	Gross domestic product
HCL	Human Capital Index
kg	Kilograms
MEAs	Multilateral Environmental Agreements

Abbreviations	
NGOs	Non-Governmental Organizations
NSO	National Statistical Office
NSWMA	National Solid Waste Management Authority
PIC	Prior Informed Consent
PCB	Polychlorinated Biphenyl
POM	Placed on the market
POPs	Persistent organic pollutants
SIDS	Small Islands Developing States
SLR	Sea Level Rise
SCYCLE	Sustainable Cycles Programme of UNITAR
SUWAMA	Suriname Waste Management
UNITAR – SCYCLE	United Nations Institute for Training and Research – Sustainable Cycles programme
USD	United States Dollar
UNU – KEYS	United Nations University KEYS
WEEE	Waste Electric and Electronic Equipment



Introduction

Global and regional e-waste situation

According to the recently published Global E-waste Monitor 2024 (Baldé et al. 2024), in 2022 a record 62 billion kg of e-waste or Waste Electrical and Electronic Equipment (WEEE) was generated globally (equivalent to an average of 7.8 kg per capita per year). However, only 22.3 per cent of this e-waste mass was documented as formally collected and recycled in an environmentally sound manner.

Since 2010, globally the growth of e-waste generation is outpacing the formal collection and recycling by almost a factor of 5. When the total benefits from viable recovery of metals as secondary resources (USD 28 billion) and the monetized savings of avoided greenhouse gas emissions (USD 23 billion) are deducted from the costs of e-waste treatment (USD 10 billion) and externalized costs to human health and the environment (USD 78 billion), the result is a net loss of USD 37 billion in the world's current e-waste management practices.

According to the Global E-waste Monitor, 13.8 billion kg of global e-waste that undergoes environmentally sound treatment at a cost USD 0.36/kg; this is 3 times more than the average cost of e-waste disposed of as residual waste, recycled outside compliant recycling schemes or managed by the informal sector (USD 0.12/kg). The higher treatment costs are mostly attributable to the costs of depolluting e-waste and auditing, administration and attaining the minimum environmental health and safety standards associated with compliant management of e-waste.

The situation related to WEEE management varies significantly in different regions of the world. In the Caribbean, the amount of e-waste grew by more than 60 per cent from 148 million kg in 2010 to 241 million kg in 2022. This equals the generation of 7.6 kg/capita per year of e-waste and is close to the global average of 7.8. The documented formal e-waste collection rate in the Caribbean region was close to 0% in 2022, which is significantly lower than the global average of 22.3 per cent.

Since 2010, globally the growth of e-waste generation is outpacing the formal collection and recycling by almost a factor of 5.

Hence, e-waste management poses a pressing challenge in the Caribbean region, in the absence of specific regulations and policies addressing the issue and the absence of a formal e-waste management infrastructure. E-waste management responsibilities in different Caribbean countries are shared among various entities.

Overview of the consultancy

The Sustainable Cycles (SCYCLE) Programme of UNITAR, Division for Planet, has been contracted by the BCRC Caribbean to conduct the activities related to Output 3.1 of the ISLAND project. SUWAMA representatives, a local organization in Suriname dealing with waste management issues, have been hired as individual consultants by UNITAR SCYCLE.

UNITAR SCYCLE is the global scientific leader in e-waste research and information provision to various stakeholders and the public. SCYCLE's mission is to promote sustainable societies. Its activities focus on the development of sustainable production, consumption and disposal patterns for electrical and electronic equipment (EEE), as well as for other ubiquitous goods. SCYCLE leads the global e-waste discussion and advances sustainable e-waste management strategies based on life cycle thinking. Thanks to its scientifically recognized methodology to quantify the e-waste management, which is recognized at the global level, SCYCLE puts its methodology at the service of the project implementation, as further specified below.

As part of **Deliverable 2 of Output 3.1** of the ISLANDS project, this national assessment report provides an overview on the WEEE management situation in the country of **Antigua and Barbuda**, including some conclusive remarks and recommendations on next steps to be taken at national level to further improve the management of a challenging waste stream such as the WEEE.

The report is structured as follows:

- First, a [methodological note](#) explains the main data sources used for the analysis and the analytical approach used for both the qualitative and quantitative sections.
- [Chapter 1](#) presents a country overview, including a socio-economic background introduction and an overview on the legislative landscape specific on e-waste or, when e-waste is not covered by national legislation, the relevant policies and legislations which includes indirectly also WEEE.
- [Chapter 2](#) presents the result of the WEEE flows assessment at national level, from 2010 and with projections up to 2030. When information was available, a short paragraph also investigates the transboundary movements of WEEE.
- [Chapter 3](#) presents the analysis of the information collected through the project survey, distributed among representatives of both the private and the public sector in Antigua and Barbuda, giving an initial overview and assessment of the technical and infrastructural capacity for WEEE management at national level.
- [Chapter 4](#) goes more into detail in the economic impact assessment of WEEE management in Antigua and Barbuda.
- [Chapter 5](#) presents the main conclusions of the analysis, and some targeted recommendations on possible way forward to improve the WEEE management sector at national level.



Methodological Note

The methodology used for the data collection and analysis for the national assessment report is mixed, both qualitative and quantitative.

The qualitative part included the following main tools:

- A comprehensive survey, mainly distributed online, targeting the main stakeholders in each project country, including governmental officers/policy makers, EEE producers/importers, recycling companies, WEEE importing and exporting companies, CSOs and other relevant organizations.
- Follow-up semi-structured interviews and/or focus groups, based on predefined guidelines and adapted according to the specific needs, also based on the possible gaps in the data collection through the survey.

The structure of the online survey is included in [Annex 1](#). Five stakeholders from the public/government sector have filled in the questionnaire, albeit two only partially.

In terms of gender balance, 3 respondents identified as males and 2 as females.

In addition to the qualitative approach, quantitative data have been collected and analysed. These include data on Electronic and Electronic Equipment (EEE) Put On the Market (POM); WEEE generated, collected and recycled (if available), economic costs and benefits related to WEEE management by national facilities. The methodology applied on the quantitative data analysis is further detailed under [paragraph 2.1](#), for what concerns the WEEE flows.

The template of the data gathering structure for the economic impact analysis is presented in [Annex 2](#).

However, it must be noted that in the case of Antigua and Barbuda, no information was shared by private stakeholders; therefore, the analysis of the economic impact described in [chapter 4](#) is based on the limited qualitative information collected through the survey.

The draft national assessment report was presented to the country's representatives on 14th November 2025, during the national validation workshop. All the additional inputs, information to fill in existing gaps and relevant comments provided by the stakeholders are reflected in the final version of the report.





Chapter 1.

Country Profile

1.1 COUNTRY OVERVIEW

Antigua and Barbuda is a two-island state, part of the Leeward Islands located in the north-eastern heart of the Caribbean archipelago, with a population of 93 772 inhabitants. Antigua has an area of 108 square miles and accounts for 99% of the population. Barbuda, a flat coral island of approximately 68 square miles, accounts for 1% of the population (Commonwealth, 2023).

Antigua and Barbuda

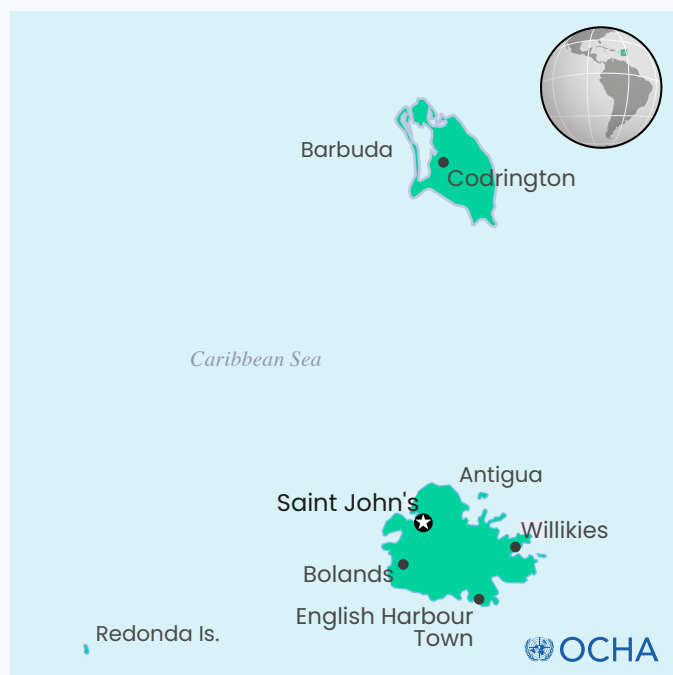


Figure 1. Map of Antigua and Barbuda

Map Sources: UNCS, ESRI, [Antigua and Barbuda Location Map \(2013\)](#) / OCHA. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Map created in Aug 2013.

Table 1. Socio-economic indicators, World Bank

Population	93 772 (2024)
Population growth (annual %)	0.5 (2024)
Human Capital Index (HCI) (scale 0-1)	0.6 (2024)
GDP (current US\$)	2.22 billion (2024)
GDP per capita (current US\$)	23 725.8 (2024)
Inflation, consumer prices (annual %)	6.2 (2024)
Access to electricity (% of population)	100 (2023)
Individuals using the Internet (% of population)	78 (2023)

Source: World Bank, [Antigua and Barbuda | Data](#)

Socio-economic environment

Tourism is the cornerstone of the national economy, contributing significantly to the GDP and providing a large portion of the national employment (Commonwealth, 2023), whilst agricultural production is mainly directed to the domestic market constrained by a limited water supply and a labor shortage (Moody Analytics, u.d.).

In Antigua and Barbuda 10% of the population is considered vulnerable and could be impacted quite significant by downturns in the economy or exogenous shocks such as those associated with climate change (OCHA, 2022). The country ranks as one of the most water-stressed countries in the Caribbean and, although 97% of the population has access to drinking water and 88% have access to sanitation services, water availability is a serious issue. The demand for water has drastically exceeded the available supply from ground and surface water sources. Antigua and Barbuda has been plagued by severe droughts every 5-10 years, since recorded history (OCHA, 2022). The FAO defines countries like Antigua and Barbuda, as water-scarce with less than 1000m³ of freshwater resources per capita (Government of Antigua and Barbuda, 2020).

According to the International Monetary Fund (IMF), Antigua and Barbuda has witnessed a strong post-pandemic economic expansion. Real output is estimated to have surpassed pre-pandemic levels in 2024, with growth estimated at 4.3 per cent, driven by strong tourism and one-off events. The recovery in nominal gross domestic product (GDP), along with improved fiscal balances, brought down the public debt from around 100 per cent of GDP in 2020 to 67 per cent in 2024. However, gross financing needs are projected to remain around 10 per cent of GDP in the medium term (IMF, 2025).

Waste management system

As a Small Island Developing State (SIDS) with extremely limited land space, Antigua and Barbuda faces significant environmental and infrastructural challenges. The country is dependent on imports of finished products, generally in generous packaging which generates large volumes of waste and consequent a high demand on the landfill capacity. Approximately 3.5 kilograms of waste per person are generated daily (ReMLit, u.d.). Linked to heavy reliance on tourism, Antigua and Barbuda is among the top 30 global plastic polluters per capita (Commonwealth, 2023).

The National Solid Waste Management (NSWMA) is responsible for the administration of an integrated solid waste management system. The Authority has limited waste recovery and recycling programmes, therefore high volumes of waste enter the landfill, increasing the risk of landfill fires, generation of persistent organic pollutants (POPs), unintentionally persistent organic pollutants (UPOPs), and leachate entering the marine environment (ReMLit, u.d.).

1.2 LEGISLATIVE OVERVIEW

Antigua and Barbuda has ratified the main multilateral environmental agreements (MEAs) which are of relevance for waste electric and electronic equipment (WEEE).

Table 2. Status of Multilateral Environmental Agreements – Antigua and Barbuda

Multilateral Environmental Agreement	Entry into force
Basel Convention	04/07/1993
Ban Amendment	05/12/2019
Rotterdam Convention	21/11/2010
Stockholm Convention	17/05/2004
Minamata Convention	23/09/2016

Nonetheless, the country has **not formulated an overarching policy to address the management of chemicals and hazardous wastes**, nor does it have a waste electrical and electronic equipment (WEEE) specific legislation. POPs, hazardous waste, mercury, mercury-added products, and WEEE are all dealt with under several pieces of legislation, as no specific piece of legislation addresses such issues exclusively.

The main legislative instrument is the **Environmental Protection and Management Act entered into force 2019** which aims to create a comprehensive framework for the effective and sustainable management of the environment by implementing proactive strategies to prevent and address all types of environmental harm or pollution, including the regulation and management of hazardous materials and waste. Waste includes any substance considered to be waste and any matter whether liquid, solid, gaseous, or radioactive, which is discharged, emitted, or deposited in the environment in such volume, composition, or manner as to cause an adverse effect. The Act provides for a broad definition of hazardous waste, understood as a substance that can pose a risk to health, safety, property or the environment. The list of hazardous substances or other goods is detailed in Schedule III of the Act.

The National Solid Waste Management Authority, established by the **National Solid Waste Management Authority Act** of 2005 is responsible for the overall management of solid waste, including electronic waste. It empowers the Authority to own, operate, or contract facilities for collection, treatment, processing, and disposal of solid and hazardous wastes, and mandates public education and staff training on waste management. The National Solid Waste Management Authority Act of 2005 provides for inspection and enforcement of waste management regulations.

The **National Solid Waste Management (Disposal Facilities) Regulations of 2023**, govern the operation and management of disposal facilities, including those receiving electronic waste, ensuring compliance with environmental standards. Finally, the Customs (Control and Management) Act, 2013 and related orders regulate the import of goods.

As there is **no specific WEEE legislation**, there are no **targeted e-waste strategies**. Antigua and Barbuda also lacks a national framework tailored to Extended Producer Responsibility (EPR) in this sector.





Chapter 2.

WEEE Flows Assessment: A Country Perspective

2.1 METHODOLOGY

Due to the wide variety of EEE products available in the market, it is essential to categorize them in groups that reflect their key characteristics. The United Nations University KEYS (UNU-KEYS) and the categories in the EU WEEE Directive can be used to classify EEE products, as explained below:

- The UNU-KEYS are a product categorisation comprised of 54 categories developed by UNU (Forti et al., 2020). The UNU-KEYS are constructed in such a way that product groups share comparable average weights, material compositions, end-of-life characteristics, and hazardous profile and lifetime distributions. The UNU-KEYS encompass all possible EEE (more than 900 products), and their classifications can be linked to the EU categories.
- The EU WEEE Directive currently covers 6 categories, as listed in Annex III of the WEEE-Directive 2012/19/EC, entered into force in 2018, and before there were 10 categories that are linked to the UNU-KEYS classification system. The data in this study is presented according to the WEEE Directive's 10 categories for harmonization purposes. The 10 e-waste Categories can be found in Table 3.

Table 3. E-waste 10 Categories

E-waste category	Description
CAT. 1	Large household appliances
CAT. 2	Small household appliances
CAT. 3	IT and telecommunications equipment
CAT. 4	Consumer equipment and photovoltaic panels
CAT. 5	Lighting equipment
CAT. 6	Electrical and electronic tools (with the exception of large-scale stationary industrial tools)
CAT. 7	Toys, leisure and sports equipment
CAT. 8	Medical devices (with the exception of all implanted and infected products)
CAT. 9	Monitoring and control instruments
CAT. 10	Automatic dispensers

Understanding the quantities, characteristics and pathways of e-waste - along with collecting accurate and up-to-date data - provides a solid foundation for monitoring e-waste generation and management. The measurement framework, developed by UNITAR-SCYCLE and detailed in the E-waste Statistics Guidelines (Forti et al., 2020), follows a mass balance approach over the EEE's entire life cycle. The methodology covers production, trade, placing on the market, e-waste generation, e-waste management, and other e-waste related activities, as represented in Figure 2. It covers any product supplied to the national market for consumption that is used by households, businesses, or public authorities.

The methodology follows four steps:

1. The EEE put on the market (POM) is calculated using the apparent consumption method, as the sum of the domestic production and imports of EEE minus the EEE exported for a specific year. The data source used in this calculation are the Comtrade trade statistics¹ and national statistics offices.

$$POM(t) = \text{Domestic production } (t) + \text{Imports } (t) - \text{Exports } (t)$$

2. After the EEE is placed on the market, it remains in use until the product is discarded – this period is referred as the product's lifetime. A product's lifetime profile indicates the obsolescence rate per year following its sale. The total amount of equipment in households, businesses, and the public sector is referred to as the stock.
3. After a certain lifetime, the product is disposed and it becomes waste, which is referred as the e-waste generated, prior to collection. The quantity of e-waste generated is calculated from the product's POM time-series, taking into account their respective rates of obsolescence in the evaluation year.
4. The e-waste follows different flows, including the formal and compliant collection. Data on the e-waste collection is requested to countries and provided by the national statistical offices (NSOs).

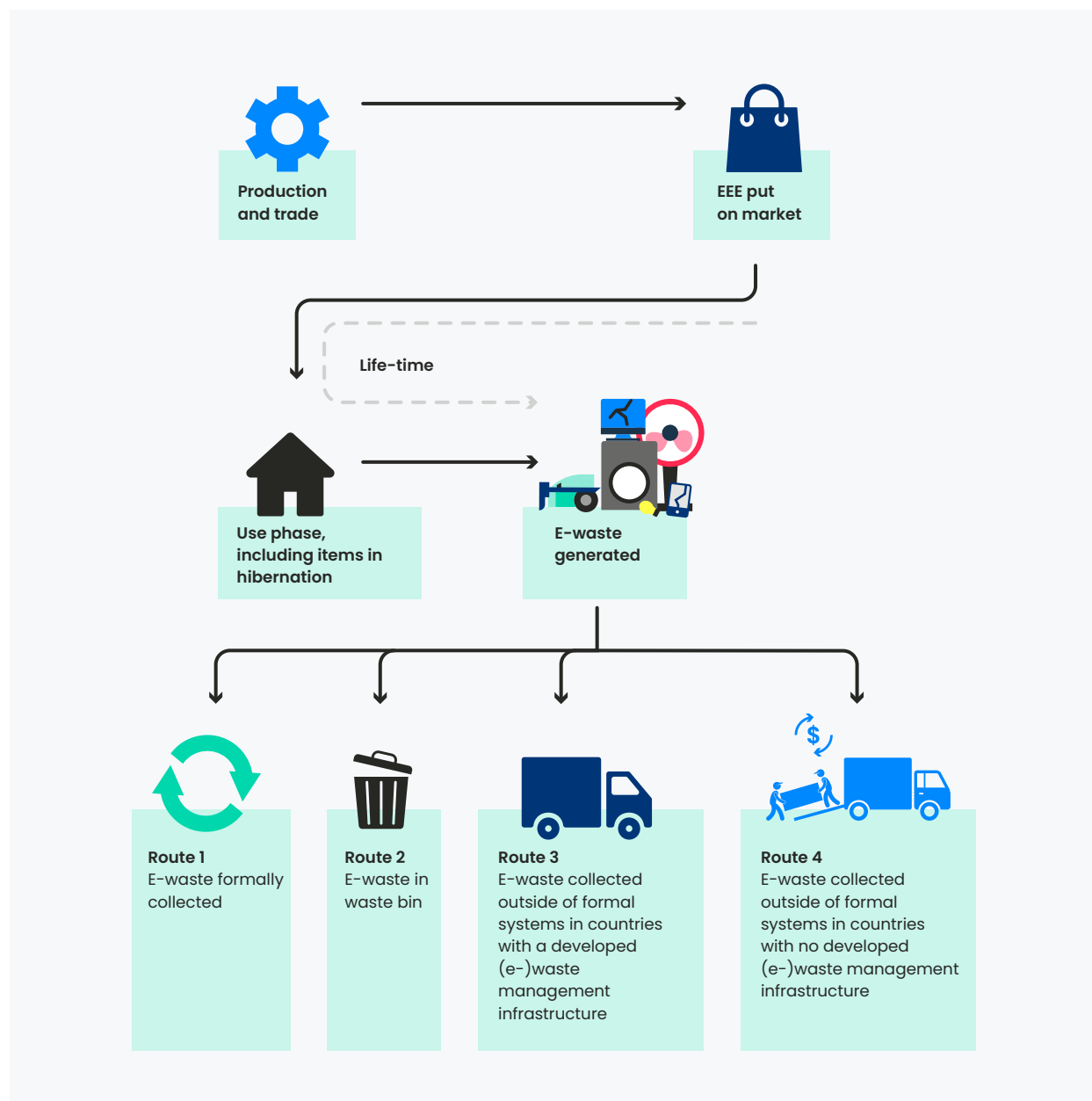


Figure 2. E-waste Statistics Framework

¹ <https://comtradeplus.un.org/>

In Antigua and Barbuda, the following bodies are responsible for collecting data on e-waste:

- | | |
|----------------------------|---|
| 1. National statistic body | 2. Department of Environment (or other governmental institutions) |
|----------------------------|---|

The 3 respondents who completed the relevant section of the survey were not aware whether a regular national reporting or monitoring system for e-waste is in place. In follow-up exchanges, stakeholders confirmed that at present there is no reporting system on e-waste in place in the country.

2.2 WEEE FLOWS AND OUTLOOK, FROM 2010 TO 2030

This paragraph describes the flows of EEE Put On the Market (POM) and e-waste generated in Antigua and Barbuda, from 2010 to 2030. Figure 2 and Figure 3 below represent a time series from 2010 to 2030 of the EEE POM and the e-waste generated in Antigua and Barbuda, respectively. From 2010 to 2022, POM data is based on the historical country's data from the Comtrade database, estimated with the apparent consumption methodology, and from 2023 to 2030 the data is an estimation based on the previous trends.

POM and e-waste data in Antigua and Barbuda estimated with the apparent consumption methodology show that the amount of EEE POM yearly has increased from 1.31 million kg in 2010 to 1.78 million kg in 2022, despite a notable decrease in 2019, and it is projected to continue increasing up to 1.95 million kg in 2030. During the same period, the amount of **e-waste generated has almost doubled, from 0.67 million kg in 2010 to 1.24 million kg in 2022, and it is projected to increase up to 1.50 million kg in 2030.**

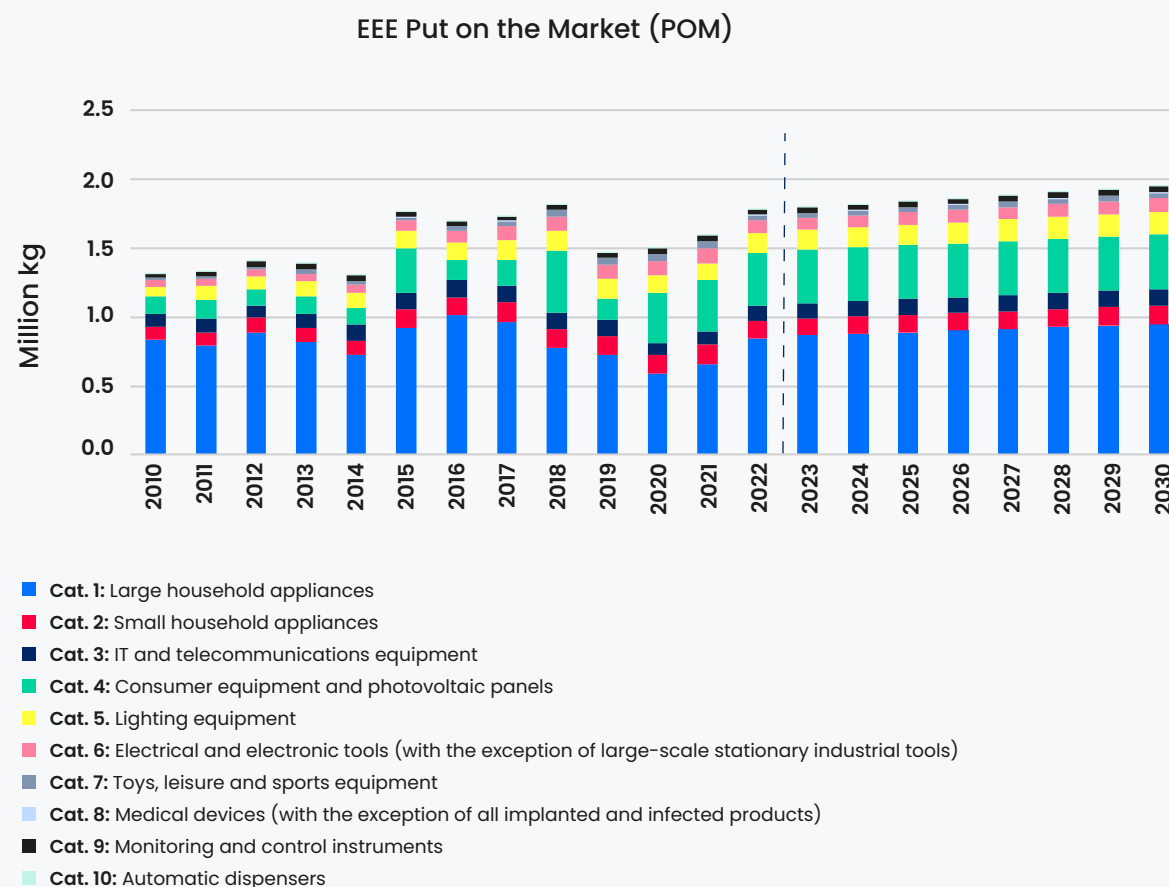


Figure 3. EEE POM in Antigua and Barbuda, 2010-2030

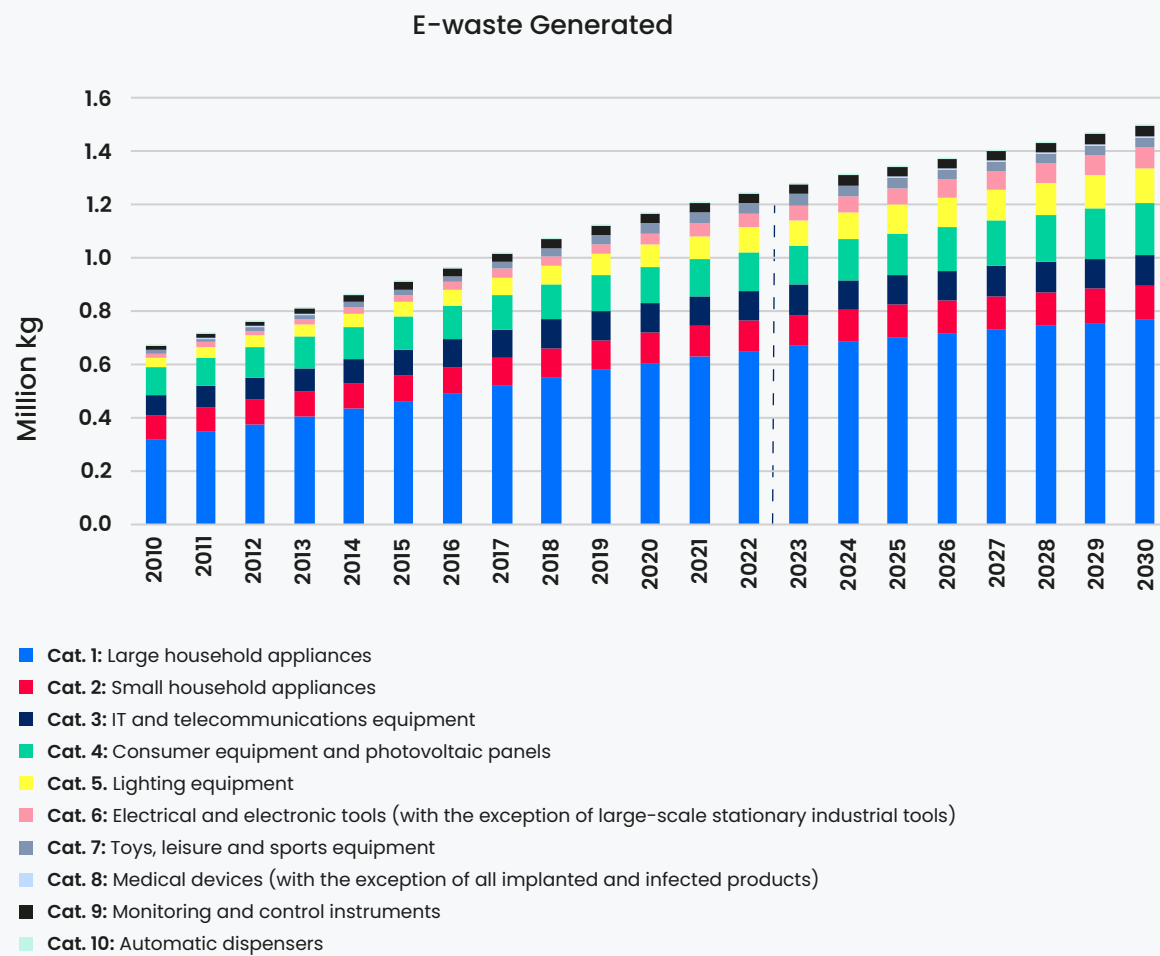


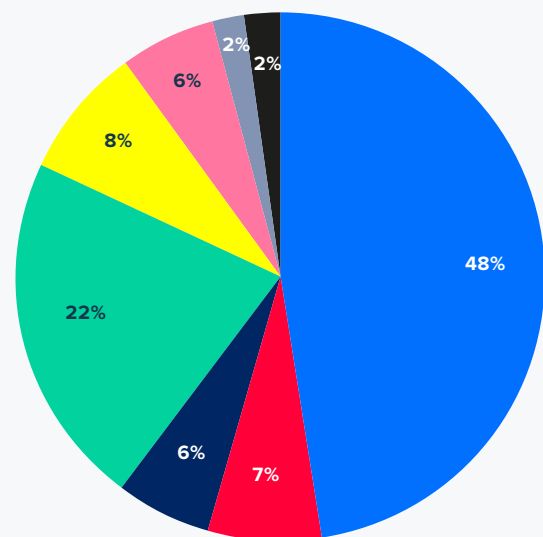
Figure 4. E-waste Generated in Antigua and Barbuda, 2010–2030



In 2022, as it can be seen in Figure 5, the largest contributors to the POM in the country were Category 1 (48%) and Category 4 (22%). When it comes to e-waste generated, as seen in Figure 6, Category 1 (52%) and Category 4 (11%) are also the largest contributors.

Globally, Antigua and Barbuda is not a high contributor to the e-waste generated, as the largest contributions come from more populated countries. However, in terms of e-waste generated per capita, according to the Global E-waste Monitor 2024 (Baldé et al. 2024) **Antigua and Barbuda generated 13.3 kg/inhabitant in 2022, ranking 55th worldwide**, comparable to countries like Lithuania, Croatia, and Russia. Within the Caribbean region, the e-waste generation per capita ranges from 1.1 kg/inhabitant to 20.7 kg/inhabitant, placing Antigua and Barbuda in the mid-range of e-waste generation per capita.

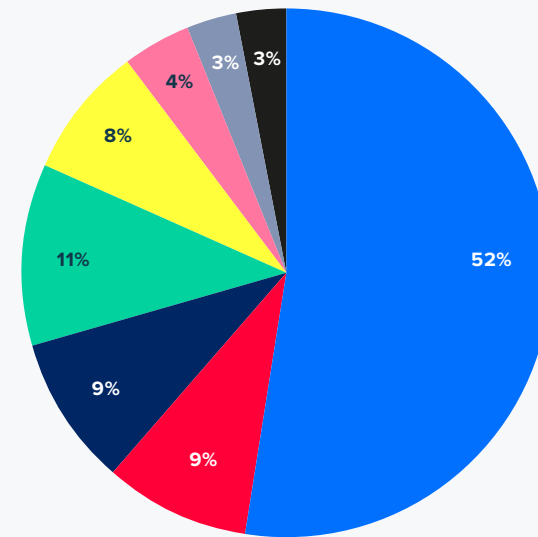
EEE POM per Category in 2022



- Cat. 1: Large household appliances
- Cat. 2: Small household appliances
- Cat. 3: IT and telecommunications equipment
- Cat. 4: Consumer equipment and photovoltaic panels
- Cat. 5: Lighting equipment
- Cat. 6: Electrical and electronic tools (with the exception of large-scale stationary industrial tools)
- Cat. 7: Toys, leisure and sports equipment
- Cat. 8: Medical devices (with the exception of all implanted and infected products) 0%
- Cat. 9: Monitoring and control instruments
- Cat. 10: Automatic dispensers 0%

Figure 5. EEE POM per category in Antigua and Barbuda, 2022

E-waste Generated in 2022



- Cat. 1: Large household appliances
- Cat. 2: Small household appliances
- Cat. 3: IT and telecommunications equipment
- Cat. 4: Consumer equipment and photovoltaic panels
- Cat. 5: Lighting equipment
- Cat. 6: Electrical and electronic tools (with the exception of large-scale stationary industrial tools)
- Cat. 7: Toys, leisure and sports equipment
- Cat. 8: Medical devices (with the exception of all implanted and infected products) 0%
- Cat. 9: Monitoring and control instruments
- Cat. 10: Automatic dispensers 0%

Figure 6. E-waste Generated per category in Antigua and Barbuda, 2022

As previously mentioned, the largest contributor to the EEE POM, in terms of mass, are large household appliances (Category 1), which account for 0.85 million kg of the POM in 2022 (48% of the total) due to the high average weight of the products included in this category (e.g., fridges, washing machines, dishwashers). The amount of EEE included in Category 1 POM has been relatively stable, and this trend is not expected to change considerably in the following years, with an annual increase of 1% forecasted from 2022 to 2030. Unsurprisingly, Category 1 equipment is also the biggest contributor to the e-waste generation, with 0.65 million kg of e-waste generated in 2022 (corresponding to 52% of the total) and has doubled from 2010 to 2022. The amount of e-waste generated from Category 1 is expected to reduce its increase rate in the coming years, due to the long lifetime of this type of equipment and the steadiness of the amount of equipment POM in the latest years.

Consumer equipment and photovoltaic panels (Category 4) is the second largest contributor to both the EEE POM, 0.39 million kg in 2022, 22% of the total, and e-waste generated, 0.14 million kg in 2022, 11% of the total. It has had the highest increase in equipment sold from 2010 to 2022 (68%), mostly due to the high increase in the installation of photovoltaic panels since 2015 to support the green transition (Government of Antigua and Barbuda, 2020b). The amount of Category 4 equipment POM is expected to stabilize in the following years, but the e-waste generated is expected to steadily

rise as the equipment POM – especially the photovoltaic panels, which lifespan is around 20 to 25 years – becomes waste.

Small household appliances (Category 2), IT and telecommunications equipment (Category 3), and lighting equipment (Category 5) account together for 21% of the EEE POM (0.12, 0.11, and 0.14 million kg, respectively) in 2022 and the 26% of the e-waste generated (0.11, 0.11, and 0.09 million kg, respectively). The three categories follow a similar trend, where the EEE POM and e-waste generated have been steadily increasing from 2010 to 2022, and it projected to continue doing so from 2022 to 2030. Electrical and electronic tools (Category 6) account for 0.10 million kg (6%) of the total EEE POM in 2022, an amount that has been continuously increasing since 2010, and it projected to remain stable from 2022 onwards. When it comes to the amount of e-waste generation, Category 6 accounts for 0.05 million kg (4%) of the total generation in 2022 and has been steadily increasing from 2010 to 2022 out of all the categories (71%) and it is projected to continue increasing until 2030.

Toys, leisure, and sport equipment (Category 7) and monitoring and control instruments (Category 9) account for a 4% of the total POM (0.03 and 0.04 million kg, respectively) and of 6% of the total e-waste generated in 2022 (0.04 and 0.03 million kg, respectively). The amount of POM per year in both categories have been fairly stable from 2010 to 2022, and this trend is projected to

continue from 2022 to 2030. When it comes to e-waste generated, Categories 7 and 9 account for 3% each (0.04 and 0.03 million kg, respectively), have remained stable during the years and are projected to stay in this trend. Medical devices (Category 8) and automatic dispensers (Category 10) are the smallest contributors in 2022 to the EEE POM (0.003 and 0.002 million kg, respectively) and e-waste generated (0.002 million kg each), accounting together for less than 1% of both metrics, and their EEE POM growth rate follows the same trend as for Category 7 and 9.

Regarding the e-waste management, **there is no quantitative data on the e-waste being formally collected and recycled in Antigua and Barbuda** currently, and the qualitative information that has been compiled is presented in the next chapter.

2.3 TRANSBOUNDARY FLOWS OF WEEE

WEEE exports are legitimate, in principle. WEEE can be exported for recycling purposes, and exporters of WEEE need to ensure that it will be recovered or recycled safely in the receiving country. In some cases, transboundary movements (TBM) of WEEE or its components are necessary to recover high-value materials (the transportation of waste printed circuit boards to specialised recycling facilities of WEEE from regions where no WEEE management systems exist). Furthermore, transboundary movements of hazardous and other wastes, including WEEE, can pose significant challenges and have an adverse impact on the environment and on

human health when not managed properly in countries lacking adequate infrastructure and capacity for managing WEEE in an environmentally sound manner. Therefore, it is important to put in place rules and procedures for distinguishing between illegal and legal transboundary movements (Baldé et al. 2024).

The main international instrument regulating the transboundary movements of waste, including WEEE, is the Basel Convention, which entered into force in Antigua and Barbuda in 1993.

In June 2022, at the fifteenth meeting of the Conference of the Parties to the Basel Convention, amendments to Annexes II, VIII, and IX of the Convention were adopted, mainly aimed at increasing the control of transboundary movements of WEEE and making all electronic and electrical waste, including non-hazardous waste, subject to the Prior Informed Consent (PIC) procedure.²

² <https://www.baselint/implementation/Ewaste/EwasteAmendments/Overview/tabid/9266/Default.aspx>.

As mentioned, in some cases, WEEE can be exported to other countries, but they must be subject to the PIC procedure – which forms the heart of the Basel Convention control system and is based on four key stages: 1) notification, 2) consent and issuance of movement document, 3) transboundary movement, and 4) confirmation of disposal. (D'Angelo et al. 2025)

From the surveyed entities, very little information was shared on the import / export situation of WEEE in the country.

While no import of WEEE is taking place in Antigua and Barbuda (according to 2 respondents out of the 3 who compiled the relevant section), exports seem to take place globally, to the United States, most likely for recycling and/or treatment purposes.

From an analysis of the national report on hazardous waste submitted by authorities in Antigua and Barbuda to the Basel Convention (BC) Secretariat, one shipment of e-waste has been reported by the country in 2021, and it concerned 70 tons of “Polychlorinated biphenyl (PCB) waste oil, capacitors contaminated with PCBs and Equipment contaminated with PCBs” classified under the code A3180, shipped to Europe, specifically to France, for final disposal classified as D10 under Annex IV – Thermal treatment on land not covered by an operation in Section B.

The mentioned one is the only national report submitted by Antigua and Barbuda to the BC Secretariat, from 2016 to 2024.

In addition, after the national validation workshop, one private sector representative shared the below data on exports of e-waste carried out by its own company (Wills Recycling LTD). The data provided have been harmonized by the authors according to the 10 WEEE categorization system used in the project. However, some of the products remained out of the categorization and are recorded separately.

Table 4. E-waste Exported

E-waste Exported 10 WEEE categories – tons per year	2025	2024	2023	2022	2021	2020
1. Large household appliances						
2. Small household appliances						
3. IT and telecommunications equipment	8.71	6.47	3.34			
4. Consumer equipment and photovoltaic panels	7.91	5.87	2.55			
5. Lighting equipment						
6. Electrical and electronic tools (with the exception of large-scale industrial tools)						
7. Toys, leisure and sports equipment						
8. Medical devices (with the exception of all implanted and infected products)						
9. Monitoring and control instruments						
10. Automatic dispensers	0.4	6.92				
Other WEEE – tons per year						
Unidentified e-waste	6.45				5.03	
CPUs	7.70	10.68	10.97		4.64	
Brown circuit boards	0.83	1.26	1.42		1.20	
Green circuit boards	0.91	1.22	1.90		1.87	17.59
Aluminium encased e-waste	4.18	0.76	0.72		8.01	
Total (tons per year)	37.08	33.23	21.36		20.75	17.59



Chapter 3.

Technical and Infra- structural Capacity for WEEE Management

As previously highlighted, chapter 3 provides an analysis of the responses to the online survey collected at national level, integrated with additional inputs gathered through bilateral interviews and meetings conducted by the consultancy team during follow-ups.

The objective is to outline the current situation in the country regarding the overall infrastructural capacity and the status of other conditions (e.g. level of public awareness, public and private support and funding, etc.) necessary to ensure the establishment and development of a durable and sustainable WEEE management system in Antigua and Barbuda.

INSTITUTIONAL AND ORGANIZATIONAL STRUCTURE

Antigua and Barbuda has **very little adequate resources, expertise and infrastructure to effectively manage WEEE**, as reported by public authorities through an assessment survey.

The current level of coordination among key stakeholders (producers, recyclers and waste managers) in the national waste management sector is defined by national authorities as somewhat effective – meaning that stakeholders do communicate regularly, however coordination could be improved in certain areas, including in the WEEE sector.

National stakeholders reported not to **be aware of voluntary initiatives or measures put in place by the industry to contribute to WEEE management**. One stakeholder reported that there was an e-waste recycling centre, but it was shut down during COVID-19.

FINANCIAL MECHANISMS

The electronic market of Antigua and Barbuda is heavily reliant on imports as there is **minimal to no local production** of EEE, few market players, and a **weak industry infrastructure**.

WEEE management in the country is primarily financed by government funding (e.g. taxes, municipal budget and public funding and fees paid by households and businesses for waste collection). Consumers are also charged for waste disposal at landfills. International aid and grants are also on occasion contributing to this sector. One respondent to the online survey also indicated that incentive programs (e.g. consumers are rewarded through financial incentives for returning WEEE to formal collection points or recycling centres) exist in the country. In addition, another respondent indicated that the following economic and market-based instrument could be used to support the WEEE management and an EPR system:

EPR SCHEMES

Advanced disposal fee (when a non-refundable fee is added to the price of a product and paid by the consumer to cover future disposal and recycling costs).

COLLECTION, RECYCLING AND DISPOSAL INFRASTRUCTURE

Based on the information provided by the respondents of the survey, consumers typically **dispose of WEEE along with other waste** (e.g. household waste). **No formal pick-up services** from households exist. Illegal dumping sites where WEEE co-mingled with municipal wastes is dumped are also reported to exist in the country

At the landfill, some of the WEEE is separated and stored in separate containers, apart from the general waste. White goods, e.g. washing machines, refrigerators, etc. are stored separately, according to a private sector representative participating in the national validation workshop.

The majority of respondents (4 out of 5) states that **no dismantling or recycling facilities** exist in the country, while one respondent indicated that one facility does exist. This was probably referring to the previously mentioned recycling centre which shut down due to the Covid-19 pandemic.

There are two waste collectors in Antigua and Barbuda, collecting WEEE along with other waste types:

- The **National Solid Waste Management Authority (NSWMA)** has the general responsibility for the management of solid waste in Antigua and Barbuda.
- **Antigua & Barbuda Waste Recycling Corporation (ABWREC)** is a non-profit organization that collects materials, shreds, packages and ships this material for recycling to other countries. However, one of the stakeholders referred that, to his knowledge, the corporation currently does not recycle e-waste but rather focuses on plastics and aluminium. No further details were provided on the functioning of ABWREC.

In addition, at the national validation workshop, it was highlighted that a private company specialised in metal scrap has started collecting WEEE since about five years ago. Such items are then sorted and shipped abroad for recycling.

Stakeholders from the public sector consulted through the online survey ranked the following aspects, based on their importance to scale up existing WEEE dismantling/treatment facilities (from 1 most important, to 7 least important):

What is needed to scale up existing WEEE dismantling/treatment facilities? Antigua and Barbuda



PUBLIC AWARENESS AND PARTICIPATION

General public awareness campaigns and education programs are organised at national level but, so far, are not specifically focusing on WEEE. One respondent also indicated that incentive programs (e.g. consumers are rewarded through financial incentives for returning WEEE to formal collection points or recycling centers) are organised in Antigua and Barbuda.

INFORMAL SECTOR

Informal sector actors are active in collection, sorting and dismantling of WEEE. The size of the sector is though not known to the stakeholders engaged. There aren't currently programs or initiatives aimed at integrating the informal sector into the formal waste management system.

READINESS TOWARDS EPR SYSTEM

Extended Producer Responsibility (EPR) is a policy approach that makes producers responsible for the entire lifecycle of their products, particularly for take-back, recycling, and final disposal. In the context of electronic waste (e-waste), EPR shifts the financial and operational responsibility for collection, recycling, and safe disposal from governments and consumers to manufacturers. This encourages producers to design more sustainable, durable, and recyclable electronics.

This approach is increasingly adopted worldwide, including in developing countries. As an example, in India, the E-Waste (Management) Rules mandate that producers of electronic goods must collect and channel e-waste to authorized recyclers through EPR plans approved by the Central Pollution Control Board. This policy has led to the formalization of parts of the informal recycling sector and improved compliance with environmental standards (OECD, 2024).

At present, respondents **were not aware of any existing good practices either in the country or abroad concerning EPR schemes.**

Stakeholders consulted indicated that the following actors should be involved in the implementation of an EPR scheme in the country:

Public and private actors to be involved for the implementation of EPR scheme - Antigua and Barbuda

**MOST
LEAST**

1. Government agencies
2. Private sector/ producers
3. Consumers
4. NGOs / CSOs
5. Recycling facilities/ industry experts
6. PROs
7. Other



The surveyed authorities indicated the following challenges in the adoption of an EPR for WEEE management in the country, ranked from the most to the least important:

Main challenges foreseen in the adoption of an EPR for WEEE management sector – Antigua and Barbuda



Moreover, according to the surveyed stakeholders, the elements most needed in the legal framework, in Antigua and Barbuda, to effectively support the EPR implementation are the ones listed below, ranked from the most to the least important:

Elements most needed in the legal framework to effectively support the EPR implementation – Antigua and Barbuda



ENVIRONMENTAL AND SOCIAL IMPACT

Two of the surveyed governmental representatives reported they had evidence or had heard of **landfills or dumping sites** where WEEE is disposed of in a non-environmentally sound manner, co-mingled with household waste. The other respondents did not have evidence of this or did not respond to this question.

In terms of social impact, there is **no evidence of possible jobs creation** in the WEEE sector and/or in the green sector for the upcoming years; nor is there formal evidence of involvement of vulnerable sectors, including women or children, in the informal sector.

CHALLENGES AND BARRIERS

The current main limitations in the existing national WEEE management system have been indicated by respondents, as follows (from the most to the least relevant ones):

What are the current limitations of the WEEE management systems – Antigua and Barbuda



REGIONAL COOPERATION

There are **no legal nor practical initiatives** currently been implemented at regional level with respect to WEEE management. **No formal cooperation or coordination exists** in the region with respect to WEEE management. According to participants in the data collection, **legal or policy restrictions hinder cross border collaboration**. But efforts are in progress to establish cross border partnerships.

All respondents to the online questionnaire concurred in stating that a regional approach would facilitate the implementation of an EPR scheme, by reducing implementation costs and thereby reducing the financial burden on individual countries. In addition, two respondents indicated that such an approach would support the creation of harmonized regulations, ensure consistency in EPR requirements across borders, making compliance easier for producers and stakeholders; and enhance collaboration between countries for improved recycling and waste management systems.

One respondent, instead, indicated that a regional EPR approach may add an additional layer of complexity in consideration of the differences in national laws, political systems, and waste management capacities. As each national context is significantly different, local needs and conditions require tailored, country-specific EPR schemes rather than a regional approach.

On the occasion of the national validation workshop, one participant highlighted that whilst a regional approach would be more sensible in terms of profitability and feasibility; in practice this approach would however present some obstacles, of instance linked to the serious challenges faced by interregional transportation. Also, it maybe difficult to track where WEEE would end up to, and which country would be the most suitable to host the hub.

Also, an additional problem may rise as regards the parts of this waste that are non-recyclable.



Chapter 4.

Economic Impact of WEEE Management Facilities at National Level

COLLECTION AND FINANCIAL STRUCTURE

In consideration of the lack of precise financial data related to WEEE management and infrastructure (see also the Methodological note), the present paragraph provides an overview of elements offering insights on the economic impact of such activities at national level, mainly based on the qualitative information gathered.

The WEEE management system in Antigua and Barbuda is at a nascent stage, with no dedicated formal collection system currently in place. As mentioned, **no WEEE specific legislation nor targeted initiatives exist in the country**.

The collection of WEEE is informal and sporadic. Two waste collectors on the island handle WEEE alongside general waste streams. The **lack of a formalized drop-off or pick-up system** results in most e-waste being disposed of with household waste, and sometimes ending up in illegal dumpsites. Generally speaking, there are **no dedicated collection fees or structured financing mechanisms** such as producer fees, eco-taxes, or EPR contributions. Funding currently relies on general public financing, landfill tipping fees, and waste collection fees.

According to the information provided during the national validation workshop, over the past five years a private company specialized in metal scrap, Wills Recycling Limited, has started collecting WEEE. The business model is based on incentives, as the company buys metals and e-waste for a fee, separate different types of electric and electronic equipment and then sells it to other countries outside the region. They also collect WEEE from the landfill as the company is located nearby. The fee paid per WEEE is based on weight, and different items have different prices.

TREATMENT AND MATERIAL RECOVERY

Antigua and Barbuda possesses some dismantling and recycling infrastructure, although it operates under limited capacity and does not yet reflect best available techniques (BAT) or best environmental practices (BEP) in full. Treatment **methods are largely manual and localized**, with basic dismantling occurring but without comprehensive recovery or sales channels for secondary raw materials.

While partial compliance with environmental standards is claimed, there is a lack of clear data on recovered fractions or output volumes. It is known that some WEEE is exported for treatment, particularly to the United States and Europe according to one respondent to the survey and the Basel reports, although detailed export volumes or categories have not been disclosed.

According to the information provided by a private sector actor during the national validation workshop, Wills Recycling Limited does some very minimal processing, basically sorting collected WEEE before shipment abroad. The company initially tried some processing (dismantling) and it was costly and not financially sustainable.

OPERATIONAL COSTS AND ECONOMIC POTENTIAL

At present, **no cost-recovery mechanisms are in place in Antigua and Barbuda's WEEE management system**. The infrastructure is funded through municipal budgets and taxes, without any fees charged to producers or consumers specifically for e-waste management.

Despite these constraints, the economic potential for WEEE management exists, particularly through:

- The establishment of formal dismantling operations;
- Development of local or regional markets for recovered materials;
- Implementation of cost-reflective pricing and producer responsibility mechanisms.

To scale operations, the country would **need investments in advanced recycling technologies, waste sorting infrastructure, and training programs to build a skilled workforce**. Improved policy coordination and dedicated legislation are also deemed critical for unlocking economic value from the sector.

As of now, the **net treatment cost per tonne of e-waste cannot be estimated due to insufficient data and a lack of formal tracking systems**. Nonetheless, the potential for green job creation and regional cooperation remains, especially if national and CARICOM-wide policy frameworks can align more effectively.



Chapter 5.

Conclusions and Way Forward

CONCLUSIONS

- The amount of EEE POM yearly has increased from 1.31 million kg in 2010 to 1.78 million kg in 2022, despite a notable decrease in 2019, and it is projected to continue increasing up to 1.95 million kg in 2030. During the same period, the amount of e-waste generated has almost doubled, from 0.67 million kg in 2010 to 1.24 million kg in 2022, and it is projected to increase up to 1.50 million kg in 2030.
- In 2022, the largest contributors to the EEE POM in the country were Category 1 – Large Households Appliances (48%) and Category 4 – Consumers equipment and photovoltaic panels (22%). When it comes to e-waste generated, as seen in Figure 6, Category 1 (52%) and Category 4 (11%) are also the largest contributors.
- In terms of e-waste generated per capita, Antigua and Barbuda generated 13.3 kg/inhabitant in 2022, ranking 55th worldwide.
- No quantitative data exists on the e-waste being formally collected and recycled in the country.
- Antigua and Barbuda has not formulated an overarching policy to address the management of chemicals and hazardous wastes, nor has a WEEE-specific legislation.
- As there is no specific WEEE legislation, there are no targeted e-waste strategies. Antigua and Barbuda also lacks a national framework tailored to Extended Producer Responsibility (EPR) in this sector
- Very little adequate resources, expertise and infrastructure exist at present to effectively manage WEEE.
- The level of coordination among key stakeholders in the waste management sector is somewhat effective, allowing for regular communication, although coordination could be improved in certain areas, including in the WEEE sector.
- The electronic market of Antigua and Barbuda is heavily reliant on imports as there is minimal to no local production of EEE, few market players, and a weak industry infrastructure.
- WEEE is typically disposed of along with other waste (e.g. household waste). There is no formal pick up services from households. Illegal dumping sites co-mingled with municipal waste are also reported to exist in the country.
- Informal sector actors are active in collection, sorting and dismantling of WEEE, but the size of the sector is unknown to the stakeholders engaged.
- WEEE is typically exported for treatment of other countries, primarily to the United States or to Europe.
- No formal cooperation or coordination exists in the region with respect to WEEE management, and legal or policy restrictions currently hinder cross border collaboration. But efforts are in progress to establish cross border partnerships.

WAY FORWARD

Considering the current situation regarding WEEE management in Antigua and Barbuda, summarized above in the conclusions, the following items are indicated as possible recommendations and way forward to the relevant stakeholders, to improve the current system, including:

- To effectively scale operations, Antigua and Barbuda should develop robust waste sorting infrastructure, secure investments in cutting-edge recycling technologies, and implement comprehensive training programs to cultivate a highly skilled workforce.
- To increase collection specific initiatives could be implemented, as for instance, as proposed by a national stakeholder reviewing this report, actions such as an old for new or a deposit program be implemented for large household devices (Category 1) and consumer equipment and photovoltaic panels (Category 4), which are purchased locally.
- To introduce green public procurement practices to ensure sustainable management of WEEE and other waste streams and improve collection and recycling and circularity practices.
- Enhanced policy coordination combined with dedicated legislative frameworks will be essential to unlock the full economic potential of the sector.
- By prioritizing investments in technology, infrastructure, and human capital—coupled with enhanced policy coordination and targeted legislation—Antigua and Barbuda can unlock significant economic, environmental, and social value from the recycling sector.
- In addition, these measures would support the creation of jobs in the circularity sector and regional cooperation remains, especially if national and CARICOM-wide policy frameworks can align more effectively.
- Such a strategic approach not only advances national sustainability goals but also positions the country as a model for environmentally sound resource management in the Caribbean region.



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Annex 1.

Online Survey

1. THE AIM OF THE SURVEY IS TO GATHER QUALITATIVE INFORMATION CONCERNING THE CURRENT WEEE MANAGEMENT SITUATION IN THE SURVEYED COUNTRIES.

The survey covers the following aspects: legislative and regulatory framework; institutional and organizational structure; financial mechanisms; collection, recycling and disposal infrastructure; data and monitoring; public awareness and participation; informal sector; readiness towards EPR system; environmental and social impacts; transboundary movements; challenges and barriers; regional cooperation.

Countries in scope: Antigua and Barbuda, The Bahamas, Barbados, Belize, Cuba, Dominica, The Dominican Republic, Guyana, Saint Kitts and Nevis, Saint Lucia, Suriname and Trinidad and Tobago.

Target audience: main actors involved in the WEEE management and in the possible establishment of a regional EPR system. This includes national stakeholders from the 12 project countries, including governmental authorities, recycling companies, WEEE importers/exporters, EEE producers (if existing), CSOs, NGOs, representatives from the informal sector etc.

Instructions: Kindly answer all sections / questions relevant to your field of work/expertise. You can skip those questions that are not relevant to your area of work.

Contacts: If you require assistance, including if you'd like to discuss a different way to compile the survey (through interview, offline format etc.), please contact the Project Coordinator elena.dangelo@unitar.org.

2. GLOSSARY

Electrical and Electronic Equipment (EEE): all products with circuitry or electrical components and a power or battery supply. It encompasses a wide range of products such as refrigerators, stoves, washing machines and hairdryers, mobile phones, wireless headphones and tablets, etc.

Waste Electrical and Electronic Equipment (WEEE or e-waste): EEE that has been discarded by its owner as waste, without the intent for reuse

Extended Producer Responsibility (EPR): policy approach that makes producers responsible for the entire lifecycle of their products, including collection, recycling and disposal. It aims to reduce waste and encourage sustainable product design by shifting the burden from governments to manufacturers. In practice, EPR can involve setting up take-back systems for recycling, paying fees to fund collection and recycling programs, or ensuring products are designed for easier recycling.

Best Available Techniques (BAT): refers to the most effective and advanced stage in the development of activities and their methods of operation, which indicate the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole. In the context of waste management facilities, BAT includes techniques that are economically and technically viable for reducing emissions and environmental impacts.

Best Environmental Practices (BEP): are the application of the most appropriate combination of environmental control measures and strategies. BEP aims to prevent or minimize the generation of waste and its harmful effects on the environment. This includes practices such as waste prevention, reduction, reuse, recycling and proper disposal methods.

Informal sector: the informal sector in waste management refers to unregulated, small-scale activities where individuals or groups collect, sort, and recycle waste materials outside formal systems, often without legal recognition or protection.

3. CONTACT INFORMATION

First Name

Last Name

Phone Number

Email Address

Organization

Country

Gender: How do you identify?

- ☐ Man
- ☐ Woman
- ☐ Non-binary
- ☐ Other

4. LEGISLATIVE AND REGULATORY FRAMEWORK

If WEEE legislation of WEEE-related policy are in place in your country, which are the products covered? (Please copy paste the list of products from the relevant legislation/policy).

If there is no specific WEEE legislation in the country, are any of the products listed in the 'Correspondence table with UNU-KEY' (included in the data gathering excel) covered in the general waste legislation or specific legislation? If yes, please provide below the official title of the legislation and possibly a link to access it.

Which elements are most needed, in your country's legal framework, to effectively support the EPR implementation? (Please rank from the most to the least needed).

- Clear definition of producer responsibilities – law must outline the obligations for producers to manage end-of-life products _____
- Improved collection and recycling systems – regulations should enhance the creation or support of infrastructure for collecting and recycling products _____
- Capacity building – initiatives to train stakeholders in maintaining collection and recycling systems _____
- Enforcement mechanisms – strong measures to ensure compliance with EPR requirements, including proportional penalties for non-compliance, combined with capacity building for inspectors _____
- Funding and financial mechanisms – legal provisions for financing EPR schemes, such as producer fees or eco-taxes _____
- Transparency and reporting requirements – laws should mandate regular reporting and transparency in the handling of waste and recycling efforts, supported by capacity building initiatives _____
- Consumer engagement & Awareness – regulations to promote public participation and education on EPR practices _____
- Other _____

5. INSTITUTIONAL AND ORGANIZATIONAL STRUCTURE

Do you believe the operational bodies in your country have sufficient resources, expertise and infrastructure to effectively manage WEEE?

- ☐ Not adequate at all
- ☐ Very little adequate
- ☐ Adequate
- ☐ Fully adequate
- ☐ I don't know

How would you assess the current level of coordination among key stakeholders (producers, recyclers and waste managers) in your country's waste management sector? (Select the most appropriate option).

- ☐ Very effective – there is already strong collaboration, with clear roles and effective communication between stakeholders
- ☐ Somewhat effective – stakeholders communicate regularly, but coordination could be improved in certain areas
- ☐ Ineffective – stakeholders rarely coordinate, resulting in inefficiencies in waste management and unclear communication channels
- ☐ Uncertain – it is unclear how well stakeholders coordinate in the waste management sector
- ☐ Other

Which main public and private actors in your country should be involved in the implementation of an EPR scheme? (Please rank from the most – 1 – to the least important – 7).

- Government agencies – responsible for setting regulations, monitoring compliance and ensuring enforcement _____
- Private sector / producers – accountable for financing/organizing collection and recycling systems + ensuring product design for recyclability _____
- Producers Responsibilities Organizations (PROs) – coordinating collection, recycling and reporting compliance with EPR regulations _____
- Recycling facilities / industry experts – managing the infrastructure for recycling and disposal of WEEE, ensuring efficient processing _____
- Consumers – engage in proper disposal and circular strategies (reuse, recycle..) _____
- NGO / Civil society – support in public awareness, education and monitoring efforts to promote effective recycling/circular strategies _____
- Other _____

Are you aware of voluntary initiatives or measures put in place by the industry to contribute to WEEE management?

- ☐ Yes
- ☐ No

Please specify below, by providing title/info or the link to the relevant initiatives.

6. FINANCIAL MECHANISMS

How would you describe the structure and maturity of the electronics market in your country? (Select the most appropriate option).

- ☐ Well-developed and competitive – mature market with strong local and international producers, diverse product offerings, and advanced supply chains
- ☐ Growing, but still in development
- ☐ Some established players, increasing local production, and expanding market potential, but with room for growth
- ☐ Emerging market
- ☐ Limited local production, reliance on imports, and underdeveloped supply chains
- ☐ Nascent or underdeveloped
- ☐ Minimal local production, few market players, and heavy dependence on imports with weak industry infrastructure
- ☐ Other

What are the financial instruments currently in place to finance the management of WEEE in your country? (Select all options that apply).

- ☐ Government Funding
- ☐ Taxes, municipal budgets, and public funds
- ☐ Waste Collection Fees – Households and businesses pay for waste services
- ☐ Landfill Tipping Fees
- ☐ Charges for waste disposal at landfills
- ☐ Private Sector Contributions – Voluntary recycling programs by businesses
- ☐ International aid and grants – Funding from NGOs and or global organizations
- ☐ Extended Producer Responsibilities (EPR) schemes

- ☐ Advanced Deposit Fee / deposit refund fee (= a refundable deposit is added to the price of a product, which is refunded to consumers when they return the used product or packaging)
- ☐ Advanced Disposal Fee (= a non-refundable fee added to the price of a product and paid by the consumer to cover future disposal and recycling costs)
- ☐ Other
- ☐ None

Which other economic and market-based instruments could be used to support WEEE management / EPR system (Select all options that apply).

- ☐ Government Funding – Taxes, municipal budgets, and public funds
- ☐ Waste Collection Fees – Households and businesses pay for waste services
- ☐ Landfill Tipping Fees – Charges for waste disposal at landfills
- ☐ Private Sector Contributions – Voluntary recycling programs by businesses
- ☐ International aid and grants – Funding from NGOs and or global organizations
- ☐ Extended Producer Responsibilities (EPR) schemes
- ☐ Advanced Deposit Fee / deposit refund fee (= a refundable deposit is added to the price of a product, which is refunded to consumers when they return the used product or packaging)
- ☐ Advanced Disposal Fee (= a non-refundable fee added to the price of a product and paid by the consumer to cover future disposal and recycling costs)
- ☐ Other

7. COLLECTION, RECYCLING AND DISPOSAL INFRASTRUCTURE

Is there a WEEE collection system in place in your country?

- ☐ Yes
- ☐ No

How is WEEE collected in your country? (Please select all options that apply).

- ☐ Collection points (e.g. bin/boxes in streets or retail stores, collection centers etc.)
- ☐ Pickup at household by informal sector (e.g. informal waste pickers, local collectors)
- ☐ Door-to-door collection system (formal sector)
- ☐ Other

Are there dismantling / recycling facilities in place in your country?

- ☐ Yes
- ☐ No

Are existing facilities implementing best available techniques (BAT) and best environmental practices (BET)?

- ☐ Yes
- ☐ No
- ☐ Partially
- ☐ I don't know

Do WEEE recycling and disposal practices in your country comply with environmental standards?

- ☐ Yes
- ☐ No
- ☐ Partially
- ☐ I don't know

Are dismantling / recycling facilities equipped with proper tools and safety equipment?

- ☐ Yes
- ☐ No
- ☐ Partially
- ☐ I don't know

Are workers in the WEEE management sector duly trained to handle collection, dismantling, recovery processes etc.?

- ☐ Yes
- ☐ No
- ☐ Partially
- ☐ I don't know

What is needed to scale up existing WEEE dismantling / treatment facilities? (Please rank from the most to the least relevant).

- Expansion of facility capacity and land availability _____
- Investment in advanced recycling technologies _____
- Increased access to specialized equipment for dismantling _____
- Technical expertise for the efficient management of the other WEEE categories _____
- Training and development of skilled workers _____
- Better waste sorting and pre-processing system _____
- Other _____

8. DATA AND MONITORING

Who is responsible for collecting WEEE data? (Select all options that apply).

- ☐ National statistic body
- ☐ Ministry of Environment (or other GOV institutions)
- ☐ International organizations
- ☐ WEEE collection companies
- ☐ WEEE treatment companies
- ☐ Other

Is there a regular (e.g. annual) reporting system in place on EEE and WEEE.

- ☐ Yes
- ☐ No
- ☐ Not yet, but it is planned
- ☐ I don't know

9. PUBLIC AWARENESS AND PARTICIPATION

What is currently in place in your country to support public awareness and engagement in WEEE disposal and recycling? (Select all options that apply).

- ☐ Efficient network of collection points
- ☐ Public awareness campaign and education programs
- ☐ Incentive programs (e.g. consumers are rewarded through financial incentives for returning WEEE to formal collection points or recycling centers)
- ☐ Other

Can you specify which awareness and education programs are in place?

How do consumers typically dispose of their WEEE ? (Select all options that apply).

- ☐ Drop off at designated collection points or recycling centers (formal channel)
- ☐ Dispose through informal collectors
- ☐ Dispose with other waste (e.g. household waste)
- ☐ Uncertain or unknown

10. INFORMAL SECTOR

At which stages is the informal sector involved in WEEE management? (Select all options that apply).

- ☐ Collection
- ☐ Sorting
- ☐ Dismantling
- ☐ Treatment
- ☐ None
- ☐ Other

Can you assess the size of the informal sector, in the WEEE management sector in your country?

- ☐ <25% of the overall WEEE management?
- ☐ Between 25–50%
- ☐ Between 50–75%
- ☐ >75%
- ☐ Unknown

Are there any programs/initiatives aimed at integrating the informal sector into formal systems? (If yes, please provide title, short description and website if available).

11. READINESS TOWARDS EPR SYSTEM

Are the main challenges foreseen in the adoption of an EPR for WEEE management sector in your country? (Please rank from most (1) to least (6) important).

- Legal & regulatory - lack of specific legislation, enforcement challenges or unclear responsibilities _____
- Financial & Economic - High implementation costs, insufficient funding mechanisms or resistance from producers _____
- Technical and infrastructure - Limited recycling facilities, collection systems, or technology for proper WEEE processing _____
- Stakeholder Cooperation - Lack of coordination among government, businesses and informal sector _____
- Public awareness and participation - Low consumer awareness or engagement in proper WEEE disposal _____
- Other _____

Do you have good practices related to EPR scheme in your country or outside to share (e.g. some steps taken to implement in EPR in WEEE or in another waste stream such as plastic waste etc.)? (If yes, please provide title, short description and website if available).

12. ENVIRONMENTAL AND SOCIAL IMPACT

Do you have evidence, in your country or in the region, of landfills or dumping sites where WEEE is disposed of if a non-environmentally sound manner (including mixed with other types of waste, ELVs, metals etc.)?

- ☐ Yes
- ☐ No
- ☐ I've heard about them but never saw them
- ☐ I don't know

Have new jobs related to the WEEE sector been created in the last 5 years in your country?

- ☐ No
- ☐ It is possible, but we do not have evidences
- ☐ Yes, but we do not have specific data
- ☐ Yes, and data are available from responsible entities (please provide information)

Are there plans, at national level, that envisage the creation of new jobs related to the WEEE sector and/or green sector in the next 5 years?

- ☐ No
- ☐ It is possible, but we do not have evidences
- ☐ Yes, but we do not have specific data
- ☐ Yes, and references are available from the responsible entities (please provide reference information)

Are women, children and/or other vulnerable groups involved in the informal sector – e.g. in the collection, dismantling of WEEE?

- ☐ Yes
- ☐ No
- ☐ Unknown

13. TRANSBOUNDARY MOVEMENTS

Does your country export WEEE for treatment purposes?

- ☐ Yes, to other countries in the region
- ☐ Yes, globally
- ☐ No
- ☐ Unknown

Please list the main receiving countries.

Does your country import WEEE for treatment or other purposes?

- ☐ Yes, from other countries in the region
- ☐ Yes, from other countries globally
- ☐ No
- ☐ Unknown

Please list the main sending countries.

14. CHALLENGES AND BARRIERS

What are the current main limitations of the WEEE management systems (please rank/order them from the most to the least important).

- Gaps in legislation _____
- Gaps in infrastructure, technology and expertise related to WEEE management _____
- Lack of financing _____
- Lack of political commitment _____
- Lack of effective enforcement _____
- Competition from the informal sector _____
- Illegal exports _____
- Political and economic stability _____
- Lack of consumers' interest and commitment to properly dispose of WEEE _____
- Other _____

What are your suggestions for improvements of the WEEE management system in your country?

15. REGIONAL COOPERATION

What is the current level of policy harmonization and cross-border cooperation in the region for WEEE management (please select all options that apply).

- ☐ Well established – Formal policies, agreements and active collaboration exist between countries
- ☐ Moderate – Some cooperation exists, but it is limited in scope or effectiveness
- ☐ Minimal – Few cross-border initiatives, with occasional ad-hoc cooperation.
- ☐ Non-existent – No formal cooperation or coordination between countries

- ☐ Regulatory barriers – Legal or policy restrictions hinder cross-border collaboration
- ☐ Ongoing discussions – Efforts are in progress to establish cross-border partnerships
- ☐ Other

Are there any legal or practical initiatives in place at regional level related to WEEE management (e.g. bilateral or regional agreements, regional recycling centers etc.)?

- ☐ Yes
- ☐ No

Please provide details.

Would a regional approach facilitate the implementation of an EPR scheme? (Please select all options that apply).

- ☐ Yes, it would reduce implementation costs – shared infrastructure and systems can help reduce the financial burden on individual countries
- ☐ Yes, it would create harmonized regulations – a regional approach can ensure consistency in EPR requirements across borders, making compliance easier for producers and stakeholders
- ☐ Yes, it would enhance cross-border cooperation – collaboration between countries can improve recycling and waste management systems, benefiting the region as a whole
- ☐ No, it may create additional complexity – differences in national laws, political systems, and waste management capacities might complicate a regional approach
- ☐ No, each country context is too different – local needs and conditions may require tailored, country-specific EPR schemes rather than a regional approach
- ☐ Uncertain – it is unclear whether a regional approach would be beneficial for EPR implementation in my country
- ☐ Other

Annex 2.

Economic Impact Analysis Template

COLLECTION INFORMATION

COLLECTION						
Which e-waste category is collected in your country?	Comment (if the 10 categories are not used, please provide national code or description of the products collected)	How is the category (Column A) or product (Column B) collected in your country?	How is the system (Column C) currently financed ?	Comment (if 'Other' in Column D, further detail here)	What is the estimated number of people involved in the collection in your country?	What is the estimated price for the collection of one tonne of e-waste category (Column A) or product (Column B) in your country? [USD\$]
Example						
Cat 1		Formal	Extended Producer Responsibility (EPR) scheme		50	300
Cat 1		Formal	Extended Producer Responsibility (EPR) scheme		50	300
Cat 1		Formal	Extended Producer Responsibility (EPR) scheme		50	300
Cat 1		Formal	Extended Producer Responsibility (EPR) scheme		50	300
Cat 1		Informal	Self-financing		200	150
Cat 1		Informal	Self-financing		200	150
Cat 2		Informal	Self-financing		200	120
Cat 3		Informal	Self-financing		200	160
Cat 4		Informal	Self-financing		200	300

TREATMENT OPERATION

TREATMENT													
Is the collected e-waste category (Column A) or product (Column B) treated in your country?	If 'No, outside the country' (Column H), to which country the e-waste category (Column A) or product (Column B) is sent to?	What is the average sale price of one tonne of e-waste category (Column A) or product (Column B) exported for recycling [+ or - USD\$]	What is the treatment capacity of the e-waste category (Column A) or product (Column B) in your country? [tonne]	Comment (Column K – specify if the treatment capacity refers to a mix of e-waste categories, codes or products)	What is the estimated number of people involved in the treatment in your country?	Which processes are mainly used to dismantle, treat or recycle the e-waste category (Column A), code or product (Column B) in your country?	Comment (if 'Other' in Column N, further detail here)	What are the main output fractions that are separated?	Comment (if 'Other' in Column P, further detail here)	How much of the output fraction (Column P) is produced yearly in your country? [tonne]	What is the average sale price of the fraction (Column P)? [+ or - USD\$]	Where is this fraction (Column P) usually traded?	To which country this fraction (Column P) is traded to?
Example													
Yes, in the country	USA	150	2000	this is valid for cat 1 and 2	50	Physical Treatment – magnetic separation		Metal frame		250	50	In the country	
Yes, in the country	USA	150	2000	this is valid for cat 1 and 2	50	Automated separation/ dismantling		Compressor		5	25	In the country	
Yes, in the country	USA	150	2000	this is valid for cat 1 and 4	50	Automated separation/ dismantling		Metal fraction		90	30	In the Caribbean region	SUR
Yes, in the country	USA	150	2000	this is valid for cat 1 and 5	50	Physical Treatment – magnetic separation		Plastic fraction		80	-10	In the Caribbean region	TTO
Yes, in the country	MEX, USA	50	500	this is valid for cat 1 and 6	50	Physical Treatment – separation		PCB		2	72	Outside the Caribbean region	USA
Yes, in the country	MEX, USA	50	500		600	Manual separation/ dismantling		Magnet		6	20	Outside the Caribbean region	MEX, USA
No, outside the country	MEX, USA, EU	-50	150		600	Manual separation/ dismantling		Ferrous metals		20	50	I do not know	
No, outside the country	MEX, USA, NLD	100	200		600	Manual separation/ dismantling		Compressor		4	20	I do not know	
I do not know	MEX, USA, NLD	100	350		600	Manual separation/ dismantling		Compressor		2	20	I do not know	





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