GOVERNMENT OF SAINT LUCIA

THE WORLD BANK

WISTLE

**WINDWARD ISLANDS SECTOR TRANSFORMATION FOR LEARNING ENHANCEMENT (WISTLE) PROJECT – P508559**

# E-WASTE MANAGEMENT PLAN (EWMP)

June 16, 2026

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**SECTION I**

## 1. Introduction and Project Description

The **Windward Islands Sector Transformation for Learning Enhancement (WISTLE)** is a regional project that includes, for Saint Lucia, the component **Enhanced Resilience and Management for Inclusive and Quality Education in Saint Lucia**. This component supports the country's education sector reform priorities by strengthening climate-resilient technology, improving infrastructure, and promoting equitable, quality education geared toward the development of 21st century competencies, skills, and learning outcomes.

The Saint Lucia component includes two interrelated subcomponents.

### 1.1 Subcomponent 3.1: Improved Instructional Delivery

This subcomponent is intended to strengthen teaching practices and the delivery of quality education for all learners, including in circumstances where face-to-face instruction is not possible. The Ministry of Education (MoE) has identified the need to improve sector resilience by enhancing teacher digital skills and supporting the effective integration of education technology (EdTech) into classroom practice.

Activities under this subcomponent include:

- development of a capacity-building programme for education officers, teachers, and principals at the lower secondary level, focused on digital skills and the integration of EdTech into teaching practice;
- gender-responsive training, including a dedicated module for students with Special Educational Needs (SEN);
- implementation of an EdTech pilot in selected primary and secondary schools;
- development of a condensed curriculum and assessment framework for upper-primary and lower-secondary levels for use in emergencies and targeted teaching support; and
- procurement of EdTech equipment, including software, hardware, and SEN devices and assistive equipment.

### 1.2 Subcomponent 3.2: Strengthening the Education Management Information System (EMIS)

This subcomponent seeks to improve evidence-based decision-making and education sector management in Saint Lucia through development of an enhanced Education Management Information System (EMIS).

*Activities include:*

- support for initial implementation of the Education Data and EMIS Policy;
- capacity building and end-user training for EMIS operationalisation; and

- procurement of devices required for EMIS reporting, informed by a needs assessment.

### 1.3 Relevance to E-waste Management

Implementation of the WISTLE Project will require the procurement, use, maintenance, replacement, and eventual decommissioning of a range of electrical and electronic equipment (EEE), including computers, tablets, printers, peripherals, networking equipment, storage devices, projectors, and assistive technologies. Over time, some of these items will become obsolete, damaged, unserviceable, or end-of-life and will therefore become **electronic waste (E-waste)**.

This E-waste Management Plan (EWMP) has been prepared to ensure that such waste is managed in a safe, traceable, lawful, and environmentally sound manner throughout the Project lifecycle.

**Scope**

These arrangements apply to:

- electronic equipment procured for the PIU and project offices;
- EdTech and SEN devices supplied to schools or beneficiary institutions;
- networking and connectivity equipment;
- peripherals and accessories; and
- all end-of-life electronic items generated under the Project.

## 2. Purpose of the E-waste Management Plan

This E-waste Management Plan has been prepared under the World Bank **Environmental and Social Framework (ESF)**, particularly **ESS1** and **ESS3**, and is intended to support the WISTLE Project in managing risks associated with the procurement, use, storage, decommissioning, and disposal of electronic equipment.

This EWMP serves **two distinct but complementary purposes**.

### 2.1 Purpose 1: Compliance and operational plan for WISTLE-generated E-waste

The first purpose of this EWMP is to serve as a **project-specific compliance and operational plan** for the management and disposal of E-waste generated by the WISTLE Project.

Under this purpose, the Plan:

- establishes procedures for the identification, segregation, inventory, temporary storage, transfer, transportation, and disposal of project-generated E-waste;
- defines institutional roles and responsibilities for implementation and oversight;
- sets out documentation and recordkeeping requirements for asset management and end-of-life handling;
- supports compliance with applicable Saint Lucian legislation and institutional arrangements within the context of current legislation and arrangements given the existing infrastructure and capacity on the ground in Saint Lucia for handling and disposing of e-waste;
- Highlights the Project's E-waste management approach with relevant World Bank ESF requirements and the Environmental and Social Commitment Plan (ESCP); and
- provides an operational framework for reducing environmental, health, and safety risks associated with improper E-waste handling.

### 2.2 Purpose 2: Awareness-raising and sensitisation tool

The second purpose of this EWMP is to serve as a **tool for awareness raising and sensitisation** among project staff, schools, beneficiaries, and other stakeholders, and also raise awareness of "proper" waste handling and the need for further regulatory development and capacity for adequately managing waste, which is not currently in place.

Under this purpose, the Plan:

- explains what E-waste is and why it requires special handling;
- highlights the environmental, occupational health, and public health risks of improper disposal;

- presents the current avenues available in Saint Lucia for safe and sustainable E-waste management, including collection, temporary storage, transfer, and export through recognised entities;
- promotes good practices in procurement, maintenance, reuse, refurbishment, recycling, and safe disposal;
- raise awareness of proper E-waste handling practices to government stakeholders such as school principals, District Education Officers and the MoE IT Unit;
- will facilitate the hosting of sensitisation sessions with key stakeholders or target groups such as the Department of Sustainable Development and disseminate information through virtual and other means to highlight the limitations of the current E-waste management processes and raise awareness of the need for further legislative and regulatory development to facilitate proper waste handling practices.

### 2.3 Integrated purpose

These two purposes reinforce one another. Effective disposal of project-generated E-waste depends not only on clear procedures and legal compliance, but also on stakeholder awareness and responsible behaviour. By combining operational guidance with sensitisation content, the EWMP supports both **compliance** and **institutional learning** and may hopefully contribute by bridging the gap between the existing practices and best practices for the management of E-waste on the island.

### 2.4 Intended users of the EWMP

This EWMP is intended for use by:

- the Project Implementation Unit (PIU);
- Ministry of Education officers and administrative staff; and staff of other ministries such as Sustainable Development and Ministry of Finance
- procurement, finance, ICT, and asset management personnel;
- school leaders and designated school coordinators;
- environmental and social specialists;
- contractors or service providers involved in transport or disposal; and
- stakeholders participating in awareness, training, and consultation activities related to project implementation.

## 3. Objectives of the E-waste Management Plan

The objectives of this EWMP are to:

1. provide a clear framework for the management and disposal of E-waste generated under the WISTLE Project;
2. ensure compliance with Saint Lucian legal and institutional requirements and relevant World Bank ESF obligations during the procurement of electronic items and disposal of E-waste;
3. minimise risks to human health and the environment from the handling, storage, transport, and disposal of E-waste;
4. promote E-waste prevention through responsible procurement, maintenance, repair, reuse, and recycling;
5. maintain an accurate inventory and traceable record of project-related electronic assets and resulting E-waste;
6. define roles and responsibilities for implementation, monitoring, and oversight;
7. inform project stakeholders of the avenues available in Saint Lucia for the safe and sustainable management of E-waste.
8. Highlight existing gaps in the legislative framework and sensitise key target groups on the need for legislative change, thereby assisting with bridging the gap between current practices and the best practices.
9. Serve as a tool for awareness raising and sensitisation among project staff, schools, beneficiaries, and other stakeholders, and. also raises awareness of “proper” waste handling and the need for further regulatory development and capacity for adequately managing waste, which is not currently in place.

## 4. Legal and Institutional Framework

The management of E-waste under this Project shall be guided by applicable Saint Lucian legislation, institutional mandates, and relevant international commitments, as well as the World Bank Environmental and Social Framework.

### 4.1 Relevant national legislation

The main pieces of legislation relevant to this EWMP include:

- **Waste Management Act, 2004** and subsequent amendments of 2007, which establishes the Saint Lucia Solid Waste Management Authority and provides the framework for waste management planning, facility licensing, regulation, and oversight; a major deficiency in the Act is the lack of any reference to E-waste; the Act does not specifically mention, nor does it define E-waste, but empowers the Solid Waste Management Authority to manage solid and hazardous waste generally, the Act also lacks specific regulations or provisions tailored for electronic and electrical equipment (EEE) disposal, as the current legislation and arrangements only allows for the disposal of all government produced E-waste at the landfill managed by the SLSWMA.
- **Public Health Act** and attendant regulations, which address sanitation, waste disposal, and protection of public health;
- **Employees (Occupational Health and Safety) Act**, which requires safe handling, storage, transport, use, and disposal of dangerous substances and safe working conditions;
- **Public Finance Management Act, 2020**, which governs the acquisition, custody, control, transfer, and disposal of public assets and places obligations on accounting officers and the Director of Finance regarding disposal procedures.

### 4.2 Institutional framework

The institutions most relevant to implementation of this EWMP include:

- **Ministry of Education (MoE):** responsible for project implementation, asset management coordination, and ensuring project staff and schools follow the procedures set out in this Plan;
- **Project Implementation Unit (PIU):** responsible for day-to-day implementation, oversight, recordkeeping, monitoring, and reporting under the EWMP;
- **Ministry of Finance / Director of Finance:** responsible for the disposal oversight arrangements applicable to public assets;
- **Saint Lucia Solid Waste Management Authority (SLSWMA):** responsible for waste management oversight and coordination of waste handling arrangements, including interaction with recyclers and landfill operations; the landfill mainly diverts e-waste received to the recyclers for handling and disposal; (see section 8.2 for details.

- **Ministry of Planning / Planning Authority:** relevant to licensing and oversight of waste management facilities and haulage under the Waste Management Act;
- **Environmental Health Department:** responsible for public health and sanitation oversight relevant to storage and handling conditions; and

Role of the Private Sector in E-waste Management

- **local recyclers / collectors:** entities operating in Saint Lucia that receive, consolidate, store, and arrange onward transfer or export of E-waste. Available information indicates that there are currently four (4) recyclers on island who accept E-waste for disposal. E-waste recyclers in St. Lucia primarily operate by collecting electronics through community drives, retail drop-offs, and private, small-scale collectors. These materials are generally sorted, dismantled, and packaged, with the majority being exported to international markets—primarily China, India, and Canada for final processing due to a lack of local, large-scale refining facilities. In keeping with current legislation, government ministries cannot divert E-waste directly to the private recyclers, as all E-waste generated by the government must be disposed of at the SLSWMA landfill.

  Key aspects of the operational landscape include:

- **Major Players:** Specialized entities play a significant role, utilizing dedicated, safe, and environmentally compliant procedures to dismantle and export electronics.
- **Collection Methods:** E-waste, including phones, laptops, and tablets, is collected during organized community events and at designated, ongoing drop-off locations, such as those partnering with the **Saint Lucia Solid Waste Management Authority (SLSWMA)**.
- **Processing Approach:** While local collection is growing, the process primarily involves sorting and safe, temporary storage before shipping rather than full-scale material extraction, which is handled at overseas facilities.
- **Key Focus:** The emphasis is on diverting waste from the Deglos landfill, minimizing hazardous material release into the environment, and promoting a circular economy, often in collaboration with regional environmental initiatives.

The sector is expanding, with increasing community involvement and partnerships, especially in initiatives focusing on electronics and other materials, reducing the need for local disposal in landfills. Through these initiatives and continued collaboration with private sector partners the SLSWMA continues to advocate to for the establishment of a wider Integrated E-waste Management program. This program will aim to establish a scalable, sustainable framework for e-waste and solid waste management in Saint Lucia that is driven by community participation, supported by industry, and ultimately embedded in national policy, with legislative backing.

### 4.3 International conventions and standards

Saint Lucia is a Party to the **Basel Convention**, which provides the principal international framework governing hazardous wastes and transboundary movement of such wastes, including certain categories of E-waste.

The **Stockholm Convention on Persistent Organic Pollutants (POPs)** is also relevant, particularly regarding substances that may be released through burning or improper handling of waste containing persistent pollutants.

This EWMP is further guided by the World Bank ESF, especially **ESS1** and **ESS3**, and by good international practice in environmentally sound E-waste management.

### 4.4 Gap in the national framework

At present, Saint Lucia does not have a dedicated, comprehensive legal regime specifically regulating E-waste as a separate category of waste. The Waste Management Act (2004) lacks any reference to E-waste and does not specifically mention, nor does it define E-waste; the Act also lacks specific regulations or provisions tailored for electronic and electrical equipment (EEE) disposal. As such the SLSWMA lacks a clear mandate as far as the management and disposal of E-waste and manages this category as it would other hazardous waste and in accordance with the Public Finance Management Act.

E-waste recyclers in St. Lucia primarily operate by collecting electronics through community drives, retail drop-offs, and private, small-scale collectors. These materials are generally sorted, dismantled, and packaged, with the majority being exported to international markets—primarily China, India, and Canada—for final processing due to a lack of local, large-scale refining facilities. Relevant controls exist through broader waste, hazardous waste, public health, and public asset disposal legislation. This means that project implementation must rely on a combination of:

- general legal provisions;
- institutional procedures;
- public asset disposal requirements;
- recognised waste handling arrangements; and
- project-specific controls established through this EWMP.

This Plan therefore helps bridge the operational gap by providing a structured and project-specific framework for the handling of E-waste and will be used to guide the handling and disposal of project generated E-waste,such as laptops, PCs, printers, mobile phones and assistive technologies which will be procured by the project. The main steps for handling any waste generated will include, assessment of the waste, storage of non-functional waste in a dedicated space, and transportation of the waste to the SLSWMA for final disposal.

## 5. Definition of E-waste and General Considerations

E-waste refers to discarded electrical and electronic equipment (EEE), including all components, subassemblies, and consumables that form part of the product at the time it is discarded, without intention or technical possibility of reuse. E-waste that will be generated by the project includes a wide range of devices such as:

- desktop and laptop computers;
- mobile phones;
- printers, scanners, and photocopiers;
- servers and networking equipment;
- storage devices such as external hard drives and USB devices;
- projectors and interactive educational devices;
- batteries, cables, and accessories; and
- assistive technologies and other specialised devices used in schools.

Although many electronic items contain valuable and recoverable materials, they may also contain hazardous substances that can pose risks to human health and the environment if they are dismantled, stored, transported, treated, or disposed of improperly.

E-waste is therefore distinct from ordinary solid waste and should not be mixed with general refuse, openly burned, informally dismantled, or disposed of without appropriate controls.

### 5.1 Typical hazardous substances in E-waste

Electronic equipment may contain hazardous materials and components such as:

- **lead**, commonly found in solder, printed circuit boards, CRTs, and batteries;
- **cadmium**, found in batteries, pigments, and some circuit components;
- **mercury**, found in lamps, switches, and some older display equipment;
- **lithium** and **lithium-polymer batteries**, which pose fire and chemical hazards if damaged;
- **cobalt**, often present in rechargeable batteries;
- **brominated flame retardants (BFRs)**, used in plastic casings and electronic boards;
- **sulfuric acid**, particularly in sealed lead-acid batteries such as those in UPS systems; and
- **carbon black and toner dust**, found in printers and photocopiers.

Because of these materials, E-waste requires controlled handling, secure temporary storage, and transfer through appropriate channels.

## 6. Environmental, Health, and Safety Risks of Improper E-waste Management

Improper handling or disposal of E-waste can release hazardous substances into the air, soil, and water. Risks arise especially when E-waste is burned, broken, dismantled without safeguards, exposed to weather, mixed with general waste, or handled without proper protective measures.

Potential impacts include:

- contamination of soil and groundwater by heavy metals and battery chemicals;
- release of toxic fumes, particulates, and persistent pollutants through burning or improper treatment;
- occupational exposure of workers to lead, mercury, cadmium, toner dust, and corrosive battery contents;
- fire risk associated with damaged lithium-ion and lithium-polymer batteries; and
- injury from broken glass, sharp metal edges, unstable stacks, or unsafe lifting and transport practices.

Improper E-waste management may also undermine public health, create liabilities for institutions, and damage public confidence in environmentally responsible project implementation.

For the WISTLE Project, the key risk is not large-scale industrial processing on-island, but rather the possibility of poor asset tracking, prolonged uncontrolled storage, improper mixing with general waste, inappropriate handling of batteries or data-bearing devices, and incomplete documentation during disposal.

## 7. Benefits of Sustainable E-waste Management Practices

Sustainable E-waste management provides environmental, economic, institutional, and social benefits.

These include:

- reduction in pollution and environmental contamination;
- conservation of natural resources through recovery of valuable materials;
- reduced pressure on landfill space;
- lower greenhouse gas emissions compared with primary extraction of metals;
- safer handling of hazardous components;
- improved accountability in public asset management;
- support for circular economy approaches; and
- increased public awareness of responsible waste practices.

Within the WISTLE Project, sustainable E-waste management also contributes to stronger governance, improved auditability, and better alignment between education sector investment and environmental stewardship.

## 8. E-waste Management in Saint Lucia: Context and Available Avenues

Saint Lucia's E-waste management system is still developing. At present, the country has limited National capacity for full treatment or recycling of E-waste. In practice, the existing system is focused mainly on:

- collection of E-waste mainly, PCs, laptops, printers, scanners, mobile phones and tablets;
- temporary storage and consolidation;
- limited manual handling or separation by the landfill and recyclers who do little dismantling and mainly export the component in some cases; and
- export of collected materials such as laptops, PCs, printers, mobile phones, tablets to overseas facilities for downstream processing, recovery, or recycling.

This context is important for the WISTLE Project because it defines the practical disposal options currently available in-country and helps inform stakeholders of the appropriate avenues for safe management.

### 8.1 Current avenues for E-waste management in Saint Lucia

The main pathways currently available in Saint Lucia include:

- **temporary internal storage** by ministries, institutions, schools, or private entities pending disposal;
- **handover through the Saint Lucia Solid Waste Management Authority (SLSWMA)** in line with public-sector waste handling arrangements;
- **collection by local recyclers or waste operators** from SLSWMA, to arrange consolidation and export;
- **drop-off initiatives or collection drives** organised periodically by public or private actors; and
- **Private-sector diversion systems** are designed to keep E-waste separate from the general waste stream and channel it toward managed export.

Despite the availability of pathways within the public sector, currently, public sector agencies are restricted to working directly through the SLSWMA for the handover of E-waste.

### 8.2 Role of recyclers and private operators

Available information indicates that Saint Lucia has local operators involved in collection and temporary handling of E-waste. The activities carried out by these recyclers include collection, transportation and shipment abroad mainly to Canada and China, of all e-waste received. In a few cases, recyclers disassemble e-waste products to separate plastic from electronic parts. However, recyclers normally do not shred, impact, fragment or granulate the remaining pieces into smaller parts. In the cases where e-waste is disassembled, the remaining parts are cleaned, compacted, and packaged for shipping overseas

jointly with other e-waste that is shipped completely untouched and not disassembled due to the hazardous materials they contain, requiring special treatment. In other words, the recycling process is basically limited to collection, transportation and storage of e-waste before shipment overseas. Even if the recyclers would like to process the material further, there is no advanced treatment or sophisticated machinery to process e-waste into smaller parts and sort them into different categories, e.g., plastic, glass, cable, ferrous and non-ferrous materials, etc. Accordingly, recyclers in St. Lucia are not technically "recyclers" given that they do not convert waste into reusable material, however, they do help collect and ship e-waste for treatment abroad.

This EWMP recognises those entities as part of the local management chain and uses the existing disposal landscape to guide practical implementation. More importantly, the Plan emphasises traceability, documentation, and lawful transfer.

### 8.3 Raising Awareness of E-waste Management in Saint Lucia

The Plan is meant to raise awareness by helping project stakeholders understand that:

- Saint Lucia has some structured avenues for managing E-waste mainly through private sector operators;
- E-waste should be separated from general waste streams;
- E-waste should be transferred only through the approved, recognised, or authorised channels (the SLSWMA) consistent with public-sector procedures; and
- Environmentally sound management depends on both institutional controls and individual compliance with proper handling procedures.

## 9. E-waste Management Approach Under the WISTLE Project

The WISTLE Project adopts a **dual-function approach** to E-waste management.

### 9.1 Function 1: Management and disposal of WISTLE-generated E-waste

Under this function, the EWMP establishes the procedures to manage all project-generated E-waste in a safe, traceable, and compliant manner throughout the project lifecycle within the current constraints of Saint Lucia's existing regulatory and institutional framework

### 9.2 Function 2: Awareness and sensitisation on safe and sustainable E-waste management

Under this function, the EWMP serves as a practical guidance document for building awareness among project staff and beneficiaries on E-waste risks, proper handling, available disposal avenues in Saint Lucia, the need for safe and sustainable E-waste management and promoting the need for addressing current gaps.

### 9.3 Project phases covered

This EWMP applies across the following phases of the Project:

- procurement and acquisition;
- storage and deployment;
- use and maintenance;
- repair or reassignment where feasible;
- decommissioning;
- temporary storage prior to disposal;
- transport, handover, and final disposal or recycling.

**SECTION II**

## 10. Procedures for E-waste Management

The procedures in this section support both the operational and awareness functions of the EWMP. They are intended to guide project staff in the practical management of electronic assets and end-of-life items, while also providing a basis for training and sensitisation.

### 10.1 Sustainable E-waste prevention and minimisation

The Project will seek to prevent or reduce E-waste generation as far as reasonably possible through the following measures:

- procurement of durable, good-quality equipment from reputable suppliers;
- preference for devices with warranties, service support, repair options, and replacement parts where feasible;
- consideration of vendor take-back, renewal, repair, refurbishment, or recycling schemes where available;
- proper inventory control to reduce loss, damage, over-purchasing, and premature disposal;
- maintenance and repair of equipment where economically and technically feasible and
- reuse or redeployment of equipment where this is practical, lawful, and safe.
- have a documented date of manufacture and warranty;
- be suitable for the intended operating environment;
- include end-of-life management options or service provisions where available; and

These measures are intended to extend equipment life, reduce waste generation, and improve lifecycle management.

### 10.2 Asset register and E-waste inventory

The Project will maintain an **Asset Register** that includes a dedicated section functioning as the **E-waste inventory (see Asset Register Template in Annex 2)**.

The Asset Register should include, at minimum, the following information:

- asset ID;
- serial number;
- item description;

- Category; - Input devices / Output devices / processing components/ IT and Telecommunications Equipment
- quantity;
- location;
- custodian;
- date purchased;
- warranty and licence information, where applicable;
- estimated useful life;
- lifecycle status; and
- disposal method (reuse, donation, handover to the SLSWMA)

Lifecycle status should be updated as relevant, using categories such as:

- procured/acquired;
- in storage;
- deployed/in use;
- under maintenance/repair;
- obsolete/end-of-life; (See section 10.7 for details)
- decommissioned;
- pending disposal/recycling; and
- disposed/recycled.

Where equipment becomes obsolete or unserviceable during Project implementation, it should be recorded in the E-waste inventory with appropriate remarks and tracked until final disposal or transfer is completed.

### 10.3 Identification of end-of-life equipment

Equipment may be classified as end-of-life where it:

- is non-functional and not reasonably repairable;
- is unsafe to continue using;
- is technologically obsolete for project purposes;
- is uneconomical to maintain;
- has been formally decommissioned; or

- is damaged beyond practical recovery.

End-of-life determinations should be made by the appropriate ICT or technical lead, with management approval in accordance with project procedures and documented as such.

### 10.4 Data security and sanitisation

All data-bearing devices must be sanitised before disposal, transfer, donation, refurbishment, or recycling.

This applies to items such as:

- laptops and desktops;
- servers;
- tablets;
- mobile phones;
- external hard drives;
- USB storage devices; and
- other digital storage equipment.

Data sanitisation shall include, as appropriate:

- certified data wiping;
- degaussing;
- physical destruction of storage media where necessary; and
- documentation of the sanitisation method used.

A **Data Sanitisation Report** should be prepared by the IT Unit Officer and retained for audit purposes.

### 10.5 Temporary storage of E-waste

All project-generated E-waste shall be placed in **temporary storage** pending authorised transfer or disposal.

Temporary storage shall meet the following minimum requirements:

- storage in a designated, secure, dry, and access-controlled location;
- protection from rain, sunlight, excessive heat, and physical damage;
- proper shelving or stacking arrangements to prevent breakage and unsafe conditions;

- clear signage identifying the area as an E-waste storage location;
- segregation of batteries and other hazardous components where feasible and necessary;
- restricted access to trained or authorised personnel; and
- periodic inspection and documentation of storage conditions.

The Ministry of Education shall ensure that a space is identified for the storage of E-waste, that stored E-waste pending disposal is periodically reviewed and transferred using the disposal channels described in this EWMP and in accordance with applicable procedures for public assets.

### 10.6 Handling requirements

All personnel (IT Manager, Procurement Specialist, Administrative Assistant) involved in the handling of project-generated E-waste shall ensure that:

- items are handled carefully to avoid breakage and release of hazardous contents;
- batteries are removed and stored separately where appropriate and safe to do so;
- damaged battery devices are isolated if there is swelling, leakage, heat damage, or fire risk;
- sharp edges, broken screens, and toner-containing devices are handled with caution;
- data-bearing devices are secured pending sanitisation and transfer; and
- suitable protective equipment, such as gloves and eye protection, is used where necessary.

### 10.7 Reuse, donation, refurbishment, recycling, and disposal hierarchy

Where equipment reaches end-of-life or is no longer required by the Project, the following hierarchy should be applied where feasible and consistent with government procedures:

1. **repair or upgrade**, where practical - MoE IT Unit will take responsibility
2. **reuse or reassignment** within the Project or Ministry, where appropriate;
3. **refurbishment** for continued institutional or educational use, where permitted by the Public Finance Management Act and feasible;
4. **donation or transfer**, where permitted by the Public Finance Management Act, and properly documented;
5. **safe disposal**, where recovery or reuse is not possible the items will be handed over to the SLSWMA consistent with legal and institutional requirements.

The MoE It Unit will be responsible and the final decisions should take account of technical conditions, cost, data security, legal requirements, and public asset disposal rules.

### 10.8 Transportation and handover

All E-waste designated for transportation from the storage location shall be:

- securely packed and protected from damage;
- labelled as appropriate;
- accompanied by transport and handover records;
- transferred only through approved or recognised channels consistent with Ministry and national procedures; and
- handed over against signed documentation.

Transport logs which will be maintained by the PIU should include:

- date of transfer;
- list of items transferred;
- origin and destination;
- name of transferring and receiving parties; and
- signatures or verification records.

Where applicable, the PIU shall obtain disposal receipts, certificates of recycling, certificates of destruction, or equivalent supporting records which will be handed over to the MoE IT Unit on closure of the project. .

### 10.9 Treatment and final disposal

Where E-waste remains after feasible prevention, reuse, refurbishment, and recycling measures have been considered, it shall be transferred for treatment or disposal through the channels available in Saint Lucia, namely to the SLSWMA and consistent with legal and institutional requirements.

Given current national practice, this may involve:

- transfer to the landfill which is managed by the Saint Lucia Solid Waste Management Authority (SLSWMA);
- diversion to recognised local recyclers or collection systems based on the assessment of the SLSWMA;
- consolidation for export to downstream recycling facilities by the selected recycler; and
- disposal or destruction through approved arrangements where required.

The Project shall not support informal dumping, open burning, uncontrolled dismantling, or disposal mixed with general waste.

**SECTION III**

## 11. Awareness, Education, and Sensitisation

Awareness and sensitisation are a central part of this EWMP. Effective E-waste management depends not only on procedures, but also on staff knowledge, institutional practice, and user behaviour. Awareness raising will be undertaken through the development of informational materials such as posters and pamphlets, but also through audio visual content disseminated on social media.

### 11.1 Purpose of awareness activities

Awareness activities under this Plan are intended to ensure that the target groups understand:

- what E-waste is;
- Why E-waste should not be mixed with ordinary waste;
- the environmental and health risks of improper disposal;
- how to identify end-of-life equipment;
- how to store and return obsolete devices safely;
- the importance of data sanitisation for digital devices; and
- the avenues available in Saint Lucia for the safe and sustainable management of E-waste;
- Highlight the existing gaps in the legal and institutional framework for the management of E-waste and highlight the need to advocate for the further development of the regulatory and institutional framework to bridge the gaps.

### 11.2 Target Groups

Awareness and sensitisation should target:

- PIU staff;
- MoE administrative and technical staff;
- procurement and finance personnel;
- ICT staff and school coordinators;
- beneficiary schools and institutional users;
- any staff responsible for handling, storing, or transporting end-of-life devices.

### 11.3 Awareness measures

Measures may include:

- induction and refresher training sessions;
- simple guidance notes and posters;
- asset management orientation for schools and departments receiving devices;
- specific guidance for ICT staff on storage, handling, and data wiping;
- sensitisation on battery risks and safe return of damaged devices;
- communication on recognised E-waste disposal channels in Saint Lucia; and
- inclusion of E-waste management messaging in wider project outreach where appropriate.

### 11.4 Key awareness messages

Key sensitisation messages should include the following:

- E-waste must not be discarded with general refuse;
- E-waste should not be burned or dismantled informally;
- batteries require special care and should be separated where necessary;
- end-of-life devices must be recorded and transferred through designated channels;
- data-bearing devices must be sanitised before disposal or transfer; and
- Saint Lucia has recognised avenues for safe collection, diversion, storage, and export of E-waste.

## 12. Roles and responsibilities for the Implementation of the EWMP- Internal Actors

**Project Manager**

- Provides oversight, approvals, and alignment with project resources and implementation requirements.

**Finance Manager / Asset Management Officer**

- Maintains the asset register and supporting disposal documentation.
- Supports compliance with public asset procedures.

**ICT / IT Support**

- Assesses equipment condition.
- Verifies end-of-life status.
- Conducts or oversees data sanitisation.
- Supports transfer coordination and documentation.

**Procurement Officer**

- Applies sustainable procurement considerations.
- Verifies vendor arrangements where relevant.
- Supports contract provisions related to end-of-life management.

**Environmental and Social Specialist (ESS)**

- Oversees implementation and revision of the EWMP.
- Monitors compliance with ESS requirements.
- Supports categorisation, recordkeeping, training, and reporting.
- Leads awareness raising activities
- Oversees the project GRM and handling of grievances related to the EWMP

**Roles and Responsibilities - External Actors**

**School Coordinators / Institutional Custodians**

- Track devices under their custody
- Report to the MoE damaged, obsolete, missing, or unserviceable devices.

- Coordinate return or handover in accordance with MoE project instructions.

**Ministry of Education**

- Ensures institutional oversight and support for implementation.

**SLSWMA /**

- Receive, divert, store, or process E-waste in accordance with their mandate or operating arrangements.

**Recognised Recyclers**

- Receive, divert, store, or process E-waste in accordance with their mandate or operating arrangements.

**Vendors**

- Participation in take-back programs for damaged or non-functional items.

**SECTION IV**

## 13. Monitoring, Review, and Reporting

Monitoring is required to ensure that this EWMP is implemented effectively and remains responsive to operational realities.

### 13.1 Monitoring activities

Monitoring shall include:

- maintenance and periodic review of the asset register and E-waste inventory;
- visual inspection of storage areas;
- verification of labels, segregation, and access control;
- review of end-of-life determinations and disposal records;
- tracking of volumes and types of E-waste generated;
- verification of data sanitisation records;
- review of transport logs, handover forms, and disposal receipts;
- periodic checks on the performance of third-party service providers where used; and
- identification of incidents, non-compliance, and corrective actions.

### 13.2 Non-compliance and corrective action

Where non-compliance with this EWMP is identified, corrective action shall be initiated promptly.

Corrective action measures may include:

- updating records or inventories;
- improving storage or labelling practices;
- conducting additional staff training;
- strengthening supervision or approval processes;
- isolating improperly stored hazardous items;
- obtaining missing transfer, sanitisation, or disposal documentation; and
- escalating serious issues to Project Management and relevant Ministry authorities.

Corrective Action Plans (CAPs) should identify the issue, responsible party, required action, timeframe, and confirmation of completion.

### 13.3 Performance indicators

The following indicators may be used to assess implementation of the EWMP:

- percentage of procured electronic assets recorded in the asset register;
- Percentage of items procured per asset category;
- percentage of end-of-life items recorded in the E-waste inventory;
- percentage of data-bearing devices with completed data sanitisation records prior to transfer or disposal;
- time elapsed between end-of-life identification and final transfer/disposal;
- number of staff trained or sensitised on E-waste procedures;
- number of incidents of improper storage, handling, or undocumented disposal; and
- percentage of E-waste transferred through recognised or approved channels.

### 13.4 Reporting

The PIU shall maintain records and prepare quarterly internal reports on implementation of the EWMP. Reporting should include:

- updates to the Asset Register and E-waste inventory;
- quantities and categories of E-waste generated;
- summary of storage, transfer, recycling, donation, or disposal actions undertaken;
- confirmation of data sanitisation for relevant devices;
- Costs incurred for the implementation of the EWMP;
- training and sensitisation activities completed;
- incidents, complaints, or grievances related to E-waste management; and
- corrective actions taken to address gaps or non-compliance.
- Challenges or setbacks encountered with the implementation of the EWMP.

Relevant information on implementation of this EWMP shall also be included in project environmental and social monitoring reports, including quarterly or semi-annual reports, as required by project reporting arrangements.

### 13.5 Review and adaptive management

This EWMP shall be reviewed **at least annually**, and earlier if required by:

- changes in project scope or procurement profile;
- changes in Saint Lucian legal or institutional arrangements;
- new service arrangements for E-waste collection or recycling;
- lessons learned during implementation from the stakeholder engagement process or the grievance redress process;
- audit findings, incidents, or non-compliance issues; or
- updates to World Bank environmental and social requirements applicable to the Project.

Any revisions shall be documented and communicated to relevant project staff and target groups.

**SECTION V**

## 14. Public Consultation Mechanism

In accordance with the World Bank Environmental and Social Framework, particularly ESS10, and in keeping with the Project's SEP consultation with relevant stakeholders shall be undertaken before and during project implementation.

Consultations related to this EWMP shall focus on:

- informing stakeholders of the purpose and requirements of the Plan;
- explaining procedures for safe handling, temporary storage, return, transfer, and disposal of E-waste;
- raising awareness of environmental and health risks associated with improper E-waste management;
- gathering stakeholder views on implementation challenges, opportunities, and local disposal arrangements; and
- improving stakeholder understanding of safe and sustainable E-waste management practices in Saint Lucia.

Consultation activities may include meetings, training sessions, school-level orientation, targeted discussions with technical staff, and inclusion of E-waste topics in broader project engagement activities.

Outcomes of consultations shall be documented and reflected in project reporting as appropriate.

## 15. Grievance Mechanism

The Project's Grievance Mechanism (GM) shall be used to receive and address complaints, concerns, and grievances related to implementation of this EWMP.

The GM shall apply to grievances associated with:

- improper storage, handling, transport, or disposal of E-waste;
- environmental, health, or safety concerns arising from project practices;
- inadequate communication or sensitisation regarding E-waste procedures;
- loss, damage, or mishandling of project-owned electronic equipment during transfer or disposal; and
- any stakeholder concern regarding project-related E-waste management.

The GM shall aim to ensure that grievances are:

- received and recorded promptly;
- reviewed fairly and transparently;
- addressed in a timely and proportionate manner; and
- resolved before escalation where possible.

Information about the GM shall be shared with relevant project staff, schools, and other stakeholders as part of awareness and sensitisation activities under this Plan.

The GRM can be accessed from the following links:

Ministry of Education website:

**https://www.education.gov.lc/wp-content/uploads/2026/04/WISTLE-SLU-Stakeholder-Engagement-Plan-SEP.pdf**

Government of Saint Lucia website:

**https://www.govt.lc/media.govt.lc/www/resources/publications/slu-sep-wistle---march2026fnl-.pdf**

## 16. Budget and Resource Requirements

Costs associated with implementation of the EWMP shall be incorporated into project operational budgeting and relevant stakeholder engagement, training, supervision, and asset management arrangements.

Budget items may include:

- staff orientation and sensitisation activities;
- preparation and printing of guidance materials;
- labelling and signage for storage areas;
- minor storage improvements, shelving, and protective materials;
- personal protective equipment where needed for handling;
- packaging and transportation costs for transfer of E-waste;
- data sanitisation and destruction costs, where applicable;
- recycling, disposal, or service fees, where applicable; and
- monitoring, audit, and reporting costs.

Where stakeholder awareness activities are combined with wider project outreach and engagement activities, costs may be covered through the Stakeholder Engagement Plan (SEP) budget or other relevant project budget lines.

## Annexes

### Annex 1. List of Electronic Equipment Covered by the EWMP

The following indicative categories of electrical and electronic equipment may be procured, used, or managed under the Project and should fall within the scope of this EWMP where relevant:

- laptops and desktop computers;
- tablets;
- servers;
- mobile phones;
- printers and colour printers;
- scanners;
- photocopiers;
- UPS units;
- projectors and interactive boards;
- networking equipment, routers, switches, and modems;
- external hard drives;
- USB flash drives and other digital storage devices;
- cameras;
- assistive devices and SEN equipment;
- batteries and battery-backed accessories;
- cables, chargers, and peripheral devices.

Listing of the hazardous compounds present in the items to be procured.

Laptops, Desktops, Tablets, Mobile Phones: Contain lead solder, mercury in displays, cadmium in batteries, and brominated flame retardants (BFRs) in circuit boards.

Servers, Networking Equipment, Routers, Switches: Contain significant amounts of heavy metals (lead, cadmium, mercury) in printed circuit boards and power supplies.

Printers, Scanners, Photocopiers: Contain specialized toners, plastics, and heavy metals.

UPS Units & Batteries: Contain high levels of lead and acid, posing severe risks if broken.

Projectors & Interactive Boards: May contain mercury and other heavy metals in the lamps and electronics.

Cameras & Storage Devices: Similar to phones and computers, they contain circuit boards with toxic heavy metals.

Cables and Chargers: Often coated in PVC plastic, which releases toxins when burned.

## Annex 2. Template: Asset Register and E-waste Inventory

A single integrated register that allows active assets and end-of-life items to be tracked through their full lifecycle will be utilised by the project.

| **Asset Identification** | | | | | | | **E-waste Inventory** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **#** | **Item and Description** | **Quantity** | **Date Purchased** | **Registration / Serial No.** | **Estimated Useful Life** | **Warranty. Licenses** | **Date** | **Lifecycle Status** | **Location/custodian** | **Disposal Plan** |
| **1.** | Laptops | | | | | | | | | |
| **2.** | Desktops | | | | | | | | | |
| **3.** | Servers | | | | | | | | | |
| **4.** | Network Printers | | | | | | | | | |
| **5.** | Color Printer | | | | | | | | | |

| Asset Identification | | | | | | | E-waste Inventory | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **#** | **Item and Description** | **Quantity** | **Date Purchased** | **Registration / Serial No.** | **Estimated Useful Life** | **Warranty. Licenses** | **Date** | **Lifecycle Status** | **Location/custodian** | **Disposal Plan** |
| **6.** | UPS | | | | | | | | | |
| **7.** | Photocopier | | | | | | | | | |
| **8.** | Shredder | | | | | | | | | |
| **9.** | Flash /thumb Drives | | | | | | | | | |
| **10.** | External Hard Drives | | | | | | | | | |
| **11.** | Tablets | | | | | | | | | |

| Asset Identification | | | | | | | E-waste Inventory | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **#** | **Item and Description** | **Quantity** | **Date Purchased** | **Registration / Serial No.** | **Estimated Useful Life** | **Warranty. Licenses** | **Date** | **Lifecycle Status** | **Location/custodian** | **Disposal Plan** |
| **12.** | Universal Serial Bus (USB) 128 GB | | | | | | | | | |
| **13.** | Scanners | | | | | | | | | |
| **14.** | Mobile phones | | | | | | | | | |
| **15.** | Cameras | | | | | | | | | |
| **16.** | Drones | | | | | | | | | |
| **17.** | Calculators | | | | | | | | | |

**Suggested lifecycle status options**

- Procured / Acquired
- In Storage
- Deployed / In Use
- Under Maintenance / Repair
- Obsolete / End-of-Life
- Decommissioned
- Pending Disposal / Recycling
- Donated / Reassigned
- Disposed / Recycled

## Annex 3. Template: E-waste Handover Record Form

**Department / Unit: _____**
**Location of E-waste Storage: _____**

**1. Details of Items Handed Over**

| No. | Description of Item | Asset category/ Serial Number | Quantity | Lifecycle Status | Condition | Remarks |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

**2. Handover Information**

**Date of Handover: _____**
**Method:** ☐ Refurbishment ☐ Donation/Transfer ☐ Safe Disposal ☐ Other: _____

**Receiving Organisation / Contractor: _____**
**Permit / Licence Number (if applicable): _____**
**Transported By: _____**
**Destination: _____**

**3. Declaration**

I confirm that the electronic items listed above have been identified as obsolete, decommissioned, unserviceable, or no longer suitable for operational use, and are being handed over in accordance with the Project's E-waste Management Plan and applicable organisational procedures.

**4. Authorisation**

| Role | Name | Signature | Date |
|---|---|---|---|
| Handed Over By | | | |
| Verified By | | | |
| Received By | | | |

**Notes:**

- All data-bearing devices must be data wiped or physically destroyed before handover, as required.
- Attach additional pages if more items are listed.
- Retain a copy for audit, environmental, and asset disposal records.

## Annex 4. Template: Data Sanitisation Report

**Organisation** / **Unit:** _____

**Technician** / **Officer:** _____

**Date:** _____

| Asset ID | Device Type | Serial Number | Sanitisation Method Used | Verified By | Verification Date | Outcome | Remarks |
|---|---|---|---|---|---|---|---|

**Accepted methods may include:**

- certified software wipe;
- degaussing;
- factory reset plus overwrite, where appropriate;
- physical destruction of storage media.