



UNITED NATIONS
UNIVERSITY
UNU-VIE SCYCLE
Sustainable Cycles Programme



unitar
United Nations Institute for Training and Research

Financed by:



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Coordinated by:



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

REGIONAL E-WASTE MONITOR

for Latin-America, results for the 13 countries
participating in project UNIDO-GEF 5554

— 2021

Authors:

M. Wagner, C.P. Baldé, V. Luda,
I. C. Nnorom, R. Kuehr, G. Iattoni

In partnership with:



REGIONAL E-WASTE MONITOR

for Latin-America, results for the 13 countries
participating in project UNIDO-GEF 5554

—— **2021**

The authors would like to thank the contributors to the workshops and validation process from the participating countries. Specifically, the following persons are acknowledged:

Argentina: Candela Nassi, Emiliano Castro.

Bolivia (Plurinational State of): Maritza Galviz Romero, Aldo César Soto Fernández, Miroslava Castellón, Dennar Villarroel.

Chile: Norma Plaza Vergara, Florencia A. Delgado Vidal, Karien Volker Kroeger, Maya Hirsch Tuttenberg, Cristóbal Girardi.

Costa Rica: Olga Segura Cárdenas, Eugenio Androvetto Villalobos, Luis Roberto Chacón Fernández, Victoria Rudín Vega, Dorell Rojas Fonseca, Luis Giraldo Álvarez, Rosario Zúñiga Bolaños, Elidier Moya Rodríguez, Pablo Hernández Casanova, Ana Yensi Murillo Araya.

Ecuador: Ana Cristina Tello Cepeda, José Antonio Piedra, Francisco Zurita Ullauri.

El Salvador: Yolanda Salazar de Tobar, Oscar Orlando Orellana Osorto, Nelson Vaquero, Rosmery Cerón.

Guatemala: Yenzi Guevara, Carmen Carmona, Laura Verónica López de Guillén.

Honduras: Elio Alvarenga, Carlos Thompson.

Nicaragua: Silvia Lacayo, Aníbal Vallejos.

Panama: Hilda Acosta de Patiño, Adiliz Aneth Barrera Marín, Reinaldo Duncan, Yoani González, Atala Milord, Jaime Vélez.

Peru: Marisa Quiñones, Dulia Aráoz, Sandra Matos.

Uruguay: Federico Souteras, Gariné Guerguerian, María José Crovetto.

Venezuela (Bolivarian Republic of): Luis Palacios, Miguel Serrano, Yorlandis Chiquito, Alfredo José Pérez, Gresmer Laya.

UNIDO: Alfredo Cueva Jacome, Carlos Hernández Santana, María Celeste Gómez.

UNDP project: COL 98842-94749 *Reducing the release of unintentional POPs and mercury from hospital waste management, E-waste, scrap metal processing and biomass burning.*

ITU: Garam Bel, Vanessa Gray, Rosie McDonald, Reyna Ubeda and Chris Ip.

Adu Chukwuemeka, Onuchukwu Solomon.

The Regional E-waste Monitor is a result of the 'Strengthening of National Initiatives and Enhancement of Regional Cooperation for the Environmentally Sound Management of POPs in Waste of Electronic or Electrical Equipment (WEEE)' project activities, known primarily as the PREAL (Proyecto Residuos Electrónicos America Latina Project). This project is funded by the Global Environment Facility (GEF) and coordinated by the United Nations Industrial Development Organization (UNIDO).



Financed by:

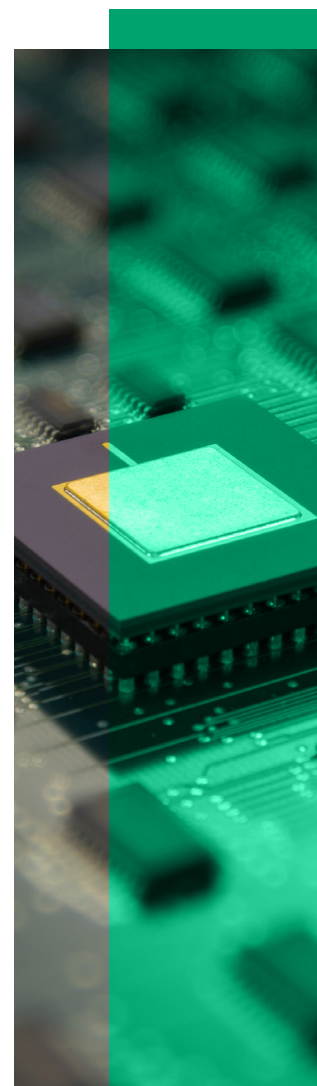


Coordinated by:



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

In partnership with:



Contact information:

For enquiries, please contact the corresponding author C.P. Baldé via scycle@unitar.org.

Please cite this publication as:

M. Wagner, C.P. Baldé, V. Luda, I. C. Nnorom, R. Kuehr, G. Iattoni. *Regional E-waste Monitor for Latin America: Results for the 13 countries participating in project UNIDO-GEF 5554*, Bonn (Germany), 2022.

United Nations University (UNU) is an autonomous component of the UN General Assembly dedicated to generating and transferring knowledge and strengthening capacities relevant to global issues of human security, development, and welfare. The University operates through a worldwide network of research and training centres and programmes, coordinated by the UNU Centre in Tokyo. www.unu.edu.

The United Nations Institute for Training and Research (UNITAR) is a dedicated training arm of the United Nations, with a mission of developing the individual, institutional, and organisational capacity of countries and other United Nations stakeholders through high-quality learning solutions and related knowledge products and services as a means for enhancing global decision-making and providing support at the country level in overcoming global challenges. www.unitar.org.

The SCYCLE Programme, now in transition from UNU to UNITAR, envisions enabling societies to reduce the environmental load from production, use, and disposal of ubiquitous goods, especially EEE, to sustainable levels by means of independent, comprehensive, and practical research and training, providing more thorough fact bases for policy development and decision-making. SCYCLE leads the global e-waste research and related trainings, and advances sustainable e-waste management strategies based on life-cycle thinking. For detailed information on SCYCLE and its projects, including its research and training activities, visit www.scycle.info.

The Regional E-waste Monitor for Latin America: Results for the 13 countries participating in project UNIDO-GEF 5554 was implemented by the Sustainable Cycles (SCYCLE) Programme, co-hosted by the United Nations University (UNU) and the United Nations Institute for Training and Research (UNITAR).

Disclaimer:

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning delimitation of its frontiers or boundaries. Trademark names and symbols are used in an editorial fashion with no intention of infringement of trademark or copyright laws. Moreover, the views expressed in this publication are those of the authors and do not necessarily represent those of UNU/UNITAR, nor does the citing of trade names, companies, schemes, or commercial processes constitute endorsement.

We regret any errors or omissions that may have unwittingly been made. ©Maps, photos, and illustrations as specified. This publication is licenced by the United Nations University/United Nations Institute for Training and Research under a Creative Commons Attribution Noncommercial-Share Alike 3.0 IGO License. Please take the time to learn more about Creative Commons.

©UNU/UNITAR 2021. Your fair use and other rights are in no way affected by the above.

TABLE OF CONTENTS

LIST OF FIGURES & TABLES	8
EXECUTIVE SUMMARY	10
ABBREVIATIONS	14
1. INTRODUCTION	16
A. What is E-waste?	16
B. E-waste: An International Issue	18
C. POP Management: An International Issue	20
D. Framework Condition for the LATAM Countries	22
E. Background to the Report	25
2. METHODOLOGY	26
A. E-waste Statistics	26
B. E-waste Plastics and BFR Statistics	30
C. E-waste and POP Policy and Management Assessment	30
D. Data Sources	36
3. OVERVIEW OF THE E-WASTE AND POP LEGISLATION AND MANAGEMENT SYSTEMS	38
A. Status of E-waste and POP Legislation	38
B. International Agreements	40
C. Mapping of Key Stakeholders	42
D. Projects and Campaigns for E-waste Collection and Recycling	46
4. STATISTICAL OVERVIEW ON E-WASTE AND POPS CONTAINED IN E-WASTE PLASTICS FOR THE LATAM COUNTRIES	48
A. EEE POM and E-waste Generated	48
B. E-waste Categories	51
C. Plastic and BFR Content in EEE POM and in E-waste Generated	52
D. Environmentally Sound Management of E-waste and POPS from E-waste Plastic	54
5. TRANSBOUNDARY MOVEMENTS (TBM) OF E-WASTE IN THE REGION	56
A. Overview of Transboundary Movement (TBM)	56
B. Overview of E-waste and Plastic POPS' Impact on Import and Export Legislation/Policies	57

C. Overview of E-waste Importing and Exporting Quantities	58
D. Issues and Impact of Import/Exports of E-waste	60
6. E-WASTE AND POP MANAGEMENT ASSESSMENT	62
A. E-waste Management Assessment	62
B. POPs Contained in E-waste Plastic Management Assessment	64
7. COMMON ISSUES AND CHALLENGES	66
8. RECOMMENDATIONS	72
9. COUNTRY PROFILES	80
Argentina	82
Bolivia (Plurinational State of)	94
Chile	104
Costa Rica	120
Ecuador	134
El Salvador	144
Guatemala	156
Honduras	164
Nicaragua	180
Panama	190
Peru	204
Uruguay	222
Venezuela (Bolivarian Republic of)	234
10. REFERENCES	244
11. ANNEXES	260
A. UNU-KEYs and Six E-waste Categories	260
B. Mathematical equations	262
C. List of Waste and Substances under the Basel Convention That are Relevant for E-waste	263
D. E-waste Statistics and Management Assessment Scores Per Countries	265
E. EEE and E-waste Plastic BFR Statistics and Management Assessment Scores per Countries	267
12. ABOUT THE AUTHORS	270

LIST OF FIGURES & TABLES

FIGURE	PAGE	FIGURE	PAGE
1. Demographic overview of the region	23	20. EEE POM and e-waste generated in Costa Rica	125
2. Economic overview of the region	24	21. Share of the EU-6 categories in the EEE (2019)	126
3. E-waste statistics framework	26	22. Share of the EU-6 categories in the e-waste generated (2019)	127
4. Examples of product lifespans of EEE	27	23. EEE POM and e-waste generated in Ecuador	138
5. EEE POM and e-waste generated in the region (kt) for 2010- 2019	49	24. Share of the EU-6 categories in the EEE (2019)	139
6. EEE POM and e-waste generated in the region (USD/inh) for 2019	50	25. Share of the EU-6 categories in the e-waste generated (2019)	140
7. E-waste generated disaggregated to category and year-to-year e-waste growth rate in the region	51	26. EEE POM and e-waste generated in El Salvador	147
8. EEE POM plastics and e-waste plastics generated and yearly growth rate of e-waste plastics generated in the region	52	27. Share of the categories in the EEE (2019)	148
9. BFR in plastics EEE POM and e-waste generated for 2010-2019, and e-waste generated of BFR from plastic disaggregated to category in the region for 2019	53	28. Share of the categories in the e-waste generated (2019)	149
10. E-waste formally collected for ESM (kg/inh) and e-waste collection rate for 2019	55	29. EEE POM and e-waste generated in Guatemala	159
11. EEE POM and e-waste generated in Argentina	87	30. Share of categories in EEE POM (2019)	160
12. Share of EEE categories (2019)	88	31. Share of categories in e-waste generated (2019)	161
13. Share of the categories of e-waste generated (2019)	89	32. EEE POM and e-waste generated in Honduras	168
		33. Share of the EU-6 categories in the EEE (2019)	169
		34. Share of the EU-6 categories in e-waste generated (2019)	170

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_23092

