GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Naoko Ishii
CEO and Chairperson

March 15, 2017

Dear Council Member:

UNIDO as the Implementing Agency for the project entitled: ***Regional (Argentina, Bolivia, Chile, Costa Rica, Ecuador, Guatemala, Honduras, Nicaragua, Panama, Peru, El Salvador, Uruguay, Venezuela): Strengthening of National Initiatives and Enhancement of Regional Cooperation for the Environmentally Sound Management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNIDO procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by Council in March 2014 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by UNIDO satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.TheGEF.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Naoko Ishii
c/o Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee

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REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

For more information about GEF, visit TheGEF.org

PART I: PROJECT INFORMATION

Project Title: Strengthening of National Initiatives and Enhancement of Regional Cooperation for the Environmentally Sound Management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries			
Country(ies):	The Argentine Republic, the Plurinational State of Bolivia, the Republic of Chile, the Republic of Costa Rica, the Republic of Ecuador, the Republic of El Salvador, the Republic of Guatemala, the Republic of Honduras, the Republic of Nicaragua, the Republic of Panama, the Republic of Peru, the Eastern Republic of Uruguay and the Bolivarian Republic of Venezuela	GEF Project ID:[1]	5554
GEF Agency(ies):	UNIDO(select)(select)	GEF Agency Project ID:	PPG:SAP 130096 CEO: SAP 140297
Other Executing Partner(s):	Secretary of Environment and Sustainable Development in the Argentine Republic, the Ministry of Environment and Water of the Plurinational State of Bolivia, the Ministry of Environment of the Republic of Chile, the Ministry of Health of the Republic of Costa Rica, the Ministry of Environment of the Republic of Ecuador, the Ministry of Environment and Natural Resources of the Republic of El Salvador, the Ministry of Environment and Natural Resources of the Republic of Guatemala, the Secretariat of Natural Resources and Environment (SERNA) of the Republic of Honduras, the Ministry of Environment and Natural Resources (MARENA) of the Republic of Nicaragua, the Ministry of Health of the	Submission Date: Re-submission Date: Re-submission Date: Re-submission Date:	9/1/2015 12/15/2015 05/24/2016 10/21/2016

[1]Project ID number will be assigned by GEFSEC.

	Republic of Panamá, the Ministry of Environment of the Republic of Peru; the Ministry of Housing, Land Planning and Environment of the Eastern Republic of Uruguay, and the Ministry of People's Power for Ecosocialism and Water of the Bolivarian Republic of Venezuela and others (Annex Q)		
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60
Name of Parent Program (if applicable): ➢ For SFM/REDD+ ☐ ➢ For SGP ☐ ➢ For PPP ☐		Project Agency Fee ($):	902,500

A. FOCAL AREA STRATEGY FRAMEWORK[2]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
(select)CHEM-1	Outcome 1.1 Production and use of controlled POPs chemicals phase out	Output 1.1.2. Countries receiving GEF support to pilot "new POPs"reduction activities	GEF TF	5,000,000	30,860,552
(select)CHEM-1	Outcome 1.5. Country capacity built to effectively phase out and reduce releases of POPs	Output 1.5.1 Countries receiving GEF support to build capacity for the implementation of the Stockholm Convention	GEF TF	4,500,000	40,550,760
(select)(select)			(select)		
(select)(select)			(select)		
(select)(select)			(select)		
(select)(select)			(select)		
(select)(select)			(select)		
		Total project costs		9,500,000	71,411,312

[2]Refer to the Focal Area Results Framework and LDCF/SCCF Framework when completing Table A.

B. PROJECT FRAMEWORK

Project Objective: To strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries						
Project Component	**Grant Type**	**Expected Outcomes**	**Expected Outputs**	**Trust Fund**	**Grant Amount ($)**	**Confirmed Co-financing ($)**
1. Strengthening of national e-waste management initiatives	TA	1.1 National Policies are drafted or reviewed	1.1.1 National policies and regulations are drafted or reviewed 1.1.2 National e-waste management strategies are established 1.1.3 Guidelines for the e-waste management activities are developed and tested 1.1.4 A national financial strategy is defined within policies and regulations	GEF TF	3,600,000	13,320,000
		1.2 National Capacity for e-waste management is in place	1.2.1 Officials and staff on e-waste management trained 1.2.2 Selected universities include e-waste management in their curricula and research programs 1.2.3 National knowledge and information management systems are set and ready for regional exchange			
		1.3 Civil society and general public is informed and aware of e-waste issues	1.3.1 Media and journalists are trained on e-waste issues and informed regarding the progress of the national and regional			

			initiatives 1.3.2 Awareness raising campaigns / customized events are developed to address the needs of specific target groups (i.e. children, women) and society at large			
2. Strengthening of national capacities on e-waste dismantling and recycling facilities / infrastructure	Inv	2.1 E-waste dismantling and recycling facilities or infrastructure are operating efficiently and sustainably in participating countries	2.1.1 In-depth assessment of pre-selected facilities and infrastructure is carried out to select facilities that will be upgraded / scaled up 2.1.2 Selected facilities are upgraded to meet SC, BC and other relevant criteria, particularly addressing the separation of POPs containing e-waste fractions and other Stockholm Convention identified emisions (throug shredders and other usual operations) according to BAT/BEP as laid down in UNEP dioxin toolkit categories 2k and 2l 2.1.3. ESM and final disposal of 600 tons of brominated plastics annually (totaling 2400 tons during the project lifespan) using BAT/BEP 2.1.4 Adequate business models are developed to ensure long-term sustainability of the facilities	GEF TF	3,900,000	43,340,000

3. Enhancement of Regional Cooperation on e-waste management	TA	3.1 Key issues of e-waste policies are harmonized at the regional level, with due consideration of the relevant MEAs and mechanisms like SAICM	3.1.1 Comparative analysis of existing national policies / regulations is conducted to identify key issues that need to be addressed at the regional level 3.1.2 A regional policy platform is operating to facilitate policy harmonization on key issues, with involvement of national MEAs officials	GEF TF	1,350,000	10,275,000
		3.2 Knowledge management systems and information exchange are strengthened	3.2.1 The policy platform is integrated into a regional knowledge / information management system 3.2.2 National knowledge / information systems are linked to the regional one			
		3.3 South-South cooperation is enhanced	3.3.1 Country cooperation is strengthened in the region through enhanced knowledge sharing 3.3.2 Regional post-project action plans and initiatives are developed			
4. Project Monitoring and Evaluation	TA	4.1 Monitoring	4.1.1 Monitoring system is set and works 4.1.2 Progress reports are delivered and required decisions/actions are taken	GEF TF	200,000	772,400

		4.2 Evaluation	4.2.1 Mid-term review and final independent evaluation are conducted 4.2.2 Lessons learned are shared with all relevant stakeholders for future project improvement			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					9,050,000	67,707,400
Project management Cost (PMC)[3]				(select)	450,000	3,703,912
Total project costs					9,500,000	71,411,312

C. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Please include letters confirming co-financing for the project with this form. Detailed information regarding the national co-financing partners can be found in Annex F. It is further expected that additional co-financing will be obtained during the project implantation phase.

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount ($)
GEF Agency	UNIDO	In-kind	300,000
GEF Agency	UNIDO	Cash	200,000
National Government	Argentina (PELCO, PROGEA)	Cash	3,398,087
National Government	Argentina	In-kind	2,868,983
National Government	Bolivia	In-kind	746,471
National Government	Bolivia	Cash	1,780,487
National Government	Chile	Cash	1,470,000
National Government	Chile	In-kind	1,380,000
National Government	Costa Rica	In-kind	2,814,816
National Government	Ecuador (Telefonica-OTECEL, MINTEL, Lexmark)	Cash	282,936
National Government	Ecuador	In-kind	3,737,159
National Government	El Salvador	In-kind	2,098,245
National Government	El Salvador	Cash	2,918,800
National Government	Guatemala	In-kind	154,931

[3]PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

National Government	Guatemala (Scrapex, Selmet, Liquidacion, E-waste de Guatemela, Reciclados de Occidente)	Cash	3,231,687
National Government	Honduras	In-kind	994,204
National Government	Honduras (Invema, Recacel, Reciclados de Honduras)	Cash	2,769,963
National Government	Nicaragua	In-kind	2,814,816
National Government	Panama	In-kind	1,335,252
National Government	Panama (Linvestor Group)	Cash	7,129,900
National Government	Peru (COIPSA, COMIMTEL, San Antonio)	Cash	7,367,299
National Government	Uruguay	In-kind	949,000
National Government	Uruguay (Pan Ceibal, TRIEX, WERBA)	Cash	3,862,000
National Government	Venezuela	In-kind	3,935,000
Others	EMPA	In-kind	1,781,675
Others	EMPA	Cash	194,125
Others	ISWA	In-kind	71,500
Others	ISWA	Cash	20,000
Other Multilateral Agency (ies)	UNU	In-kind	158,500
Others	BOKU University Vienna	In-kind	12,931
Others	BOKU University Vienna	Cash	58,508
Private Sector	Ericsson	In-kind	6,318,088
Private Sector	Ericsson	Cash	407,655
Private Sector	Microsoft	In-kind	7,000
Private Sector	Microsoft	Cash	14,000
Others	RELAC	In-kind	865,150
Others	RELAC	Cash	54,000
Other Multilateral Agency (ies)	International Telecommunication Union	In-kind	538,800
Other Multilateral Agency(ies)	International Telecommunication Union	Cash	524,000
National Government	US-EPA	In-kind	189,464
Other Multilateral Agency (ies)	World Health Organization	In-kind	300,000
Other Multilateral Agency (ies)	International Labor Organization	In-kind	87,880
Private Sector	Ernst & Young Belgium	In-kind	1,103,000
Private Sector	Ernst & Young Belgium	Cash	88,000
Private Sector	Dell	In-kind	4,000
Private Sector	Dell	Cash	73,000
Total Co-financing			71,411,312

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

After detailed consultations with the participating countries during the preparation of the PIF the below distribution was agreed. Due to their significantly larger size, Argentina and Peru will receive a higher share of the GEF Grant in order to implement the activities on national level.

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
UNIDO	GEF TF	Persistent Organic Pollutants	Argentina	776,730	73,788	850,518
UNIDO	GEF TF	Persistent Organic Pollutants	Bolivia	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Chile	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Costa Rica	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Ecuador	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	El Salvador	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Guatemla	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Honduras	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Nicaragua	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Panama	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Peru	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Uruguay	703,704	66,852	770,556
UNIDO	GEF TF	Persistent Organic Pollutants	Venezuela	982,526	93,340	1,075,866
Total Grant Resources				9,500,000	902,500	10,402,500

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

[2] Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount ($)	Cofinancing ($)	Project Total ($)
International Consultants[1]	1,035,000	2,014,150	3,049,150
National/Local Consultants	140,000	500,000	640,000

[1] Please note that the cost for experts from the Latin American region, who will support activities on the regional level, will also be considered as international experts.

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF[4]

1. The information presented in this CEO endorsement builds on that reflected in the Project Identification Form (PIF). During the PPG phase the project framework has been discussed with representatives of the participating countries, and the outcomes from the PIF have been kept; however, minor changes have been introduced at the output level to better reflect the current situation and respond to the countries' needs. These changes relate mainly to the wording of the outputs to be achieved to better highlight the desired results.
2. **PPG findings**: During the PPG phase two consultants were recruited to verify the baseline situation in all participating countries and identify existing needs per country. In addition to the consultants, two advisors were also recruited to support the consultants' work in specific topics, like policy review and POPs support.

[4]For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

3. As a result of the review of existing initiatives, the consultants could identify some regional experiences of harmonization processes in Latin America. Among them, the Regional Latin American and Caribbean Platform for Electronic Waste (RELAC) was identified as a main key stakeholder in gathering and disseminating relevant information at the regional level. Through this mechanism, regional guidelines have been produced that will be used as a landmark to continue the common work. A list of existing books and publications relevant to the development and implementation of this project can be found in Annexes N and O.

4. Further, it was recognized that – in contrast to the original assumption at the PIF development stage – e-waste dismantling facilities already exist in all participating countries. Therefore, original PIF Output 2.1.3 "A dismantling / recycling facility is set up and ready to operate in countries where no facility exists that meet project criteria" has been removed for this CEO endorsement.

5. One regional meeting was organized in Panama in December 2014 and all project countries actively participated on it. During this meeting, a first draft version of the CEO endorsement was discussed and reviewed jointly with all participating country representatives. During the second part of the meeting, potential national, regional and international project partners participated to discuss their potential involvement during project implementation. The regional meeting was a great opportunity to discuss in detail the planned project interventions with all participating countries and to integrate their inputs into the CEO endorsement in order to meet their needs during project implementation.

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.:

6. All the participating countries have ratified the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs), the Basel Convention (BC) on the control of transboundary movements of hazardous waste and their disposal, and the Rotterdam Convention (RC) on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

7. All of them have also completed their first National Implementation Plan (NIP) to address the initial twelve listed POPs, and currently most of the participating countries are reviewing and updating their NIPs for at least ten additional new POPs, including POP-listed brominated flame retardants potentially found in certain electronic and electrical equipment (EEE). In this regard, UNIDO is assisting eight of the 13 countries involved in this project (Bolivia, Costa Rica, Ecuador, Guatemala, Honduras, Nicaragua, Peru and Venezuela).

8. The NIP updates will include preliminary inventories of certain EEE and related action plans for the environmentally sound management of Waste Electronic and Electrical Equipment (WEEE). The reviewed and updated NIPs for the aforementioned countries are expected to be completed in 2015.

9. The proposed project is consistent with national e-waste management strategies and plans of the participating countries, wherever they are applicable. The project also takes into account global environmental issues related to the POPs present in WEEE, particularly brominated flame retardants such as Polybrominated Diphenyl Ethers (PBDEs), Polychlorinated Biphenyls (PCBs), Hexabromocyclododecane (HBCD), and dioxins and furans (PCDD/Fs, PBDD/Fs).

10. The seven participating countries in South America are members of the Union of South American Nations (UNASUR); some also belong to the Southern Common Market (MERCOSUR - composed of Argentina, Bolivia, Brazil, Paraguay, Uruguay and Venezuela) or to the Andean Community (CAN - composed of Bolivia, Colombia, Ecuador and Peru). The MERCOSUR approved on November 2005 a common policy for the management of special waste (including batteries, electric and electronic equipment, lamps and mobile phones) ruling the Extended Producer Responsibility [MERCOSUR/IV CMC/ P.DEC Nº 02/05]. The six participating countries of Central America belong to the Central American Integration System (SICA - that comprises Belize, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama), so only Belize and the Dominican Republic are not included in the project. Therefore, this project will seek links between UNASUR and SICA specific policies.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities

11. The objective of the Stockholm Convention, for which the GEF serves as financial mechanism, is to protect human health and the environment from persistent organic pollutants (Article 1). In line with this objective, since its PIF formulation, this project has proposed 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) in Latin-American Countries."

12. Therefore, this project is fully aligned with Objective 1 of the GEF-5 Chemicals Strategy (i.e., Phase out POPs and reduce POPs releases), particularly with its Outcome 1.1 (Production and use of controlled POPs chemicals phased out) and Output 1.1.2. (Countries receiving GEF support to pilot "new POPs" reduction activities). It is also well connected with Outcome 1.5. (Country capacity built to effectively phase out and reduce releases of POPs) and its Output 1.5.1 (Countries receiving GEF support to build capacity for the implementation of the Stockholm Convention).

13. Based on the existing facilities identified throughout the project preparation (Annex M), the project proposes under its expected core outputs that the selected facilities are upgraded to meet the Stockholm Convention (SC), the Basel Convention (BC) and other relevant criteria, particularly addressing the separation of POPs containing e-waste fractions and other Stockholm Convention identified emissions (through shredders and other usual operations) according to BAT/BEP as laid down in UNEP dioxin toolkit categories 2k and 2l (Expected Output 2.1.2). In addition, it seeks the environmentally sound management (ESM) and final disposal of POP-PBDEs using BAT/BEP (Expected Output 2.1.3.). Of course, these outputs are supported by the additional project outputs, and their corresponding outcomes and components, whose overall objective is "to strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries," as stated under Section B. PROJECT FRAMEWORK

14. As stated in para 9, "the proposed project is consistent with national e-waste management strategies and plans of the participating countries, wherever they are applicable. The project also takes into account global environmental issues related to the POPs present in WEEE, particularly brominated flame retardants such as Polybrominated Diphenyl Ethers (PBDEs), Polychlorinated Biphenyls (PCBs), Hexabromocyclododecane (HBCD), and dioxins and furans (PCDD/Fs, PBDD/Fs)."

15. It should also be stressed that, in general, inadequate disposal or mismanagement of WEEE increases the likelihood of POPs releases to the air, soil, surface water or groundwater. So, any activity that reduces the likelihood of such releases is indeed an activity linked to the objectives of the Convention. Therefore, the project does address POPs issues, and, without being a "SAICM project" it also supports the emerging policy issue of hazardous substances within the life cycle of electrical and electronic products under the SAICM.

16. As demonstrated, the project does respond to the priorities of the Stockholm Convention and adheres to the approved PIF, even stressing its focus on POPs. Moreover, the project has successfully aligned all participating countries and its project partners to work together in order to meet the project objectives. These partnerships have enabled the project to specify a clear regional baseline and specific details for every participating country with detailed information regarding e-waste policies and legislation, existing initiatives, country guidelines and existing recycling infrastructure for each of them and within the region. (Annexes I to M provide a detailed assessment of the national and regional situation of e-waste). The project components are formulated on these specific baselines that are already dealing with e-waste management, including appropriate legislation, policies, institutions, stakeholders, facilities and tools. These will be the basis for addressing adequately POPs on e-waste management.

17. Departing from the Stockholm Convention objective and priorities, and aligning them with Objective 1 of the GEF-5 Chemicals Strategy under its Outcome 1.1 and 1.5, and its corresponding Outputs 1.1.2. and 1.5.1 ensures that the project is designed with eligible components under GEF-5 criteria. The project structure and design are very close to those presented at the PIF stage and, as demonstrated, there will be sufficient national investment for e-waste management and the project management and administration will ensure that the GEF funds are used to address POPs on e-waste.

18. In summary, consistent with the Stockholm Convention priorities as set out in the GEF-5 Chemicals Strategy for phasing out POPs and reducing POPs releases, particularly with its Outputs 1.1.2. and 1.5.1, the project will set up

a very cost-effective strategy that initially will result in a direct 10% reduction in POPs emissions from e-waste management, through national pilot activities, but will later influence eliminating the remaining 90% "potential" emissions that would occur otherwise.

A.3 The GEF Agency's comparative advantage:

19. UNIDO's vision of Inclusive and Sustainable Industrial Development (ISID) aims at ensuring that developing countries and countries with economies in transition achieve higher levels of industrialization to improve their economies and benefit from the globalization of markets for industrial goods and services; no one should be left behind in benefiting from industrial growth, and prosperity should be shared among women and men in all countries. UNIDO supports broader economic and social growth within an environmentally sustainable framework; the unique knowledge and resources of all relevant development actors should be combined to maximize the developmental impact of ISID. Regarding e-waste management, UNIDO's efforts aim at raising awareness, building capacity, and engaging in knowledge sharing and policy advocacy to support sustainable recycling industries. This will enable the development of an operationally and economically viable collection network, with dismantling and recycling facilities, to process e-waste in developing countries and in countries with economies in transition. A safe and environmentally sound e-waste management system stimulates the development of a national recycling infrastructure, thus contributing to the inclusive and sustainable industrial development of those countries, which contributes to creating green and decent jobs and sustainable and green economies. Currently, as in other parts of the world, the environmentally sound management of e-waste is a challenging problem in the Latin American region, and the participating countries will benefit from technical and financial assistance to achieve better e-waste management within the framework of ISID.

20. UNIDO's comparative advantage lies in its mandate of promoting competitive and environmentally sustainable industries. UNIDO has involved many industrial sectors in its GEF portfolio including energy efficiency in industries, renewable energy, water resources management, and chemicals management (including POPs and ODS). It has a unique advantage and vast experience in piloting BAT/BEP in small-medium enterprises (SMEs) in developing countries and countries with economies in transition. UNIDO, as a member of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), has been actively engaged in issues addressed by the Strategic Approach to International Chemicals Management (SAICM), including e-waste. UNIDO capitalizes on its existing institutional network, such as the Resource Efficient and Cleaner Production Network (RECPnet), its Field Offices and UNIDO local desks, and the Stockholm and Basel Convention Regional Centers, to ensure the delivery of its programmes.

21. UNIDO has in-depth understanding and expertise on chemicals management, particularly in industrial processes, and a close relationship with governments as well as with the private sector which furthers cooperation and helps customize solutions. After securing GEF funding, UNIDO helps governments to mobilize the required co-financing. To do so, UNIDO takes advantage of its large experience in promoting technology transfer and supporting its convening role by establishing fora with the participation of governments, the private sector, civil society and other partners to exchange and disseminate knowledge and information, strengthen partnerships for discussing common questions on policies, legal, institutional and regulatory issues, capacity building and facilitating the replication of good experiences and lessons learned.

22. UNIDO has also extensive knowledge of small and medium enterprises (SMEs) in developing countries and in countries with economies in transition. It is part of a strong international network in the field of e-waste management; it is member of the Solving the E-waste Problem (StEP) Initiative and of the Partnership for Action on Computing Equipment (PACE). UNIDO is also the lead organization within the e-waste focal area of the Global Partnership on Waste Management (GPWM) and the Emerging Policy Issue on hazardous substances within the life cycle of electrical and electronic products under the SAICM.

23. Further, UNIDO has ongoing projects to improve the national e-waste management systems in Uganda, Tanzania and Ethiopia (this last funded by the GEF under ID 5040). The experiences gained through project implementation in Africa, the existing network of professionals in the LAC region, and the presence of UNIDO representatives in the region will help to successfully implement the proposed project in partnership with the countries.

24. Through the existing field offices in the region and the ongoing support that it provides to eight of the participating countries to update their NIPs, UNIDO can develop an optimal relationship with relevant ministries and decision

makers. Further, within the processes of updating the NIPs, inventories of e-waste in the involved countries are being conducted. This will help to better identify the countries' needs and customize the activities for each of them.

25. UNIDO will make use of the existing Global Network for Resource Efficient and Cleaner Production (RECP net; in particular, the "Red Latina") to coordinate activities and to ensure sustainability after project completion. The members of the RECP net will be mainly involved in project implementation at the national and regional levels. The existing regional knowledge management platform based on RELAC will serve as a starting point for information exchange and harmonization of activities.

26. Under the Global Partnership on Waste Management, PACE and the StEP Initiative, coordination with other organizations implementing e-waste related projects in the LAC region and worldwide is ongoing and will be further strengthened.

A.4. The baseline project and the problem that it seeks to address:

A.4.1. Context / background information

27. Waste of electronic or electrical equipment (WEEE) or e-waste, is defined as whole items or parts or residuals from electrical and electronic equipment (EEE) discarded by the consumer before or at the end of its service life. EEE includes all devices needing an electric current or electromagnetic fields for proper operations. The continuous technological change and the frequent replacement of EEE, especially in developed countries, leads to a rapid global increase of e-waste in terms of volume and complexity; it is estimated that in 2014 around 41 million tons of e-waste are generated worldwide. This situation and trend is also taking place in developing countries and, due to its accelerated economic growth and level of development, even faster in the Latin American region.

28. WEEE streams have characteristics that make them different from other waste streams, such as municipal or hazardous wastes. In particular, they offer a potential for recovery of high-value recyclable materials but, at the same time, they may contain highly toxic compounds including Persistent Organic Pollutants or POPs (mainly Polychlorinated Biphenyls or PCBs, and Polybrominated Diphenyl Ethers or PBDEs). According to the Stockholm Convention guidance on new POPs, and particularly to the *"Guidance for the inventory of polybrominated diphenyl ethers (PBDEs) listed under the Stockholm Convention on POPs",* c-OctaBDE was mainly used in acrylonitrile-butadiene-styrene (ABS) polymers for housings/casings for EEE, mainly for cathode ray tube (CRT) housings of computer and TV monitors.

29. E-waste has become a very prominent issue in the national agendas of several Latin American countries, and the interest is growing steadily within the public and private sectors, as well as in civil society organizations. Political and public concerns about the handling and treatment of e-waste arise due to the contained POPs and hazardous components; at the same time, as countries struggle to improve their economies, e-waste seems to offer important economic and business opportunities that can help generate new enterprises, employment and good practices; e.g. increasing the rates of collection, enhancing the re-use of still working equipment, promoting refurbishment and reutilization, or improving the extraction and commercialization of WEEE contained valuable materials.

30. Most countries in Latin America have already started implementing several initiatives, including inventories, diagnostics, pilot collection activities, education campaigns for the population, workshops and seminars, which have led to the formulation of policy proposals, including the enactment of specific rules and regulations for the proper management, collection, awareness-raising, and the establishment of recycling facilities for WEEE. These activities have been mainly conducted through independent events and national and regional organizations or working groups and networks, mainly in response to local contexts, needs and developments.

31. Furthermore, in many Latin American countries there seems to be a shared understanding to rely on a common approach for the design of proposed solutions for the management of WEEE, which is based on the principle of extended producer responsibility (EPR). However, due to national differences in policy development and the status of WEEE related initiatives, progress has not been homogeneous throughout the region.

32. In addition, there is still a lack of clarity regarding the notion of producer or the scope of the responsibility, and in some cases, shortage of adequate dismantling and recycling infrastructure or lack of specific policies on e-waste. These factors certainly have affected harmonious and conducive interactions which in turn have hindered and delayed the adoption of a successful management model. Without the proposed project and the support at the national and international levels, this scenario is likely to continue, at least in the short and medium term.

33. Another global environmental problem is the improper recycling of WEEE, which may involve the burning of plastic coatings, housings and casings, causing thereby the formation and release of unintentionally-produced POPs (u-POPs), like dioxins and furans which are highly toxic chemicals that, as other POPs remain intact for very long times, travel long distances in the environment where they become ubiquitous, accumulate in living organisms including humans, and appear in higher concentrations at higher levels in the food chain, causing serious toxic effects to both humans and wildlife. Thus, without proper management and control throughout the lifecycle of EEE and the management of WEEE, POPs releases contribute to polluting the environment and increasing the concentrations of toxic chemicals in the human bodies, with deleterious consequences for the human health. Because POPs can also travel very long distances, POPs releases and emissions may affect people and the environment not only where they are produced or released, but also people and ecosystems located thousands of kilometers away.

34. In this respect, women and children are of special concern as their bodies are usually more sensitive if exposed to POPs or waste of hazardous components and chemicals such as lead, cadmium and mercury. Gender mainstreaming will be an important aspect of this project to ensure that women and children are adequately involved in awareness raising and training activities, whenever feasible.

35. To properly protect health and safety of the workers and the public, especially of women and children, and the integrity of the environment from POPs and other toxics, the environmentally sound management of WEEE during its collection, storage, dismantling, recovery, treatment and final disposal should include effective safety, occupational and environmental management practices, which are also considered through this project whose aim is to contribute to achieving environmentally sound management and disposal of POPs waste with special focus on WEEE management at the national and regional level in Latin America.

36. Compared to other developing regions like Asia and Africa, informal sector involvement and its improper recovery and recycling practices are still at a relatively low level in Latin American countries, meaning that the moment for the developing this project in many participating countries is ideal in order to avoid further proliferation of these practices and prevent negative impacts to the environment and public health.

37. According to demographic projections, by 2015 it is estimated that the 13 countries participating in the project will have a population of nearly 200 million people. At the moment there is no precise information on e-waste generation in these countries; however it can be estimated that nearly 600,000 tons may be produced by 2015, assuming a per capita generation 3 kg/year.

38. E-waste components are very diverse. Broadly it can be assumed a composition of around 50% iron and steel, 21% plastic and 13% non-ferrous metals (including some precious metals), among other materials. Therefore, the e-waste generated within the participating countries represents a potential recovery of 300,000 tons of iron and 78,000 tons of non-ferrous metals, which may be incorporated in metallurgical processes, and 126,000 tons of plastic polymers, that can be recycled or disposed of through controlled combustion processes that allow energy recovery as a benefit, due to polymers' high calorific values.

39. On the other hand, e-waste contains pollutants such as lead, mercury, arsenic, cadmium, selenium, hexavalent chromium, brominated flame-retardants, and chemicals listed in the Stockholm Convention (PBDE and PCB); or halogenated-substances (such as CFCs), among others. These substances may be released, into the environment, through the recycling of e-waste components, which may cause negative impacts on human health and the environment. Additionally, some processes of recycling of or energy recovery from e-waste components may generate significant emissions of chlorinated and brominated dioxins and furans.

40. In relation to the brominated flame-retardants listed in the Stockholm Convention (COP-PBDEs), the commercial Penta-BDE was used in the manufacture of printed circuits and the commercial Octa-BDE was used on plastic polymers. The production of these compounds ended in 2004, so they are still present in many of the items of e-waste generated currently and expected in those that will be generated during the coming years.

41. According to statistics compiled by UNEP on the percentage of the various types of EEE present in the waste streams, the fraction of plastic polymer and the content of POP-PBDEs can be estimated. So, the e-waste generated by the 13 project participating countries, represents an emission of POP-PBDE estimated between around 26 and 60 tons/year. The project aims to tackle about 10% of them.

42. In this respect, the proposed project has the main objective to implement sustainable environmental e-waste management to reduce potential environmental and health impacts associated with POPs and emissions of other hazardous chemicals from improper WEEE practices. Seven outcomes and related outputs are set to achieve the project objective.

A 4.2 Baseline Scenario

43. The common aim to reduce the harmful effects of e-waste has already led the participating countries to promote and sustain actions to address this problem. Management of e-waste is an increasing problem for the governments due to the general lack of specific infrastructure, lack of specific supporting legislation, the growing number of electronic and electric equipment (EEE), and little environmental awareness within many of the involved stakeholders and society at large. Thus, some participating countries are in the process of developing and implementing municipal e-waste management strategies and action plans, however, financial and technical assistance is needed to advance environmentally sound management systems, practices and technologies that could minimize the negative environmental impacts of an inadequate e-waste disposal.

44. In particular, , the participating countries have different baselines, which mainly depend on their different developmental, technical, economic and social situations, and thus this project aims to align differences at the national level with support of regional cooperation. Without GEF support, an alignment and cooperation between the participating countries is unlikely. In this regard, the goal of the project is to have an inclusive project with the participation of different stakeholders and, at the same time, facilitate the assistance of international organizations with strong expertise on e-waste issues, with a solid commitment of national governments to executing the project.

45. Regarding the regional component, the baseline situation of the participating countries is very diverse. As described in detail later in this document, most countries in Latin America have already started implementing different initiatives, including inventories, diagnostics, pilot collection activities, education campaigns for the population, workshops and seminars. In some cases, these efforts have led to the formulation of policy proposals, including the enactment of specific rules and regulations for the proper management, collection, awareness-raising, and the establishment of recycling facilities for WEEE. However, these country initiatives are not aligned at the regional level, so without financial support from GEF and technical support from UNIDO this is unlikely to happen in the near future.

46. The GEF supported activities will facilitate and strengthen regional coordination within and among the participating countries. Without GEF funding, regional coordination is not likely to be enhanced, and the business as usual scenario would prevail leading to a growing gap in technology and policy among the participating countries regarding their national e-waste management strategies. This may hamper successful implementation of measures related to the Stockholm and Basel Conventions in the region.

47. Due to the global character of the electric and electronic market, harmonization is very important at the moment for the integrated management of obsolete devices. A good example is the European Community approach and its sharing of regional norms. Latin America can maximize its resources by devising common solutions for its key common issues, considering its own particularities. Countries can work at the regional level and agree on topics such as eco-design, recycling standards, homologation of transboundary movements, etc. The GEF funds would enable participating countries to pay special attention to POPs and harmonization issues through this project.

48. The regional component will also address these issues through harmonization of e-waste policies, strengthening of knowledge management systems and South-South cooperation. Without this project, the willingness and know-how among all the participating countries, to cooperate on a regional level, will be unlikely in the coming years. Nevertheless the project will build upon the work of representatives of the governments of Chile and Argentina who are working as regional delegates in the development of specific guidelines under the Basel Convention. In addition most of the Basel Convention Regional Centers and the regional Latin American platform RELAC maintain already specific webpages on e-waste and regularly disseminate newsletters. Despite this progress, there are still pendant issues, particularly the inclusion of more countries in this network and the institutionalization of this process.

49. Also, since 2004 the regional Platform RELAC has developed significant work on knowledge management. It has produced a variety of information, undertaken communications activities and promoted articulation of the stakeholders and a dialogue towards harmonization. The Swiss Federal Laboratories for Materials Science (EMPA)

is another organization that has developed diverse regional activities and in cooperation with RELAC developed regional and international workshops, documents, studies and proposals. With large representation of regional stakeholders, both organizations promoted a collective document entitled "*Guidelines for the Management of WEEE in Latin America: Results of a Regional Public-Private Round Table,"* which is an important regional milestone and perhaps the first step towards WEEE management harmonization in Latin America.

A.4.3. Baseline project

50. The main objective of the proposed GEF project is to strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in the 13 participating Latin American countries to contribute to protecting human health and the environment, particularly by reducing POPs released into the environment. So, the GEF funds will be mainly used to support existing national activities and to strengthen regional cooperation activities on e-waste management, focusing on POPs issues.

51. The **National e-waste Strategy Components** will be based on the baseline and needs of each country. Having tailor-made national e-waste management strategies is important to meet the requirements of each country, since these strategies can be key factors for long-term success. National e-waste management strategies include elements such as regulations for take-back and disposal of WEEE, a collection system, the strengthening of existing dismantling facilities, recycling and reuse standards, etc. Only if national policies are in place, cooperation within the region is feasible in the long-term. To support the countries, the project has conducted an in-depth analysis of the status quo in each country and has secured the involvement, participation and investment (co-financing) of the private sector as seen in the following

52. **Involvement, participating and investment (co-financing) of the private sector**

53. Contrary to expectations during PIF preparation, during the PPG phase the project consultants identified and confirmed significant presence of private formal e-waste recycling companies in all 13 participating Latin American countries, which is presented under ANNEX M of this CEO endorsement document.

54. From this information, as of end of November 2014, 74 private formal e-waste recycling companies with facilities eligible for the project had been identified. It should be noted that at least 2 eligible facilities were identified in countries where none had been identified during the PIF (e.g. Bolivia, Honduras, Nicaragua and Uruguay).

Participating Countries	Number of formal e-waste recycling companies identified on PPG phase
Argentina	8
Bolivia	3
Chile	8
Costa Rica	15
Ecuador	5
El Salvador	10*
Guatemala	4
Honduras	2**
Nicaragua	2
Panamá	5

Peru	5
Uruguay	3
Venezuela	4
TOTAL	**74**

* Further analyses by the government counterparts have identified that 4 of these companies would be good candidates for this project: ZARTEX, AUTOCONSA, ALMACENA-MIENTO TODO VERDE, CREST (Centro de Reacondicionamiento, Ensamble y Soporte Técnico)

** During 2015, government counterparts have identified 3 additional companies: HES (Honduras Environmental Service), Invema, and Reciclados de Honduras.

55. Given these findings, as stated in para 4 of this CEO endorsement document, the original PIF Output 2.1.3 "A dismantling / recycling facility is set up and ready to operate in countries where no facility exists that meet project criteria" was removed for this CEO endorsement.

56. To further illustrate the willingness of the private sector to get involved, participate and contribute with co-financing mainly as equity investments and other types of co-finance that can be considered as cash, let us just take the case of Honduras, one of the countries where there was apparently no hope to find private, formal-sector e-waste recyclers.

57. Annex M shows that two companies that process e-waste were identified in Honduras: RECACEL S. A. Recicladora Centro Americana de Celulares (www.recacel.com) and Recycle, S. de R.L. de C.V. (www.recyclehonduras.com). Both companies have expressed their support to the project and, in addition, two more that were not initially identified: Invema (www.invemascrap.com) and Reciclados de Honduras (9 Calle S, San Pedro Sula, Honduras). All these four companies are supporting the baseline project through investments in their facilities. With this explanation, the committed co-financing for the case of Honduras is as follows:

Sources of Co-financing	**Name of Co-financier (source)**	**Type of Co-financing**	**Co-financing Amount** ($)
National Government*	Honduras	In-kind	994,204
National Government* (Invema, Recacel, Reciclados de Honduras, Recycle)	Honduras	Cash (mainly as equity investment)	2,769,963
TOTAL*			3,764,167

* Although Section C, of this CEO Endorsement document shows that co-financing of Honduras apparently comes only from the "National Government," this Table shows a detailed breakdown of the US$ 3,764,167 co-financing

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58. Continuing with the explanation of the previous paragraph, the cash and equity investment contributions for Honduras come from the four above mentioned companies, as follows:

Participating private sector companies in Honduras	**cash / equity investment contribution**
Invema	USD 1,069,963
Recacel	USD 200,000
Reciclados de Honduras	USD 1,000,000
Recycle	USD 500,000
TOTAL	**USD 2,769,963**

59. The co-financing contributions collected through the Executing Partners listed on p. 1 of this CEO Endorsement, which are the leading ministries in each participating country, are somehow similar to those of Honduras. The reason all national contributions appear in Section C under "National Government" is because the governments collected them, aggregated and resubmitted them to UNIDO, accompanied by the corresponding individual co-financing letters of their partners, many with the disaggregation and details of each contribution in the attachments to those letters. Thus, UNIDO can verify and eventually disaggregate the co-financing contributions for every participating country, as illustrated herein for the case of Honduras.

60. However, entering the entire individual "Name of Co-financier" list would render Section C of the CEO endorsement document unmanageable, which is the reason UNIDO presented the national co-financing contributions aggregated under the names of their corresponding national governments. Therefore, it should be noted that the "cash" and "in-kind" co-financing contributions listed under "National Government" in Section C include not only government contributions, but also contributions (mainly as investment) coming from the private sector involved in E-waste management or recycling, as well as cash contributions committed by original equipment manufacturers (OEMs) involved in extended producer responsibility (EPR), bilateral aid coming from governments for the implementation of e-waste management projects, or "in-kind" contributions by the governments, NGOs, universities and other national organizations.

61. Following an October 2016 reassessment of the co-financing contributions by the countries, UNIDO is pleased to report the following results:

Participating countries (national co-financing)		Amounts USD	Percentage
Cash	National*	34,211,159	58,94%
In-kind	National*	23,828,877	41,06%
Total national co-financing		**58,040,036**	**100.00%**

* Includes all national stakeholders: governments, private sector, NGOs, etc.

62. Adding the co-financing contributions from additional donors contacted directly by UNIDO, who would prefer to contribute to the whole project, rather than to an individual participating country, the co-financing scenario looks now as follows:

Type of co-financing			Total co-financing	Percentage
Cash	National*	34,211,159	**35,844,447**	**50,19%**
	Others**	1,633,288		
In-kind	National*	23,828,877	**35,566,865**	**49,81%**
	Others**	11,737,988		
TOTAL			**71,411,312**	**100.00%**

* Includes all national stakeholders: governments, private sector, NGOs, etc.

** Includes all stakeholders that offered co-financing through UNIDO: EMPA, ISWA, UNU, BOKU University Vienna, Ericsson, Microsoft, International Telecommunication Union, US-EPA, World Health Organization, International Labor Organization, Ernst & Young Belgium, DELL, and UNIDO itself.

63. The evidence provided herein shows that the project has promoted since its design phase the effective involvement, participation and co-financing of the private sector. As shown, there is already significant investment of the private sector in the participating countries, which is part of the baseline project and that will be the basis for improving the environmentally sound management of e-waste by introducing the safe and sound management of the POPs fractions in support of the Stockholm Convention.

64. In addition, from the assessment conducted through the PPG phase, there is a very low risk of "non-participation" of the private sector in this project, since the existing formal recycling industries are very

interested in advancing on the development of sound e-waste management and recycling systems. If, for some reason, "non-participation" is detected, it can be addressed by approaching the concerned private sector and sharing with it more detailed information about the project, so the entrepreneurs can clearly identify their own benefits vis-à-vis their required commitments, which will allow them to reassess their interest on participating in the project.

65. In summary, the PIF was approved on the basis that there would be significant investment at the national level to develop and incentivize the establishment of functioning e-waste management systems and also that the GEF increment would be used to explore and pilot mechanisms for dealing with the POPs fraction of the e-waste. UNIDO is glad to report herein that such proposed national investment has grown significantly (204%) from the PIF stage when the assessed co-financing was USD 35 Million to USD 71,411,312 as of October 2016. Further, from the last assessment, it appears that more than 50,19% of the assessed co-finance is in equity investment and cash, and around 49,81% of it is primarily in-kind contributions. As this is a GEF-5 project, the GEF expected that POPs projects would have a co-financing over grant ratio 4 to 1; however, this project shows already a co-financing ratio 7.5 to 1.

66. **Summary of the national baselines**

67. The below section contains a summary for each participating country outlining the current situation of WEEE management regarding (i) policies and legislative instruments, (ii) existing initiatives, (iii) existing guidelines, and (iv) existing recycling infrastructure. A detailed assessment of the national and regional situation of e-waste can be found in Annexes I - M. The baseline situation of each country will be the basis for the activities to be developed under the project (e.g. focusing on the improvement of the legislative framework and/or the up-scaling of the WEEE infrastructure).

Argentina

68. Status of E-waste Policies / Legislation: Argentina currently does not have a federal e-waste regulation. The only related national regulations are the solid and hazardous waste laws. The major challenge is to have a specific e-waste regulation at the federal level. Nevertheless, as a federal country, Argentina has four provinces with e-waste regulations: Chaco, Chubut, La Rioja and San Juan.

69. Over the past few years, several bills and projects of law at the federal level have been introduced in the Senate, but none of them has been approved. According to experts, two major obstacles to get approval are discussions around cost internalization and the EPR principle.

70. Existing Initiatives: The Secretariat of Environment and Sustainable Development is the leading government organization that supports all major initiatives established in the country and regional policies. The main goal of the Government is to implement programs and projects that enhance Public Private Partnerships (PPP).

71. As in other Latin American countries, in Argentina there have been a variety of campaigns from diverse sources. At the provincial level, municipalities have played an important role, but most of the campaigns have been developed by PPPs; the usual organizers of these events are dismantlers and recyclers. Awareness raising campaigns have been organized, especially about the proper disposal of batteries, with high response from the public.

72. Existing Guidelines: There are several guidelines available in Argentina on topics including Best Practices for E-waste Management, Sustainable Public Purchasing, and Computers for Schools.

73. Existing Recycling Infrastructure: E-waste recyclers have quite a long history in Argentina; nevertheless their level of development is rather low. Six formal WEEE recycling companies have been identified and some of them are already working for major original equipment manufacturer (OEMs), but there is currently no internationally certified company. Information about the treatment capacity of recyclers and details on how the system is developing is lacking.

Bolivia

74. Status of E-waste Policies / Legislation: Bolivia is one of the countries where government's involvement on electronic waste only started recently. The government has a program for the integrated management of solid waste and the main progress reported in this area is a project for a national e-waste regulation. However, a comprehensive strategy for e-waste management is still missing

75. Existing Initiatives: The Ministry of Environment and Water works as the leading stakeholder that coordinates with others government agencies. Regarding knowledge management, the NGOs Fundación REDES has been the most active stakeholder; it has developed two studies on e-waste: one on PC-waste generation and a guideline for the recovery of valuable materials from e-waste. These activities have strong support from Swiss contact, a Swiss NGO that participated in the ECLAC e-LAC regional program.

76. Program Hormiga (Ant Program, in English), led by the NGO FUNDARES, is a key program in Cochabamba that raises awareness within local schools on e-waste and the recycling process. It builds capacity on handling e-waste.

77. Collection campaigns have been developed at the municipal level and also through recycling companies. No dissemination activities by the government were identified and it seems that there is no public budget for e-waste management. However, a large number of public media play an important role in Bolivia. The government owns and operates a television station, a news agency, a weekly newspaper, and a growing network of community radio stations. This may facilitate dissemination of messages about e- waste.

78. Existing Guidelines: Bolivia has developed two Technical Standards for the transport and handling of electronic waste.

79. Existing Recycling Infrastructure: Bolivia has a poor e-waste recycling infrastructure. Three companies have been identified, but all of them carry out very basic operations, mostly focused on simple manual dismantling. Major challenges are the very small volumes that cannot be processed for export and fractions of the e-waste stream, such as printed circuit boards or hazardous elements that end up in artisanal local recycling processes.

Chile

80. Status of E-waste Policies / Legislation: Chile belongs to the Organization for Economic Cooperation and Development (OECD) and therefore it is committed to the goals established by the OECD.. Nevertheless, at this moment e-waste is still managed under the Hazardous Waste Act. For more than five years there is a process with multi-sectorial groups working in a proposal for a framework law for solid waste management, including *"Priority Waste",* under which WEEE is mentioned.

81. In the process of building the regulation, the government usually calls a group of representatives from the private sector- producers of electrical and electronic equipment and recyclers. This group does not work permanently and creating an association has not been possible.

82. The EPR principle is part of this bill that also includes integration of the informal sector. The GIZ supports a project to implement the EPR principle for different products including electrical and electronic devices (EEE).

83. The bill on Pollutant Release and Transfer Register, which was put under implemented in early 2015, is one of the important regulations achieved in this area.

84. Existing Initiatives: Chile is a pioneer in signing a voluntary agreement with some producers (OEM) for the management of their obsolete electronic products. Although this is a mandatory agreement, it has not achieved its goals since there is no administrative and technical staff in charge of reaching this commitment.

85. The government of Chile has been one of the few that has commissioned studies to support its projects. It has also organized a number of seminars related to different items of the e-waste cycle. For these activities, it has worked mainly with private consultants and universities.

86. The collection activities generally are organized by recyclers, often working with municipalities; due to budget constraints the government plays a minor role in this respect and supports the activities only nominally. There are

some e-waste collection points in very few municipalities and one of the biggest retailers. These collection activities are very valuable since they promote the need to collect obsolete electronic devices; however they focus only on computers and other valuable electronic devices like mobile phones.

87. Producers have also promoted collection; they usually offer a price reduction on the purchase of a new product if the client hands in an old one at the same time. This exchange is usually restricted both in the product collected and regarding the equipment sold.

88. The government does not have an information system, but the norm on stakeholder registration may improve this situation. Regarding information to the community, government has a good relation with the media, but an information strategy and full use of the communication instruments of the Ministry of Environment are lacking. The Ministry principally disseminates information on regulations and requirement for the recyclers.

89. Existing Guidelines: An e-waste assessment about WEEE generation in Peru has been conducted and the country is subject to OECD guidelines.

90. Existing Recycling Infrastructure: Chile houses one of the first electronics recycling companies in the region and up to date has a handful of formal companies, most of which work in the Santiago area, but also some in Southern Chile. Nevertheless, due to the lack of legislation, the development of e-waste recycling has slowed down and the recycled volumes remain rather low.

Costa Rica

91. Status of E-waste Policies / Legislation: In Central America, Costa Rica is the most advanced country on e-waste management, at least at the regulation level. Nevertheless, after publication of the Executive Decree No. 35933-S on Integrated e-Waste Management in 2010, there have been incompatibilities with the General Waste Law No. 8839, particularly regarding the implementation of the EPR principle for special waste. As a first step to resolve this issue, the Executive Decree Nº 38272-S (Declaration on Special Waste Management) has been issued in early 2014. To fully implement EPR, the Executive Decree 35933 is currently being revised to eradicate all contradictions with the other two legislative instruments. This process is still ongoing.

92. Existing Initiatives: The Ministry of Health leads the e-waste management process, and there is a National System for Integrated e-waste management (SINEGIRE), which includes the Ministry of Environment, Energy and Telecommunications. A Committee for e-waste management has been created, which is an advisory board composed of representatives from all sectors: government, private sector and NGOs.

93. ASEGIRE is a Producer Responsibility Organization that represents a group of producers aiming to respond collectively to the regulation. As EPR was not initially in effect, ASEGIRE started as a voluntary initiative.

94. There have been many campaigns carried out mostly by civil society organizations, but ASEGIRE has a better planning for meeting the goals required by the regulation, although there are no specific quantitative targets yet.

95. The government has conducted training events on e-waste, aimed at the society in general. ACEPESA, a NGO devoted to waste management and other environmental issues, has played a relevant role in organizing workshops addressing stakeholders at the national and sub-regional level (Central America).

96. At the regional level, the government of Costa Rica through its Ministry of Health and other stakeholders has been working on a sub-regional strategy (Central America and the Dominican Republic), but they have not published the results yet.

97. Existing Guidelines: ACEPESA has produced several studies on e-waste in Costa Rica and some other Central American countries. In a joint effort with RELAC, it has produced a guideline for organized e-waste collection campaigns. Also, the National Strategy for Integral and Sustainable e-waste Management, which is one of the first documents of this kind in the entire region, deserves to be highlighted.

98. Existing Recycling Infrastructure: Considering its size, Costa Rica has a relatively large number of e-waste recyclers that compete for relatively low e-waste volumes. More than 20 formal companies have been identified to be somehow involved in the management of certain e-waste fractions. Costa Rica has also the only R2 certified company in Central America (GEEP Costa Rica).

Ecuador

99. Status of E-waste Policies / Legislation: In the last two years, two relevant ministerial agreements have been signed. The first is on mobile phones and the second on environmentally sound management of batteries. Since 2013 the country is implementing EPR for mobile phones through a rather novel approach: companies can increase their import quota by increasing the number of collected phones.

100. Existing Initiatives: The RENOVA Plan supports a change of the energy matrix, including further efficiency by replacement of electrical and electronic devices. It also establishes the replacement of equipment that affects the ozone layer such as refrigerators, air conditioning and other equipment using greenhouse cooling substances.

101. At the regional level, during 2012 -2013, the government of Ecuador held the presidency of the e-waste goals of the e-LAC Initiative lead by the Economic Commission for Latin America and the Caribbean (ECLAC). Under its chairmanship, a web site was established, a regional meeting was organized and a photography contest conducted. Unfortunately, this e-LAC work has been discontinued.

102. The producers and importers are in charge of the awareness activities towards the community. Ecuador does not have a national information strategy for e-waste. The government manages some activities related to articulation at the national level, including seminars and meetings.

103. Existing Guidelines: Different groups have been working on e-waste studies to assess the current WEEE generation and the situation of e-waste management. Nevertheless, until now no specific guidelines or manuals have been published in Ecuador.

104. Existing Recycling Infrastructure: Ecuador has a growing number of e-waste recyclers and some of them have been already operating for a few years. There are no certified companies and treated volumes are still low. Companies like Vertmonde have been participating in regional events and initiatives carried out by RELAC, EMPA or StEP.

El Salvador

105. Status of E-waste Policies / Legislation: There is currently no regulation on e-waste. The government currently focuses on activities to set the shared and extended producer responsibility (EPR) approach for importers and distributors; to promote the adoption of 3R principles; to enforce the public and private investment; to encourage participation of all stakeholders and formalization of the WEEE management sector.

106. El Salvador has a Plan for the Comprehensive Management and Guidelines for the proper management of Waste of Electrical and Electronic Equipment (WEEE).

107. Existing Initiatives: The Interagency Technical Group, consisting of the Technical Secretariat of the Presidency (STP), the Ministry of Education (MINED), the Ministry of Economy (MINEC) and the Ministry of Environment and Natural Resources (MARN), has been set to comprehensively address WEEE issues. The Ministry of Environment and Natural Resources is the entity with authority to establish registration and issuance of environmental permits for WEEE managers. Among their activities, they have developed an inventory of e-waste volumes; a draft of National Guidelines for the Management of e-waste and a register of recyclers. Proper WEEE management is included in the National Environmental Policy, there is a Situation Diagnosis, Guidelines for the ESM management of Waste Electrical and Electronic Equipment; Approval process for disassembling facilities; and a Center for Overhaul Operations, Assembly, Technical Support and Computer Recycling (Centro de Reacondicionamiento, Ensamble, Soporte Técnico y el Reciclaje de Computadoras - CREST).

108. Regarding awareness activities, some collection campaigns have been developed by the private sector and the government has organized dissemination workshops specially directed to the formal and informal recycling sector.

109. El Salvador has been a center of various sub-regional activities. Some international organizations have conducted workshops there. The capital San Salvador hosted the E-Waste Academy organized by StEP in 2014.

110. Existing Guidelines: El Salvador has a Plan for Comprehensive Management of Waste Electrical and Electronic Equipment in El Salvador and Guidelines for the proper management of Waste Electrical and Electronic Equipment.

111. Existing Recycling Infrastructure: There are currently three companies that have environmental permits to store e-waste, but their level of operations is still very low and, given the small size of the country, they are competing for a very limited market. There is also a government program for the refurbishment of computers, the Center for Overhaul Operations, Assembly, Technical Support and Computer Recycling (CREST).

Guatemala

112. Status of E-waste Policies / Legislation: The Guatemalan Cleaner Production Policy defines the strategies for the promotion and adoption of cleaner production for enhancing competitiveness and preventative environmental management, but it does not include an e-waste policy. The Government has focused on hazardous waste management, and has received support of Costa Rica for the implementation of the Basel Convention. It plans to have a workshop with exporters, regarding the procedures and technical guidelines for hazardous waste. The Ministry of Environment and Natural Resource (MARN) leads this process.

113. Existing Initiatives: The NGO "E-waste de Guatemala" organizes annual awareness raising campaigns.

114. Existing Guidelines: No guidelines have been developed for Guatemala.

115. Existing Recycling Infrastructure: Four formal e-waste recyclers have been identified. One of them, e-Waste de Guatemala, has been very active for the last few years, but like most recyclers in Central America, it struggles with low volumes and limited options for a sound end-processing for some of the fraction on national level.

Honduras

116. Status of E-waste Policies / Legislation: Currently, Honduras is developing a legislative proposal for integrated Solid Waste Management that will include WEEE.

117. Existing Initiatives: The government, through its Secretariat of Energy, Natural Resources, Environment and Mining (SERNA), has worked on Strategies for the management of WEEE, and developed recycling campaigns in partnership with the private sector (distributors of EEE and recyclers). It has also organized training for young people due to the relevance of this issue. Academia is also perceived as a strategic partner for training, awareness raising and dissemination.

118. The SERNA has also initiated collaborative activities with the health sector to improve the knowledge of populations affected by the exposure to hazardous substances. The health sector is also working on monitoring occupational hazards for people who work and/or are exposed to WEEE hazards.

119. Even though there is no permanent relation with the media, for the awareness activities SERNA has used newspapers, radio, social media and television.

120. Existing Guidelines: An assessment study for WEEE generation in Honduras has been developed and finalized. There are no other specific guidelines on this topic.

121. Existing Recycling Infrastructure: Three companies handling e-waste have been identified. All of them have very limited operations and mainly export the equipment collected through alliances with companies like SIMS Recycling (USA) or GEEP (Costa Rica).

Nicaragua

122. Status of E-waste Policies / Legislation: The government plans to implement a project on *"Environmentally sound management of WEEE in Central America"* particularly for Honduras and Nicaragua.

123. Existing Initiatives: Collection of e-waste is mainly in hands of the informal sector. There is no formal system for dismantling or treatment. Nicaragua has a significant amount of second hand EEE imported for local commercialization.

124. There are some NGOs working on general aspects for a proper e-waste management. They have participated at the Central American workshop on E-waste.

125. There is some interest of mobile phone companies to develop a program regarding used equipment. Further universities work with students to develop new products from obsolete parts of computers.

126. Existing Guidelines: E-waste related activities are only starting in Nicaragua and no specific guidelines on the subject have been published.

127. Existing Recycling Infrastructure: The Ministry of Environment and Natural Resources of Nicaragua (MARENA) has only one e-waste recycler with an environmental permit issued by it, and another recycler is undergoing the process to obtain such permit. Both of these companies are scrap dealers trying to enter the e-waste business, and their operations are very basic.

Panama

128. Status of E-waste Policies / Legislation: Panama is a large importer, exporter and high consumer of electrical and electronic devices. Through its solid commercial network, it is a relevant external distributor of EEE to whole Central America.

129. In spite of that, the general work on e-waste is in its early stages and, for now Panama has only a general Waste Law and is currently preparing a proposal for a regulation and a national strategy on e-waste.

130. Existing Initiatives: Some collection campaigns have been carried out by the private sector and NGOs.

131. Existing Guidelines: No specific guidelines or manuals on the subject have been developed so far, but with support of ACEPESA of Costa Rica, an e-waste assessment has been developed in 2008.

132. Existing Recycling Infrastructure: Four companies involved in e-waste recycling have been identified, but no information could be obtained on their environmental permits or authorizations from Government authorities.

Peru

133. Status of E-waste Policies / Legislation: The national regulation “Reglamento Nacional para la Gestión y Manejo de los RAEE” (DS No.001-2012-MIMAM), approved in June 2012, establish the rights, obligations and responsibilities of those involved in the generation, collection, transportation, storage, treatment, reuse and disposal of WEEE to prevent, control and mitigate damage to human health and the environment. In this regard the legislation establishes the responsibility and obligation for importers and manufacturers of EEE, to develop a national management plan that includes a system of WEEE collection and treatment and outlines conditions for the environmentally sound processing and reuse of WEEE, to be met by companies. Also, there is the “Directiva para la Baja y Donación de RAEE del Sector Público”, published in 2013, which is a unique norm in Latin America that defines that all e-waste from the public sector must be disposed of through formal channels.

134. Peru also has its National Environment Policy, a National Environmental Plan until 2021 and a National Environmental Agenda 2013-2014. The national government through the Ministry of Environment (MINAM) has the leadership in the process of implementing national legislation for WEEE management, which provides the basis for monitoring activities of other central government agencies, and work by the local governments and the private sector. The Ministry has set a specific annual operating budget to promote WEEE management, and the management plans are supervised either by the Ministry of Production (PRODUCE) or by the Ministry of Transport and Communications (MTC), depending on the type of equipment a company sells or imports.

135. Existing Initiatives: Since the adoption of the national WEEE regulation, the Ministry of Environment leads the implementation process and coordinates a Technical Support Committee (CAT) for WEEE management and handling. The CAT involves the public and private sector, academia, NGOs, civil society and international

cooperation. It meets monthly or bimonthly and has five sub-committees: regulations, campaigns, studies, diagnosis, and WEEE management plans, which have conducted highly participatory processes encouraging broad stakeholder participation. They have worked closely with national centers like the NGO IPES and international organizations like EMPA.

136. There are approximately 80 EEE importers that cover 80% of the imported amount of such devices, by weight. To date 43 WEEE management plans have been approved by the relevant sectors (Produce), out of which 39 plans are for individual companies and 4 are collective plans for several companies.

137. The national information strategy is under construction; the legislation requires annual reports from the public sector (generators) and private sector (producers, traders). Data systematization, which includes progress reports on e-wastes management, will be the responsibility of some central public entities.

138. The national regulation also includes a communication and education policy. This has led to plans of a series of collection campaigns in many cities. The government, recyclers and take-back schemes participate in these activities. These activities are directed to the general public and supported by strong use of media: radio spots, promotional videos, press releases, social media, articles in journals, etc.

139. Existing Guidelines: Peru, through its National Standards Institute (INDECOPI), has published three technical standards on the stages of e-waste management: collection, transport and treatment. Several e-waste assessment studies carried out with the support of the SECO/EMPA e-waste project provide a solid information basis.

140. Existing Recycling Infrastructure: Collection points for WEEE items have been established in Lima e.g. for mobile phones, computer equipment, small appliances and television sets. Currently, there are five e-waste recyclers already registered with DIGESA and many more are looking to enter into the market, from small informal companies to large international recyclers from Spain or the U.S. The level of skills of the local recyclers has been constantly improving over the last years; the formally processed volumes are rapidly increasing.

Uruguay

141. Status of E-waste Policies / Legislation: The country does not have a national e-waste regulation but it is planning to set up a system for implementing the Extended Producer Responsibility principle. The government has a good relation with the private sector and has managed to work with some producers with the objective of implementing the application of the Extended Producer Responsibility (EPR) principle.

142. Existing Initiatives: ANTEL, Uruguay's government-owned telecommunications company, has developed the main strategy for WEEE management in Uruguay. This is the so-called Plan Integra, where used computers are refurbished for social use. Initiatives for collecting mobile phones and batteries have also been developed. =The government has organized dissemination activities for its technical staff and employees.

143. With assistance of the Swiss Cooperation the Government has developed a national questionnaire and an expert workshop. A working group was created in 2012 to design a pilot project on working conditions one-waste management.

144. Existing Guidelines: There is a guideline on the efficient use of information technology for the public sector, but it does not contain specifics on e-waste.

145. Existing Recycling Infrastructure: There are three companies involved on e-waste management, but their operations are very basic, mostly focused on manual dismantling. E-waste volumes are still small but they are growing.

Venezuela:

146. Status of E-waste Policies / Legislation: Venezuela has no specific e-waste legislation, but the government is currently working on a draft e-waste bill in coordination with other national regulations. There is an internal public sector norm that sets the collection and treatment of electric and electronic equipment. The public sector focuses its

e-waste program on three objectives: (1) the formulation of national regulations, (2) the development of an e-waste management system; and, (3) the recovery of valuable material from e-waste.

147. Existing Initiatives: An information system is needed, but Venezuela's priority is establishing a good e-waste management system. There are some experiences from academia (at a very small scale), in trying to recuperate precious metals from e-waste.

148. Venezuelans have organized some campaigns mainly to collect mobile phones, but there is no specific awareness work planned. At the regional level, Venezuela has been part of the ECLAC e-LAC project.

149. Existing Guidelines: There are no studies, in-depth research, or guidelines on e-waste management for Venezuela. However, there has been some activity regarding the development of assessment studies, but with very little impact.

150. Existing Recycling Infrastructure: Four formal e-waste recycling companies have been identified. At least two of them have developed sound operations and have important OEMs as their customers. Besides this, the Government is currently working on setting up a state enterprise (REMAPCA) for the proper management of WEEE. This work is assisted by TES-AMM of Singapore.

Regional Situation:

151. The **Regional Component** will focus on harmonizing e-waste policies with consideration of relevant MEAs and the SAICM, aligning the existing national knowledge/ information systems to the regional ones and enhancing South-South cooperation to facilitate the management of all WEEE streams in the region. Better coordination and cooperation among participating countries within the sub-regions and the whole region will result in a more environmentally sound and effective way of collecting, recycling and processing WEEE.

152. At the regional level the Regional Latin American and Caribbean Platform for Electronic Waste (RELAC) is a major player. RELAC is a well-recognized multi-sectoral network for LAC aiming at the promotion of sustainable WEEE management with focus on its environmental, economic and social aspects and. has already conducted a vast work in articulating the e-waste stakeholders in the region. Through knowledge generation, capacity building and communications management, the platform can set an enabling environment for the coordination of regional project activities and will support effective communication. The strengthened South-South cooperation will also enhance the development of future regional action plans, and further projects and initiatives.

153. The five Basel Convention Regional Centers (BCRCs) present in the region have also developed several pertinent regional initiatives. The BCRC for South America in Argentina has generated information, conducted international meetings and supported the promotion of e-waste management in its countries of coverage.

154. The BCRC for Central America and Mexico is working with the Central American Commission for Environment and Development (CCAD), which has led to a sub-regional project to develop a set of *"Guidelines on WEEE for Central America Countries"*. Moreover, the BCRC for Central America and Mexico with significant international cooperation organized (in May 2012) the largest gathering of international experts on e-waste in the Americas: the San Salvador Dialogue on ESM of WEEE. This Center, in association with ITU and StEP organized international seminars in San Salvador (2013 and 2014), and has developed important awareness-raising campaigns, and advanced significantly in the ESM of Used Lead Acid Battery (ULAB). It has provided technical assistance to ULAB recyclers in Guatemala, Costa Rica, Colombia and the Dominican Republic, and recently has also developed protocols for the ESM recycling of CRTs with a Guatemalan ULAB recycler.

155. The eLAC project managed by the Economic Commission for Latin America and the Caribbean (ECLAC) includes the treatment of industrial waste as one of its goals. ECLAC set a working group that was active during 2012-2013. Currently, there are plans to reactivate this initiative with the RELAC Platform acting as coordinator within the project. eLAC is an intergovernmental strategy that defines Information and Communications Technologies (ICTs) as instruments for economic development and social inclusion in Latin America and the Caribbean. It is based on a public-private sector partnership with a long-term vision (until 2015) in line with the Millennium Development Goals (MDGs) and the goals of the World Summit on the Information Society (WSIS). eLAC contributes to the

implementation of these long term goals by pursuing a series of frequently adjusted short-term action plans with concrete qualitative and quantitative goals.

156. Some international organizations have supported e-waste initiatives in the Latin American region, such as IDRC, UNESCO and GIZ. In the last two years, other organizations have also supported this topic in the region. For example, the ITU is organizing seminars in different Latin American countries; the European Commission has supported a MERCOSUR project on best e-waste practices in Argentina, and the StEP Initiative led by UNU has organized an E-waste Academy in El Salvador in 2014.

A 4.4.Barrier analysis

157. The threats to ESM of e-waste in the participating countries, and their fundamental causes and barriers are stated below.

158. Component 1: Strengthening of national e-waste management initiatives

159. a) Lack of comprehensive and enforceable national policies promoting ESM of e-waste: The lack of formal legislative rules or regulations for e-waste is an important barrier for the implementation of a system for an environmentally sound management of e-waste. The required ESM regulations should be accompanied by technical guidelines and training activities for proper compliance, including POPs issues.

160. b) Lack of long-term strategies and guidelines to ensure the set-up of an ESM of e-waste: Some countries have already developed strategies for the ESM of e-waste; however, compliance with existing international standards should be ensured to meet project goals, so local standards will be improved accordingly. In other countries, strategies and guidelines need to be developed and tested to ensure that an ESM of e-waste is established. Both existing and newly developed strategies need to be in line with the Stockholm Convention on POPs, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and with other relevant MEAs. In addition, e-waste management strategies must be aligned with country-specific objectives and current situations (e.g. existing e-waste recycling facilities, existing e-waste infrastructure).

161. c) Insufficient financial support for the ESM of e-waste: In many countries e-waste management has not been an environmental priority, so it has not received sufficient funding for setting-up an ESM system for e-waste. Most of the current investment has been made by the private sector, even without the existence of legal obligations (e.g. due to the lack of specific legislation) to meet specific environmental standards, or achieve corporate goals, or to help monitor and report resource recovery, recycling, or environmental releases and transfers of toxic chemicals. Investment for the proper handling and disposal of WEEE at the local level is still scare in most participating countries. With the technical and financial assistance of this project, such situation should be improved.

162. d) Scarce knowledge and information on the ESM of e-waste and the risks to the environment and human health due to improper handling of e-waste: There is a need to strengthen institutional capacities to achieve the implementation of national e-waste management systems with shared private and public ownership. Training sessions should be developed for staff of the regulatory bodies and for e-waste facility owners and staff, so they can learn about their corresponding responsibilities and obligations for the fulfilment of the regulations. Training on management of the hazardous POPs fraction will also be imparted to the eventual waste handlers that request a license and to those that currently have operating licenses. In addition, e-waste has a weak curriculum at the regional academic institutions and, without technical and financial support, universities and research institutions will not have the means or the incentives to increase their offer of e-waste related courses, trainings and research. Awareness of the general public needs to be improved to ensure its participation in support of the projects. This will also facilitate that media and specific groups such as workers, women, the elderly and children get the information they need about the advantages of an environmentally sound management of e-waste, and are aware of the risks to the human health and the environment associated with the careless handling or treatment of e-waste that contains POPs and other hazardous substances. The risks for women and children can be particularly high in areas with improper e-waste management processes, including storage, collection, transport, dismantling, handling and disposal. Without targeted information sharing and awareness raising campaigns, the level of e-waste related information will remain low and professionals and other stakeholders will remain unaware of the requirements and guidelines for ESM of e-waste, and of their own roles within the corresponding system.

163. Component 2: Strengthening of national capacities on waste dismantling and recycling facilities / infrastructure

164. a) Lack of existing e-waste facilities operated in an ESM manner and adequate business models: There are already several e-waste dismantling and recycling facilities in the region; however, there is usually insufficient expertise, lack of legislation and of monitoring to ensure that the facilities are operating in an ESM manner. In particular, awareness is lacking with regard to the proper handling of POP-containing fractions in certain e-waste streams (e.g. plastics). Therefore, the predominating practices of recovering and redirecting these fractions towards direct recycling nullify a true environmentally sound processing. Most of the countries lack the technical capacity and financial support to up-scale their facilities, to train their human resources and to monitor potential chemical releases (within the facility and/or larger areas caused by improper disposal practices) in order to meet the requirements of the Stockholm Convention and other relevant multilateral environmental agreements (MEAs). Thus, in general there are insufficient regional demonstration activities on the ESM of e-waste, including the existence of adequate business models to ensure sustainable long-term operations within the region, a situation that will remain the same without a firm GEF intervention.

165. Component 3. Enhancement of Regional Cooperation on e-waste management

166. a) Absence of regionally harmonized e-waste policies, lack of a regional knowledge management and information sharing system; and insufficient South-South cooperation: There is no formal regional mechanism promoting South-South cooperation on e-waste that could guide national governments starting from experience already achieved within the region. The reinforcement of existing regional platforms would enhance information sharing, knowledge management and capacity building which in turn would enhance the overall regional capacity to demonstrate and consolidate ESM of e-waste. Without the project, there would be significantly less technical and financial support to institutionalize a common regional platform and to improve South-South cooperation. Without these incentives, policies will hardly be harmonized at the regional level and regional coordination on chemicals and waste management supported by relevant conventions (Basel, Rotterdam and Stockholm) may not be advanced in a meaningful way in the years to come.

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

167. Among the benefits of this project, it should be highlighted the incremental recovery of non-renewable raw materials (ferrous and non-ferrous metals) and fossil-fuel plastics or petro-based polymers, accompanied by the minimization of pollutant releases, both from e-waste components themselves (POPs compounds, heavy metals and ozone-depleting substances), and from those formed during the processes of recycling of and energy recovery from e-waste (including emissions of dioxins and furans).

168. Proper e-waste management in the participating countries will bring global environmental benefits that fit the priorities set out within the framework of the GEF-5 Strategy on Chemicals. The project will contribute to reduce exposure of POPs and other toxic substances to humans and wildlife, thus addressing the first objective of the aforementioned strategy, which deals with the phasing out of POPs and the reduction of POPs releases. As mentioned in more detail in Part II, B.2 'Global Environmental Benefits', according to statistics compiled by UNEP on the percentage of the various types of EEE present in the waste streams, the fraction of plastic polymer and the content of POP-PBDEs can be estimated. Therefore, the e-waste generated by the 13 project participating countries represents an emission of POP-PBDE estimated between around 26 and 60 tons/year. The project aims to tackle about 10% of them.

169. This GEF project will systematically support and professionalize knowledge management and information systems in the Region. Thus it will contribute to establish a culture for the environmentally sound management of chemicals and waste within the Latin American society. Campaigns, trainings and awareness raising activities will help improve the general knowledge on the proper management of POPs within e-waste.

170. The project will support the integrated WEEE management by introducing two approaches: knowledge management and information systems that will be developed, articulated and disseminated to enable stakeholder's access to the services offered at the national and regional levels.

171. The incremental cost reasoning at the project outcome and output level follows:

172. **Component 1: Strengthening of national e-waste management initiatives**

173. **Outcome 1.1 National Policies are drafted or reviewed:** This outcome aims at reinforcing the existing regulatory framework in Costa Rica, Ecuador and Peru and assisting the project countries Argentina, Bolivia, Chile, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Uruguay and Venezuela in drafting or polishing e-waste policies and regulations. In the case of Argentina the focus is on supporting the development of a national bill rather than provincial legislation. The trend there is that regional policies appear when a topic is not properly addressed at the federal level.

174. For Costa Rica, Ecuador and Peru, which have already promulgated national policies, the focus will be on a gap analysis of their national policies and regulations to address environmentally sound management of e-waste, including EPR, as well as on the effective introduction of EPR into policies (including the set-up or improvement of the corresponding systems).

175. For the other participating countries, this output envisages introducing examples of advanced legal frameworks, cases of good practices and a policies showcase focusing on project countries and some other selected countries (e.g. Switzerland, the E.U., Japan, or the U.S.A.) to support the feasibility of EPR policies. The focus for these countries will be on information dissemination about EPR among all stakeholders (producers, retailers, recyclers, public authorities, NGOs), drafting of national e-waste policies and regulation with EPR inclusion; and development of national systems for information, reporting and public registration.

176. During the PPG phase, common goals for establishing these strategies were identified, including enforcement of regulations, development and institutionalization of recycling systems, training and skill development, as well as development of a communications strategy. Other important issues are: EPR implementation, promotion of a multi-stakeholder dialogue, formalization of informal recycling activities and introduction of technical standards and norms.

177. **Output 1.1.1 National policies and regulations are drafted or reviewed**: For this output the review and systematization of the most relevant experiences of existing EPR laws, and the setting up of alternative scenarios is imperative for developing a "model law" proposal. Such "model law" will need not only to go through a legal debate, but also through a specific economic analysis. In this process, the participation of producers and other key stakeholders seems essential. Latin America is a region with particular socioeconomic parameters that must be taken into account (e.g. the informal sector) and the proposed "model law" must take into account all these particularities. Some aspects, as creating a producers' association, defining collecting goals, introducing transparency and monitoring, appear to be relevant, but probably exceed the competence of national authorities, so regional cooperation and social facilitation may be an asset. In the legislative process for each country, legal drafting is essential.

178. Since this output implies the formulation of a national regulatory framework under a participatory process with the main stakeholders, review by the legal departments of the ministries involved in e-waste management becomes essential. Therefore, these activities will differ from country to country depending on the existence of national policies and depending on the competences of the relevant ministries.

179. In addition, some countries require special consideration for orphan e-waste, situations as smuggling (e.g. Bolivia) or import as accompanied baggage (e.g. Uruguay) which could disturb the balance required for an effective EPR.

180. **Output 1.1.2 National e-waste management strategies are established:** This output aims at setting up management strategies to improve the administration of the WEEE system. Due to the different levels of development among the participating countries, a set of strategies will be designed and implemented according to the needs and current situation of each country. This process will help the governments to establish a roadmap to develop its e-waste management system and will contribute to homogenize e-waste management at the regional level.

181. **Output 1.1.3 Guidelines for e-waste management are shared, tested and improved:** During the PPG, an analysis of existing country-specific and regional guidelines for e-waste management was conducted. The availability and scope of the guidelines was examined to better understand the gaps and also to assess how a regional exchange of such information might help to close them. On the basis of these findings, the strategy will be

to first rely on the information exchange and then continue filling the gaps by developing and sharing country-tailored guidelines for the different areas of e-waste management at the national and regional levels.

182. **Output 1.1.4 A financing strategy is defined within policies and regulations:** This output aims at defining and devising tailor-made financial tools to support national e-waste management strategies. The collection and treatment of e-waste is associated with costs. Especially the proper treatment of hazardous fractions is cost intense. This so called financial mechanism is an important building block to ensure long-term sustainability and viability of the country's overall e-waste management system. As there is no available a regional "master model" for a financial mechanism and since a suitable model highly and directly depends on certain issues, rules and responsibilities established by the local legal framework, tools should be developed to allow each government and pertinent local and regional authorities to fulfill their obligations within the chosen system. Although EPR is the predominant paradigm to deal with WEEE management systems, passing related legislation in the LAC region has shown some difficulties. Economics is the main basis of EPR, so it requires a fine legal drafting that can be introduced coherently into the national normative system.

183. **Outcome 1.2 National Capacity for e-waste management is in place:** This project outcome aims at ensuring that each participating country develops its human, scientific, organizational and institutional capabilities to deal with the required e-waste management operations. The increased capabilities will be based on information and knowledge sharing to help improve performance, make better decisions, establish good associations and achieve project objectives.

184. **Output 1.2.1. Officials and staff on e-waste management trained:** Training of key national stakeholders is crucial for achieving their successful involvement in the development of the e-waste management system. Particular attention will be given to the training of officials with responsibilities at the national level, with emphasis on improving skills for the environmentally sound management of e-waste, furthering knowledge and information sharing, and strengthening their participation in governance and decision making. To design the training program, participants have to be selected and their specific needs identified. It is also necessary defining adequate contents, selecting training materials and establishing a flexible methodology adapted to the experience of the participants. It is also important to take into account the experiences of other stakeholders within an integrated e-waste management system and previous training experiences that can be the basis for continuing this work.

185. **Output 1.2.2. Selected universities include e-waste in their curricula and research programs:**.

186. During the PPG phase, Latin American universities were surveyed to identify existing initiatives and needs related to e-waste. Although Latin American universities acknowledge the e-waste related problems, only a small number of them have specific experience on this subject. In most cases the offer is limited to generic courses on waste management that include e-waste issues, and there are only a few emerging research experiences. So, this output aims at developing or strengthening national capabilities by incorporating e-waste into the curricula and research programs at Latin America universities.

187. **Output 1.2.3 National knowledge and information management systems are set and ready for regional exchange:** This output aims at designing and implementing a centralized system that enables the development, gathering, processing and exchange of relevant information and knowledge on e-waste management processes at the national level.

188. The national knowledge and information management system is intended to assist decision making processes with due consideration of the lifecycle. It will provide information to ensure process follow up and accountability, as well as general statistics related to the situation of e-waste generation and flows. Thus, it will be a national central data repository to serve all the stakeholders involved with updated information.

189. **Outcome 1.3 Civil society and general public is informed and aware of e-waste issues:** Environmentally sound e-waste management requires wide social participation and support, which in turn demands the provision of specific information and development of strong awareness regarding e-waste issues. In this process, the roles and responsibilities of each group of stakeholder (government officials, producers, recyclers, responsible of compliance schemes, NGOs, and others) need to be identified and incorporated.

190. In addition, it is important to address the media due to their increasingly significant role in providing information to society. Regarding traditional media such as television, radio and newspapers, a set of technological instruments

have been added in the last decades that have dramatically changed forms and ways of communication. All stakeholders want to have presence and incidence in the media; however, to be effective, a good strategy and coordination must be developed in order to take advantage of media to share their inputs, views and opinions aiming at reinforcing the environmentally sound e-waste management.

191. **Output 1.3.1 Media and journalists are trained on e-waste issues and informed regarding the progress of the national and regional initiatives:** This project recognizes the importance of the media to place e-waste issues on the public agenda. The journalists are main actors who can handle public information and produce contents for different media channels. Therefore, the project aims at enhancing their knowledge about e-wastes. Since ESM of e-waste is a fairly new subject, a set of activities have to be set and materials should be prepared to train journalists on this topic.

192. To achieve this objective at the regional level, a manual on e-waste management for journalists will be produced. This manual will include general, basic information on e-waste that should be flexible enough so it can be adapted to the different national situations.

193. It is also important to consider establishing agreements with universities in the region to include training on sustainable e-waste management in their curricula for journalists.

194. **Output 1.3.2 Awareness raising campaigns / customized events is developed to address the needs of specific target groups (i.e. children, women) and society at large:** To accomplish the objectives of this output, national and regional communications strategies should be implemented. These should be addressed at specific groups, considering the particularities of women, men, children and teenagers, as EEE consumers or users, or as people subject to the WEEE environmental impacts.

195. Information and communications technologies (ICTs) are the new tools to facilitate and expand ways of reaching and informing larger numbers of people in society. This should be considered when designing training materials, particularly at the regional level. On line courses and e-learning tools supported by chats, computers, videoconference, webinars, a digital portfolio, and more.

196. As a general approach, awareness raising campaigns have to be developed with realistic, clear and specific objectives. It is important to define accurate, clear and concise messages whose contents should respond to the specific needs of each stakeholder group. In addition, the channels may differ depending on the targeted group. Considering all these variables, a regular monitoring is important to assess intermediate results, make proper adjustments and advance the goals.

197. Special attention will be given to disseminating sex-disaggregated data and qualitative information on women and children dealing with WEEE and EEE, especially during the end of the life cycle. Disseminating these materials will require gender-specific publications or gender-specific trainings.

198. It is crucial to assess the diverse resources that the different stakeholders possess in each country. In these assessments, all resources should be taken into account: early experiences, public media, support documents, social media, etc. Later on, this information could determine, for instance, that the distribution of computers to schools through digital inclusion projects be accompanied by awareness events on ESM of e-waste.

199. Finally, a consideration should be given to the fact that women are strong consumers of certain electric and electronic devices; in addition, there are women international organizations specialized on ICT that are willing to include ESM of e-waste into their action plans.

200. **Component 2: Strengthening of national capacities on waste dismantling and recycling facilities/infrastructure**

201. **Outcome 2.1 E-waste dismantling and recycling facilities or infrastructure are operating efficiently and sustainably in participating countries:** This project component is aimed at strengthening the available infrastructure for take-back and conduct safe dismantling and treatment of the POPs containing e-waste fractions, to make possible their final safe disposal. Considering the current situation, detailed activities will be customized to the needs of each country. Initial inventory of existing e-waste treatment facilities shows that in all countries e-waste treatment facilities exist already. Countries with rather advanced infrastructure for e-waste treatment include

Argentina, Chile, Costa Rica, Ecuador, Guatemala, Peru and Venezuela. Although some facilities exist in Bolivia, El Salvador, Honduras, Nicaragua and Uruguay these facilities operate at a lower level in terms of applied technology and volumes treated. A list of formal E-waste recyclers in the participating countries is Annex M.

202. The development of sustainable business models shall contribute to attracting the private sector to invest in the facilities and ensure their economic sustainability.

203. **Output 2.1.1 In-depth assessments of existing facilities and infrastructure is carried out to select facilities that will be upgraded:** During the PPG phase, an assessment has been carried out to compile a database of all existing formal companies involved in handling and dismantling of e-waste in the participating countries (Annex M). The list has been verified with national government representatives to ensure that only formally established or approved facilities are taken into account. Based on a set of criteria, a general evaluation and screening process has been conducted. In a second stage, during implementation, facilities with the potential to be upgraded will be selected. This selection has to consider a set of indicators such as legal status, certifications, volumes, range of services, existing customers, facility, processes, documentation and, even more important, willingness for cooperation and full transparency. Annex L provides more details about the assessed facilities.

204. **Output 2.1.2 Selected facilities are upgraded to meet SC, BC and other relevant criteria, particularly addressing the separation of POPs containing e-waste fractions and other Stockholm Convention identified emisions (throug shredders and other usual operations) according to BAT/BEP as laid down in UNEP dioxin toolkit categories 2k and 2l:** Dismantling and recycling are not new in the LAC region, where there are already large private-sector investments, facilities and infrastructure operating satisfactorily on e-waste dismantling and recycling. (Annex M). Even in the absence of national regulations, many ICT–sector companies and local dismantlers have been involved on e-waste dismantling and recycling, but they have not been aware of POPs issues, so their operations do not address them.

205. Therefore, this project departs from already existing facilities and infrastructures and places strong emphasis on handling and disposing of properly the e-waste fractions that may contain POP-PBDEs from EEE plastics (e.g. ICT equipment, CRT cases, carcasses of TV sets and monitors) or other circuit parts (e.g. PCBs from small condensers and ballasts) to seek full compliance with the Stockholm Convention and move beyond the recycling exemption of Part IV, Annex A thereof

206. This output aims particularly at improving the current processes, practices and operations used by a number of selected existing facilities for separating PBDE containing fractions in WEEE either through hand-held equipment in case of manual dismantling or technologies incorporated in semi-automated waste separation lines in the participating countries. The focus is on involving existing facilities; only if duly justified, a new facility will be established (funded by local investment). The emphasis is on improving processes, practices and operations rather than only increasing the treated volumes.

207. **Output 2.1.3: ESM and final disposal of 600 tons of brominated plastics anually (totaling 2400 tons during the project lifespan) using BAT/BEP:** Work by demonstration facilities under 2.1.2 and replication at national level will result in a new waste stream containing hazardous POPs, mainly consisting of PBDE containing plastics and other POPs. It is expected that this stream will be in around 600 tons of brominated plastics annually, totaling 2400 tons during the project lifespan. The safe final disposal of this fraction will provide the core of the GEF intervention in this output. At this time, the best option seems to be disposal through co-processing by cement kilns, under SC guidance (Section V, Source category 2B of the SC BAT/BEP guidelines, 2007). Existing cement kilns for waste management within the region will be considered, together with specific hazardous waste facilities. During implementation, emissions tests will be conducted to ensure that air emissions are within accepted regulatory standards. Prior to disposal, proper separation of POPs-containing e-waste fractions will be carried out under output 2.1.2. The project will develop and demonstrate the optimal Stockholm Convention complying disposal operation of the POPs containing fractions from the current facilities and operations. The GEF funding will be used for ensuring the sustainable operations of the fractions as detailed in outputs 2.1.2 and 2.1.3.

208. **Output 2.1.4 Adequate business models are developed to ensure long-term sustainability of the facilities:** To make e-waste recycling sustainable and to ensure that all fractions, valuable and non-valuable, hazardous and non-hazardous, are handled and processed in an environmentally sound manner and resource efficient way, adequate financing mechanisms and business models are needed. For the development of these models, the interests and

rights of all stakeholders have to be taken into account, assessed and processed satisfactorily. EEE producers are looking for the application of the highest possible treatment and recycling standards to ensure legal and environmental compliance and brand protection at all times.

209. **Component 3: Enhancement of Regional Cooperation on e-waste management**

210. **Outcome 3.1 Key issues of e-waste policies are harmonized at the regional level, with due consideration of the relevant MEAs and mechanism like SAICM:** The identification, coordination and integration of key issues of general interest at the regional level will be enhanced by the project. Issues such as the extended producer responsibility (EPR) principle are still complex and new to the legal tradition and practice in the region; therefore, regional discussions and agreements can help invigorate the national legislative processes. Categorizing EEE is also a technical issue that can be tackled regionally; homogeneous categories can also facilitate the operations and the monitoring and make comparable the analyses of results and performance. The best regulations cannot be successful if sufficient recycling facilities lack; regional agreements can facilitate sound investments that guarantee more profitable larger-scale operations. A regional strategy for recycling also requires adequate national rules for transboundary movements of WEEE.

211. There are different alternatives for ruling the EPR and e-waste policies, but all of them require adequate information and knowledge. This project addresses barriers related to information and business skills that may affect the implementation of e-waste policies, particularly those matters that may delay the development of the legislative text. This outcome, in particular, aims at developing a system for information, public registration and reporting to be harmonized with the participating countries. A publicly accessible online platform on e-waste policies will be developed to inform regarding the regulatory e-waste framework and its implementation.

212. **Output 3.1.1. Comparative analysis of existing national policies / regulations is conducted to identify key issues that need to be addressed at the regional level:** During the PPG phase, a preliminary comparative analysis of existing national policies and regulations has been conducted, addressing the identification of key issues and a follow-up (e.g. best practices, standards, contract types, performances, costs, litigation and case law). The focus includes Latin American and selected countries with successful experiences. Countries can take benefit from improved solutions.

213. During the implementation, this preliminary analysis will be discussed and complemented, so the project countries have updated information about EPR and e-waste policies at the regional and international levels, including EPR alternatives, efficiency, financial systems, and templates of agreements for producers and collective systems, among others.

214. **Output 3.1.2. A regional policy platform is operating to facilitate policy harmonization on key issues, with involvement of national MEAs officials:** The aim of this regional platform is to provide project participants, particularly policy practitioners and officials involved in multilateral environmental agreements with a tool that supports them in their policy-making process. This tool will facilitate the collection and organization of the information to guide discussions and enhance the collective learning about reconciling key e-waste policy issues, both at the conceptual and at the practical levels, tailored to the needs of the participating countries. This shall enhance existing regional and sub-regional initiatives to improve e-waste policy harmonization. Proposals for regional harmonization may include issues like: definitions, transboundary movements, custom activities and e-waste management standards. The platform should ensure the participation of key stakeholders such as government authorities, producers, wholesaler, consumers, civil society organizations and recyclers.

215. The regional Platform RELAC will be coordinating this platform and contributing with specialized activities and materials to keep it in operation. Basel Convention Centers ideally should lead discussions of processes related to transboundary movements of WEEE: generation of information, guidelines, training, and protocols for these movements. Special attention should be paid to the movements of e-waste among Latin American countries under international agreements. A monitoring system for the transboundary movement of e-waste should be established in cooperation with the Basel Convention Centers.

216. **Outcome 3.2 Knowledge management systems and information exchange are strengthened:** Knowledge management is an integrated systematic approach to identify, manage and share all information assets, including developing new knowledge on e-waste management. It also considers setting up databases, developing documents,

policies and procedures, as well as involving expertise and sharing experiences of individual experts and stakeholders in this field.

217. This outcome aims at achieving vast, fast and easy access to all types of information and emphasizes interpersonal communications rather than the mere capture and storage of knowledge. It will help in filtering existing information, developing new knowledge, and enabling action through knowledge processing and shared knowledge resources. It will also assist in transferring explicit knowledge, and building or reinforcing adequate technical infrastructures within the region.

218. This will be particularly relevant for updating national and regional information. In addition to specific Latin American research centers; organizations like StEP can make essential contribution if some of their studies are translated to Spanish.

219. **Output 3.2.1. The policy platform is integrated into a regional knowledge / information management system:** This project output aims at enhancing the existing regional knowledge and information systems and coordinating them with the policy platform described under Output 3.1.2. Reaching this goal requires paying attention to the relevant stakeholders within the diverse sectors and countries since they play key roles in the overall system. For knowledge management, this approach should facilitate generating information on relevant aspects of the e-waste management process, such as legal, technical, educational, financial, social, environmental and others.

220. **Output 3.2.2. National knowledge / information systems are linked to the regional one:** National information on e-waste management can help develop best practices that can be later reproduced at the regional level. Therefore, a mechanism for information dissemination at the regional level should be set with the participating countries. The basis for this is designing and implementing a model that allows the linkage of the national knowledge/ information systems with the regional one. This model should consider standardization at the outset and the corresponding interconnection as a building process with different stages. In a first stage, for instance, a set of objectives and goals and a battery of common indicators that apply to all national systems can be included in the regional one to start generating comparable information on e-waste management. Then, information and knowledge that supports the set objectives, goals and indicators can be processed and included. The next steps should be based on the initial linkage experiences.

221. Currently, inter-organization collaboration is increasingly important. Organizations, workgroups, teams, and individuals, supported by information and communication technologies (ICTs) can adopt new ways of working. For the purposes of this project, a Communities of Practice model is proposed to provide a new mechanism for connecting the stakeholders of the participating countries with the goal of gaining knowledge on e-waste management through sharing information, knowledge and experiences, as well as establishing collaboration among them, so they can increase the possibilities to develop successfully their own activities, grow personally and professionally, and contribute to achieve success in their countries.

222. The Communities of Practice approach is flexible and can be useful in providing a virtual model to connect people who, otherwise, might not have the opportunity to interact, either with certain frequency or even at all. It provides a participatory context for people to communicate and share information. Introducing a collaborative process to groups enables dialogue, stimulates learning and helps people organize around purposeful actions to deliver tangible results.

223. This output requires that the participating countries already count with some basic information and possess communications technologies equipment that is compatible, so they can be linked. This should include software programs that allow working with e-mail systems, telecommunications applications like Skype, and web conferencing systems including web seminars ("webinars"). At the national level, each country should appoint at least one person who will be in charge of compiling national information and providing it for the regional communications system. Countries must also commit to an active participation at the regional level.

224. **Outcome 3.3 South -South cooperation is enhanced:** South-South and triangular cooperation has been successfully promoted and implemented by national governments, regional entities and UN agencies. It allows for an enhanced collaboration of the participating countries regarding political, economic, environmental, technical and social issues. In this project, the focus will be on the ESM of e-waste, but the aim is to use already existing cooperation channels and institutions. Participating countries will share their knowledge, skills and expertise to meet the project objective and to ensure the sustainability of the project outcomes. The governments will take the

lead and will promote active participation of the public and private sectors. The agenda for the cooperation will include, but will not be limited to knowledge sharing, awareness raising and the development of regional post-project action plans and initiatives.

225. **Output 3.3.1 Country cooperation is strengthened in the region through enhanced knowledge sharing:** Based on outcomes 3.1 (policy harmonization) and 3.2 (knowledge management and information exchange), participating countries will enter in additional, bilateral commitments to share their experiences, knowledge, skills and expertise on the ESM of e-waste to help other countries to meet project objectives and support the sustainability of the project outcomes at the regional level.

226. **Output 3.3.2 Regional post-project action plans and initiatives are developed:** Based on project results, participating countries will expand their cooperation to prepare joint regional post-project action plans and initiatives to ensure project sustainability. Some initiatives may be based on replications of successful stories, best practices and lessons learned from project outcomes, with the aim to complement or scale-up previous activities and results, wherever possible. This output will ensure sustainability of the project activities and enhance ownership, e.g. of the platforms developed through the project.

227. **Component 4: Project Monitoring and Evaluation**

228. This component addresses project management, oversee and appraisal, as outlined in Part II, C.

A.6. Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

229. Main project risks have been assessed with the national counterparts during project preparation and the corresponding mitigation measures have been designed and will be ready to be implemented. The following table contains the details risk analysis for this project:

230. **Table 1:** Assumptions and risks to the project, their likelihood and potential mitigation measures

Assumptions and Risks	Likelihood	Mitigation Measures
General Overall Risks		
Current high interest of governments, NGOs and CBOs on e-waste management could diminish due to changes in governments, which would cause a reduced support for the project, thus affecting its implementation and sustainability.	Low	Ensure good communication among all stakeholders and help them with information / knowledge sharing mechanisms to keep the interest high and enhance South-South cooperation. During project implementation, invest sufficient time for post-project planning, especially at the regional level, to involve regional institutions and national governments, while keeping their interest on e-waste management. Establish sustainable business models for the facilities to ensure long-term planning and to attract investors.
Private sector participation is very low or does not occur	Low	The risk of "non-participation" of the private sector is very low, since the existing formal recycling industries are very interested in the project. At the moment, more than 74 private facilities apt for the project have been identified and 14 of them have submitted co-financing letters. However, if "non-participation" were detected, it will be addressed by approaching the concerned companies and sharing with them detailed information on the project, so they can clearly identify their own benefits vis-à-vis their required commitments, enabling them to reassess their interest on participating in the project.
Enforcement of the e-waste management strategy, collection schemes and treatment options do not work properly. As a result, e-	Low	Develop careful planning and communication with the corresponding stakeholders and provide them with proper and sufficient trainings. Ensure appropriate design of the collection scheme, dismantling and

waste does not reach the formal channels or streams and there is insufficient input for the dismantling and recycling facilities. In addition, there is inappropriate treatment of some e-waste fractions.		treatment facilities, with the best available experts and in close cooperation with the national organizations; pilot them on a small scale to improve them, before scaling them up. Organize frequent trainings and capacity building activities and implement internationally recognized standards at the facilities.
Informal sector will continue its inappropriate activities or these will even become stronger, so a substantial amount of e-waste will not reach the appropriate facilities or recycling streams.	Medium	Establish attractive options, including business models, with participation of the informal sector (waste collection, dismantling and recycling activities) to ensure economic sustainability, and integrate them already during the planning stage of the collection scheme. Ensure a good relationship between the staff of the formal facilities and the informal sector.
Countries within the region do not have a common understanding of MEAs or they do not agree on the options for e-waste management in the region	Low	Organize regional meetings and workshops to discuss about joint implementation of MEAs and related projects. Establish an information platform to facilitate communication among participating countries.
Due to improper handling of ODS, project contributes to climate change.	Low	The project will deal with selected EEE and WEEE, mainly without ODS. If cooling appliances are included, they will be managed with utmost care so ODS are not emitted to the environment.
Illegal or improper e-waste transboundary movements might occur	Medium	Sub-regional and regional activities will include workshops in cooperation with the Basel Convention and Stockholm Convention Secretariat and Regional Centers to raise awareness on transboundary movements of hazardous wastes and find appropriate solutions for e-waste. Control and monitoring tools will be set in accordance with the relevant MEAs.

A.7. Coordination with other relevant GEF financed initiatives

231. UNIDO will seek coordination on GEF-financed initiatives with a variety of national and regional stakeholders in Latin America, particularly with the national governments, the Basel Convention Regional Centers in Argentina and El Salvador, the Stockholm Convention Centers in Brazil and Panama, the Combined Basel-Stockholm Conventions Center in Uruguay, the RELAC initiative, and manufacturers of EEE.

232. Coordination with the GEF-financed projects *"Enabling activities to review and update the National Implementation Plans (NIPs)"* will be encouraged. UNIDO is currently assisting the reviewing and updating of the SC NIPs for Mexico, Honduras, Costa Rica, Nicaragua, Guatemala, Venezuela, Ecuador, Peru and Bolivia. In addition, UNEP is assisting Chile, Argentina, Uruguay and Paraguay in reviewing and updating their NIPs. Since e-waste management has high priority in the region, these NIP review and update processes are likely to deal in depth with some of the new POPs, particularly with polybrominated diphenyl ethers (PBDEs) and pentachlorobenzene (PeCB), which are mainly associated with plastics present on e-waste streams and with unintentional emissions from EEE and combustion-related processes. Therefore, the proposed project has close linkages with the respective NIP update processes, and thus frequent information exchange is expected to occur, which will help coordinate project activities and avoid unnecessary duplication.

233. UNIDO will also use lessons learned from GEF and non-GEF financed e-waste projects in other regions, such as the project implemented in Ethiopia (GEF ID 5040), Uganda, Tanzania or Cambodia. The implementation of these projects showed that financial mechanisms, enforcement of national policies as well as sustainable business models, are fundamental to ensure environmentally sound treatment of e-waste. Further projects in the field of e-waste management are under preparation for the Philippines, Uganda, the SADC as well as the ECOWAS region. Wherever adequate lessons learned will be shared within the ongoing projects.

234. Coordination with non-GEF financed initiatives will also be done mainly with the existing RECPnet (in particular with "Red Latina") at the regional level of the project. In addition, close coordination will take place with initiatives led by UN-organizations, particularly ITU, UNU, WHO, ILO, the Global Partnership on Waste Management, the Partnership for Action on Computing Equipment (PACE) and the Solving the E-waste Problem Initiative (StEP).

235. ITU, being the specialized UN agency for ICTs, is committed to helping the world adapt to the new challenges arising in a fast-evolving environment. As part of its raising awareness and capacity building programme, ITU has been organizing a series of events on WEEE management worldwide with a special focus on the Americas. Additionally, ITU being an international standards developing organization, has developed a set of standards aimed at reducing the e-waste burden

236. UNU has already supported a number of e-waste related activities in Latin America including the organization of an E-waste Academy for Managers (EWAM) Edition in El Salvador, a survey of the e-waste situation in Latin America and the Caribbean and we have quantified the e-waste arising in the region in detail. UNU is committed to further actively support the region to improve their e-waste management system.

237. WHO has developed knowledge and tools to build capacity among the health sector to detect and prevent e-waste exposures. WHOs involvement in the project will be based on this experience. In addition, relevant health protection information will be developed for dissemination among the main risk groups.

238. The ILO and the Sectoral Policies Department (SECTOR) have worked on e-waste issues already for many years. In 2012 SECTOR, together with the ILO unit for occupational safety and health, published the study *"The global impact of e-waste: Addressing the challenge"*. This paper includes a case study on Bolivia and a desk review on Brazil. With the support from SECTOR, ILOs office has carried out activities on e-waste in China and Serbia.

239. The GPWM is an open-ended partnership for international organizations, Governments, businesses, academia, local authorities and NGOs. It was launched in November 2010 to enhance international cooperation among stakeholders, identify and fill information gaps, share information and strengthen awareness, political will, and capacity to promote resource conservation and resource efficiency. UNIDO is involved in the initiative since its beginning and leads the focal area on e-waste.

240. The Partnership for Action on Computing Equipment (PACE) was developed as a multi-stakeholder public-private partnership that provides a forum for representatives of personal computer manufacturers, recyclers, international organizations, associations, academia, environmental groups and governments to tackle environmentally sound refurbishment, repair, material recovery, recycling and disposal of used and end-of-life computing equipment. PACE has developed a Guidance Document which emphasizes reuse and recycling, with the aim of avoiding the final disposal of such used and end-of life products in final-disposal facilities such as landfills or incinerators.

241. The Solving the e-waste problem Initiative (StEP) is an international initiative comprised of manufacturers, recyclers, academics, governments and other organizations committed to solving the world's e-waste problem. By providing a forum for discussion among stakeholders, StEP is actively sharing information, seeking answers and implementing solutions. As UNIDO is an active member of StEP, regular information exchange with other StEP members will take place in order to avoid duplication of work and streamline ongoing activities in the region.

242. In addition to the above mentioned UN organizations, international partners from academia and the private sector will contribute to achieve the project goal. In particular, project activities will be actively coordinated with initiatives implemented by the University of Natural Resources and Life Science (BOKU) from Vienna, EMPA, Ernst & Young Belgium, Microsoft and Ericsson.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

243. Project execution will provide an opportunity for involving a wide range of national and regional stakeholders, such as ministries, municipalities, research and academic institutions, local authorities, private-sector organizations, e-waste recyclers, NGOs working on e-waste management, including women's and children's groups. As stated, close coordination will take place with initiatives led by other UN-organizations, particularly

ITU, UNU, WHO, ILO. As described in the following paragraphs, public private partnerships (PPP) may be a key coordination and working mechanism during project execution.

244. During project preparation, UNIDO has already been involved with a variety of stakeholders in Latin America. The group of key stakeholders includes government organizations (especially ministries dealing with issues on the environment, health, industry, communications, research and science), Basel Convention Centers (Argentina, El Salvador and Uruguay), Stockholm Convention Centers (Brazil, Panama and Uruguay), RELAC, ISWA, EMPA, WRF, manufacturers of EEE, IGOs (UNU, ITU, WHO, ILO, ECLAC, PAHO, WIPO and ECLAC), the U.S. EPA and the GEF. The main role of these stakeholders has been aligned to support project implementation at the national and/or regional levels.

245. The implementation of this project will build on the coordinated capacities of the national and regional partners. The policy-oriented activities will be implemented with the involvement of high-level public officials and other senior partners, while the technical matters and the demonstration activities will be jointly implemented by the technically-oriented associates, in coordination with the corresponding authorities.

246. The following table contains an analysis of the stakeholders that will be involved in the project. A detailed list of stakeholders is in Annex L.

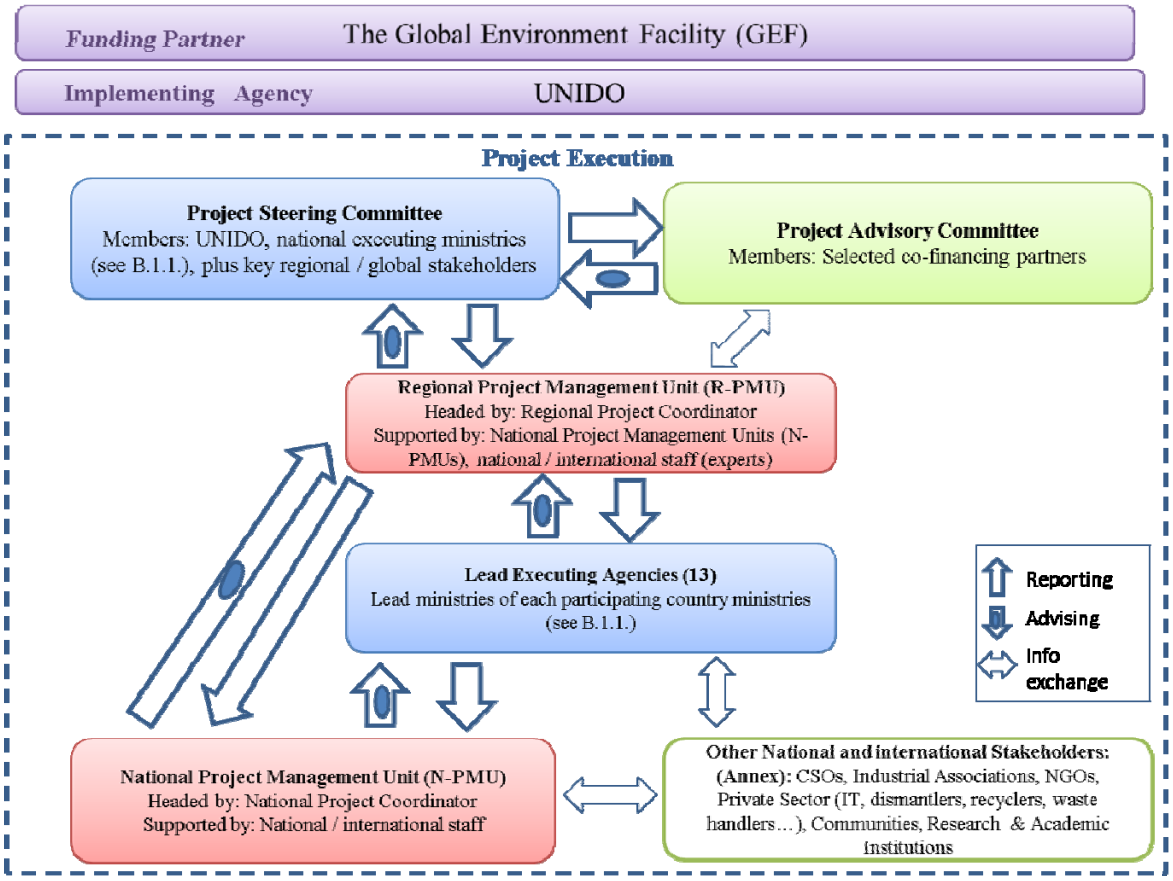
Stakeholders	**Proposed involvement**
At the regional level	
SC Centers	Information sharing on Stockholm Convention related issues and activities, whenever required.
BC Centers	Information sharing on Basel Convention related issues and activities, e.g. transboundary movements and their implication in the identification of hazardous wastes or illegal trade, whenever required.
RELAC Platform	Coordination of policy activities and information management (knowledge platform); enhancement of the WEEE regional networks focusing on the knowledge management approach: articulate sectors, generate knowledge, and build capacity and a communication system.
Manufacturers (OEMs / ”brands”)	Sharing of practical experiences from LAC countries where they are implementing compliance or voluntary take-back programs
At the national level (general overview)	
Government institutions[5]	Leading the national project execution and monitoring of day-to-day activities within the countries
Private sector associations (manufacturers, retailers, ICT, etc.)	Representing project stakeholders in project meetings, working groups, etc. and communicating needs and experiences from the private sector.
Collectors, dismantlers, recyclers	Supporting the stakeholder discussions at the national level with practical experiences about collection, recycling, informal sector competence, etc.
NGOs and civil society	Supporting e-waste related communication activities at the national level, whenever feasible.

[5]Number and type of involved Governmental institutions depend on the specific situation of each country.

	Special focus will be given to the involvement of women's groups and/or women's associations.
Academia (Universities, research institutes), IGOs and others	Supporting development of national WEEE management systems with specific information and research on open, unsolved topics that focus on "filling the knowledge gaps" at the national level. This regards all areas (systemic, policy, economic, technical, etc.)

B.1.1. Institutional arrangements for project implementation

247. The following illustration summarizes the overall project structure and implementation arrangements.



248. The GEF Implementation Agency (IA) for the Project will be UNIDO, with headquarters in Vienna, Austria, and regional/local offices in Mexico, Nicaragua, Colombia, Ecuador, Bolivia and Uruguay. UNIDO's Headquarter-based Project Manager will oversee project implementation and will work closely with the national and regional UNIDO's field offices on project monitoring and follow-up. All activities implemented and project management will be in accordance with UNIDO and GEF rules and regulations, as well as with the approved project document.

249. The Project will establish a Project Steering Committee (PSC), which will consist of UNIDO, national representatives of the ministries that are the leading project executing counterparts and additional stakeholders, based on project objectives set in the approved project document. Meetings of the PSC will be held at least once in a year. Other stakeholders and experts can be invited to the meetings depending on the specific needs or topics of a meeting agenda. The TOR of the PSC will be drafted and approved during the project inception workshop;

however, they will include at least the following tasks:

- Review of annual work plans;
- Review of annual GEF reporting (PIRs);
- Review of annual budgets vis-á-vis the GEF grant and co-financing;
- Monitoring and Evaluation of project progress;
- Guidance on strategic issues and activities; and other issues to be determined in the TOR

All the PSC activities and decision-making will be conducted, in line with the project approved objectives, goals, outcomes, outputs, activities, indicators and budgets, and in adherence to the GEF and UNIDO requirements.

250. A Project Advisory Committee (PAC) will be established. Willing co-financing partners will be part of the PAC, and it will ensure that all project partners are informed and updated on the status of project implementation and developments at the national and regional levels. Further the PAC will be involved in the review of technical documents as well as monitoring and evaluation activities. As its name indicates, the PAC will make recommendations and suggestions but will not have power to enforce them.

251. The project will further set-up a Regional Project Management Unit (R-PMU) consisting of a regional project coordinator (RPC) supported by required minimum administrative staff. The R-PMU will be hired by UNIDO and will be mainly responsible for guiding and following up day to day project execution, particularly the harmonization of the activities through the region. The RPC will promote the regional activities and support the countries in their exchange of information and knowledge. The regional coordinator(s) will work in very close cooperation and under UNIDO project manager, and will coordinate with the existing regional networks. The main task of the R-PMU include, inter alia:

- Accompanying and advising execution of regional project activities
- Coordination of national activities at the regional level
- Establishment of regular project reports, PIRs and other monitoring reports, as required
- Organization of regional workshops and meetings
- Communications regarding its mandate with national, regional and international stakeholders

252. In agreement with the representatives of all participating countries, the existing regional knowledge management platform RELAC will serve as a starting point for information exchange and harmonization of activities. RELAC will host the regional knowledge management platform and will work in close cooperation with the R-PMU. Regional information exchange and knowledge transfer will be facilitated by conducting regional workshops and establishing a regional knowledge management platform. Regular web-based and face-to-face meetings will support effective communication.

253. At the national level, lead executing agencies will be the relevant ministries in charge of the project in their respective countries. This will include the Secretary of Environment and Sustainable Development in the Argentine Republic, the Ministry of Environment and Water of the Plurinational State of Bolivia, the Ministry of Environment of the Republic of Chile, the Ministry of Health of the Republic of Costa Rica, the Ministry of Environment of the Republic of Ecuador, the Ministry of Environment and Natural Resources of the Republic of El Salvador, the Ministry of Environment and Natural Resources of the Republic of Guatemala, the Secretariat of Natural Resources and Environment (SERNA) of the Republic of Honduras, the Ministry of Environment and Natural Resources (MARENA) of the Republic of Nicaragua, the Ministry of Health of the Republic of Panamá, the Ministry of Environment of the Republic of Peru; the Ministry of Housing, Land Planning and Environment of the Eastern Republic of Uruguay, and the Ministry of People's Power for Ecosocialism and Water of the Bolivarian Republic of Venezuela. Sub-contracts for national project execution for management of national outputs under component 1 and 2 will be issued in accordance with UNIDO’s procurement procedures, to the national executing partners or other partners that they have selected under procedures that warrant the best value for the money; fairness, accountability, integrity and transparency of the procurement processes; effective competition, when it is possible; and the best interest of the GEF, UNIDO and the participating countries. Each country will indicate or confirm which arrangement(s) fit its particular situation.

254. As a part of the national execution, every national executing partner will establish a National Project Management Unit (N-PMU) consisting of a National Project Coordinator (NPC) and 1-2 support staff, only if needed, to supervise day-to-day project activities in their respective countries, and to report to the RPC, to country officials and UNIDO.

255. As described, the NPCs will liaise with the appointed RPC to align their activities with the initiatives of the other countries and promote their developments.

256. The N-PMUs will further ensure frequent communication with other relevant stakeholders that are active in the respective countries in order to ensure cooperation and avoid duplication of work.

257. The members of the RECPnet as well as the Basel and Stockholm Convention Regional Centers will be involved for technical assistance and knowledge management transfer, whenever needed. The executing counterparts of participating countries can also nominate other national executing partners (universities, NGOs, CSOs, private companies, etc.), following internal procedures in line with the GEF and UNIDO requirements.

258. UNIDO may also enter into other contractual agreements with selected institutions within the region to support the execution of specific project outputs, particularly those that may require international experts or international bidding procedures for regional components.

259. Additional international and national consultants will be recruited based on project requirements drafted by UNIDO's project manager on the basis of project requirements. Terms of Reference (ToRs) will be prepared by UNIDO in collaboration with the national project coordinators, if required.

260. Procurement contracts for larger, centralized procurement requirements will be managed exclusively by UNIDO.

261. As provider of the fund for this project, the GEF logo will appear on all project publications and outreach materials.

262. A quote on publications of GEF funded projects must also acknowledge the GEF's participation. UNIDO logo will be more visible and separated from the GEF logo, if possible, since for safety reasons UN visibility is more important.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local level, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

263. **Socio-economic benefits:** Inadequate management of e-waste causes significant environmental impacts and health effects. In turn, there are important regional obstacles that prevent the region from effectively applying sound environmental, social and economic policies aimed at stimulating proper WEEE management and disposal. These include (a) legal gaps for WEEE management; (b) poor articulation of the collection, transport, recycling, reuse and disposal activities for WEEE streams; (c) weak application, if any, of the extended producer responsibility (EPR) principle to help fund the required WEEE management and disposal policies; (d) lack of knowledge of WEEE management, particularly regarding POPs and other hazardous fractions contained in e-waste; (e) lack of information regarding the availability of and the procedures for transfer of technology; and, (f) shortage of sustainable economic models to support proper WEEE management.

264. In this regard, during development of the PPG phase UNIDO has involved new project partners including the International Telecommunications Union (ITU), the World Health Organization (WHO), the International Labour Organization (ILO), the United Nations University (UNU), the United States Environmental Protection Agency, the Swiss Federal Laboratories for Materials Science (EMPA), the International Solid Waste Association (ISWA), Boku University of Austria and others, in order to tackle properly these challenges and allow the project to further identify risks and opportunities so the policymakers in the region can consider them in the framework of this project when designing new policies and regulations for waste management, particularly for the e-waste streams.

265. The proposed project aims to achieve the environmentally sound management of e-waste with the main global environmental benefit of reducing human exposure to hazardous chemicals such as POP-PBDEs, u-POPs and PCBs that are likely to occur due to improper WEEE management practices. The introduction of environmentally

sound management systems at selected e-waste recycling facilities will contribute to the reduction of toxic chemicals that, otherwise managed, affect human health and the environment. It will also promote a cost-effective and safe recycling of WEEE. In line with the Stockholm Convention, the project will contribute to avoid recycling of POP-PBDEs in the long run.

266. Based on the successful experience of Colombia (not a part of this project) under EMPA support, manual processes will be encouraged for the preparation for reuse, recovery and disposal of WEEE since they are considered an important source of employment and business development. UNIDO has demonstrated that each post created in SMEs helps create five posts related to goods and services required by them. Furthermore, the development or adoption of technologies for recovery of highly valued commodities (precious metals, rare earths, etc.) can also encourage foreign investment, research and technological development and, if this is linked with the proper management of the POPs and other hazardous fractions, there is a clear case for a win-win situation. Initially, through the project, national partners will select at least 26 facilities for up-grading, and it is estimated that the BAT/BEP operations for separating brominated plastics containing POPs will require hiring at least two additional people per facility. So, the initial demonstration effort aims at creating at least 250 new jobs related with the project and, indirectly, many more through existing companies that will follow at their own expense the road open by the selected facilities.

267. Overcoming the legal gaps for WEEE management within most of the region is an additional benefit of this project and this will be conducted particularly under Outputs 1.1.1 (National policies and regulations are drafted or reviewed), 1.1.2 (National e-waste management strategies are established), and 3.1.1 (comparative analysis of existing national policies / regulations is conducted to identify key issues that need to be addressed at the regional level). Only by banning incineration and pyrolysis, prohibiting the recycling of plastics with BFRs and demonstrating BAT/BEP to safely manage and dispose of PBDEs-retarded plastics, it is expected that the project can influence on 90% of the "potential" POPs emissions that would occur otherwise.

268. The project, mostly by channelizing co-financing and private investment, will contribute to overcome the poor articulation of the collection, transport, recycling, re-use and disposal activities for WEEE streams. In this regard, implementation of Output 1.1.3 (Guidelines for the e-waste management activities are developed and tested) will be a key development.

269. It is also expected that, through newly drafted or reviewed national policies and regulations (Output 1.1.1), the project can strengthen the application of the extended producer responsibility (EPR) principle to help fund the required WEEE management and disposal policies. This is not the case now in Costa Rica, the participating country with most regulatory experience on e-waste management. There, the Executive Decree No. 35933-S on Integrated e-Waste Management (2010) has shown incompatibilities with the General Waste Law No. 8839, particularly on the implementation of the EPR principle for special waste. As a first step to resolve this issue, the Executive Decree Nº 38272-S (Declaration on Special Waste Management) has been issued in early 2014 but, to fully implement EPR, the Executive Decree 35933 is currently being revised to eradicate all contradiction with the other two legislative instruments. This process is still ongoing and the Costa Rican national counterparts expect that this project will support the successful completion. At the same time, the project expects that this case will clearly illustrate to the other project partners how to address the EPR principle in their e-waste regulations, so the required WEEE management and disposal policies can be funded at the right level.

270. To tackle the lack of knowledge on WEEE management, particularly regarding POPs and other hazardous fractions contained in e-waste, the project has established cooperative efforts with the UNU, the U.S. EPA, EMPA, ISWA, and Boku University of Austria. During the PPG phase, UNIDO has entertained several conversations with them in order to start advancing and polishing activities under project Outputs 1.2.1 (Officials and staff are trained on e-waste management), 1.2.2 (Selected universities include e-waste management in their curricula and research programs); 1.2.3 (National knowledge and information management systems are set and ready for regional exchange); and 3.3.1 (Country cooperation is strengthened in the region through enhanced knowledge sharing). These activities have already attracted the attention of other potential donors and, it is expected that it will be also accompanied by government investments through national universities that will be selected and involved on training, research and development, and information and knowledge exchange activities. Naturally, all these activities will help overcome the lack of information on the availability of and on the procedures for transfer of technology that has been diagnosed.

271. To help overcome the shortage of sustainable economic models to support proper WEEE management, the project includes Output 1.1.4 (A national financial strategy is defined within policies and regulations). As stated under para 48, in Argentina, several bills and projects of law at the federal level have been introduced in the Senate, but none of them has been approved due to two major obstacles: cost internalization and adoption the EPR principle. This need by Argentina has been felt and supported by the rest of the participating countries since the policy situations are quite similar. The benefit of working on such models will express in a quicker approval and enactment of the required legislation.

272. To achieve these beenfits, the project will in a first step rely on the involvement and engagement of private sector stakeholders to share information and create awareness among the industry. The project will also involve the general public trainings and awareness raising campaigns. Of course, all relevant socio-economic benefits will be monitored throughout project implementation by UNIDO's relevant indicators (amount(s) of material(s) recycled or reused, tons; commercial value of materials recycled or reused, expressed in USD).

273. **Gender inclusion:** The environmentally sound management of POPs and its related industrial activities has important gender dimensions. At the household level, the exposure to EEE and WEEE, especially through improper WEEE handling practices, varies in quantities and concentrations and women and children can be particularly affected. Biological factors, notably body weight and physiological differences between women, men and children, influence the susceptibility to health damage from exposure to toxic chemicals. In the work place there are social factors, primarily gender-determined roles that may have an impact on the level and frequency of exposure to WEEE-related chemicals and their resulting impacts upon human health.

274. Further, studies show that relative to men, women tend to have a smaller ecological footprint. Their production and consumption patterns are often more resource-efficient, they are more likely to recycle, they have more knowledge about local ecosystems, and they make more sustainable decisions for their households and businesses. These factors will be taken into account during the entire project implementation, e.g. the design of awareness raising campaigns.

275. In line with UNIDO's Environment Branch Gender Strategy, specific attention will be given to gender-mainstreaming throughout the project life cycle, e.g. (i) workshops (measured with indicators like: number of participants (by sex); number of gender-specific presentations (e.g. on WEEE handling and disposal); number of gender and children-specific information materials);(ii) trainings (measured with indicators like: number of male/female trainees; number of gender-specific presentations; number of gender-specific information materials); (iii) gender-specific awareness-raising campaigns (such as campaigns targeted to women's group; gender-specific information materials) and (iv) gender-specific technical trainings.

276. Regarding WEEE management, the situation of female-to-male workers differs from country to country; nonetheless it appears that women and children are, at least, living close to recycling facilities and disposal sites, which might pose high risks to their health. The project will contribute to a socially inclusive ESM of WEEE, involving the general public through awareness raising campaigns to strengthen their knowledge on how to address and reduce their potential exposure of toxic chemicals.

277. Gender dimensions will be introduced both at the project and policy levels. The project will conduct consultations with relevant gender groups during its inception phase, to assess how the decision making processes of the project will impact upon women and men. For instance, consultations will be held with NGOs that engage with the informal sector of waste processing and handling in the beneficiary countries to better understand how project interventions will impact men and women in the sector. Where possible, such gender groups and/or NGOs will also be invited to take part in project workshops to ensure stakeholders are aware of the associated gender dimesnions and concerns. In addition, through the public awareness raising activities (e.g. gender-specific publications and trainings) within the framework of the project, representation and commitment of vulnerable worker populations and local communities in the formulation and incorporation of gender dimensions in project activities will be secured, thus enhancing the sound management of chemicals in general and of WEEE in particular.

278. Further, when up-scaling the e-waste treatment facilities gender specific issues will be considered in order to make the facilities attractive to women as a work space. This will include for example, equal pay for women and man as well as family-friendly practices, such as child-care and flexible working hours.

279. **Global Environmental Benefits:** The project will ensure that WEEE is properly recycled, that would otherwise enter the global environment to compound global environmental problems. The main benefits are related to e-waste containing pollutant substances such as lead, mercury, arsenic, cadmium, selenium, hexavalent chromium, brominated flame-retardants (particularly POP-PBDEs and PCB that are listed in the Stockholm Convention), halogenated-substances (CFCs), among others. These substances can be released, into the environment, through inadequate recycling of e-waste components, which may cause negative impacts on health and the environment. Additionally, some processes of recycling or energy recovery of e-waste components may generate significant emissions of dioxins and furans (chlorinated and brominated).

280. Regarding the brominated flame-retardants listed in the Stockholm Convention (POP-PBDEs), the commercial Penta-BDE was used in the manufacture of printed circuit boards and the commercial Octa-BDE was used on plastic polymers. The production of these compounds ended in 2004, so they are still present in e-waste currently generated and will continue to be present in the coming years. The project will investigate this issue in-depth.

281. According to statistics compiled by UNEP on the percentage of the various types of EEE present in the waste streams, the fraction of plastic polymer and the content of POP-PBDEs can be estimated. So, the e-waste generated by the 13 project participating countries, represents an emission of POP-PBDE estimated between around 26 and 60 tons/year. The project aims to tackle about 10% of them (2.6 to 6 tons/year during five years).

282. The project will use the following indicators to assess global environmental benefits: number of countries receiving GEF support for ESM of POPs and phasing out POPs production and use; number of countries with a comprehensive framework to ensure an enabling environment for safe-guarding the ESM of POPs in e-waste; number of facilities with an ESM of POPs.

283. Another benefit of this project is the incremental recovery of non-renewable raw materials (ferrous and non-ferrous metals) and petroleum plastics polymers; the minimization of pollutants' releases from e-waste components (POPs compounds, heavy metals and ozone depleting substances) and those formed in the recycling process or energy recovery from e-waste (including dioxins and furans).

284. Through the establishment of ESM of e-waste, other global environmental co-benefits will arise. For example, the e-waste flow into the recycling facilities will be better monitored to ensure that condensers and transformers containing PCBs will not be recycled there to prevent cross-contamination. Recycling of POP-PBDEs from EEE plastics (e.g. from CRT cases, TV sets and monitors) will be reduced to avoid potential effects to human health and the environment. Awareness rising activities (funded through co-financing) will also include topics on Hexabromocyclododecane (HBCD) that can be found in insulation of cooling appliances or in HIP-containing enclosures for EEE, since the corresponding amendment entered into force on 28 November 2014.

285. Proper WEEE practices will also lead to the reduction of uncontrolled incineration of halogenated plastics in cases of EEE and PCV insulation of electrical cable; and thus will contribute to the reduction of unintentionally produced dioxins and furans.

286. To achieve these global environmental benefits, the project has secured co-financing (cash and in-kind) from the governments, the private sector and other international players.

C. DESCRIBE THE BUDGETED M &E PLAN:

Table 2: Monitoring and Evaluation

M&E Activity Categories	Feeds Into	Time Frame	GEF Grant Budget ($US)	Co-financing Budget ($US)	Responsible Parties
Measurement of GEF Tracking Tool specific indicators	Mid-term Review and Terminal Evaluation Reports	At project mid-term and completion	10,000	60,000	• NPC and PMU provide inputs and draft reports; • NPC submits drafts for approval by project steering committee (PSC); • PSC submits final inputs/reports to UNIDO PM
Monitoring of project impact indicators (as per Log Frame)	Project management; Semi-annual progress report; Annual GEF PIR	To be agreed between executing partners and UNIDO PM	20,000	160,000	
Periodic Progress Reports	Project management; Annual GEF PIR	To be agreed between executing partners and UNIDO PM	20,000	322,400	
Midterm review/ evaluation	Project management	At project mid-term	50,000	215,000	Independent evaluator, for submission to UNIDO PM and UNIDO ODG/EVA
Independent terminal evaluation	Terminal Evaluation Review (TER) conducted by UNIDO EVA	Project completion	100,000	15,000	Independent evaluator, for submission to UNIDO PM and UNIDO ODG/EVA
Total indicative cost			**200,000**	**772,400**	

287. Project monitoring and evaluation (M&E) will be conducted in accordance with UNIDO's established guidelines for conducting mid-term reviews and terminal evaluations of GEF-funded projects and GEF procedures. The M&E activities are defined under project component 4 and the M&E budget is in the Table below. Monitoring will be based on indicators defined within the project results framework and complemented by the annual work plans. The GEF tracking tool will also be used as a monitoring and evaluation tool, and will be submitted three times during the duration of the project (CEO approval, mid-term and at project closure).

288. UNIDO as Implementing Agency will involve the GEF Operational Focal Points, national executing counterparts and project stakeholders at all stages of the project monitoring and evaluation to ensure that the results lead to improved current and future project design and implementation.

289. According to the GEF and UNIDO Monitoring and Evaluation policies, follow-up studies like country portfolio evaluations and thematic evaluations can be conducted. All project partners and contractors are obliged to (i) make studies available, and provide reports or other project- related documents, and (ii) facilitate interviews with staff involved in the project activities.

290. Monitoring responsibilities: Day to day monitoring of the national project implementation will be the responsibility of the NPCs who will report to the regional coordinator and UNIDO's project manager on a regular basis. The NPCs will prepare the Annual work plan, including indicators, in coordination with UNIDO's project manager and the regional coordinator (RC). The NPCs will also inform UNIDO of any delays or difficulties during project implementation so that appropriate and timely measures can be taken.

291. The NPCs will prepare, in consultation with the RC and PSC, inputs for the assessment of the GEF tracking tool indicators (before mid-term and terminal evaluations) and the project impact indicators (as per Log Frame) as part of project management, semi-annual progress report and annual GEF PIR. The drafts will be submitted to UNIDO, through the RC, for review and approval. Periodic progress reports will also be prepared by the NPCs as part of the annual GEF PIR, including the reporting of co-financing activities and UNIDO indicators.

292. UNIDO, through meetings or exchanges with project counterparts, or as frequently as deemed necessary, but not less than semi-annually, will undertake periodic monitoring of the project implementation progress. This will allow parties to troubleshoot any problems pertaining to the project timely, to ensure the smooth implementation of project activities.

293. UNIDO will conduct periodic visits based on agreed schedules, to be detailed in the project Inception Report and each Annual Work Plan to assess project progress. Other members of the PSC and the PAC may also accompany these visits. A Field Visit Report will be prepared by UNIDO and will be circulated to the project team and the Steering Committee members one month after the visit.

294. Annual Monitoring will occur mainly through PSC meetings, which will take place at least once a year.

295. Independent evaluation responsibilities: The project will undergo at least two independent external evaluations, a mid-term review and a terminal evaluation, as follows:

296. Mid-term review: An independent mid-term review will be performed by one or more independent consultant(s). The evaluation will assess progress made towards achievement of project objectives and outcomes, and will propose project amendments, if needed. The evaluation will focus on project performance in terms of relevance, effectiveness, efficiency and timely implementation. Findings of this evaluation will be incorporated as recommendations for further project implementation during the second half of project duration. The TORs for this evaluation will be prepared by UNIDO based on the generic TORs developed by the UNIDO and GEF Evaluation Offices.

297. Terminal evaluation: An independent final evaluation will be performed by an independent consultant after project completion, and will consider the outcomes of the mid-term review. It will focus on project results and impacts (e.g. in terms of global environmental benefits), sustainability and recommendations for follow-up projects. The TORs for this evaluation by UNIDO in accordance with the generic TORs developed by the UNIDO and GEF Evaluation Offices.

298. Inception workshop: A Project Inception Workshop (IW) will be conducted with the full project team, relevant government counterparts, co-financing partners, UNIDO, and other partners as appropriate. The IW is expected to inter alia define annual work plan, set clear targets for each country, define and agree on the role of each stakeholder, agree on a meeting schedule for the PSC and PAC, define activities that will be implemented in

cooperation with the co-financing partners. Measurement of impact indicators related to global benefits will be done according to the schedules defined in the IW. These will be undertaken through subcontracts or agreements with relevant institutions, or through specific studies that are part of the projects activities.

299. Each national N-PMU, in cooperation with UNIDO and the R-PMU, will be responsible for the preparation and submission of the following documents:

300. Inception report: The inception report will be prepared after the inception workshop and will include at least the following: Annual workplan, including tentative dates for the PSC meeting, UNIDO field missions, project budget for the first year and M&E requirements for the first year.

301. Project implementation report (PIR): is an annual progress document mandated by the GEF. The PIR includes the following (a) analysis of the achievement of project objectives, (b) analysis of project performance over the reporting period, including the resulting outputs and outcomes, (c) risk management, (d) accounting of co-financing. The PIR shall also constitute the annual project report, which is a UNIDO requirement for monitoring project management.

302. A terminal project workshop will be conducted in the last month of project duration. A final report will be prepared, including project achievements, further actions needed if any, project sustainability, replicability and up-scaling options.

303. Prior obligations and prerequisites: GEF grant assistance will be provided to the counterparts subject to UNIDO being satisfied that obligations and pre-requisites listed below have been fulfilled or are likely to be fulfilled. When fulfilment of one or more of these prerequisites fails to materialize, UNIDO may, at its discretion, either suspend or terminate its assistance.

304. Prior to project effectiveness, financing by co-financiers other than the GEF and UNIDO must be specified in the project document and the respective commitment letters shall be made available to UNIDO.

305. During project implementation, progress reports and PIR reports should be prepared according to the project monitoring plan.

306. Legal contexts:

307. Argentine Republic: *"The Government of the Argentine Republic agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 26 February 1985 and entered into force on 31 August 1987."*

308. Plurinational State of Bolivia: *"The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Plurinational State of Bolivia and UNIDO, signed on 1 December 1988."*

309. Republic of Chile: *"The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Government of the Republic of Chile and UNIDO, signed on 26 April 1988."*

310. Republic of Costa Rica: *"The Government of the Republic of Costa Rica agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 7 August 1973 and entered into force on 6 February 1976."*

311. Republic of Ecuador: *"The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Government of the Republic of Ecuador and UNIDO, signed on 10 May 1989 and entered into force on 15 March 1993."*

312. Republic of El Salvador: *"The Government of the Republic of El Salvador agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 21 March 1975 and entered into force on 23 June 1975."*

313. Republic of Guatemala: *"The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Government of the Republic of Guatemala and UNIDO, signed on 11 October 2002 and entered into force on 3 January 2008."*

314. Republic of Honduras: *"The Government of Honduras agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 17 January 1995."*

315. Republic of Nicaragua: *"The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Republic of Nicaragua and UNIDO, signed and entered into force on 11 November 1993."*

316. Republic of Panama: *"The Government of the Republic of Panama agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 23 August 1973 and entered into force on 19 April 1974."*

317. Republic of Peru: *"The Government of the Republic of Peru agrees to apply to the present project, mutatis mutandis, the provisions of the Revised Standard Technical Assistance Agreement concluded between the United Nations and the Specialized Agencies and the Government on 30 March 1956."*

318. Eastern Republic of Uruguay: *"The Government of the Eastern Republic of Uruguay agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 12 December 1985 and entered into force on 20 September 1988."*

319. Bolivarian Republic of Venezuela: *"The Government of the Bolivarian Republic of Venezuela agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 19 January 1995."*

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE*(MM/dd/yyyy)*
Dr. Diana Celia VEGA	Director	Secretary of Environment and Sustainable Development; Argentina	07/26/2013
Mr. Roberto SALVATIERRA ZAPATA	Vice Minister for Environment, Biodiversity, Climate Change and Forest Management and Development	Ministry of Environment and Water; Bolivia	09/13/2013
Ms. Ximena GEORGE-NASCIMENTO	Secretaria de Relaciones Internacionales	Ministerio del Medio Ambiente/ Ministry of Environment; Chile	07/23/2013
Mr. Ruben MUNOZ ROBLES	Director, International Cooperation	Ministry of Environment, Energy and Telecommunication; Costa Rica	07/22/2013
H.E. Mrs. Lorena TAPIA	Minister	Ministry of Environment; Ecuador	06/24/2013
Mr. Herman Rosa CHÁVEZ	Minister	Ministry of Environment and Natural Resources; El Salvador	07/10/2013
H.E. Mrs. Marcia Roxana SOBENES GARCIA	Minister	Ministry of Environmental and Natural Resources; Guatemala	07/24/2013
Ms. Irina Helena PINEDA AGUILAR	Director of External Cooperation and	Secretariat of Natural Resources and	06/28/2013

	Resource Mobilization Unit	Environment (SERNA); Honduras	
Mr. Roberto ARAQUISTAIN CISNEROS	Vice minister	Ministry of Environment and Natural Resources – MARENA; Nicaragua	08/12/2013
Mr. Abraham HERRERA JEFE	Director	National Environment Authority; Panama	07/24/2013
Mr. Jose Antonio GONZALEZ NORRIS	Director of the International Cooperation and Negotiations Directorate	Ministry of Environment; Peru	07/19/2013
Ms. Silvia FERNANDEZ	Advisor on International Relations and Cooperation	Ministry of Housing, Land Planning and Environment; Uruguay	07/17/2013
Lic. Neila GONZALEZ	General Director of International Management and Cooperation	Ministry of the People's Power for the Ecosocialism, Habitat and Housing; Venezuela	08/26/2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Philippe R. Scholtès, Managing Director, Programme Development and Technical Cooperation (PTC), UNIDO GEF Focal Point		10/21/2016	Alfredo Cueva Jacome	+43126026 5228	a.cueva@unido.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Interventions	Indicators	Baseline	Target	Sources of Verification	Assumptions
Project Objective	**To strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in Latin-American Countries**				
Outcome 1.1: National policies are drafted or reviewed	# of environment policies, strategies, laws, regulation related to e-waste approved/enacted	Lack of comprehensive national e-waste policy framework in most countries	13 countries have enacted national policies on e-waste	National Gazettes (e-waste policies, regulations, strategies, guidelines,)	Governments of all participating countries are committed to strengthen the e-waste regulatory and institutional framework in line with the requirements under the Stockholm Convention on POPs.
Output 1.1.1 National policies and regulations are drafted or reviewed	# of national e-waste policies and regulations drafted or reviewed	3 countries have national policies, 10 do not have e-waste specific policies	13 countries draft their e-waste policies and corresponding regulations or prepare amendments to them (3 of 3 countries draft amendments and 10 of 10 draft policies)	Document of newly drafted /improved policies and regulations	
Output 1.1.2 National e-waste management strategies are established	# of national e-waste strategies drafted or reviewed	Only few countries have a written strategy for e-waste management	1 strategy per country drafted or reviewed;	Documents of national e-waste management strategies drafted or reviewed	
Output 1.1.3 Guidelines for the e-waste management activities are used or developed and tested	# of countries using existing/newly developed and tested guidelines	Guidelines exist, but are not fully integrated into the national implementation processes	At least 6 countries use existing/newly developed and tested guidelines to establish their e-waste management strategy	References to guidelines introduced and used from the national e-waste management reports	

Output 1.1.4. A national financial strategy is defined within policies and regulations	# of countries with sustainable financing strategies in e-waste policies and regulations	Lack of overall financing strategies to sustain the national e-waste management system (operations, administration, monitoring, etc.)	At least 10 countries have developed a sustainable financing strategy for all aspects of the e-waste management system	National project reports or other documents pertaining the financing strategies	
Outcome 1.2 National Capacity for e-waste management is in place	# of countries with satisfactory national capacity for e-waste management (i.e. officials trained, training programs, KM and information systems) # of training participants/trainees (male/female) from involved stakeholder groups	Lack of knowledge of e-waste management and its environment and human health risks in particular, those related to POPs management	At least 10 countries possess satisfactory national capacity for e-waste management At least 1500-1700 trainees (male/female) from involved stakeholder groups are trained	National project reports (sections on capacity building for e-waste management) Participants lists	Governments of all participating countries are committed to strengthen the e-waste knowledge and proper management in their countries and within the region
Output 1.2.1 Officials and staff on e-waste management trained	# of training participants/trainees (male/female)	Lack of specific knowledge in e-waste management among officials and operational staff	At least 80% of government officials (male/female) responsible for e-waste management pass training At least 80% of staff from selected facilities involved on e-waste operations are properly trained (according to tests / assessments)	Meeting minutes and participants list (male/female) Training reports	

Output 1.2.2 Selected universities include e-waste management in their curricula and research programs	# of universities providing e-waste management curricula and research programs	Lack of learning programs, research opportunities and projects on e-waste management at the university level within the region	At least 5 selected universities (within the region) have incorporated e-waste management into their curricula and research programs.	Reports on university e-waste courses / research programs linked to the project	
Output 1.2.3 National knowledge and information management systems are set and ready for regional exchange	# of national knowledge and information systems implemented # of participants in KM and information system (male/female)	Insufficient national information systems are available to enhance national and regional KM and information exchange on e-waste	At least one knowledge management and information system available, per country At least one training/workshop per country on the KM and information system totaling around 200-250 of participants (male/female) regionally	User statistics Meeting minutes and participant lists (male/female)	
Outcome 1.3. Civil society and general public is informed and aware of e-waste issues	# of awareness raising campaigns # of published articles / news items per quarter # of training participants/trainees (male/female)	Lack of awareness about e-waste management and associated risks; limited media coverage of this topic	13 awareness raising campaigns per year; At least 2 articles published / news items issued per quarter 2 trainings per country and at least 30 participants / trainees per event (male/female)	Articles, videos and/or records of TV/radio transmissions	People are interested in the e-waste topics

Output 1.3.1. Media and journalists are trained on e-waste issues and informed regarding the progress of the national and regional initiatives	# of trainings for media and journalists (male/female) # of e-waste related contributions in audio, visual and printed media	Lack of knowledge on e-waste management and risks associated with human health and the environment among media and journalists	2 trainings per country and at least 30 participants / trainees per event (male/female) 30 e-waste related contributions in audio, visual and printed media	Training materials and list of attendees; Press releases, articles, videos and records of radio transmissions	
Output 1.3.2. Awareness raising campaigns / customized events are developed to address the needs of specific target groups (i.e. children, women) and society at large	# of awareness raising campaigns addressing the needs of all targeted groupies (male/ female) # of gender-specific campaigns (e.g. on WEEE handling and disposal); #gender and children-specific information materials	Lack of awareness about e-waste management and risks associated with environment and human health among society and specific targeted groups	At least 4 awareness raising campaigns per country per year , including gender-related issues	Awareness raising materials and reports.	
Outcome 2.1. E-waste dismantling and recycling facilities or infrastructure are operating efficiently and sustainably in participating countries	POPs releases from e-waste avoided (tons) e-waste treated through formal recycling chains (tons per year) <u>Co-benefits</u> Materials recycled or reused (tons) Commercial value of materials recycled or	Insufficient number of dismantling facilities with proper technical and operational capacities, in particular regarding POPs management. The e-waste generated by the 13 participating countries represents an emission of	A minimum 10% of the regional POPs-PBDEs emissions (estimated between 2.6 to 6.0 tons/year) avoided 90% of up-scaled facilities manage POPs in an environmentally sound manner 60% of e-waste in each country is	Project reports, Annual declarations of recycled materials quantities	Existing recyclers are committed to upgrade their facilities

	reused (USD)	POP-PBDE estimated between 26 and 60 tons/year	treated by the upgraded / scaled up facilities 90% of up-scaled facilities fill reports on quantities of materials recycled, so its commercial value (USD) can be estimated by the project		
Output 2.1.1 In-depth assessments of existing facilities and infrastructure is carried out to select facilities that will be upgraded / scaled up	# of facilities with detailed assessments	More than 70 formal e-waste recycling companies exist in the participating countries. A pre-selection of eligible facilities to be upgraded / scaled up within the project was done based on their level of development.	77 e-waste facilities are assessed in detail for their potential to be upgraded / up-scaled	Assessment reports	
Output 2.1.2 Selected facilities are upgraded to meet SC, BC and other relevant criteria, particularly addressing the separation of POPs containing e-waste fractions and other Stockholm Convention identified emission (through	POPs releases avoided in e-waste (tons) e-waste treated by the selected facilities (tons per year) # of facilities adopting BAT/BEP related with the environmentally sound management of	A majority of existing facilities lack technical and operational capacities and do not pay special attention to POPs management.	90% of up-scaled facilities manage POPs in an environmentally sound 60% of e-waste in each country is treated by the upgraded / scaled up facilities	Project reports (upgrading / scaling up of facilities) Audit report of facilities	

shredders and other usual operations) according to BAT/BEP as laid down in UNEP dioxin tookit categories 2k and 2l	POPs		At least 25 facilities adopted BAT/BEP for POPs		
Output 2.1.3. ESM and final disposal of 600 tons of brominated plastics annually (totaling 2400 tons during the project lifespan) using BAT/BEP	# quantity of brominated plastics disposed of	There are gaps with the e-waste collection system, manual dismantling and safe final disposal of BFR-plastics	Disposal of 600 tons of brominated plastiscs annualy, totaling 2400 tons during the project lifespan	Disposal reports	
Output 2.1.4 Adequate business models are developed to ensure long-term sustainability of the facilities	# of jobs created (male/female) time to break-even per recycler applying the recommended business model	Identified need to develop business models taking into accounts the improved framework conditions.	At least 90 jobs in total created at each facility 2 years maximum to break even per recycler applying the recommended business model	company payroll Project reports Annual financial reports Mass balance of facility	
Outcome 3.1 Key issues of e-waste policies are harmonized at the regional level, with due consideration of the relevant MEAs and mechanisms like SAICM	Key e-waste policy issues harmonized at the regional level	Insufficient regional coordination and harmonization of e-waste management related issues	Participating countries have agreed to harmonize key e-waste policy issues	List of identified key e-waste policy issues Review report of key e-waste issues in national policies of participating countries Meeting minutes showing agreements and/or progress	Countries are willing to agree on and address key issues at the regional level

				regarding e-waste policy key-issue harmonization	
Output 3.1.1 Comparative analysis of existing national policies / regulations is conducted to identify key issues that need to be addressed at the regional level	Key regional issues identified through comparative analyses of existing national policies	Key issues that need to be addressed at the regional level have been started to be identified during the PPG phase	Agreement among participating countries regarding key regional issues to be tackled in the national policies	List of proposed and agreed key regional issues Meeting minutes showing agreements	
Output 3.1.2 A regional policy platform is operating to facilitate policy harmonization on key issues, with involvement of national MEAs officials	# of countries actively participating in the regional platform to harmonize their policies	No regional policy platform available at this stage.	All participating countries are actively participating in the regional platform for harmonization purposes	User statistics of policy platform	
Outcome 3.2 Knowledge management systems and information exchange are strengthened	# of countries actively participating in the regional KM and information exchange system	Limited knowledge and information sharing among Latin American countries.	All participating countries actively contribute to the regional information exchange	User statistics of the KM and information exchange system	Stakeholders provide knowledge and maintain information
Output 3.2.1 The policy platform is integrated into a regional knowledge / information management system	# of national policies available on regional knowledge / information management system	The existing regional knowledge / information system provides limited information and is not used for harmonization purposes.	13 national policies are available on regional knowledge / information management system	Uploading records of the knowledge / information management system	

Output 3.2.2 National knowledge / information systems are linked to the regional one	# of national documents of participating countries that are published on the regional knowledge management system	Missing information exchange between countries.	All relevant documents published at the national level within the project are available on the regional knowledge management system	Uploading records of knowledge / information management system	
Outcome 3.3 South-South cooperation is enhanced	# of jointly implemented activities	Limited South-south cooperation between the participating countries	3 jointly implemented activities in the region	Meeting Minutes, event reports	Stakeholders are willing to cooperate on a South-South level
Output 3.3.1 Country cooperation is strengthened in the region through enhanced knowledge sharing	# of regional exchange events	Limited number of regional exchange events is currently organized.	At least 5 regional events are organized throughout the project duration	Event reports	
Output 3.3.2 Regional post-project action plans and initiatives are developed	Post-project action plan(s) developed	There is a small number of isolated regional initiatives that should be better coordinated	All participating countries have at least one planned activity for the post-project phase. They decide whether or not a new regional project is warranted.	Post-project plan documents	

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

A. Scientific and Technical Advisory Panel

I. STAP Advisory Response *(see table below for explanation)*

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Minor revision required**

Further guidance from STAP

The project objective is stated as: "To strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPS in Waste of Electrical or Electronic Equipment (WEEE) in Latin American Countries."

STAP comments:

a) Although the PIF mentions support for the extended producer responsibility policy approach, and reaching out to manufacturers during PIF development, there are no component activities that directly involve producers in the project. However, Table 3 of the PIF states that producers are considered seemingly only as "additional" or secondary stakeholders. This seems counter intuitive if extended producer responsibility is to be promoted. There should be specific activities engaging producers to help solve the problem. As it stands, it comes across as an "end-of-pipe" type of solution, with no potential to discuss redesign, recycling and material restrictions as a joint approach to the problem of hazardous e-waste. There remains therefore very limited potential for waste minimization if the producers do not have a clear role in adjusting the WEEE life cycle. That said: EPR requires a well-designed regulatory framework to be effectively implemented. Therefore, there should be a fundamental reflection as to whether or not EPR can be an effective component of this project.

UNIDO response:

In fact, as commented by STAP, "*EPR requires a well-designed regulatory framework to be effectively implemented.*" Therefore, during the PPG phase, a detailed assessment of the national and regional legislation and particularly, key issues and needs for the improvement and development of e-waste policies (Annex H) have been examined. The assessment showed that only Costa Rica and Peru have policies that enact EPR. Limited EPR in policies is included in the legislation of Argentina (only in one province) and Ecuador (only for batteries), while other countries (e.g. Bolivia, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Venezuela) do not have legislation related to EPR, so first steps towards the inclusion of EPR principles into their legislations need to be taken. Annex H, part C2 contains a draft proposal for improving the national policies (including EPR), taking into account the existing policy baselines and the need for regional cooperation. At the moment, negotiations are taking place between some countries and original equipment manufacturer (OEMs), based on the EPR principle. The EPR will be further discussed with the participating countries during the inception phase of the project. Based on these facts, the EPR principle can be effectively introduced into this project.

b) Following on from the first point, there is also a question of unintended consequences, particularly as relates to the energy (and other) inputs to recycling, which reinforce the need for manufacturer involvement in such projects, ensuring there is appropriate analysis of tradeoffs. For example: to make an item easier to recycle, the manufacturer can purposely compromise the bond between components of the electronic item, to lower the energy required to pull apart, and recycle the various components of the item. However, this can shorten the life span of the item, meaning that the consumer has to replace the item more frequently; but this ultimately increases the quantity of waste being generated, even eating into any energy gains achieved through the ease of dismantlement of the equipment. So a balance has to be struck with the manufacturer between sturdiness and life span of any product, and the volume of waste generated and the amount of energy required (and GHGs generated) to dispose of and recycle the waste.

UNIDO response: During project implementation, particularly for the up-scaling of selected e-waste facilities, potential unintended consequences will be taken into account; however, the focus of this project lies on upscaling existing recycling facilities for WEEE and not on the manufacturing process of products. Still the issue will be raised and discussed during trainings and awareness raising activities and during events with the participation of OEMs and academia.

c) There is some assessment of the e-waste policies and capacities of the project countries, but it is not clear the standard against which they were measured. Given that for EPR implementation is dependent about the right legislative and regulatory structures being put in place, it might be worth it to do a benchmarking against those constructs that have been successfully supporting EPR eg. regional WEEE legislation such as the recast EU directive on WEEE (see http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:197:0038:0071:EN:PDF), as well as other legislative frameworks built on more experience in EPR (eg EU WEEE - http://ec.europa.eu/environment/waste/weee/index_en.htm; EU RoHS â€“2011/65/EC - http://ec.europa.eu/environment/waste/rohs_eee/; China WEEE - http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=2202304&fileOId=2202306). Note also, that "producer" is legally defined in many jurisdictions as either the original equipment manufacturer (OEM) or importer. A re-examination of the identification of the producers in the LAC region, therefore, and their willingness to cooperate, will help to determine ability to support EPR.

UNIDO response: Annex H summarizes the situation of EPR in the participating countries and shows the key issues and needs for improvement and development at the national and regional levels. Therefore, through the national and regional project components, the already existing WEEE legislative framework will be reviewed and strengthened, with due consideration on how to effectively support EPR.

d) Is there room to consider batteries within this initiative?

Mexico, in particular, has been very progressive in developing recycling and safe disposal practices for batteries in partnership with US counterparts and in collaboration with the Commission for Environmental Cooperation.

UNIDO response: Yes, the project will incorporate batteries , into the project, wherever national efforts have been made. For example, in the cases of Argentina and Chile batteries have been identified as a priority waste category. During project implementation, the feasibility and extent to include batteries will be explored with those interested.

II) GEF Secretariat Comment at PIF (PFD)/Work Program Inclusion [1]

a) Calculations of the amount of POPS to be reduced/ eliminated.

UNIDO response: According to demographic projections, by 2015 it is estimated that the 13 countries, participating in the project, will have a population of nearly 200 million people. At the moment there is no precise information on e-waste generation in these countries; however it can be estimated that nearly 600,000 tons may be produced by 2015, assuming a per capita generation of 3 kg/year/person.

E-waste components are very diverse. Broadly a composition of around 50% iron and steel, 21% plastic and 13% non-ferrous metals (including some precious metals), among other materials can be assumed. Therefore, the e-waste generated within the participating countries represents a potential recovery of 300,000 tons of iron and 78,000 tons of non-ferrous metals, which may be incorporated in metallurgical processes, and 126,000 tons of plastic polymers, that can be recycled or disposed of through controlled combustion processes that allow energy recovery benefits due to polymers' high calorific values.

On the other hand, e-waste contains pollutants such as lead, mercury, arsenic, cadmium, selenium, hexavalent chromium, brominated flame-retardants, particularly those listed in the Stockholm Convention: POP-PBDE and PCB; or halogenated-substances (such as CFCs), among others. These substances may be released, into the environment, through the recycling of e-waste components, which may cause negative impacts on human health and the environment. Additionally, some processes of recycling of or energy recovery from e-waste components may generate significant emissions of chlorinated and brominated dioxins and furans.

In relation to the brominated flame-retardants listed in the Stockholm Convention (COP-PBDEs), the commercial Penta-BDE was used in the manufacture of printed circuits and the commercial Octa-BDE was used on plastic polymers. The production of these compounds ended in 2004, so they are present in many of the items of e-waste generated currently and expected in those that will be generated during the coming years.

According to statistics compiled by UNEP on the percentage of the various types of EEE present in the waste streams, the fraction of plastic polymer and the content of POP-PBDEs can be estimated. So, the e-waste generated by the 13 project participating countries, represents an emission of POP-PBDE estimated between around 26 and 60 tons/year. The project aims to tackle about 10% of them.

b) Clear description of the regional activities and the approach to dealing with transboundary transport of POPS containing material.

UNIDO response: The Regional Component will focus on harmonizing e-waste policies with consideration of relevant MEAs and the SAICM, aligning the existing national knowledge/ information systems to the regional ones and enhancing South-South cooperation to ease the management of all WEEE streams in the region. Better coordination and cooperation among participating countries within the sub-regions and the whole region will result in a more environmentally sound and effective way of collecting, recycling and processing WEEE.

At the regional level the Regional Latin American and Caribbean Platform for Electronic Waste (RELAC) is a major player. RELAC is a well-recognized multi-sectoral network for LAC aiming at the promotion of sustainable WEEE management with focus on its environmental, economic and social aspects and. has already conducted a vast work in articulating the e-waste stakeholders in the region. Through knowledge generation, capacity building and communications management, the platform can set an enabling environment for the coordination of regional project activities and will support effective communication. The strengthened South-South cooperation will also enhance the development of future regional action plans, and further projects and initiatives.

The transboundary transport of POPs containing material will be handled according to both, the Stockholm Convention and Basel Convention. The five Basel Convention Regional Centers (BCRCs) present in the region

will play a major role in supporting the countries to ensure proper handling and transboundary movement of POPs containing material mainly through capacity building activities.

The Centers have already developed several pertinent regional initiatives. The BCRC for South America in Argentina has generated information, conducted international meetings and supported the promotion of e-waste management in its countries.

The BCRC for Central America and Mexico is working with the Central American Commission for Environment and Development (CCAD), which has led to a sub-regional project to develop a set of *"Guidelines on WEEE for Central America Countries"*. Moreover, the BCRC for Central America and Mexico with significant international cooperation organized in May 2012 the largest gathering of international experts on e-waste in the Americas: the San Salvador Dialogue on ESM of WEEE. This Center, in association with ITU and StEP organized international seminars in San Salvador, in 2013 and 2014, and has developed important awareness-raising campaigns, and advanced significantly in the ESM of Used Lead Acid Battery (ULAB). It has provided technical assistance to ULAB recyclers in Guatemala, Costa Rica, Colombia and the Dominican Republic, and recently has also developed protocols for the ESM recycling of CRTs with a Guatemalan ULAB recycler.

c) Clear plan for how this project will be used to catalyze the reduction of POPS in the entire sector.

UNIDO response: The main objective of the proposed GEF project is to strengthen national initiatives and enhance regional cooperation for the environmentally sound management of POPs in Waste of Electronic or Electrical Equipment (WEEE) in the 13 participating Latin American countries to contribute to protecting human health and the environment, particularly by reducing POPs released into the environment. So, the GEF funds will be mainly used to supporting existing national activities and strengthening regional cooperation activities on e-waste management.

As mentioned above it is estimated that the 13 project participating countries represent an emission of POP-PBDE of around 26 to 60 tons/year. The project aims to tackle about 10% of them every year. This will be achieved through the development of national policies which will enhance an effective collection, pre-treatment and final treatment of e-waste including POPs containing materials and the establishment of proper recycling infrastructure according to BAT/BEP for pre-treatment and final disposal of POPs containing material.

Within the duration of the project sustainable e-waste management systems will be set-up on national level taking into account the whole recycling chain with special attention to POPs containing materials. It is expected that the established systems will be self-sustainable at the end of the project and continue its operations in order to further collect and treat all types of e-waste.

III) Response to Council Comments

Canada's Comments

We note that the proposal covers a broad range of e-waste. We request that the proposal clarify that the focus of the project is on POPs in e-waste to ensure that GEF funding remains within its mandate under the Stockholm Convention.

We agree with STAP that private sector participation in the design, co-funding and implementation of this project is crucial and should be well-defined before CEO approval of the project. In addition, we agree that extended producer responsibility should be included in the project components.

UNIDO response: Yes, the proposed GEF project covers a broad range of e-waste, especially focusing on POPs. POPs calculations in e-waste were included into the project to ensure that GEF funding remains within the Stockholm Convention mandate. For the 13 participating countries an emission of POP-PBDEs of around 26 to 60 tons/year were estimated. The project aims to tackle about 10% of them every year.

Private sector participation was ensured during PPG through co-financing commitments (Table C and Annex F). Annex I summarizes the situation of EPR in the participating countries and shows the key issues and needs for improvement and development at the national and regional levels. Therefore, through the national and regional project components, the already existing WEEE legislative framework will be reviewed and strengthened, with due consideration on how to effectively support EPR.

Germany's Comments

Germany approves the following PIF in the work program but asks that the following comments are taken into account:

Suggestions for improvement to be made during the drafting of the final project proposal:

Germany welcomes the PIF and especially supports the STAP comment on the unclarified role of the private sector. However:

- It should be explained in greater detail how the private sector would be involved in the project, especially under the aspect of an extended producer responsibility (EPR).

- The standards for e-waste policies are not clearly defined and the existing policy frameworks in the countries differ widely. Countries with weak policy framework should learn from the frontrunners to make up their own policy frameworks with sufficiently high standards.

UNIDO response:

As addressed above, Annex I summarizes the situation of EPR in the participating countries and shows the key issues and needs for improvement and development at the national and regional levels. Therefore, through the national and regional project components, the already existing WEEE legislative framework will be reviewed and strengthened, with due consideration on how to effectively support EPR.

Annex H summaries the existing national policy framework of the participating countries. The national component will address national policies and national capacities while the regional component aims to harmonize e-waste policies, including a knowledge management platform to exchange information and experiences among the participating countries.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS[6]

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: **USD 200,000**			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
International consultants (6) hired for project assessments, design and initial drafting of the CEO endorsement, including their travel costs and DSA for Panama meeting	138,000	134,002	
Travel for consultants during baseline project preparation	14,200	13,904	
Expenses for international meeting in Panama, including venue, travel expenses of national government representatives and representatives of the Regional Centers for the BC and SC, DSA and meeting arrangments for attendees	47,200	48,142	
Other direct costs (e.g. communication, transfer costs through UNDP, etc.)	600	181	
Translation of the CEO endorsement into Spanish (pending)			3,771
Total	200,000	196,229	3,771

[6]If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

Not applicable

ANNEX E: GEF BUDGET

Output Based Budget for the GEF Grant							
		GEF Grant Budget Component 1					
Outcome 1. Strengthening of national e-waste management initiatives	**Type of Expense**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Output Total**
Output 1.1	International Expertise (BL 11-00)		40,000.00	50,000.00			90,000.00
National Policies are drafted or reviewed	Local Travel (BL 15-00)						-
	National Expertise (BL 17-00)	40,000.00	60,000.00	30,000.00	20,000.00		150,000.00
	Contractual Arrangement (BL 21-00)	200,000.00	370,000.00	280,000.00	100,000.00		950,000.00
	Training/Workshops (BL 30-00)						-
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total	240,000.00	480,000.00	360,000.00	120,000.00	-	1,200,000.00
Output 1.2	International Expertise (BL 11-00)		40,000.00	80,000.00	40,000.00	40,000.00	200,000.00
National capacity for e-waste is in place	Local Travel (BL 15-00)						-
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)	100,000.00	160,000.00	200,000.00	160,000.00	160,000.00	780,000.00
	Training/Workshops (BL 30-00)	60,000.00	120,000.00	200,000.00	120,000.00	120,000.00	620,000.00
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total	160,000.00	320,000.00	480,000.00	320,000.00	320,000.00	1,600,000.00
Output 1.3	International Expertise (BL 11-00)						-
Civil society and general public is informed and aware of e-waste issues	Local Travel (BL 15-00)						-
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)	160,000.00	160,000.00	160,000.00	160,000.00	160,000.00	800,000.00

	Training/Workshops (BL 30-00)						-
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total	160,000.00	160,000.00	160,000.00	160,000.00	160,000.00	800,000.00
TOTAL Component 1		560,000.00	960,000.00	1,000,000.00	600,000.00	480,000.00	**3,600,000.00**

		GEF Grant Budget Component 2					
Outcome 2. Strengthening of national capacities on waste dismantling and recycling facilities/infrastructure	**Type of Expense**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Output Total**
Output 2.1	International Expertise (BL 11-00)						-
E-waste dismantling and recycling facilities or infrastructure are operating efficiently and sustainably in participating countries	Local Travel (BL 15-00)						-
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)	200,000.00	200,000.00	200,000.00	200,000.00	50,000.00	850,000.00
	Training/Workshops (BL 30-00)		150,000.00	300,000.00	300,000.00	95,000.00	845,000.00
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)	190,000.00	430,000.00	670,000.00	865,000.00	50,000.00	2,205,000.00
	Miscellaneous (BL 51-00)						-
	Output sub-total	390,000.00	780,000.00	1,170,000.00	1,365,000.00	195,000.00	3,900,000.00
TOTAL Component 2		390,000.00	780,000.00	1,170,000.00	1,365,000.00	195,000.00	**3,900,000.00**

		GEF Grant Budget Component 3					
Outcome 3. Enhancement of regional cooperation on e-waste	**Type of Expense**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Output Total**
Output 3.1	International Expertise (BL 11-00)			30,000.00	30,000.00		60,000.00
Key issues of e-waste policies are harmonized at the regional level, within due consideration of the relevant MEAs and mechanisms like SAICM	Local Travel (BL 15-00)	5,000.00	10,000.00	10,000.00	10,000.00	5,000.00	40,000.00
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)						-
	Training/Workshops (BL 30-00)						

							-
	International Meetings/Workshops (BL 35-00)	30,000.00	60,000.00	60,000.00	60,000.00	30,000.00	240,000.00
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)			5,000.00	5,000.00		10,000.00
	Output sub-total	35,000.00	70,000.00	105,000.00	105,000.00	35,000.00	350,000.00
Output 3.2	International Expertise (BL 11-00)			30,000.00	30,000.00		60,000.00
Knowledge management systems and information exchange are strengthened	Local Travel (BL 15-00)	5,000.00	5,000.00	10,000.00	10,000.00	5,000.00	35,000.00
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)	25,000.00	25,000.00	70,000.00	130,000.00	25,000.00	275,000.00
	Training/Workshops (BL 30-00)						-
	International Meetings/Workshops (BL 35-00)	30,000.00	30,000.00	60,000.00	70,000.00	30,000.00	220,000.00
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total	60,000.00	60,000.00	180,000.00	240,000.00	60,000.00	600,000.00
Output 3.3	International Expertise (BL 11-00)	40,000.00	40,000.00	40,000.00	40,000.00	40,000.00	200,000.00
South-South cooperation is enhanced	Local Travel (BL 15-00)	30,000.00	30,000.00	30,000.00	30,000.00	30,000.00	150,000.00
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)						-
	Training/Workshops (BL 30-00)						-
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	50,000.00
	Output sub-total	80,000.00	80,000.00	80,000.00	80,000.00	80,000.00	400,000.00
TOTAL Component 3		175,000.00	210,000.00	365,000.00	425,000.00	175,000.00	**1,350,000.00**

		GEF Grant Budget Component 4					
Outcome 4. Project Monitoring and Evaluation	**Type of Expense**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Output Total**
Output 4.1	International Expertise (BL 11-00)	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	50,000.00

	Local Travel (BL 15-00)	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	50,000.00
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)						-
	Training/Workshops (BL 30-00)						-
Monitoring	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	100,000.00
	Local Travel (BL 15-00)						-
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)			40,000.00		60,000.00	100,000.00
	Training/Workshops (BL 30-00)						-
Evaluation	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-
	Output sub-total			40,000.00		60,000.00	200,000.00
TOTAL Component 4		20,000.00	20,000.00	60,000.00	20,000.00	80,000.00	**200,000.00**

		GEF Grant Budget PMC					
PMC	**Type of Expense**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Output Total**
	International Expertise (BL 11-00)	75,000.00	75,000.00	75,000.00	75,000.00	75,000.00	375,000.00
	Local Travel (BL 15-00)	15,000.00	15,000.00	15,000.00	15,000.00	15,000.00	75,000.00
	National Expertise (BL 17-00)						-
	Contractual Arrangement (BL 21-00)						-
PMC	Training/Workshops (BL 30-00)						-
	International Meetings/Workshops (BL 35-00)						-
	Equipment (BL 45-00)						-
	Miscellaneous (BL 51-00)						-

	Output sub-total	90,000.00	90,000.00	90,000.00	90,000.00	90,000.00	450,000.00
TOTAL PMC		90,000.00	90,000.00	90,000.00	90,000.00	90,000.00	**450,000.00**
TOTAL PROJECT COSTS		**1,145,000.00**	**1,970,000.00**	**2,595,000.00**	**2,410,000.00**	**930,000.00**	**9,500,000.00**

ANNEX F: CO-FINANCING BUDGET

International Contributor	in-kind	cash	Total
EMPA	$ 1,781,675	$ 194,125	$ 1,975,800
ISWA	$ 71,500	$ 20,000	$ 91,500
UNU	$ 158,500	$ 0	$ 158,500
BOKU	$ 12,931	$ 58,508	$ 71,439
Ericsson	$ 6,318,088	$ 407,655	$ 6,725,743
Microsoft	$ 7,000	$ 14,000	$ 21,000
UNIDO	$ 300,000	$ 200,000	$ 500,000
RELAC	$ 865,150	$ 54,000	$ 919,150
ITU	$ 538,800	$ 524,000	$ 1,062,800
US-EPA	$ 189,464	$ 0	$ 189,464
WHO/PAHO	$ 300,000	$ 0	$ 300,000
ILO	$ 87,880	$ 0	$ 87,880
EY Belgium	$ 1,103,000	$ 88,000	$ 1,191,000
Dell	$ 4,000	$ 73,000	$ 77,000
Sub-total	**$ 11,737,988**	**$ 1,633,288**	**$ 13,371,276**
National Contributors			
Argentina	$ 2,868,983	$ 3,398,087	$ 6,267,070
Bolivia	$ 746,471	$ 1,780,487	$ 2,526,958
Chile	$ 1,380,000	$ 1,470,000	$ 2,850,000
Costa Rica	$ 2,814,816	$ 0	$ 2,814,816
Ecuador	$ 3,737,159	$ 282,936	$ 4,020,095
El Salvador	$ 2,098,245	$ 2,918,800	$ 5,017,045
Guatemala	$ 154,931	$ 3,231,687	$ 3,386,618
Honduras	$ 994,204	$ 2,769,963	$ 3,764,167
Nicaragua*	$ 2,814,816	$ -	$ 2,814,816
Panama	$ 1,335,252	$ 7,129,900	$ 8,465,152
Peru	$	$ 7,367,299	$ 7,367,299
Uruguay	$ 949,000	$ 3,862,000	$ 4,811,000
Venezuela	$ 3,935,000	$ -	$ 3,935,000
Sub-total	**$ 23,828,877**	**$ 34,211,159**	**$ 58,040,036**
TOTAL	**$ 35,566,865**	**$ 35,844,447**	**$ 71,411,312**

BUDGET DISTRIBUTION

	GEF GRANT	National Co-financing (US$)	International Co-financing (US$)		Total
	(US$)		Others	UNIDO	Co-financing (US$)
Outcome 1. Strengthening of national e-waste management initiatives	**3,600,000.00**	9,867,091	3,452,909	-	**13,320,000**
Outcome 2. Strengthening of national capacities on waste dismantling and recycling facilities/infrastructure	**3,900,000.00**	43,131,988	208,012	-	**43,340,000**
Outcome 3. Enhancement of regional cooperation on e-waste	**1,350,000.00**	1,714,699	8,420,301	140,000.00	**10,275,000**
Outcome 4. Project Monitoring and Evaluation	**200,000.00**	111,932	500,468	160,000.00	**772,400**
Project Management	**450,000.00**	3,214,326	289,586	200,000.00	**3,703,912**
TOTAL PROJECT COSTS	**9,500,000.00**	58,040,036	12,871,276	500,000.00	**71,411,312**

ANNEX G: WORKPLAN

	Year 1				Year 2				Year 3				Year 4				Year 5			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Outcome 1.1: National policies are drafted or reviewed																				
Output 1.1.1 National bills and regulations are drafted or reviewed																				
Output 1.1.2 National e-waste management strategies are established																				
Output 1.1.3 Guidelines for e-waste management are developed and tested																				
Output 1.1.4. A financial mechanism is defined in order to support the national e-waste management strategy																				
Outcome 1.2 National Capacity for e-waste management is in place																				
Output 1.2.1 Officials and staff on e-waste management trained																				
Output 1.2.2 Selected universities include e-waste management in their curricula and research programs																				
Output 1.2.3 National knowledge and information management systems are set and ready for regional exchange																				
Outcome 1.3. Civil society and general public is informed and aware of e-waste issues																				
Output 1.3.1. Media and journalists are trained on e-waste issues and informed regarding the progress of the national and regional initiatives																				

Output 1.3.2. Awareness raising campaigns / customized events are developed to address the needs of specific target groups (i.e. children, women) and society at large																				
Outcome 2.1. **E -waste dismantling and recycling facilities or infrastructure are operating efficiently and sustainably in participating countries**																				
Output 2.1.1 In-depth assessments of existing facilities and infrastructure is carried out to select facilities that will be upgraded / scaled up																				
Output 2.1.2 Selected facilities are upgraded / scaled up to meet SC, BC and other relevant criteria, particularly BAT/BEP																				
Output 2.1.3. ESM and final disposal of 600 tons of brominated plastics annually (totaling 2400 tons during the project lifespan) using BAT/BEP																				
Output 2.1.4 Adequate business models are developed to ensure long-term sustainability of the facilities																				
Outcome 3.1 **Key issues of e-waste policies are harmonized at the regional level, with due consideration of the relevant MEAs and main mechanisms like SAICM**																				
Output 3.1.1 Comparative analysis of existing national policies / regulations is conducted to identify key issues that need to be addressed at the regional level																				
Output 3.1.2 A regional policy platform is operating to facilitate policy harmonization on key issues, with involvement of national MEAs officials																				
Outcome 3.2 **Knowledge management systems and information exchange are strengthened**																				
Output 3.2.1 The policy platform is integrated into a regional knowledge / information management system																				

Output 3.2.2 National knowledge / information systems are linked to the regional one																					
Outcome 3.3 **South-South cooperation is enhanced**																					
Output 3.3.1 Country cooperation strengthened in the region through enhanced knowledge sharing																					
Output 3.3.2 Regional post-project action plans and initiatives are developed																					

ANNEX H: OVERVIEW OF EXISTING LEGAL FRAMEWORK FOR ENVIRONMENT, WASTE AND E-WASTE IN LATIN AMERICAN COUNTRIES

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
Argentina	Resolución A.P.R.A 240/14	Programa de Gestión Integral de Residuos Sólidos Urbanos.	2014	Unidad de coordinación de Gestión Ambiental	Provincial	Buenos Aires
	Ley Nº 1854	Basura Cero			Provincial	CABA
	Ley Nº 7345	Gestión y tratamiento de los Residuos de los Aparatos Eléctricos y Electrónicos RAEE	2014		Provincial	El Chaco
	Ley Nº 2807	Aparatos Eléctricos y Electrónicos			Provincial	CABA
	Ley Nº 9737	Programa de Reciclado Residuos de Aparatos Electricos y Electrónicos		Secretaría del Ambiente	Provincial	La Rioja
	Ley XI-56	Programa de Reciclado de Residuos de Aparatos Eléctricos y Electrónicos			Provincial	Chubut
	Ley Nº 8362	Programa de Gestión Integral de equipos informáticos fuera de uso y residuos de aparatos eléctricos y electrónicos			Provincial	San Juan
	Ley Nº 4504 Cambio XVI Nº 101	Manipulación, tratamiento y disposición de pilas y baterías	2009		Provincial	Misiones
	ResoluciónNº 101/2011	Programa Voluntario de Certificación de Gestión Sostenible de Residuos de Aparatos Eléctricos y Electrónicos.	2011		Provincial	Buenos Aires
	Resolución A.P.R.A 262/08	Gestión de Pilas y Baterías Recargables Agotadas	2008			
	Decreto Nº18/92	Prohibición de ingreso de desechos peligrosos	1992		Nacional	
	Ley Nº 23.922	ApruebaConvención de Basilea			Nacional	
	Decreto Nº 831/93	Generación, Transporte y Disposición de Residuos Peligrosos.	1993		Nacional	
	Ley Nº 26.184	Pilas y Baterías prohibición de su fabricación, ensamblado e importación			Nacional	
	Ley Nº 25.612	Gestión Integral de residuos industriales y de actividades de servicios			Nacional	

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Ley Nº 24.051	Residuos Peligrosos			Federal	
	Ley nº 25.675	Ley general del Ambiente			Federal	
Bolivia	NB 69019	Management of Waste Electrical and Electronic Equipment (WEEE)	2012			
	NB 69018	Definitions and Classification of Waste Electrical and Electronic Equipment (WEEE	2012	IBNORCA Instituto Boliviano de Normalización y Calidad	Nacional	
	Related norms	Constitución Política del Estado	2009			
		Ley de Protección del Medio Ambiente No.1333	1992			
		Reglamento Nacional del Medio Ambiente	1995			
		Normas técnicas para la gestión de residuos				
		Reglamento municipal local				
Brazil	Notice No. 01/2013	Call for the Development of Sectoral Agreement for Deployment of Reverse Logistics System for Electric and Electronic Products and Components,	2013		Nacional	
	Law No. 8806/2012	The Establishment Of Standards And Procedures For The Management And Disposal Of Waste Technology and other measures	2012		Provincial	Florianopolis
	(DN) No. 118, 2013	COPAM Normative Deliberation No. 188	2013	COPAM	Provincial	Minas Gerais
	Standard	Waste Electrical and Electronic Equipment - Requirements for Reverse Manufacturing Activity.	2012			
	Law No. 9941	Collection, Management and Disposal of Electronic Waste	2012		Provincial	Espiritu Santos
	Law 9163/	Takeback and Recycling of Products Containing Heavy Metals	2009			Espiritu Santos
	Law No. 1.705	Management of Waste Electronic Equipment (WEEE),				Manaus

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Law No. 9.291	Collection and Disposal of Electronic Waste, Lamps and Batteries,				Maranhao
	Law 3.970/2010	Recycling and Disposal of Electronic Waste,	2010			Matto Grosso do Sul
	Law 11.384/2012	Management of Waste Electronic Equipment	2012			Porto Alegre
	Law 13.533/2010	Recycling, Management and Disposal of Electronic Waste,	2010			
	Law No. 5.043/2009	Producer Responsibility for Takeback and Recycling of Computer Waste	2009			
Chile	Decreto nº148	Reglamento Sanitario sobre Residuos Peligrosos	2003	Ministerio de Salud	Nacional	
	Ley Nº 19.300	Bases generales del Medio Ambiente	1994		Nacional	
	Ley nº 725	Codigo Sanitario			Nacional	
	Decreto S1	Reglamento de Registro de Emisiones y Transferencia de Contaminantes	2013	Ministerio del Medio Ambiente	Nacional	
	DecretpSupremo 594	Condiciones sanitarias básicas en los lugares de trabajo	2000		Nacional	
	Convenio de Basilea	Implementación Ratificado por Chile a través de D.S. N° 685 del Ministerio de Relaciones Exteriores en 1992	1992		Nacional	
	OCDE	Integrante	2010		Nacional	
Colombia	Ley Nº 1672	Lineamientos para la adopción de una política pública de gestión integral de residuos de aparatos eléctricos y Electrónicos (RAEE)	2013	Ministerio de Ambiente y Desarrollo Sostenible	Nacional	
	Resolución Nº 1512	Sistemas de recolección selectiva y gestión ambiental de computadores y/o periféricos	2010	Ministerio de Ambiente y Desarrollo Sostenible	Nacional	
	Resolución Nº 1511	Sistemas de recolección selectiva y gestión ambiental de Bombillas	2010	Ministerio de Ambiente y Desarrollo Sostenible	Nacional	

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Resolución Nº 1297	Sistemas de recolección selectiva y gestión ambiental de pilas y/o acumuladores	2010	Ministerio de Ambiente y Desarrollo Sostenible	Nacional	
	Decreto 4741	Prevención y Manejo de residuos peligrosos generados en el marco de gestión integral	2005	Ministerio de Ambiente y Desarrollo Sostenible	Nacional	se define las bombillas como un residuo peligroso
Costa Rica	Decreto Ejecutivo Nº 35933-S	Gestión Integral de Residuos Electrónicos	2010	Ministerio de Salud, Ministerio de ambiente de energía y telecomunicaciones		
	Ley Nº 8839	Gestión integral de Residuos	2010	Ministerio de Salud	Nacional	
	Reglamento Nº38272-S	Declaratoria de residuos de manejo especial	2014	Ministerio de Salud	Nacional	
	Ley Nº 7554	Ley Orgánica del Medio Ambiente	1995			
	DecretoEjecutivo Nº 35906-S	Reglamento de Centros de Recuperación de Residuos Valorizables	2010	Ministerio de Salud	Nacional	
	Decreto general de aduanas 368	Modificaciones a Ley General de Aduanas	2009	Hacienda	Nacional	
	Reglamento Nº19049	Manejo de basura	1989			
	Ley 7438	Convenio de Basilea	1994			
Ecuador	Acuerdo Ministerial Nº190	Política Nacional de Post Consumo de equipos eléctricos y electrónicos.	2012	Ministerio del Ambiente	Nacional	
	Acuerdo Ministerial Nº191	Instructivo para reciclaje de celulares	2012	Ministerio del Ambiente	Nacional	
	Acuerdo Ministerial Nº161	Reglamento para la prevención y control de la contaminación por sustancias químicas peligrosas, desechos peligrosos y especiales	2011	Ministerio del Ambiente	Nacional	
	Acuerdo 10330	Chatarrización de los bienes obsoletos e inservibles del sector publico	2010	Ministerio de Industria y Productividad	Nacional	
	Acuerdo 1042	Listado de sustancias químicas peligrosas, desechos peligrosos y especiales	2012	Ministerio del Ambiente	Nacional	

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Decreto 1791	Chatarrización de los bienes obsoletos e inservibles del sector publico	2010	Ministerio de Industria y Productividad	Nacional	
	Reglamento general	Manejo y administración de bienes del sector publico	2006	Contraloría General	Nacional	
	Ley de gestión ambiental	Ley de gestión ambiental Codificación	2014			
El Salvador	Decreto Ejecutivo No.41, 31/05/2000	Reglamento Especial en Materia de Sustancias Residuos y Desechos Peligrosos	2000			
	Decreto Nº 233	Ley de medio ambiente	1998			
	Acuerdo Regional	Movimientos Transfronterizo de Desechos Peligrosos.	1992		Regional	
Guatemala	Acuerdo Gubernativo Nº 258	Política de Producción más Limpia	2010			
	Ley	Ley de protección y mejoramiento de medio ambiente-(decreto nº 68-86)			Nacional	
Honduras	Constitución	Constitución art. 145 y 146				
	Ley General	Ley General del Ambiente art 68 y 69				
Nicaragua	Constitución					
Panama	Resolución 1029	Requisitos empresas dedicadas al manejo de residuos peligrosos.	2011		Nacional	
	Decreto Ejecutivo 34	Gestión Integral de Residuos - peligrosos y no peligrosos	2007		Nacional	
Paraguay	Ley nº 1.561/2000 (I)	Sistema Nacional del Ambiente /Consejo Nacional de Ambiente y Secretaría del Ambiente	2000			
	Ley nº 42/90		1990			
Peru	Decreto Supremo 001-2012	Reglamento nacional para la gestión y manejo de los residuos de aparatos eléctricos y electrónicos	2012	MINAM		

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Decreto Supremo 02-2009	Decreto Supremo que aprueba el Reglamento para la Gestión y Manejo de los Residuos de Aparatos Eléctricos y Electrónicos	2009	MINAM		
	NTP 900.064	Generalidades. Gestión Ambiental. Gestión de Residuos. Manejo de residuos de aparatos eléctricos y electrónicos.	2013	INDECOPI		
	NTP 900.065	Generación, recolección interna, clasificación, Almacenamiento, centro de acopio. Gestión ambiental. Gestión de residuos. Manejo de residuos de aparatos eléctricos y electrónicos.	2013	INDECOPI		
	NTP 900.066	Gestión de Residuos. Manejo de Residuos de Aparatos Eléctricos y Electrónicos - RAEE. Tratamiento de RAEE con monitores y pantallas y otros aparatos eléctricos y electrónicos.	2014	INDECOPI		
	Ley 29419/Decreto 005	Regula Actividad de los recicladores	2010	Ministerio del Ambiente y Ministerio de Salud	Nacional	
	Directiva 003-2013	Procedimientos para la gestión adecuada de los bienes de los muebles estatales calificados como Residuos de Aparatos Eléctricos y Electrónicos- RAEE	2013	Superintendencia Nacional de Bienes Estatales		
	Decreto Legislativo N° 1013	Ley de Creación, Organización y Funciones del Ministerio del Ambiente				
	Ley N° 27314	Ley General de Residuos Sólidos (modificada por el Decreto Legislativo N° 1065)				
	Resolución 027/2013	Procedimientos para la gestión adecuada de los muebles estatales calificados como Residuos de Aparato Eléctricos y Electrónicos	2013	Sociedad de Bienes Estatales (SBN)		
	DecretoSupremo 012/2009	Politica Nacional Ambiental	2011			
Uruguay	General Act Nº 17-283/2000	General Act for Environmental Protection	2000			

Country	Law / Bill / Regulation	Original Title	Year	Institutions	Jurisdiction	Name of Jurisdiction
	Decreto 349/005	Reglamentación de evaluación de impacto ambiental y autorizaciones ambientales.				
	Ley Nº 17.283/2000	General de Protección Ambiental.	2000			
	Decreto Nº 373/03	Reglamento de baterías de plomo ácidousadas o ser desechadas				
Venezuela	Constitución de la República Bolivariana de Venezuela		1999			
	Ley Nº 5833. 22	Ley Orgánica del Ambiente	2006			
	Ley Nº 36.579	Ley Orgánica de Salud.	1998			
	Ley Nº 6017	Ley de Gestión Integral de la Basura	2010			
	Decreto Nº 2635	Normas para el control de la recuperación de materiales peligrosos y el manejo de los desechos peligrosos	1998			
	Resolución 40	Requisitos para el registro y autorización de manejadores de sustancias, materiales y desechos peligrosos	2005			

ANNEX I: DETAILED ASSESSMENT OF THE NATIONAL AND REGIONAL LEGISLATION

E-waste existing policies: key issues and needs for improvement and development

Summary

Among the project countries, only Costa Rica and Peru have policies (an act and an executive decree, respectively) that enact the extended producer responsibility (EPR) and certain degree of development throughout the creation of associations of producers and an approximation to the definition of collection goals. Argentina has several provincial legislations, three establishing the government's responsibility for treatment and disposal of e-waste. Only one province has included extended producer responsibility (in a provincial law). Ecuador has a policy that postulates the EPR principle that is only developed as an obligation for batteries. Recommended actions in these countries should include a study regarding the performance of procedures created by private sector and the government, and propose and assist the countries in the development of information, registration and reporting systems.

In Argentina, Chile and Uruguay there have been draft bills to introduce the EPR principle, but all of them have failed to be passed. The Argentinean bill introduces EPR as the producer is responsible only for its own products. The Chilean bill has a detailed development of EPR expressed in rules that set clear duties and establish a financing system. The Uruguayan bill mainly consists of a set of principles and suggestions. Action in these countries should include the identification of barriers that impeded the approval of the legislation, analyses of the producers' viewpoints, and assessment of the sources of uncertainty.

The other countries: Bolivia, El Salvador, Guatemala, Honduras, Nicaragua, Panamá and Venezuela do not have current initiatives or draft bills, but in some cases there are already e-waste collection plans in the main cities. The first actions in these countries should be aimed to creating consensus regarding the EPR principles and its financing architecture; also, steps to create an information system can be initiated simultaneously.

For all the countries some of the key issues to create/improve e-waste policies, identified during the PPG phase are: (1) Passing rules (perhaps through necessary legislative acts) to establish the EPR principle. Perhaps, this should consider the producers' (including manufacturers, importers, traders) responsibility for the entire life-cycle of the electric and electronic equipment they introduce in the markets. Consequently, producers should have the obligation to set, implement and finance the collection, treatment and disposal of the e-waste produced after consumption of their EEE, independently in principle of the public waste services; (2) Developing and adapting the EPR principle to Latin America, with a set of obligations (perhaps introduced by an executive order or similar) for all the stakeholders. The region seems to have preference for gradual steps in order to reach all e-waste streams (future, historic and orphan); (3) Defining e-waste collecting goals or quotas by producer and associations of producers to fulfill their duties. This would make the system more efficient and trustable (eventually and temporarily, a cap could be established for producers goals ,*e.g.* to collect e-waste not exceeding 20 per cent of the amount set during the previous year, based on their participation in the market; and, (4) Creating information systems, registers for all EPR actors, and setting common reporting strategies, but with differentiated roles, including those of the public authorities, producers and their associations, recyclers, customs authorities, etc. Other important rules should be established, as well, such as penalties, user e-waste awareness, research, specific obligations for large users, and so on.

A. Current policies in Latin America:

Table 1. Existing e-waste policies in Latin America

	Statutory law	Normative level
ARGENTINA	Provincial legislation: Ley 7345 de 2014 — Chaco Ley XI-56 — Chubut Ley 9373 de 2013 — La Rioja Ley 8362 de 2013 — San Juan Ley Nº 2807 — Ciudad de Buenos Aires[7] — National legislation: Proyecto del senador Daniel Filmus	provincial Bill (national)
BOLIVIA	—	
BRASIL	Lei 12.305,[8] de 2 de agosto de 2010 — State legislation: Lei 9941/2012 — Espirito Santo Lei 9291/2010 — Maranhão	Solid Waste Act

[7]An act to obligate governmental agencies to dispose e-waste; it is possible for private sector to adhere.
[8]The article 33 of Solid Waste Act define the EPR principle.

	Lei 8.876/2008 — Mato Grosso Lei 3970/2010 — Matto Grosso do Sul Lei 15851/2008 — Paraná Lei 11.384/2012 — Rio Grande do Sul Lei 13.576/2009 — São Paulo — Municipal ordinances: Lei 5359/09 — Cascavel - PR Lei n° 6.663/2010 Guarulhos - SP Lei No. 1.705 — Manaus - AM Lei No. 5.043/2009 — Rio de Janeiro - RJ[9] Lei 7772/09 — Sete Lagoas - MG	
CHILE	There exist a bill: A bill for waste managemente and EPR	bill
COLOMBIA	Ley 1672/2013 (19 de julio)	national
COSTA RICA	Act 8.839, Decreto Nº 35933-S and Decreto 38272-S	Act - Executive decrees
ECUADOR	Agreement Nro 190	Ministerial order
EL SALVADOR	—	

[9]Found unconstitutional at Ação direta de inconstitucionalidade 0062570-08.2009.8.19.0000 arguing invade federal powers.

GUATEMALA	—	
HONDURAS	—	
NICARAGUA	—	
PANAMA	—	
PARAGUAY	—	
PERU	Supreme Decree Nº 001-2012-MINAM	Executive Decree
URUGUAY	There is a bill drafted 2007	A bill
VENEZUELA	—	

1. **Extended producer responsibility**.

The main problem in Latin America is that there exist a few manufacturers of EEE, and EPR needs to be moved to importers, dealers and traders. Probably in Latin America the weight of orphan e-waste is more significant (smuggled, assembled and imported in the baggage); producers view this as an unpredictable burden of e-waste and unfair competence.

In addition there is no accurate estimation of the number of WEEE in hands of users (historic). Perhaps for this reasons some existing policies introduce EPR complemented with governmental duties and give place to a negotiation process to charge producers initially/explicitly with "their" products and weakly with historic and orphan e-waste

Strengths:

EPR create incentives to design more sustainable, less toxic and easily recyclable EEE;

EPR puts the e-waste in the hands of the actors that take the profits and with adequate knowledge and releases government of a task that could be performed more efficiently by the private sector. Collect and disposal as government task charging the cost of process e-waste to the public expenditure, is an unfair distribution of tax burden.

Weaknesses:

EPR could increase the cost of EEE because producers would be adding recycling costs into the initial price tag;

To enact an efficient EPR policy, a sustainable set of obligations and control mechanisms is necessary that require consensus and an accurate legislative drafting.

Table 2. Producers' collecting obligations

	EPR	as State duty	IRP only the producer's REEE	AEE of their owns brands	with the purchase of EEE of the same type	other RAEE *e.g.* orphan	collective system
ARGENTINA Proyecto nacional Chaco Chubut La Rioja San Juan	X[10]	 X X X	 X —	 — —	 X[11] —	 — —	 X X
CHILE	X		—	—	—	X	X
COSTA RICA	X10		—	—	—	—	X
ECUADOR	X10		—	—	—	—	
PERU		*[12]	X[13]	—	—	—	X

[10]The definition of ERP don't restrict responsibility only to "their AEE", but the texts are ambiguous and there are no rules to include explicitly orphan or historic RAEE.
[11]Article 14 of Decreto Nº 35.933-S and article 42 of Act 8.839
[12]Municipalities are committed to collect e-waste separately, the policy don't say who pay the treatment and final disposition of this e-waste.
[13]Article 11.2. ... Collect by free the WEEE from their customers, in the geographical area related to the established WEEE management system.

2. Associations of producers, collecting goals or quotas, historic and orphan WEEE

All e-waste legislations are based on the environmental and human health compromise to collect, treat and disposeall e-waste. This goal requires that producers collect and finance also the disposal of other e-waste than they produce and introduce in the market. Minimum EPR use two strategies: collect the EEE sold when it became e-waste; collect one-to-one with the purchase of a new EEE. Producers' collecting goals can be established by public authorities to guarantee "all" existing e-waste can be disposed under the police. The calculation of collecting goals is based in the total estimation of e-waste in hands of users, and the participation of each producer in the local market.

If each user can decide the producer will receive its e-waste (a good practice to open a wide collecting system), it is possible that one producer receive a quantity that exceed the fees that it charged to its products, to reduce this volatility the laws give producers the possibility to associate and create entities (NGO or companies) that manage all the e-waste; this is economically more efficient: less fix cost, better capacity of negotiation with recyclers, and so on.

Strengths:

Fundamentally producers association and collecting goals create a stable and sustainable system to collect, treat and dispose practically all the e-waste.

Weaknesses:

It is not possible to obligate a producer to be associated, this increase the control activities of the public authorities and generate risks.

The systems need more than one, but not a lot, associations of producers to open market rules; to create these conditions could be a challenge for the public authority.

Producers are concerned with the loss of control or with excessive participation by the public authority defining goals —certain transparency and accountability is necessary. During the discussion regarding thebill, producers usually introduce objections to this system, fundamentally because they fear the system overpass the expectations and specifically because of lack of information and uncertainty.

To calculate collecting goals it requires a strong information system, registering all the actors, and a set of obligatory reporting forms.

This logic requires a penalty in case a producer don't reach the goal, this risk increases for non-associated producers

Table 3. Collecting goals at regional policies

	Introduced in policy rules	Explicit calculation	Who calculate and fix the goals	What happens if the goal is not reached

CHILE	Yes	yes	executive order by the Environment Ministry[14]	It's a serious administrative offence (art. 34 d) ... with a fine, withdrawal of license, and public exposition
COSTA RICA	Yes	yes	a joint public-private Executive Committee (CEGIRE) and Ministry of Health Goals must be negotiated with producers	not ruled

3. Information system, registering and obligatory reports

Different kinds of information are needed by the public authority to control the performance of each actor, assessment of policy performance, and specifically to calculate producers collecting goals.

Normally the legislative/executive rules establish (or leave to the public authority) the creation of information systems, the registration of all actors (and in some cases large users of EEE), and obligation to report (annually) compliance information. Sources of information are mainly reports and registers, but other sources are also relevant. All these information is used to generate performance indicators and to calculate producers collecting goals.

Strengths:

The defined information outputs and the accessibility to certain basic data creates a more efficient and trustable system;

Also information transparency gives accountability to the system;

If customs are integrated to the system, information about transboundary movements of e-waste becomes better monitored and public.

[14]Goals to be reviewed for each five years period (Article 15)

Weaknesses:

Producers (manufacturers, importers and traders) are generally concerned for certain data that they consider privileged information; transparence could be delayed to reduce impacts in market competence.

The reported information period (normally annual) could be reduced with available Internet technology, but some concern by producers can be anticipated.

The information quality is absolutely relevant; a distributed data system and weakness of public authorities in this matter is a challenge; audit capabilities are reduced and expensive.

Table 4. Information flow in the existing policies

	Information system on e-waste	Register for all actors	Reportes	exportaciones
ARGENTINA Proyecto nacional Chaco Chubut La Rioja San Juan	yes[15] yes no no [16]	yes yes no no [17]	si si no no [18]	no no no no no
CHILE	[19]	si	Si	[20]

[15]The National Information System for Waste Management, established in Article 17, Act No. 8839.
[16]In the policy text as e-waste traceability; also required to state agencies and large generators an annual affidavit
[17]It is established a register of state agencies and large generators.
[18]State agencies must report; large generator must maintain "records and supporting information"
[19]The bill propose records and annual reports, says that information is to be used for goals calculation; the bill also contain elements of transparency but there are not explicit mention to an information system.
[20]The bill make reference to Basel Convention.

COSTA RICA	yes15	si	Si	no
ECUADOR	no	no	No	no
PERU	parcial[21]	parcial[22]	Yes	yes

4. Other issues

As EPR is a strategy designed to promote the integration of environmental costs associated with goods throughout their life cycles into the market price of the products,[23] this move the focus of implementation to a law & economics vision. Both penalties and incentives must be used to guarantee the police objectives and generate efficiency.

There are few examples of incentives in the region (perhaps only the participation of universities in research) but others as State revenues sacrifice, pre-competitive research, and public expenditure applied only to transitory actions (*e.g.* municipal collecting actions) could be considered.

Table 5. Penalties and incentives in the region existing policies

	penalties	incentives
ARGENTINA		
Proyecto nacional	yes[24]	no
Chaco	a reference[25]	[27]
Chubut		no
La Rioja	no	no
San Juan	no	no

[21]Article 6 and other sections create for the public authority the duty of "monitoring, surveillance, monitoring, audit and control" but there not exist the concept of information shared with all the actors in the policy.
[22]Only to recyclers.
[23]Thomas Lindhqvist, Extended Producer Responsibility in Cleaner Production, (2000), Lund University.
[24]A fine or withdrawal of license. Directors, managers and administrators could be personally responsible.
[25]Article 8.1.h.

	si[26]	
CHILE	si[28]	[29]
COSTA RICA	a reference[30]	a reference[31]
ECUADOR	a reference[32]	[33]
PERU	si[34]	si[35]

Municipal participation in the policy is essential, particularly during the transition to a full EPR (in particular with collecting point or events). Fines and other awareness actions must be implemented to enforce the policy. In some countries municipal autonomy could be a problem.

[27]Article 9.4.h.
[26]Written warning, fines or withdrawal of license. Directors, managers and administrators could be personally responsible.
[28]Articles 34,35 and 36. In Article 35, a fine for don't reach the goals " ... for each unit of goal unreached the amount of 2 to 10 the cost of a unit of waste management".
[29]The article 28 creates a fund to support programs, research and studies.
[30]Article 24.
[31]At Article 6 as a power of Executive Committee (CEGIRE).
[32]Article 3.
[33]Article 4.6.
[34]Article 21
[35]Article 20. Public recognition for good performance and successful experiences

B. Harmonization of existing national policies

Probably the harmonization must be addresses to a common understanding of the EPR. Project countries differ in economic and social conditions, and in consequence it is almost impossible to create the same set of obligations for producers and other actors.

In the following draft proposal it is clear that the core rules could be harmonized, complementarily obligations need to be adapted to socio-economic framework (*e.g.* existence of manufactures, smuggling, and marginal social groups collecting e-waste informally)

§1. Definitions:

Producer: the term producer includes manufacturer, importer or trader of an EEE.

Collective system of management: is an association of producers that assume by contract the obligations of collection, treatment and final disposal of WEEE.

Generators of WEEE: are the users that decide an EEE become e-waste, can be large generators or small generators (that includes private households).

Large generators: are state agencies and corporations that are users with certain number of EEE (a quantity to be defined by executive order) and registered by state authority.

§2. Core rules

Scope of the norm: EEE included in the policy; defined and listed in an executive order.

Extended Producers Responsibility: Producers are responsible for the organization and financing of waste management of EEE marketed in the country, independently of the public service of urban sanitation and solid waste.

This rule requires a high legislative level and for instance could be included in the Solid Waste Act (as the Brazilian Act 12.305 or the Costa Rican Act 8839)

§3. Obligations

A set of obligations for all the actors. The experience in Latin America (particularly Costa Rica and Perú) shows that ruling must be gradual beginning with a minimum EPR and promoting the installation of associations of producers.

The minimum is:

3.1. Producers must accept e-waste for free for collection, handling and recycling or reuse for which they are the producer [or of their registered trademarks]

3.2. Producers can satisfy their e-waste obligations individually or associated with other producers

3.3. Generators of WEEE must segregate WEEE from municipal solid waste collection, and deliver WEEE to producers or approved management systems duly authorized.

3.4. State authority must define and implement an information system addressed to quantify the number of EEE in the market and to estimate the amount of e-waste. This system must be complemented with a registration of all actors and a reporting system that cover all the information needed to monitor this police and estimate the e-waste collecting goals.

Second level:

[*rule added*] **3.5. Additionally to the obligation 3.1.producers must accept by free for collection, handling and recycling or reuse one piece of electronic waste of any producer's brand if offered by a consumer with the purchase of covered electronic equipment of the same type by a consumer.**

Third level:

[*rule instead previous 3.1.*] **3.1. Producers must accept by free for collection, handling and recycling or reuse all the WEEE to cover the producer collection goal.**

The producer collection goal is defined annually as:

producer's market share × estimated total e-waste

producer's market share measured in percentage units and estimated total e-waste in equipment's units, both result from the state authority information system

Fourth level

[*rule instead previous 3.1.*] **3.1. The producer collection goal is defined annually as:**

μ× Producer's market share × estimated total e-waste

*Where*μ*is a multiplier defined by the state authority that could be equal to* e.g. *1.2* [a statutory cap for this multiplier could be an asset]

Fifth level

[*rule instead previous 3.1.*] **3.1. Producers must accept by free for collection, handling and recycling or reuse all the WEEE.**

This is, for instance, the norm in the Swiss ordinance 814.620

To reduce opposition or lobbying by industry or other stakeholders, can be added some complementary rules:

3.6. Producers are not obligated to accept by free e-waste from large generators. Large generators must deliver their e-waste to approved management systems duly authorized.

3.7. Producers must accept by free for collection, handling all the WEEE just to reach the cap of 150% of their collection goal, they are responsible for recycle for their producer collection goal.

C. Articulation within the existing regional and sub-regional policy platforms.

1. Background

The participating countries are parties of three regional economic co-operation agreements *viz*. MERCOSUR (Argentina, Brazil, Paraguay, Uruguay and Venezuela), the Andean Community (Bolivia, Colombia, Ecuador and Peru), and the Central America Integrated System (Belize, El Salvador, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, Dominican Republic).

MERCOSUR approved by November 2005 a common policy for the management of special waste (including batteries, electric and electronic equipment, lamps and cell phones) ruling the Extended Producers Responsibility [MERCOSUR/IV CMC/ P.DEC Nº 02/05]

Complementarily to agree harmonization of national policies and sharing information, the MERCOSUR common policy includes:

> Article 1.
>
> ... establish the basis for environmental management of hazardous waste of universal generation, which should create favorable conditions for the development of a regional platform committed to incorporating post consumer responsibility
>
> Article 4. ...
>
> > 4. Discourage the entry into the region of waste and products from third countries involving an environmental problem through the development of common criteria for prevention and detection of illicit trafficking and promoting cooperation among States Parties
> >
> > 8. Provide appropriate and necessary financing conditions within the existing channels in MERCOSUR and coming from other international organizations for the effective implementation of the "MERCOSUR Environmental Policy for special Waste Management of Universal Generation and Post Consumer Responsibility";
> >
> > 9. Promote research programs and capacity development on the field of clean technologies, recycling and waste treatment;

The Central America Integrated System, throughout the Central America Commission for Environment and Development approved the Regional Agreement about Transboundary Movements of Hazardous Waste (1992) (signed by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua y Panamá). Relevant clauses establish:

> 1. Hazardous Waste Import Ban: The signatories Central American countries of this Agreement shall take all that they be appropriate within the areas under their jurisdiction, to prohibit the import and transit of wastes considered hazardous, to Central America from countries that are not parties to this Agreement. They cooperate to ban imports of hazardous waste from entering a state party to this Agreement.

2. Draft proposal

Taking into account existing agreements and the needs for a regional environmental protection and human health preservation that particularly is enforced by national e-waste polices, some initiatives can be articulated and agreed to guarantee more efficient and sustainable polices.

1. To create favorable conditions for the development of a regional platform committed to incorporate extended producers responsibility as a regional principle;

2. To cooperate to ban imports of e-waste from entering a State Party to this Agreement;

3. To develop common criteria for prevention and detection of illicit trafficking and promoting cooperation in this matter among States Parties;

4. To interchange good practices, information and knowledge about the implementation of extended producers responsibility in concordance with the socio-economic conditions of each State Party;

5. To cooperate for the definition and implementation of national information systems about e-waste generation, collection and final disposal that can communicate with each other efficiently and with greater possibilities to generate indicators and knowledge;

6. To create a regional information system to monitor transboundary movements of e-waste for the purpose of final disposition between the States who are Parties.

ANNEX J: OVERVIEW OF PAST AND ONGOING NATIONAL PROJECTS RELATED TO E-WASTE MANAGEMENT

Country	Organization / Institution	Project	Objective	Scope	Year	Links
Argentina	GREENPEACE	BASURA ELECTRÓNICA	Produce knowledge and incidence	National	2009	www.greenpeace.org.ar/blog/categoria/basura-electronica-2
	DONDE RECICLO	Recycling map	General project about recycling Include e-waste and batteries.			www.dondereciclo.org.ar
	REZAGOS		Business of refurbishment and re-use of electronic devices	National		www.rezagos.com
	MINERIA URBANA		Consultant in WEEE management			www.mineriaurbana.org
	UNIVERSIDAD DE LA PLATA	E-BASURA Social program about computers recycling	Capacitation and refurbishment on computers	La Plata	2009	www.e-basura.linti.unlp.edu.ar
	FUNDACIÓN EQUIDAD	Social program	Technical trainings on computer			https://sigraee.files.wordpress.com/2014/06/argentina.pdf
	MERCOSUR/ EUROPEAN UNION	ECONORMAS Best practices on WEEE SMEs	Guideline on best practices in e-waste SMEs Argentina.	Argentina	2013/ 2014	www.econormas-mercosur.net/es/videos/59-videos-pcs/289-buenas-practicas-en-la-gestion-de-residuos-de-aparatos-electricos-y-electronicos-
Bolivia	FUNREDES	E-waste in Boliva	Some studies about situation of e-waste in Bolivia	La Paz		www.fundacionredes.org
	SWISS CONTACT	Eco vecindario	Proper solid waste management		Ongoing	www.swisscontact.bo
	SGAB Sociedad de Gestion Ambiental Boliviana.	Society of Environmental Management of Bolivia	Seminars, activities on e-waste	Cochabamba		www.sgab-bolivia.org
	Municipality of La Paz	Project about environmental technology	Sensitize civil society about disposal of			

Country	Organization / Institution	Project	Objective	Scope	Year	Links
		awareness	technological resources			
Chile	Ministry of Environment	Extended producer responsibility	Implementation of EPR on valuable devices, specific project on e-waste	National		http://portal.mma.gob.cl/
	CHILENTER	Refurbishment Center-	Social project-dependent from Government (Digital Divide)	National		www.chilenter.cl
	UNIVERSIDAD DE CHILE	CENTRO DERECHO AMBIENTAL	Sustainability at legal level. Some seminars including WEEE issue.			www.derecho.uchile.cl/cda
Costa Rica	ASEGIRE	Association for Integral Management for e-waste. Compliance Unit	Set up a take-back scheme, training, legal and technical assistance	Costa Rica		www.asegire.com
	ACEPESA. Asociación Centro Americana para la Economía, la salud y el ambiente	Central America Association for Economy, Health and Environment	Research, capacity, trainings and networking	Costa Rica		www.acepesa.org
	GIZ	Programa de Competitividad y Medio Ambiente (CYMA)	Joint organization with various sectors of a proposal of Law 8839 law, Waste Management, published on July 13, 2010.	Costa Rica		
Ecuador	Ministry of Telecommunications and Information Society	Chair of Working Group eLAC 2015 Waste Technology			2013	www.mintel.gob.ec

Country	Organization / Institution	Project	Objective	Scope	Year	Links
El Salvador	Basel Regional Center for Central America and Mexico	Project for Regional Central America countries on WEEE	OEA project- StEP associated			http://crcbcam.blogspot.com/2012/09/centro-regional-del-convenio-de-basilea.html
	Computer Refurbishment Center (CRC), Ministry of Education (ME) and national support network technical Reconditioning, assembly, Technical Support and Computer Recycling (CREST)	Center for refurbishment, assembly, technical support and Computers Recycling				www.cienciaytecnologia.edu.sv/index.php/noticias/item/286-centro-de-reacondicionamiento-de-computadoras.html
	Fundación Salvadoreña para el Desarrollo Económico y Social (FUSADES)	Study on E-waste				www.fusades.org
Guatemala	E-Waste de Guatemala	Foundation	Social project. Collection campaigns, gathering and training for companies. Standards certification project.			www.ewastedeguatemala.org
Peru	IPES Promoción del Desarrollo Sostenible	Promotion for Sustainable Development. NGOs specialist on e-waste	Assist the Peruvian Government in the law implementation. Support technical area, collection campaigns, trainings, etc.			www.ipes.pe www.raee-peru.pe
	Ministry of Education	Peru Educa	"Digital Divide" project			www.perueduca.edu.pe

Country	Organization / Institution	Project	Objective	Scope	Year	Links
Uruguay	Plan Ceibal		Recycling Program - ANTEL INTEGRA - refurbishment - Plan Ceibal			www.ceibal.edu.uy
	AGESIC		Agencia de Gobierno Electrónico y Sociedad de la información			www.agesic.gub.uy
	CEMPRE	Corporate Commitment for Recycling				www.cempre.org.uy
	Ministry of Housing, Spatial planning and environment	National Direction of Environment				www.mvotma.gub.uy
Venezuela	Ministry of Education		"Digital Divide" Program			www.canaimaeducativo.gob.ve
	Ministry of Popular Power for Science, Technology and Innovation	One Laptop per Child	Caimana Project			www.mcti.gob.ve
	Ministry of Popular Power for environment					www.minamb.gob.ve
	National System for Sciences, Technology and Innovation	WEEE program				www.mcti.gob.ve

ANNEX K: OVERVIEW OF PAST OR ONGOING REGIONAL OR SUB-REGIONAL PROJECTS RELATED TO E-WASTE MANAGEMENT

Organization / Institution	Project / Program (original title)	Country (s) / Region / Subregion	Implementing Partners	Goal(s) of Project	Instruments	Period / Year
IDRC – Canada	Plataforma RELAC	Latin America	Sur, EMPA, Governments, OEMs, BCRCs	Develop solutions for e-waste management in Latin America	Regional harmonization training and dissemination	2004
RELAC - Chile	WEEE articulation in LA	Latin America	IDRC, EMPA, OEMs, Goverment of Chile, Argentina, Colombia, Perú, Costa Rica, México, BCRCs			2004-2011
EMPA - Switzerland	Swiss e-Waste Program	Peru, Colombia and LAC	IPES in Peru, CNPMLTA in Colombia, RELAC on regional level	Support the implementation of e-waste management systems on all levels (legislation, collection, recycling, etc.)	Technological development, training and dissemination	2008-2012
EMPA - Switzerland	Sustainable Recycling Industries (SRI)	Peru and Colombia	IPES in Peru, CNPMLTA in Colombia, RELAC on regional level	Support the implementation of e-waste management systems with special focus on sustainable recycling		2013-2015
ECLAC (CEPAL)	e-LAC e-waste working group	Latin America		Include E-waste issue at the e-lac goals		2010-2015
UNEP/GEF	Global En-lighting Partnership programm	Latin America				
	Regional strategy for energy efficiency in lighting	Central America				2013
StEP	Solving the e-waste Problem	Global	United Nation University (UNU)	Map about LA incluye de e-waste volumen of each Latinamerican country	Five LA associates	2013
Centro de Tecnología de Innovación Renato Archer (CTI)	Project presented at the Latin American meeting of Ministers of Science and Technology held in Rio de Janeiro in June 2013.	Brasil, Chile, Colombia, Costa Rica and Peru			Reinforce industrial recycling process. Includes strengthening industry training	

ITU	ITU T SG5 Environment and Climate Change	Global		Responsible for studies on methodologies for evaluating ICT effects on climate change and publishing guidelines for using ICTs in an eco-friendly way.		
ACEPESA,ITU, CWG and Platform RELAC (IDRC)	"Sustainable Management Strategy electronic waste in Panama, Guatemala and El Salvador."	Collaborative Working Group on Solid Waste Management – CWG and RELAC (IDRC)		Assess the situation and developed a sustainable strategy for the e-waste management in El Salvador, Guatemala and Panamá.	Diagnostic about WEEE in Panama Guatemala and El Salvador	2007-2008
ACEPESA - Costa Rica	Diagnostic Weee panorama in El Salvador	El Salvador	ACEPESA y CWG	Assess the situation of e-waste management in El Salvador		
IDRC / ICA	QUIPUS.WCE. RELAC	Latin America	Werecycle/ Reciclemos A hemispheric initative for LA and the Caribbean	Create awareness in Latin America and the Caribbean about the risks and negative impacts of electronic waste (e-waste), the importance of its sustainable management and disposal. This will be done through the development and presentation of a Toolkit to be disseminated in the entire regio	LA	2007
Fondos de AGCI	Development Project	Mexico and Chile (bilateral)	INE / RELAC			2012

ANNEX L: DETAILED OVERVIEW OF INVOLVED STAKEHOLDERS AT THE NATIONAL LEVEL

Country	Category	Stakeholder name
Argentina	Governmental institutions	Secretaria del Ambiente y Desarrollo Sustentable Ciudad Autónoma de Buenos Aires
	Private sector association	Cámara Argentina de Máquinas de Oficina (CAMOCA) Cámara de Industriales de Bienes Durables de Consumo (CICOMRA) Cámara de Importadores de Pilas y Baterías (CIPIBA)
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	Silkers IndustriasDalaferl Scrap y Rezagos SRL Protea (Cordoba) 3R Ambiental Pelco SAS GestiónAmbiental
	NGOs and civil society	Greenpeace Equidad Minería Urbana Va de vuelta Plan Conectando Sonrisas
	Academia	Instituto Nacional de Tecnología Industrial (INTI) Universidad Nacional de La Plata Universidad de Buenos Aires Universidad Nacional de Quilmes
	Other	Centro de Convenio de Basilea America del Sur.
Bolivia	Governmental institutions	Ministerio de Medio Ambiente y Agua
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	RAEE Recicla Recíclame Procicla

	NGOs and civil society	Swisscontact Centro de Promoción de Tecnologías Sostenibles (CPTS) FUNDARES - Cochabamba FUNDARES-Santa Cruz REDES QUIPUS Cleaner Production Center
	Academia	Universidad AndinaSimón Bolívar
Chile	Governmental institutions	Ministerio de Medio Ambiente (MMA)
	Private sector association	ACTI EPEI
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	Recycla Degraf Chile Recicla MIDAS Chile Hidronor RE CHILE Global Recycling Compañía S.P.A. Reciclex
	NGOs and civil society	CHILENTER SUR Centro de Estudios Plataforma RELAC Centro Nacional de Producción Más Limpia (CNPL)
	Academia	Centro Ambiental Escuela de Leyes Universidad de Chile Universidad Andres Bello
Costa Rica	Governmental institutions	Ministerio de Salud Ministerio de Ambiente, Energía y Telecomunicaciones (MINAET)
	Private sector association	No information
	Take-back Schemes	ASEGIRE

	Collectors, dismantlers, recyclers	GEEP CR Fortech Solirsa, Soluciones Integrales en Reciclaje Metales Slmet MS S.A. Hope Proyectos Ambientales S.A. VALU SHRED Costa Rica Servicios Ecológicos M.B.B. S.A. TREC S.L Tratamiento de residuos electrónicos de Canarias S.L Bodeguita Luna Llena FUNDATEC, Fundación Tecnológica de Costa Rica : CTTM Reciclub logística Eladio Segura Ureña - GIP WILCORNIC SOLUCIONES S.A. ASOCIACIÓN DE MUJERES AMBIENTALISTAS 4R BRIGHTPOINT COSTA RICA LIMITADA
	NGOs and civil society	Centro Nacional de Producción más Limpia, ACEPESA
	Academia	No information
Ecuador	Governmental institutions	Ministry of Environment (MAE) Ministry of Telecommunication Ministry of External Affairs Ministry of Productivity
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	Vertmonde Intercia (Aliado GEEP) CERSA Cia Ltda Recynter (Verificarsies RAEE) BEE-RECYCLER Cía. Ltda. Comexport (Confirmargestor RAEE) One Life / Prolife
	NGOs and civil society	Centro Ecuatoriano de Eficiencia de Recursos y Producción más Limpia
	Academia	No information
El Salvador	Governmental institutions	Ministry of Environment and Natural Resources
	Private sector association	No information
	Take-back Schemes	N/A

	Collectors, dismantlers, recyclers	E-scrap de El Salvador Zartex Centro de Reacondicionamiento de Computadoras (CRC) , Government Program Miraje de RL AlmacenamientoTodo Verde AUTOCONSA DURAN COMPANY SA DE CV GLOBAL RECYCLED TeconologíaAmbiental
	NGOs and civil society	Centro Nacional de Producción Más Limpia de El Salvador
	Academia	Red de Instituciones de Educación Superior de El Salvador para el Fortalecimiento del Desarrollo de una Cultura Ambiental (RIESS)
Guatemala	Governmental institutions	Ministry of Environment and Natural Resources
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	e-Waste de Guatemala RECELCA RAMDELSA SELMET GUATEMALA
	NGOs and civil society	Centro Guatemalteco de Producción más Limpia
	Academia	No information
Honduras	Governmental institutions	National Secretariat of Natural Resources and Environment
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	RECACEL SA. Recicladora Centro Americana de Celulares Recycle, S. de R.L. de C.V.
	NGOs and civil society	Centro Nacional de Producción Más Limpia Honduras
	Academia	Universidad Nacional Autónoma de Honduras Universidad Pedagógica Nacional de Francisco Morozán
Nicaragua	Governmental institutions	Ministerio de Ambiente y RecursosNaturales (MARN)
	Private sector association	No information
	Take-back Schemes	N/A

	Collectors, dismantlers, recyclers	Asociación Nicaragua Ambiental (NICAMBIENTAL) HanterMetals eWaste - Global communications
	NGOs and civil society	Centro de Producción más Limpia de Nicaragua
	Academia	No information
Panama	Governmental institutions	National Environment Authority Ministry of Health
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	Recicla Panamá Recitec EcoRecycling Panamá Recimax Recycling Services, S.A" Recimetal
	NGOs and civil society	No information
	Academia	Universidad Latina de Panamá Universidad Metropolitana de Educación, Ciencia y Tecnología
Peru	Governmental institutions	Ministerio del Ambiente (MINAM) Ministerio de la Producción (PRODUCE) Ministerio de Transporte y Comunicaciones (MTC) Direccion Nacional de Salud (DIGESA) Sociedad de Bienes Estatales (SBN)
	Private sector association	Sociedad Nacional de Industrias (SNI) Cámara de Comercio de Lima (CCL)
	Take-back Schemes	ASPAGER, Plan Colectivo RLGA
	Collectors, dismantlers, recyclers	San Antonio Recycling Peru Green Recycling COIPSA Comimtel Akstarkom
	NGOs and civil society	IPES Centro de Ecoeficiencia y Responsabilidad Social (CER)

	Academia	Pontífica Universidad Católica del Perú (PUCP) Universidad Nacional de San Cristóbal de Huamanga Universidad Nacional Santiago Antúnez de Mayolo
	Other	INDECOPI
Uruguay	Governmental institutions	Dirección Nacional de Medio Ambiente (DINAMA) Ministry of Housing, Land, Planning and Environment
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	TRIEX Gestión de Residuos (Celuloide S.A.) Werba S.A. Crecoel
	NGOs and civil society	No information
	Academia	Universidad de la República Universidad de Montevideo
Venezuela	Governmental institutions	Ministry of the People´s Power for the Environment Ministry of Sciences and Innovation Thecnology
	Private sector association	No information
	Take-back Schemes	N/A
	Collectors, dismantlers, recyclers	Eco Reciclaje Integral Netarea Tecnología Informática TecNofic KB Venezuela RP CA
	NGOs and civil society	No information
	Academia	No information
Regional Level	International Organisms	IDRC GIZ PACE ITU Comunidad Europea UNEP
	Regional Organisms	Central American Commission of Environment and Development (CCAD) eLAC - ECLAC

	International Cooperation/Science	EMPA Solving the E-Waste Problem (StEP) GSMA Waste
	Cooperation/Science LA	RELAC
	Certification organizations	CENELEC WEELABEX SERI (R2) eStewards (BAN)
	MEAS	Basel Convention Center for South America (BCRC-SA) Basel Convention Center for Central America and Mexico (BCRC-CA) Stockholm Convention Regional Centre in panama (SCRC Panama) Stockholm Convention Regional Centre in Uruguay (SCRC Uruguay)

ANNEX M: OVERVIEW OF EXISTING FORMAL E-WASTE RECYCLING COMPANIES IN LATIN AMERICAN COUNTRIES

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
Argentina	Silkers	Buenos Aires	Parque Industrial Tecnológico Quilmes, Nave 20. Camino General Belgrano km. 10.5 Bernal Oeste / Partido de Quilmes (B1879DQU)	www.silkers.com.ar	No	* 14001 * 9001	-	-	**WEEE/HAZARDOUS:** TECHNOLOGY **OPDS**: Disposición 1960 de 2011 CHE OPERATOR **OPDS** (Exp. 11.2012) CAA Generador No. 5390, Resolución 357 **SAyDS** (Exp. 03.2014) **EXPORTS:** CAA Operator - Exportator No. 5513, Resolución 955 **SAyDS** (Exp. 09.14)
	Industrias Dalafer	Quilmes	Avda Tomás Flores N° 1946, Quilmes Oeste	www.dalafer.com.ar	No information	14001	-	-	**WEEE/HAZARDOUS:** Certificado de Habilitación Municipal No. 2194 de 2003 Certificado de Aptitud Ambiental -CAA- **OPDS 4795** (Exp. 04.2015) Certificado de Habilitación Especial - CHE- for Special Waste Transport No. 385/14 **OPDS** (Exp. 02.2015) 438 OPDS (06.26.2015) CHE Operatorof Special waste No. 0085/13 **OPDS** (Exp. 04.2014) Certificado Ambiental Anual -CAA- Operator- Generator No. 05466 **SAyDS** (Exp. 07.2014) **EXPORTS:** CAA Operator - Exportator No. 05608 **SAyDS** (Exp. 12.2014)
	Scrap y Rezagos SRL	Buenos Aires	Sarmiento 2090 10A (1044)	www.rezagos.com	Yes	14.001 (in process)	-	-	**WEEE/HAZARDOUS:** Certificado Aptitud Ambiental (C.A.B.A.) Nº 23194/2008, **Buenos Aires** (Exp. 10.2014) **EXPORTS:** Certificado Ambiental Anual -CAA- Operador- Exportador No. 05471 **SAyDS** (Exp. 07.2014)
	Protea (Cordoba) 3R	Córdoba	Austria 2373 P. 4 (1425) Ruta 9 Km	www.3rambiental.com.ar	No information	-	-	-	

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Ambiental		12,5, Juárez Celman						
	Pelco SAS	Tigre	MAIN: Calle Saavedra Nro. 2875, El Talar WEEE: Facility Benavídez Aristóbulo del Valle y Storni, Benavídez	www.grupopelco.com.ar	No			-	MAIN FACILITY AND TRANSVERSAL PERMITS: WEEE/HAZARDOUS: * CHE Operator of Special Waste No. 0141 OPDS (Exp. 12.18.2014) * WEEE Technology Registration Disposición 1055/11 OPDS (Exp. ND) * Incineration Technology Registration Disposición No. 0087/11 OPDS (Exp. ND) * Certificado de Aptitud Ambiental -CAA-No.473 OPDS (Exp. 04.16.2015) * Certificado Ambiental Anual -CAA-Operator- Generator No. 5436 SAyDS (Exp. 05.28.2014) Final Enabling: Certificado de Habilitación Definitiva -CHD No. 4112-23222, Municipality of Tigre (Exp. ND). EXPORTS: * Certificado Ambiental Anual -CAA-Operator- Exportator No. 05375 SAyDS (Exp. 02.01.2014)
	Gestión Ambiental	Buenos Aires	Benjamin J Lavaisse 1361, Darsena Sur (Ex Benito Correa) Puerto de Buenos Aires	www.gestionambientalbsas.com	No				No information
	Va de vuelta (NGO)	Buenos Aires		www.vadevuelta.org/dona-tus-electronicos	Yes				
	Fundación Compañía Social Equidad (NGO)	Buenos Aires	Av. Corrientes 3156, 1er piso	www.equidad.org	Yes				

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
Bolivia	RAEE Recicla	La Paz	Calle Kantuta Nro. 29, Zona El Pedregal	www.facebook.com/raeerecicla	Just CPUs cases				Operating License (Exp. 2016) Registro Ambiental Industrial (RAI) Nro. 0201001103 emitido por la Dirección de Gestión Ambiental (Exp. 2016) Export registration (Exp. 2016)
	Recíclame	Cochabamba							
	Procicla	Santa Cruz	C. Soliz De Olguin # 465 Zona: Central						
Chile	Recycla	Santiago de Chile	Av. del Valle N° 945 of 5607, Ciudad Empresarial, Huechuraba, Facility: Volcán Lascar poniente 761, Barrio industrial Lo Boza, Pudahuel.	www.recycla.cl	No				**WEEE/ Hazardous:** Exempt Resolution No. 919/2009, Comisión Regional del Medio Ambiente de la Región Metropolitana de Santiago, CONAMA (Exp. NA) Resolution of Environmental Calification (RCA) No. 43.707/2010, CONAMA (Exp. NA) **TRANSPORT:** Exempt Resolution No. 034372/2006 RCA, CONAMA (Exp. NA) "Gral. Transport for Hazards" **OTROS:** Oficio Ordinario No. 2604 / 2005, CONAMA (Exp. NA) "Not obligation for Environmental Impact Assesment"

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Degraf	Santiago	Las Araucarias Nº 9001, Quilicura	www.degraf.cl	No	9.001 14.001	18.001		**WEEE/ Hazardous:** Resolution of Environmental Qualification (RCA) No. 100/2008, Comisión Regional del Medio Ambiente de la Región Metropolitana de Santiago, CONAMA (Exp. NA) "Change of scope" Resolution NO. 6423/2009, Seremi de Salud RM ((Exp. NA) Resolution of Environmental Qualification (RCA) No. 244/2010, Comisión Regional del Medio Ambiente de la Región Metropolitana de Santiago (Exp. NA) "Change of scope" Resolution 4726/2011 Seremi de Salud RM (Exp. NA)
	Chile Recicla	Coronel	Longitudinal Sur 2661, Chillán	www.chilerecicla.com	No				
	MIDAS Chile	Santiago	Juan de la Fuente 834, Lampa Region Metropolitana	www.midaschile.cl	No	No	No		**WEEE/ Hazardous:** -Environmental Impact Statements -Resolution of Environmental Qualification (RCA) Nº 83749/2011 y Nº41096/2013, Comisión Regional del Medio Ambiente de la Región Metropolitana de Santiago, CONAMA (Exp. NA). Reception, storage and management for eWaste, batteries. *It is the only company in Chile that produces raw materials from garbage, precursors of urban mining
	Hidronor	Santiago Concepción	Av. Vizcaya 260, Pudahuel *Ruta Q-50, Km. 51,7, Florida Concepción-Cabrero	www.hidronor.cl		14.001 17.025	18.001		
	RE CHILE	Santiago	La Estera 742 G, Parque Industrial Valle Grande I, Lampa. R.M.	www.rechile.cl	No	Yes	18.001		

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Global Recycling Compañía S.P.A.	Lampa	Panamericana Norte Nº 22650	-					
	Reciclex	Santiago	Calle Briones Luco 01151 La Cisterna	www.reciclex.cl					
Costa Rica	GEEP CR	Cartago	25m Sur y 75m Oeste de Servicentro El Guarco	www.geepglobal.com	Yes	9.001 14.001	18.001	R2	**OPERATING PERMIT:** ARSGPR-098-2014 No4598 (Exp. 04.2019) **WEEE/HAZARDOUS OPERATOR:** DPAH-UASSAH-RGA -014-2013 (Exp. 11.2018) **COMMERCIAL PATENT:** PSF: 3577 Exp. 11.2016
	Fortech	Cartago	Oficinas Centrales Parque Industrial Zeta, Edificio # 29	www.fortech.cr	Yes	14.001			DPAH-UASSAH-RGA-019-2013 (Exp. 12.2018)
	Solirsa, Soluciones Integrales en Reciclaje	San José	300 Norte y 75 Oeste del BCR.	www.solirsa.com		-	-	-	DPAH-UASSAH-RGA-018-2013 (11.2018)
	Metales Slmet MS S.A.	Cartago	Zona Franca de Cartago	www.metalesselmet.com					Yes
	Hope Proyectos Ambientales S.A.	San José	300 Norte y 75 Oeste del BCR.	www.hopeambientales.org	Depends	-	-	-	DPAH-UASSAH-RGA-023-2013 (Exp. 12.2018)
	VALU SHRED Costa Rica	Alajuela	Zona Franca Zeta, Montecillos de Alajuela, Bodega 32A	www.valushred.com		14.001 9.001			**WEEE/HAZARDOUS:** - Sanitary Permit of operation , Health Ministry No. 0961/11, clasificación CIIU 3710 - Permit from Health Ministry as a WEEE Recycler No. DRS-UN-292/12 - Environmental Viability, Resolution No. 0536-2 012-SETENA

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Servicios Ecológicos M.B.B. S.A.	San José	Zona Industrial, Brasil, Mora, San José, Costa Rica 800 metros oeste y 200 metros sur de distribuidora Santa Bárbara, Calle Las Carreras	www.reciclajecr.com					DPAH-UASSAH-RGA-015-2013 (Exp. 11.2018)
	TREC S.L Tratamiento de residuos electrónicos de Canarias S.L	Alajuela	400 S. 400 O.200 N. de antiguo Radar del Aereopuerto	www.trec-canarias.com	No	-	-	-	DPAH-UASSAH-RGA-009-2013 18 (Exp. 11.2018)
	Bodeguita Luna Llena	San José	La Uruca, 100 metros Sur de la Bomba Texaco, Contiguo a la Imprenta Nacional en el Edificio Trisan	www.solucionesbodeguita.com		14.001 9.001	-	-	Yes, authorization for collection and storage of WEEE, permit from Health Ministry, export permits
	FUNDATEC, Fundación Tecnológica de Costa Rica : CTTM	Cartago	Nave 18, Parque Industrial de Cartago	www.tec.ac.cr http://www.tec.ac.cr/sitios/Docencia/quimica/cipa/Paginas/cttm.aspx					Yes
	Reciclub logística	San José	Frente a Plantel de Buses Casa Cuba	www.recyclub.com/					Yes (Exp. 03.2019)
	Eladio Segura Ureña - GIP	San José	Urbanización El Llano Casa 1-A, Salitrillos						DPAH-UASSAH-RGA-006-2013 (Exp. 10.2018)

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	WILCORNIC SOLUCIONES S.A.	Cartago	La Lima, costado oeste de Laboratorios Stein	www.wilcornic.com		14.001		R2	Yes (Exp. 01.2019)
	ASOCIACIÓN DE MUJERES AMBIENTALISTAS 4 R	Alajuela	650 N.de entrada princip. San Luis de Florencia						Yes (Exp. 12.2018)
	BRIGHTPOINT COSTA RICA LIMITADA		ANDAGOYA INC., S.A. Parque Industrial, Zona Franca						
Ecuador	Vertmonde	Quito	Francisco García No. N70-146 y Juan Barrezuete Office: Algas N50-171 & Frutillas	www.vertmonde.com	No				Environmental Certificate No. 00047-D, SDA Quito (Exp. 01.2012) Certificate of artisanal environmental waste manager "Medium" No. 523-GAR, SDA Quito (Exp. 02.2012)
	Intercia (GEEP)	Guayaquil Quito	Km 26 vía Daule Lotización INMACOMSA, Calle Laureles y 6to. Callejón 20 N.O. Guayaquil Km 8,2 vía Simón Bolívar - San Juan de Cumbayá alto	www.intercia.com	No	14.001 9.001		Punto verde, MinAmbiente	-Environmental Licence No. 280 /2011 (MinAmbiente) (Exp. NA) **QUITO** - Enteched Environmental Waste Recyclers No. 037-GRT, Distrito Metropolitano del Municipio de Quito (Exp. NA) - Environmental Certification Register No. 0441-R-AZVT (Exp. NA) **GUAYAQUIL** - Environmental Licence No. DMA-LA-2008-018 , M. I. Municipalidad de Guayaquil (Exp. NA) **RUMIÑAHUI** - Environmental Licence No. 2, Gobierno Autónomo Descentralizado Municipio de Rumiñahui (Exp. NA)
	CERSA Cia Ltda	Quito	Rodrigo De Triana N26-153 y Av. Orellana		No information				

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	BEE-RECYCLER Cía. Ltda.	Guayaquil	Monte Sinai 9270 593	www.actiweb.es/beerecycler	No information				Environmental Licence N° 9270 -AZD , Ministerio de ambiente (Exp.)
	One Life / Prolife	Quito	Av.Occidental Y José Miguel Carrión Oe6-201, EC170134	www.onelife.org.ec	No information				
El Salvador	E-scrap de el salvador	El Salvador	Carretera de Oro,san Martin, San Martín, Cuscatlan	-	No information				
	Zartex	El Salvador	Parque Industrial Verde, Bodega #2 Calle Agua Caliente, KM 5 ½, Soyapango	www.zartex-escrap.com	No				
	Centro de Reacondicionamiento de Computadoras (CRC) , Governmen t Program	Zacatecoluca, La Paz			Yes				
	Miraje de RL	Ilopango	Calle a Changallo Col. Vista Hermosa Lote No.1 Final Pavimentacion Ilopango.	www.facebook.com/miraje.rl	Yes				
	Almacenamiento Todo Verde	San Vicente	Antigua Calle a San Nicolás Lempa, Cantón San Antonio Achichilquito, San Vicente	www.sites.google.com/site/almatodoverde	No information				

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	AUTOCONSA	San Salvador	Autoconsa SA de CV 37 Av. Sur #543 Col.Flor Blanca	www.autoconsa.net/prueba/index.html	No information				
	DURAN COMPANY SA DE CV	San Salvador	Poligono A, Solar # 313 Bo. Las Magnolias Cantón San Isidro, Izalco, Sonsonate Office: Avenida Albert Einstein #17C Edificio Construmarket, Antiguo Cuscatlan, La libertad	www.durancompany.com	No				
	GLOBAL RECYCLED	San Salvador	Ps Independencia No 220-1		No information				
	Teconología Ambiental	San Salvador	Condominio Santa Adela Pasaje 3, No 6B Centro de Gobierno	tecnologiaambiental.com.sv	No information				Authorized by the Ministry of Environment and Natural Resources (MARN)
Guatemala	e-Waste de Guatemala : ONG recolección	Ciudad de Guatemala		www.ewastedeguatemala.org		-	-	-	Environmental Assessment Licence # 446/2013, DIGARIN, "C" Category (Exp.)
	RECELCA	Ciudad de Guatemala	Avenida Petapa 52-30 Zona 12	www.recelca.com					**DATA DESTRUCTION** Standard 5220.22M, USA Defense Department
	RAMDELSA	Ciudad de Guatemala	Avenida Hincapié 3-49 Apto. 2 Zona 13	www.ramdelsa.com					
	SELMET GUATEMALA	Ciudad de Guatemala	Dirección: 25 Calle 0-19 - Zona 1	www.selmetguatemala.com					Environmental Licence # 104/2014, DIGARN, "C" Category (Exp. 01.2018)
Honduras	RECACEL SA. Recicladora Centro	San Pedro Sula	Cortés, Choloma,Barrio Los Andes 10 calle 504	www.recacel.com	Yes				Licencia Ambiental N1 039-2012

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Americana de Celulares								
	Recycle, S. de R.L. de C.V.	San Pedro Sula	29 Calle 2 Ave. Calpules	www.recyclehonduras.com	No				Licence for management of special waste, operational permit and RTN
Nicaragua	Asociación Nicaragua Ambiental (NICAMBIENTAL)	Managua	Colonia Salvadorita K-144	www.asociacionnicaraguaambiental.blogspot.com					
	Hanter Metals	Managua	Delicias del Volga 2 1/2c al Lago Nicaragua	www.hantermetals.com					Authorized by Ministry of Environment and Natural Resources (MARENA) for handling, storage, treatment and final disposal of hazardous waste
Panama	Recicla Panamá	Ciudad de Panamá	Juan Diaz, Los Pueblos, Calle A Desarrollo Los Alcazares Galeras #1 y #2	www.reciclapanama.net		9.001			
	Recitec	Ciudad de Panamá	Vía Jose Domingo Díaz, El Crisol, frente a Hopsa	www.recitecpanama.wordpress.com					
	EcoRecycling Panamá	Ciudad de Panamá		www.ecorecyclingpanama.blogspot.com					
	Recimax Recycling Services, S.A	Ciudad de Panamá		www.recimax.net					
	Recimetal	Ciudad de Panamá		www.recimetal-sa.com					
Peru	San Antonio Recycling	Lima	Av. Los Ciruelos 526-540 Urbanización Canto Grande, San Juan de Lurigancho	www.sanantoniorecycling.com	No				EC-RS Registry (ECNA-1021.10 by DIGESA) (Exp. 12.2014) EPS-RS Registry (EPNA-597-11 by DIGESA) (Exp. 01.2015)

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
	Perú Green Recycling	Lima	Jr. Domingo Martínez Luján N° 935, Surquillo Facility: Av. Gerardo Unger N°5169 Urb. Industrial El Naranjal	www.perugr.com	No				Olivos Municipality Licence No. 494-2013 (OLIVOS MUNICIPALITY) (Exp. 05.04,2014) EC-RS Registry (ECNA-1502.13 by DIGESA) (Exp. 11.2017) PS-RS Registry (EPNA-852-13 by DIGESA) (Exp. 08.2017) Environmental Impact Statement Resolution No. 310-2013 (DIGESA), 2013. (Exp. NA)
	Perú Recicla (COIPSA, Grupo Salaverry)	Lima	Av. Argentina Nº 5064, Callao	www.perurecicla.net	No				EC-RS (ECNK-1373.12 by DIGESA) (Exp. 10.2016) EPS-RS (ECNK-771.12 by DIGESA) (Exp. 10.2016)
	AKSTARCOM (generador)	Lima	Av. Primavera N° 120 - Ofc. 222-A	www.akstarcom.com	No				
	COMIMTEL (productor)	Lima	Av. Alfredo Mendiola N° 8034 1ra Etapa Zona Industrial S.M.P	www.comimtel.com	No				EC-RS (ECNA-1223.12 by DIGESA) (Exp. 4.2016) EPS-RS (EPNA-865.13 by DIGESA) (Exp. 10.2017)
Uruguay	TRIEX Gestión de Residuos (Celuloide S.A.)	Montevideo	Haiti 1500	www.triex.com.uy	No				• Resolution R.M. 1299/2011, Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente. Environmental authorization previous to their activities. • Resolution R.M. 741/2012, Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente. Modification R.M. 1299/2011. • Resolution R.M. 389/2004, Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente to MA&A S.A. (previous to Triex) • Resolution R.M. 469/2010., Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente. Company Name change (MA&A S.A. to Celuloide S.A. -Triex–.
	Werba S.A.	Montevideo	Coronel Belinzon 4880 / c.p.12000	www.werbasa.com	No				
	Crecoel	Montevideo	PTI Parque Tecnológico Industrial del Cerro, Haití	www.crecoel.com	Yes				

Country	Name	City	Address	Website	Refurbish-ment/ARS	Certifications			Permits / Licences
						ISO	OHSAS	Others	
			1490.						
Venezuela	Eco Reciclaje Integral	Caracas	Av. Intercomunal Antimano Galpon Lisboa Zona Industrial La Yaguara	www.ecoreciclaje.com.ve	No information				
	Netarea Tecnología Informática	Estado Vargas	Av. Cannes c/Av. Costanera, Edificio Costabella, Piso 6, Apto. 6-7, Palmar Este	www.netarea.com.ve	No information				
	TecNofic	Caracas	Av. Ppal. Los Cortijos, Edf. Los Hermanos, P-1, Loc. 10, Los Cortijos de Lourdes	www.tecnofic1.com	No information				
	KB Venezuela RP CA	Caracas	Centro Industrial Metalinox, local 4 - Mariche Km 10 Edo. Miranda	www.reciclaje.co.ve	Yes				(R.I.F. J-29532778-1)

Participating Countries:

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	Ref.
Latin America	Yes	Lineamientos para la Gestión de los Residuos de Aparatos Eléctricos y Electrónicos (RAEE) en Latinoamérica	Guidelines for the Management of Waste Electrical and Electronic Equipment (WEEE) in Latin America	Regional Project on Harmonization of Electronic Waste Management in Latin America, implemented by: *Regional Platform for Electronic Waste in Latin America and the Caribbean, RELAC	X		Mar 11	Government Recyclers OEM and producers Consumers	LA 001
		Guía de contenidos legales para la gestión de los residuos electrónicos	Legal Guide content for e-waste management	*Regional Platform for Electronic Waste in Latin America and the Caribbean, RELAC *Centre of Environmental Law, Universidad de Chile		X	Aug 10	Government	LA 002
MERCOSUR: Argentina, Brazil, Paraguay, Uruguay and Venezuela	Yes	Compras públicas sostenibles	Sustainable Public Procurement. Guidelines for Policy development.	MERCOSUR PNUMA IADS Argentina	X		2008	Consumer (government)	LA 003
Argentina Uruguay Peru Venezuela	Yes	Gestión de RAEE derivados de proyectos de dotación masiva	Management of WEEE arising from massive projects supplying equipment	Latin American Network of Educational Portals, RELPE (Red Latinoamericana de Portales Educativos)	X		2012	Government Producers Consumers (educational institutes)	LA004

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	Ref.
		de equipamiento		Uca Silva, Lina Uribe BID					
Argentina	Yes	Buenas Prácticas para la Gestión Sostenible de RAEE	Best Practices for Sustainable Management of WEEE	MERCOSUR	X		2014	Recyclers Reburbishers Operators Government	LA 005
Bolivia	Yes	Norma Boliviana PNB 69018. Residuos Sólidos. Residuos de aparatos eléctricos y/o electrónicos - Definiciones y clasificación	Bolivian standard PNB 69018. Solid Waste. Electrical and / or electronic waste - Definitions and classification	Bolivian Institute of Standardization and Quality (Instituto Boliviano de Normalización y Calidad – IBNORCA), Bolivia		X	2012	Government	LA006
		Norma Boliviana PNB 69019. Residuos sólidos - Residuos de aparatos eléctricos y/o electrónicos - Manejo de residuos de aparatos eléctricos y/o electrónicos	Bolivian standard PNB 69019. Solid Waste. Electrical and / or electronic waste - Management of WEEE	Bolivian Institute of Standardization and Quality (Instituto Boliviano de Normalización y Calidad – IBNORCA), Bolivia		X	2012	Recyclers Reburbishers Operators Government Consumers	LA007

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	Ref.
		Gestión Integral de Residuos de Aparatos Eléctricos y electrónicos, norma legal asociada	Integral Management of WEEE, associated statute	Foundation REDES Gobierno Autónomo Municipal de La Paz	X		2012	Government Recyclers Refurbishers	LA008
Chile	No OCDE Guidelines								
Costa Rica	Yes	Estrategia Nacional para el Manejo Integrado y Sostenible de Desechos de Artefactos Eléctricos y Electrónicos	National Strategy for the Integral and Sustainable management of eWaste	*Regional Platform for Electronic Waste in Latin America and the Caribbean, RELAC *ACEPESA * Costa Rica Government	X		2004	Government Recyclers OEM and producers Educational Institutes	LA009
		Manual para la implementación de compras verdes	Manual for Green procurement implementation in public sector of Costa Rica	CEGESTI	X		2008	Consumer (government)	LA010
		Guía para la realización de eventos de recolección pública de residuos de PC	Guide for conducting public events performing	ACEPESA/Platform RELAC	X		December, 2009	Consumer (government)	LA011

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	Ref.
Ecuador	No (Only law with management procedures)								
El Salvador	Yes	Estrategia sostenible de gestión de residuos electrónicos en El Salvador	Sustainable Strategy for e-waste management in El Salvador	ACEPESA and CWG	X		Jun 08	All public	LA012
Guatemala	No								
Honduras	No								
Nicaragua	No								
Panamá	No								
Peru	Yes	NTP 900:064: Manejo de Residuos de Aparatos Eléctricos y Electrónicos. Generalidades	Peruvian Technical Standard NTP 900:064. Waste Electrical and Electronic Equipment. Overview	Comisión de normalización y de Fiscalización de Barreras Comerciales no Arancelarias, INDECOPI, IPES		X	Sep 12	Governme nt definitions	LA013
		NTP 900:065: Manejo de Residuos de Aparatos Eléctricos y Electrónicos. Etapas de Generación, Recolección Interna, Clasificación . Centros de Acopio	Peruvian Technical Standard NTP 900:065. Waste Electrical and Electronic Equipment. Generation, internal collection and classification Stages. collection centers.	Comisión de normalización y de Fiscalización de Barreras Comerciales no Arancelarias, INDECOPI, IPES		X	Sep 12	Generators	LA014

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	Ref.
		ENTP 900:066: Manejo de Residuos de Aparatos Eléctricos y Electrónicos. Tratamiento (en elaboración)	Peruvian Technical Standard NTP 900:06X. Waste Electrical and Electronic Equipment. Treatment (Draft)	Comisión de normalización y de Fiscalización de Barreras Comerciales no Arancelarias, INDECOPI		X	14	Recyclers Refurbishment Operators	LA015
		Manual de Residuos Generados por la actividad eléctrica	Manual Waste generated by electrical activity	Supervisory Agency for Investment in Energy and Mining, Osinergmin (Organismo Supervisor de la Inversión en Energía y Minería)	X		2010	Government Recyclers	LA016
Uruguay	Yes	"Guías Básicas de uso eficiente de la tecnología" Buenas Prácticas para implementar "Racks de TI verdes" en la Administración Pública	"Basic Guide to efficient use of technology" Best Practices for implementing "Green IT Racks" in Public Administration	Agency for Electronic Government and Information Society, AGESIC (Agencia de Gobierno Electrónico y Sociedad de la Información)	X		Apr 13	Consumer (government)	LA017
Venezuela	No								

Non-participating Countries:

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	No.
Brazil	Yes	Guia para informações de fim de vida fornecidas por fabricantes e recicladores e para o cálculo do índice de reciclabilidade de equipamentos eletroeletrônicos (Draft) Projeto 03.111.01-010 (IEC TR 62635 ed 01)	Guide to End-of-life information provided by manufacturers and recyclers. Calculation of the recyclability index for electronic equipment (Draft) Project 03.111.01-010 (IEC TR 62635 ed 01)	Brazil (document in draft)	X		Nov 12		LA018
		ABNT NBR 16156:2013 Resíduos de Equipamentos Eletroeletrônicos – Requisitos para atividade de manufatura reversa	ABNT NBR 16156:2013 Waste Electrical & Electronic Equipment - Requirements for reverse manufacturing activity	Brazilian Association of Technical Standards, ABNT (Associacao Brasileira de Normas Técnicas)		X	2013		LA019
		Logística Reversa de Equipamentos Eletroeletrônicos. Análise de Viabilidade Técnica e Econômica	Reverse Logistics for Electrical and Electronic Equipment. Analysis of Technical and	Agência Brasileira de Desenvolvimento Industrial – ABDI	X		Nov 12	Government OEMs / producers Recyclers	LA020

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	No.
			Economic Feasibility						
		Guia do Usuário Consciente de Produtos Eletrônicos	Awareness guide for electronics users	Ituatec	X		Jun 10	Consumers	LA021
Colombia	Yes	Guía de Green IT para entidades públicas y empresas	Green IT guidelines in public and private entities	Universidad Externados de Colombia	X		Sep 13	Consumer Government	LA022
		Lineamientos Técnicos para el Manejo de Residuos de Aparatos y Electrónicos	Guidelines for WEEE Management	Ministerio de Ambiente, Vivienda y Desarrollo Territorial de Colombia	X		Jul 10	Government Recyclers - Refurbishers	LA023
Mexico	Yes	Guía para la formulación de un plan de manejo de residuos electrónicos en el nivel municipal	Guidelines for the formulation of a management plan for electronic waste at the Municipal level	National Institute of Ecology and Climate Change, SEMANART - México	X		01.11.2012	Government OEM and producers Recyclers	LA024
		Diagnóstico de la generación de residuos electrónicos en la región noreste	Diagnosis of eWaste generation in the Notheast Region	*Environmental Quality Center, ITESM - Monterrey Campus *National Institute of Ecology and Climate Change,	X		2008	Government OEM and producers	LA025

Country / Region / Organisation	Does the application country have guidelines?	Original Title	Title (English)	Author (person/entity)	Guideline	Standard	Date	Target	No.
				SEMANART - México					
		Guía para la formulación de planes de manejo de residuos electrónicos en México	Guidelines for the formulation of a management plan for electronic waste in Mexico	*Secretariat of Environment and Natural Resources - México *National Institute of Ecology and Climate Change, SEMANART - México	X		2012	Government OEM and producers	LA026

Ref.	Topics involved																
	Consumption (LCA)	Generation and Inventory	Legal fulfilment	Financial Liability and Insurance	Mgmt Hierarchy - Available technologies	ROHS	Collection and transport	Storage	Dismantling	Reuse	Recycling	Final Disposal	Transboundary movements	REP	EHSMS	Policy and Reports	Audits and indicators
LA 001		X	X	X		X	X	X	X	X	X	X	X	X	X	X	
LA 002			X	X										X		X	
LA 003	X					X										X	
LA004	X	X	X	X		X	X			X	X		X	X		X	
LA 005			X	X	X		X		X	X	X				X		X
LA006																X	
LA007		X	X				X	X	X	X	X	X			X	X	X
LA008			X						X	X	X	X				X	
LA009	X		X	X			X			X	X			X		X	X
LA010	X															X	
LA011			X	X			X	X						X		X	
LA012		X					X	X	X	X	X					X	
LA013		X	X		X											X	
LA014		X						X							X		X
LA015																	
LA016		X					X	X			X	X			X		
LA017	X															X	
LA018																	
LA019														X	X		
LA020		X		X			X				X			X		X	
LA021																	
LA022	X															X	
LA023			X				X	X	X	X	X	X		X	X	X	
LA024	X	X		X			X	X						X		X	X
LA025	X	X			X									X		X	
LA026	X	X		X	X									X		X	

ANNEX O: OVERVIEW OF EXISTING BOOKS ABOUT E-WASTE MANAGEMENT IN LATIN AMERICA

Country/Region	Title	Author(s)	Year	Edited by	City
Regional LAC	Gestión Sostenible de Residuos de Aparatos Eléctricos y Electrónicos en América Latina	ITU, Basel Convention, UNESCO, UNIDO, WIPO, BCRC-South America, ECLAC	2015	ITU	Geneva
Regional LAC	Los residuos electrónicos : Un desafío para la Socieada de Conocimiento en América Latina y el Caribe	Günther Cyranek/U. Silva	2010	UNESCO/Plataforma RELAC	Montevideo
Regional LAC	Gestión de residuos electrónicos en América Latin	Uca Silva	2009	Ediciones SUR /RELAC	Santiago
Argentina	Minería Urbana y la Gestión de los Residuos Electrónicos	Gustavo Fernández Protomastro	2013	Ediciones I Salud	Buenos Aires
Bolivia	Lineamientos estratégicos para la Gestión Integral de Residuos y Aparatos Eléctricos y Eléctrónicos del Gobierno Autónomo Municipal de La Paz		2012	Fundación REDES	La Paz
Chile	Residuos Electrónicos. La Nueva Basura del Siglo XXI	Casa de la Paz	2007	Recycla / Casa de la Paz	Santiago

ANNEX P: OVERVIEW OF OTHER E-WASTE RELATED STUDIES IN LATIN AMERICA

Country/Region	Author(s)	Original Title	Year	Editor
Argentina	Gustavo Fernandez Protomastro	Buenas Practicas para la gestión sostenible de los RAEE/caso Argentina	2014	Econormas/Mercosur/CE
	GREENPEACE	Minería y Basura electrónica: el manejo irracional de los residuos	Jul 05	
		Basura Electrónica: el lado tóxico de la telefonía móvil	2012	
		Recambio de Televisores: La explosión de la basura electrónica	2010	
		Gestión de Baterías y Pilas	2010	
		La responsabilidad extendida del productor en el contexto latinoamericano. La gestión de residuos de aparatos eléctricos y electrónicos en Argentina"	2008	T.Lindhqvist, P. Manovaivibool, N. Tojo
	Gustavo Fernández Protomastro	La Cadena de Valor de los RAEE. Estudio sobre los circuitos formales e informales sobre la gestión de los residuos de aparatos eléctricos y electrónicos en la Argentina	2007	
Bolivia	CAINTEC	Diagnóstico de Residuos Electrónicos en Bolivia	2009	Swiss Contact
		Hacia la conceptualización integral de los RAEE	2010	Fundación REDES
		Progress and perspectives of Integrated Management of Residues of Electrical and Electronic Apparatus in Bolivia	2010	Fundación REDES
	Universidad Mayor	Obtención de metales preciosos a partir de residuos electrónicos descartados		Swiss Contact
Chile	Bernhard Steubing	Generación de residuos electrónicos en Chile. Análisis de la situación actual y estimación presente y futura de los volúmenes de residuos de computadoras, utilizando el modelo de flujo de materiales	2007	Plataforma RELAC /EMPA

	Kreuza Alarcon	Gestión y tratamiento jurídico de los residuos de aparatos eléctricos y electrónicos, en el contexto de la regulación genérica de los residuos sólidos en Chile	2012	Universidad de Chile - Tesis de grado
	Maya Wolfensberger	Informe sobre Manejo de residuos electrónicos a través del sector informal en Santiago de Chile	2009	Plataforma RELAC /EMPA
		Diagnóstico Producción, importación y distribución de productos electrónicos y manejo de los equipos fuera de uso.		MMA, GTZ
Costa Rica	V. Rudin y S. Lobos	Diagnóstico de la situación del manejo integrado y sostenible de los desechos de componentes electrónicos en Costa Rica.	2003	ACEPESA
El Salvador	Carlos Melendez	Diagnóstico de residuos Electrónicos en El Salvador	2008	ACEPESA /CWG
Guatemala	Universidad de San Carlos	Encuestas sobre usuarios y recolectores informales	2013	E-waste Guatemala
Honduras	M. Rush y N. Calix	Estimación de la generación de los RAEE en Honduras	2014	SERNA, Universidad Nacional Autonoma
Peru	O. Espinoza et al	Diagnóstico del Manejo de los Residuos Electrónicos en el Perú. Actualización al año 2010.	2011	IPES
	R. Kahhat y E. Williams	Adoption and disposition of new and used computers in Lima, Peru.	2009	International Journal of Sustainable Resource Management and Environmental Efficiency.
	O. Espinoza et al	Diagnóstico del Manejo de los Residuos electrónicos en el Perú.	2008	IPES
Venezuela		Ficha Técnica de RAEE	2013	MPPCTI Gobierno de Venezuela
LA	U. Silva y L. Uribe	Gestión de RAEE derivados de proyectos de dotación masiva de equipamento	2013	BID/RELPE