FINAL PROJECT REPORT

"ASSESSMENT OF THE STATUS OF CENTRAL AMERICA, MEXICO AND THE DOMINICAN REPUBLIC ESM OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT"

Basel Convention Regional Centre for Central America and Mexico
BCRC-CAM

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Project Technical Committee

MA, MS, Miguel Araujo.
Director
Basel Convention Regional Centre for Central America and Mexico.
BCRC-CAM.

Dr. Flor de Maria Perla de Alfaro
Project Coordinator
Basel Convention Regional Centre for Central America and Mexico.
BCRC-CAM.

Eng. Wilfredo Evenor Velasquez Mejía.
Technical Assistant.
Basel Convention Regional Centre for Central America and Mexico.
BCRC-CAM.

Regional Advisory Council

Eng. Marco Escalante
Ministry of Forests, Fisheries and Sustainable Development.
Belize

MS. Olga Segura Cárdenas
Ministry of Health
Costa Rica

Eng. Carolina Flores
Ministry of Environment and Energy (MINAE).
Costa Rica

B.A. Ingrid Michelle Villatoro Valladares
Ministry of Environment and Natural Resources (MARN).
Guatemala

Eng. Beatriz Lopez
Ministry of Environment and Natural Resources (MARN).
El Salvador

B.A. Marco Tulio Calix
Secretariat of Natural Resources and the Environment (SERNA).
Honduras

Eng. Yelba Lopez
Ministry of Environment and Natural Resources (MARENA).
Nicaragua

Dr. Ulises Narvaez Vargas
Presidency Of the Republic Nicaragua

MS. Hevecia Bonilla
National Environmental Authority (ANAM).
Panama

Eng. Mariela Maylin Barrera
Ministry of Health (MINSA)
Panama

MS. Alexander Moreta
Eng. Wilson Tejeda
Ministry of Environment and Natural Resources
The Dominican Republic

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GLOSSARY

ATTT: Transit and Transport Authority of Panama

BCRC-CAM: Basel Convention Regional Centre for Central America and Mexico

CCAD: Central American Commission for Environment and Development

CHRWOW: Chemicals, Hazardous Residues and Wastes and Other Wastes

COP: Conference of the Parties

CRT: Cathode Ray Tubes

DR: The Dominican Republic

ECC: Environmental Cooperation Commission of North America

EEE: Electronic and Electrical Equipment

ESM: Environmentally Sound Management

IBW: Infectious Biological Waste

LAB: Lead Acid Batteries (New)

POP: Persistent Organic Pollutants

SAT: Superintendencia de Administración Tributaria de Guatemala

SICA: System for the Integration of Central America

ULAB: Used Lead Acid Batteries

WEEE: Waste Electrical and Electronic Equipment

1. EXECUTIVE SUMMARY

The Basel Convention Regional Center for Central America and Mexico has developed an Assessment of the Status of Central America, the Dominican Republic and Mexico ESM of Hazardous Wastes and Other Wastes, including Waste Electrical and Electronic Equipment (WEEE), throughout their life cycle.

The assessment was developed thanks to the financial support from the government of Japan, through the Ministry of Environment of Japan, and the secretariat of the Basel, Rotterdam and Stockholm Conventions. Mexico also provided an important financial contribution, through its Secretariat for the Environment and Natural Resources

(SEMARNAT), which allowed the organization of a regional workshop to share results of this assessment, to exchange related experiences and to prepare a profile of a project to support the implementation of ESM of chemicals and hazardous residues and wastes and other wastes from this sub-region, which will allow the synergistic implementation of several international agreements related to chemicals and hazardous wastes, like the Basel, Minamata, Rotterdam and Stockholm Conventions and the Montreal Protocol.

The methodology used throughout the development of the assessment included the design and distribution of an instrument to help compile the information available within government organizations, Academia, NGO, and private sector, related to the management of hazardous residues and wastes and other wastes, including WEEE in the countries of the sub-region. Additionally, consultations via Skype, emails, field visits and national and regional workshops were carried out. Coordination was arranged with the Project for Implementation of Synergies in the Management of Hazardous Residues, Wastes and Other Wastes in El Salvador, financed by the European Union. Moreover, thesis works as well as relevant documentation available through the Internet were revised, analyzed and processed. The included information was provided by the members of the Regional Advisory Council and obtained in the official electronic portals of the countries included in the evaluation as well as in United Nations portals.

Within the sub-region comprised of Central America, the Dominican Republic and Mexico, hazardous residues and wastes are generated, including WEEE and Used Lead Acid Batteries (ULAB) utilized in cars and other uses, like telephone systems and/or energy systems; as well as tires.

The countries of this sub-region have indicated their interest to organize their institutions at the national and regional levels so as to implement the environmentally sound management of chemicals, hazardous residues and wastes, and other wastes.

The goals of the assessment on the status of ESM of hazardous residues and wastes and other wastes, including WEEE and ULAB, aim to contribute to support the regional institutional and legal framework, towards their effective Environmentally Sound Management. These goals also aim at contributing to the reduction of risks towards human health and the environment of the communities within the region.

There is a growing increase in the use of chemicals and in the generation of hazardous residues and wastes and other wastes, in different activities and processes implemented by different stakeholders and sectors of the society. Among them there are the agrochemicals, pharmaceutical products, electric and electronic equipments (EEE), Lead Acid Batteries (LAB), oil derivatives, among others. Due to the above, it is crucial to articulate and implement ESM of these compounds in accordance with the content of Multilateral Environmental Agreements like the Basel, Minamata, Rotterdam and Stockholm Conventions, the Montreal Protocol and the UN Framework Convention on

Climate Change. ESM established a life cycle approach, which emphasizes prevention in the use and generation of residues and wastes, especially hazardous ones, the segregation, material recovery, recycling, co-processing, treatment and lastly the final disposal in sites properly designed, operated, supervised and maintained in an environmentally sound manner.

The typical "recycling" of Used Lead Acid Batteries (ULAB) consists in the separation of its components, and the smelting and refinement of lead. This process produces lead oxides, lead sulfites and lead dioxide in shape of dust, dirt, sediments and sludge. Other common byproducts of ULAB recycling are the sulfuric acid and heavy metals like antimony, arsenic, cadmium and copper, plastic from the battery cases, and polyethylene of the separators. The importance of the ESM recycling of ULAB is the recovery of lead with reduced environmental impacts. Nonetheless, in order to reduce severe environmental and health impacts, it is important to apply the life cycle approach included in the Basel Convention Technical Guidelines on ESM of ULAB, which includes guidelines for the collection, temporary storage, transportation and recycling of ULAB. During the Assessment it was found that there is one ULAB Recycling facility which stands out, with an interesting technology and processes with virtually zero waste, that benefitted from a model ESM technology transfer supported by BCRC-CAM and the Cleaner Production Framework, backed by the Guatemalan National Cleaner Production Centre (Acumuladores Iberia in Guatemala), and three facilities with Green Slag packaged technologies (PB Metals in Costa Rica, Verde Ecoreciclaje Industrial in the Dominican Republic, and ENERTEC in Mexico.

According to press information in the region about nine million tires are manufactured in the region annually[1]. In 2012 sales in Central America of new tires of Chinese origin were 21.7 million units, while in 2011 they were 26.3 million units, while the sales of new tires from other origin were 33.9 million units in 2012 and 46.8 million in 2011, according to an executive from Bridgestone, Costa Rica. He also mentioned that in 2012 Central America imported 4.17 million second hand.[2] Countries of the region face the challenge that the majority of these tired are not managed in an environmentally responsible manner. Some of them are used for building erosion control barriers, in playgrounds in urban parks, or co-processed in cement kilns as alternative fuels. In Costa Rica there is a tire recycling plant, FUNDELLANTAS, managed by an NGO which collects, process and compacts used tires to be used in the construction of roads.

There is no manufacturing of electric and electronic equipment in Central America and the Dominican Republic, but there is in Mexico.[3] Each importer/distributor of this equipment

[1] La Prensa, Nicaragua, April 24, 2013.
[2] Ibid.

[3] Electronics manufacturing is growing because this country has the lowest labor rates of the three North American countries and transportation costs to ship products to the United States and Canada are much less

knows the manufacturing country. Nonetheless, because there is no commitment towards a take back system at the end of their life cycle, there is no way of finding out how many of them are managed properly. For example, in the case of mobile phones, when a client purchases a new unit, it is possible that she/he gives away the old unit, stores it at home or that he/she throws it away with common trash, aggravating the environmental contamination, because its components, mainly its battery, cause a serious damage to health and ecosystems. Some manufacturers have established social corporate responsibility programs for their products, motivating the user to return back the old unit, assuming the costs for their treatment, recycling and/or final disposal. Costa Rica is the only country in the region that has set up a legal and institutional system for ESM of WEEE and is starting to put into practice extended producer responsibility not only for WEEE but also for ULAB.

All productive sectors in all countries generate considerable amounts of hazardous residues and wastes like: used oils, contaminated sludge, obsolete pesticides and pharmaceuticals, end-of-life computing equipment and other types of electric and electronic equipment which are converted in wastes when they are substituted by new ones.

In all countries of the sub-region there are formal authorized managers of WEEE, of ferrous and non ferrous metals or other type of hazardous wastes residues and wastes. The collection sites for Used Lead Acid Batteries (ULAB) are the sales of spare car parts, sales and maintenance of batteries and car workshops. In general, all of these establishments need to have a permit or license as authorized managers of hazardous residues and wastes.

It is important that managers of hazardous residues and wastes through the life cycle have corresponding authorizations and permits according to the legal framework, in order to ensure their ESM.

There are also informal unauthorized managers of hazardous residues and wastes in the region, carrying out collection, temporary storage, refurbishing, dismantling, treatment and final disposal, in uncontrolled conditions, and with high risk to human health and to ecosystems.

The Central American countries, the Dominican Republic and Mexico, all have legislation which includes Multilateral Environmental Agreements (all countries have ratified the Basel, Rotterdam and Stockholm Conventions), National Constitutions, bylaws, executive decrees, municipal ordinances, policies and national plans related to management of hazardous residues and wastes.

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than shipping the products from China (please see http://globalpurchasing.com/blog/regionalization-electronics-manufacturing9

Consumers have an important role within ESM of hazardous residues and wastes, mainly in the prevention and reduction of the generation of residues and wastes. In the first place by not using toxic substances and/or persistent organic pollutants; or by observing all safety, health and occupational measures, when utilizing chemical substances; by avoiding the generation of hazardous residues and wastes; by not mixing hazardous residues and wastes with other non hazardous wastes; by delivering to authorized managers their hazardous residues and wastes.

In general, currently the status of the countries of the region on the management of hazardous residues and wastes, and other wastes, including WEEE, is the following:

- Limited information and awareness within the population about ESM of hazardous residues and wastes.
- Limited environmental controls by national authorities.
- Limited control of imports of raw materials and substances that in productive processes become hazardous residues or wastes.
- Limited landscape planning and enforcement for the location of sites related to hazardous residues and wastes, so that they have proper infrastructure and appropriate authorizations and permits.

The government authorities and other sectors of the region acknowledge the importance of preventing the generation at the source, the reduction, material recovery, recycling, treatment, and ESM disposal of hazardous residues and wastes including WEEE (and ULAB), as well as the adverse effects that they cause to health and ecosystems if not ESM.

The competent authorities in the countries of the region should carry out concrete interventions, specifically in communication and awareness raising to the population, highlighting the risks to human health and ecosystems of hazardous residues and wastes, not only to persons who manipulate them but to population living nearby small workshops and big factories managing these compounds, contributing to raising the importance of ESM of chemicals, and hazardous residues and wastes and other wastes.

CONCLUSIONS

- Limitations have been found in the documentation of the information on the different phases of management of hazardous wastes and other wastes, within national and local authorities, Academia, managers of these compounds and other stakeholders which interact in their management. This reduces the efforts of systematization of the management of these compounds, and limits the possibility of guiding policies, strategies, and the setting of coordination mechanisms to control, monitor and set goals for prevention and reduction of priority wastes streams.

- Priority waste streams of hazardous wastes have not been identified, limiting the opportunities to focalize their management.
- The informal management of hazardous wastes and other wastes in each of the countries of the region develops in high risks conditions to human health and the environment.
- All countries of the region have developed legal frameworks, nonetheless their implementation is limited.
- The extended producer responsibility of the producer/importer/wholesaler and the shared and differentiated responsibility of authorities and managers, has not been implemented in the sub-region.
- The government institutions with responsibilities and specific mandates for the management administration and monitoring do not have required technical and financial resources.
- The implementation of multilateral agreements related to ESM of hazardous wastes and other wastes is limited.
- The proximity principle of the Basel Convention and the existing capacities for ESM of hazardous wastes and other wastes within the sub-region are not considered for the authorization of exports.
- Currently, there are limited financial resources for ESM of hazardous wastes and other wastes in the countries of the sub-region.

RECOMMENDATIONS

- To design and implement a platform for the documentation and information exchange within the Central America, the Dominican Republic and Mexico sub-region, for the different phases of the life cycle of chemical substances, hazardous wastes and other wastes, in order to improve the effectiveness of their management.
- To identify the priority waste streams to focalize the management of hazardous wastes and other wastes in the sub-region.
- To document the information for the systematization of the management and to guide policies, strategies, coordination mechanisms to control and monitor and to establish goals for prevention and reduction of identified priority waste streams of hazardous wastes and other wastes.
- To develop and implement in each country of the region strategies for the formalization and strengthening of the informal sector, base on the extended and shared and differentiated responsibility of the producer, importer, distributor, wholesaler, retailer, national and local authorities, managers and other relevant stakeholders, as well as to enforce the legal framework, to contribute to human health and environmental quality of the communities of the sub-region.

- To strengthen the institutions with specific mandates for the ESM of hazardous wastes and other wastes, adding proper training to their staff, according to their assigned responsibilities.
- To strengthen the articulated implementation of multilateral agreements in each of the countries of the sub-region.
- To take into account the proximity of available ESM installed capacities for refurbishment, recycling and treatment within the sub-region, when authorizing transboundary movements, thus improving their ESM.
- To strengthen the legal framework and their enforcement in each country of the sub-region.
- To include and effective apply the extended and share and differentiated responsibility in the legislation of the countries of the sub-region.
- To design and active a regional fund for ESM of hazardous wastes and other wastes, with contributions from multilateral and bilateral donors, governments, producers, managers and other relevant stakeholders, allowing a controlled, monitored and strengthened system.

2. BACKGROUND

Article 2(8) of the Basel Convention defines environmentally sound management (ESM) as "taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes".

The Fifth Conference of the Parties of the Basel Convention adopted the Basel Convention Declaration on Environmentally Sound Management, available in http://archive.basel.int/meetings/cop/cop5/ministerfinal.pdf.

The 7th Meeting of the Open Ended Working Group of the Basel Convention (OEWG7) adopted the Bali Declaration on Waste Management for Human Health and Livelihood, which is available in http://www.basel.int/Portals/4/Basel%20Convention/docs/meetings/cop/cop9/bali-declaration/BaliDeclaration.pdf, where the importance of ESM was highlighted as well as the generation of important co-benefits for climate.

The 10ª Conference of the Parties of this same convention adopted in its decision BC-10/2 a new Strategic Framework for the Implementation of the Basel Convention for 2012-2021, (please find this document on page 26 of the COP10 Report in http://archive.basel.int/meetings/cop/cop10/documents/28e.pdf, where its Goal 2 is "Strengthening the environmentally sound management of hazardous and other wastes not only through technical guidelines and the promotion of its implementation through national legislation (Objective 2.1), but also through the prevention and minimization of

hazardous wastes and other wastes at the source (Objective 2.2), the support and promotion of capacity building to the Parties including technical capability, through technology needs assessments and technology transfers (Objective 2.3), the facilitation of national, regional and international commitments with regard to the management of priority waste streams (Objective 2.4), and enhancing and promoting the sustainable use of resources by improving the management of hazardous wastes and other wastes, and encouraging the recognition of waste as a resource (where appropriate) (Objective 2.5).

The Strategic Framework also included as its Goal 3 the promotion of the implementation of the environmentally sound management of hazardous and other wastes as an essential contribution to the attainment of sustainable livelihood, the Millennium Development Goals and the protection of human health and the environment. This goal will be implemented through the development of national and regional capacity, particularly through the Basel Convention regional and coordinating centres, by integrating waste management issues into national sustainable development strategies and plans for sustainable livelihood (Objective 3.1) and the promotion of cooperation with national, regional and international bodies, in particular cooperation and coordination between the Basel, Rotterdam and Stockholm conventions, to improve environmental and working conditions through the environmentally sound management of hazardous and other wastes (Objective 3.2).

Moreover this same COP10 affirmed in its BC-10/3 Decision: Indonesian-Swiss country-led initiative to improve the effectiveness of the Basel Convention (found on page 31 of the COP 10 Report found in

http://archive.basel.int/meetings/cop/cop10/documents/28e.pdf) the recognition of the importance of ESM including in its 2nd item the decision to complete the development of a framework for the environmentally sound management of hazardous wastes and other wastes, including consideration of ways in which the framework and its elements might be linked to the issue of transboundary movement of hazardous and other wastes, while in its 3rd item set up an international expert group to work on reducing the inadequate waste management procedures which are currently causing harm to human health and the environment throughout the world, taking into account elements listed in the Annex to Decision BC-10/3 which include:

- ✓ the following categories:

(a) Occupational health and safety matters (e.g., regarding safety, health, liability and emergency response);
(b) Environmental protection matters (e.g. prevention of pollution);
(c) Facility-related matters (e.g. regarding construction and infrastructure);
(d) Waste related matters (e.g. collection, sorting, pre-treatment, treatment, storage, downstream management);

(e) Emission related matters (e.g. emission limit values to air, water and soil);
(f) Organizational matters (e.g. valid license or permit, monitoring, recordkeeping, information to be provided to authorities, aftercare, insurance, management abilities/training level environmental management systems);
(g) Regulatory matters (consistency/complementarity).

✓ the following tools and instruments among others:

(h) Legislation;
(i) Standards;
(j) Guidelines;
(k) Policies (e.g., green procurement);
(l) Codes of good practice;
(m) Voluntary agreements.

✓ making use of the following measures among others:

(n) Certification programmes;
(o) Licences and permits regularly validated;
(p) Training, awareness-raising and compliance promotion;
(q) Regular inspections and enforcement;
(r) Mechanisms for ensuring corrective action.

Finally, the Cartagena Declaration on the Prevention, Minimization and Recovery of Hazardous Wastes and Other Wastes**,** adopted by the Parties also at COP 10 and included in Annex IV of the COP Report (please see page 164 of the COP report http://archive.basel.int/meetings/cop/cop10/documents/28e.pdf) sets up the reference framework for the implementation of ESM of Hazardous Wastes and Other Wastes.

This reference framework includes a commitment to enhance the active promotion and implementation of more efficient strategies to achieve prevention and minimization of the generation of hazardous waste and other wastes and their disposal, while emphasizing that measures should be undertaken to achieve prevention and minimization of hazardous wastes and other wastes generated at source, to enable the decoupling of economic growth and the environmental impacts associated with waste generation, encouraging efforts at national level to measure and record progress in waste reduction, and reporting it to the Secretariat of the Basel Convention, while at the same time encouraging Parties, signatories and others to develop synergistic national and regional pilot projects for waste prevention for specific waste streams, where appropriate in

collaboration with UNEP and UNIDO Cleaner Production programs, GEF, and the Basel Convention Regional Centers, and partnerships, including public-private partnerships;

Moreover, the Cartagena Declaration reaffirms that the safe and environmentally sound recovery of hazardous and other wastes that cannot as yet be avoided, represents an opportunity for the generation of employment, economic growth and the reduction of poverty insofar as it is done in accordance with the Basel Convention requirements, guidelines and decisions and will not create a disincentive for their prevention and minimization.

Furthermore, the Cartagena Declaration encourages more systematic and comprehensive global and regional efforts to improve access to cleaner production methods as well as to information on less hazardous substitutes for hazardous chemicals and materials, in partnership with relevant initiatives, and recognizes the need to make the most of the Basel Convention regional and coordinating centers, which also need to be strengthened to disseminate information and practices on waste prevention and minimization as well as assist in developing pilot projects for environmentally sound management of specific waste streams of concern, within the framework of the ongoing synergy process in the Chemical and Waste Regime which can strongly contribute to improving waste prevention, minimization and recovery.

HISTORY OF HAZARDOUS RESIDUES AND WASTES

Generated residues and wastes are a reflection of production and consumption patterns of contemporary societies. Nonetheless, their management needs to be adapted to changes in these patterns.

Until very recently in the XIX century residues and wastes were deposited directly in open sites, rivers, seas or any other convenient site nearby. With the industrialization and development processes the quantity and variety of residues and wastes increased considerably. Thus, they need to be managed in an environmentally sound manner, adopting all possible measures to guarantee that human health and ecosystems are protected against negative effects caused by these residues and wastes.

The effects of hazardous residues and wastes vary considerably with respect to human health and ecosystems. They may affect human health with temporary effects (nausea, vertigo, headache, etc) and permanent and chronic effects (cancer, disability, death). The impact depends on the duration and exposition (Corbitt, 1989). A classical effect caused by hazardous wastes is the Minamata incident in Japan during the 1960s, which caused hundreds of deaths because of poisoning, when ingesting mollusks contaminated with mercury. The latter was determinant for this nation becoming the first country in the world which established mandatory regulations and better oversight on the management o hazardous wastes. The necessity of setting up environmental regulations became

evident in the United Kingdom, when a case of acute toxicity in children exposed to arsenic salts occurred in February 1972, originated from drums buried in recreational areas. Similar situation have been registered in different parts of the world, which are illustrative examples of the negative impact of an unsound management of hazardous wastes on human health and the environment, and the need to reduce their consequences on the environment (Correa, 1990).

Currently, the incorrect practice of directly discharging residues and wastes, including hazardous ones, in open sites, rivers, seas or any other convenient site nearby, continues. Last century, during the 50s, 60s and 70s, the world realized that this practice had serious impacts on human health and hygiene, with negative impacts on ecosystems. Due to the above, governments of different countries have been promoting efforts at the global level to promote the Environmentally Sound Management (ESM) of hazardous residues and wastes and other wastes.

The countries of the sub-region of Central America, the Dominican Republic and Mexico are Parties to the International Environmental Agreements related with the management of chemicals, and hazardous residues like the Basel, Rotterdam and Stockholm, and Vienna Conventions and the Montreal Protocol and the United Nations Framework Convention on Climate Change. As of today, only Nicaragua has ratified the Minamata Convention on Mercury. The other countries of the region have signed this new multilateral agreement with the exception of Belize and El Salvador.

The main goal of the Multilateral Environmental Agreements is the protection of human health and the integrity of the ecosystems. Accordingly, they establish the prevention of the generation of hazardous wastes at the source, as initial objective of their management, followed by their recovery through their reuse, recycling and or material recovery, or energy generation in controlled conditions and through ESM, to limit to the maximum the volume of wastes for final disposal in properly designed facilities, which are operated and maintained with proper controls, as well as to reduce emissions of persistent organic pollutants or greenhouse gases, in order to prevent risks to the environment and health and avoid leaving a legacy of environmental liabilities to the new generations.

These circumstances demand an authentic revolution in education and awareness-raising, and the development of new technologies, management, services, and markets for secondary materials, as well as the effective implementation of the cleaner production strategy, of green procurement and sustainable consumption policies. Moreover, they also require ESM of hazardous wastes and other wastes, the establishment and effective operation of networks for information, knowledge and experience exchanges, and the support of international cooperation in the implementation of ESM of these compounds.

3. INTRODUCTION

3.1 Hazardous Residues and Wastes

Industrial processes generate in general a wide variety of residues and wastes, which can be solid, pasty, liquid or gaseous, with corrosive, reactive, explosive, and/or toxic, which present potential risks to human health and the environment. These residues and wastes are denominated hazardous. There are other sources which generate hazardous residues and wastes: like health centres (infectious biological waste, obsolete pharmaceuticals), trade, and mining (acid mine drainage which contains heavy metals).

End of life lead acid batteries, known as Used Lead Acid Batteries (ULAB) or Spent Lead Acid Batteries (SLABS) become a hazardous residue, thus necessitating ESM to recuperate the lead to be used in the manufacturing of new batteries or in other uses. Without ESM, ULAB represent a serious health risk because of their toxicity and bioaccumulation in tissues of living beings.

Waste Electrical and Electronic Equipment (WEEE), are materials, components, consumables and subassemblies, generated either by households or from professional use, are growing rapidly, because of excessive consumption of digital technology products at the global level.

The infectious biological waste (IBW) is generated during activities carried out in health centres, veterinary offices, clinical and/or research laboratories, educational and/or research centres, mainly. Due to their infectious biological agents, they represent a risk to human health.

3.2 The Basel Convention

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Elimination is a treaty promoted by the United Nations Environment Programme (PNUMA, 1989). Al countries of the sub-region Central America, the Dominican Republic and Mexico are Parties to this convention. The 3rd Conference of the Parties of the Basel Convention granted El Salvador to become the host of the Basel Convention Regional Centre for Central America and Mexico (BCRC-CAM), to support countries of this sub-region in the implementation of this agreement.

The main goal of the Basel Convention is to protect human life and the environment before damages caused by the management of hazardous wastes, by reducing their generation to the minimum in both quality and hazardousness.

The agreement establishes that their Parties should take all necessary means so that the management of hazardous wastes and other wastes, including their transboundary movements and their elimination, are compatible with the protection of human health and the environment.

The Basel Convention has several annexes with different content:

- ✓ Annex I: Categories of wastes to be controlled, which is a list of hazardous wastes;
- ✓ Annex II: Categories of wastes requiring special consideration;
- ✓ Annex III: List of hazardous characteristics;
- ✓ Annex IV; Disposal operations;
- ✓ Annex V A: Information to be provided on notification;
- ✓ Annex V B: Information to be provided on the movement document;
- ✓ Annex VI: Arbitration;
- ✓ Annex VII: Amendment of the prohibition (not yet entered into force);
- ✓ Annex VIII: List A (considered hazardous under Article 1, paragraph 1 (a), of the Basel Convention, and their designation on this Annex does not preclude the use of Annex III to demonstrate that a waste is not hazardous.
- ✓ Annex IX: List B Wastes contained in the Annex will not be wastes covered by Article 1, paragraph 1 (a), of this Convention unless they contain Annex I material to an extent causing them to exhibit an Annex III characteristic.

Central American countries are Parties to the Regional Agreement on Transboundary Movements of Hazardous Wastes, registered before the Basel Convention. These countries, the Dominican Republic and Mexico have included within their legal frameworks, the management of hazardous wastes.

3.3 General Description of the Central America, the Dominican Republic and Mexico Sub-region.

3.3.1 Physical and demographic context. Central America Sub-region

Central America is comprised of the Republics of Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica and Panama. It has almost 524 thousand square kilometers and about 42 million inhabitants (UN estimate, 2009). The Dominican Republic has been included because it has recently become a member of the System for the Integration of Central America (SICA), headquartered in El Salvador. Mexico was also added to the assessment, because of two reasons: it is a member of the sub-region covered by BCRC-CAM; and there was a strong interest of Professor Luis Eduardo de Avila, General Director of the Integral Management of Hazardous Materials and Wastes, from the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT) for Mexico to be part of this assessment.

Illustration 2: Map of the Central America Sub-region

Illustration 1: Map of the Dominican Republic

The Dominican Republic occupies over two thirds of the La Española Island, in the Greater Antilles archipelago. The occidental third is occupied by Haiti. This country extends over 48,442 square kilometers and it has 10,280,000 inhabitants based on the 2013 census.[4] It limits to the North with the Atlantic Ocean, to the South with the Caribbean Sea or Antilles Sea, to the East with the La Mona Channel, which separates it from Puerto Rico and to the West with the Republic of Haiti.

México, officially called United Mexican States, is located in the Southern part of North America. It limits to the North with the United States of America, to the Southwest with Belize and Guatemala, to the West with the Pacific Ocean and to the East with the Gulf of Mexico and the Caribbean Sea. It is the 14th largest country in the world, with an extension of closed to 2 million of km². It is the 11th country in the world with the largest population which by mid 2013 almost approaches 120 million inhabitants.

The Central American *landscape and climate* is very diverse: it is shaped by mountain ranges and highlands in the center and the North, with temperate and warm-wet climate, while in the lower areas it has calcareous plains with lower jungles and hot climate. Though tropical climate predominates, the mountain highland shows a more varied

[4] «National Statistics Office (ONE) :: ONE dio a conocer los resultados preliminares del IX Censo Nacional de Población y Vivienda 2010». ONE. Consulted on September 22, 2013.

climate, going from dry tropical to mountain cold climates, the predominant climate being temperate, with warm temperatures and moderate rain.

The average Central American temperatures have a small variation, with nights and days

Ilustration 3: Map of the United States of Mexico

with temperatures above 20 degrees centigrade and high humidity. In the Pacific Ocean zone temperatures are a little bit higher.

The months of August September and October, are the rainiest, the Caribbean zone being the one with higher propensity to receive hurricanes.

The Dominican is located 19° North latitude and it has the characteristics of a sub-tropical climate modified by Northeast trade winds and the topography of the country. Climatic variations are marked, ranging from semi-arid to tropical wet. Its latitude and prevailing pressure systems, influenced by the Mid-Atlantic system, which has high pressures, make its similar to the other Greater Antilles (Cuba, Jamaica, Puerto Rico) climate. It has a 25 degrees centigrade annual average temperature at the sea level, with little seasonal variations. Average annual precipitation varies drastically from 455 mm at La Hoya de Enriquillo (Valle de Neyba Valley) at 2,743 mm throughout the Northeast shore. The geographic and seasonal distribution of showers is erratic.

Normally there are two rainy seasons: from April through June and from September to November. The country is located in a region characterized by tropical storms and between August and November it can have damages caused by strong winds, rain and high tides.

In Mexico the climate is determined by several factors, among them the altitude above sea level, the geographical latitude, the diverse atmospheric conditions and the existent distribution of land and water. Because of the above, the country has a

big diversity of climates, which very generally can be classified, according to their temperature, in warm and template; and according to the existing humidity in: humid, sub-humid and very dry.

The dry climate can be found in most of the center and North of the country, region which covers 28.3% of the country; characterized by the circulation of winds, which generates scarce cloudiness and rainfall ranging from 300 to 600 mm annually, with average temperatures from 22° to 26° C in some regions, and in others from 18° to 22° C.

The very dry climate has average temperatures from 18° to 22° C, with extreme cases of more than 26°C; presenting annual rainfall from 100 to 300 mm on average, and it can be found in 20.8% of the country.

The warm climate is divided into warm humid and warm sub-humid. The first occupies 4.7% of the country and is characterized by an average annual temperature between 22 ° and 26 ° C and rainfall of 2,000 to 4,000 mm annually. Meanwhile, the warm sub-humid climate can be found in 23% of the country; it has rainfall between 1,000 and 2,000 mm and temperatures ranging from 22 ° to 26 °, with regions exceeding 26 ° C.

Finally, the temperate climate is divided into humid and sub-humid; in the first of these temperatures between 18 ° and 22 ° C and rainfall average of 2,000 to 4,000 mm annually are registered; comprising 2.7% of the country. Regarding temperate sub-humid climate, it can be found in 20.5% of the country, and it registers mostly temperatures between 10 ° and 18 ° C and 18 ° to 22 ° C. However in some regions it may register less than 10 ° C; it has rainfall of 600 to 1.000 mm on average during the year.

3.3.2 Central American Integration

The System for the Integration of Central America (SICA) is the institutional framework for the integration of the Central American Region created by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. Afterwards, Belize and the Dominican Republic became full members in 2000 and 2013, respectively. Haiti is in the process of becoming a regional observer.

SICA was established on December 13, 1991, and entered into force o February 1st, 1993. El Salvador hosts SICA.

The birth of SICA consolidates the efforts with a new legal framework and entities were created like the Central American Parliament, the Bank for the Integration of Central

America (BCIE), the Central American Court of Justice (1994) and other regional entities, besides many regional treaties related with culture, political and economic issues, the most recent being the Customs Union. The Central American Commission for Environment and Development (CCAD) is one of the SICA´s Secretariats comprised of the Ministers of Environment of the region.

Table 1: Population of Central American Countries, the Dominican Republic and Mexico

Country	Capital	Extension (Km^2)	Population Est.(2014)	Population Density hab./Km^2
Belize	Belmopan	22,966	322,100	14
Costa Rica	San Jose	51,100	4,570,000	90
El Salvador	San Salvador	21,041	6,163,000	293
Guatemala	Guatemala City	108,889	14,027,000	129
Honduras	Tegucigalpa	112,492	7,466,000	66
Nicaragua	Managua	130,000	5,743,000	48
Panama	Panama City	75,517	3,454,000	46
The Dominican Republic	Santo Domingo	48,442	10,000,000	206
Mexico	Mexico City	2,000,000	119 426 000	57

Source: World Population Prospects: the 2008 revision. United Nations. 2008.

4. Goals of the Assessment

4.1 General Objective:

To assess environmentally sound management of hazardous wastes and other wastes including waste electrical and electronic equipment (WEEE) in Central America, the Dominican Republic and Mexico.

4.2 Specific Objectives:

a) To identify key stakeholders engaged in ESM of Chemicals and Hazardous Wastes and Other Wastes (CHWOW), including WEEE IN Central America the Dominican Republic and Mexico.
b) To identify regulations in force on ESM of CHWOW, including WEEE.

c) To contribute to the strengthening of the legal and institutional framework in Central America, the Dominican Republic and Mexico, with a profile of an ESM framework for CHWOW, including WEEE.
d) To document the current management of CHWOW, including WEEE, their challenges and opportunities, including the potential for cooperation and synergies among the countries of the region.
e) To evaluate the coordinated implementation of the Basel, Minamata, Rotterdam and Stockholm Conventions, the Vienna Convention, and the UN Framework Convention on Climate Change in Central America, the Dominican Republic and Mexico.
f) To promote synergies in the coordinated implementation the Basel, Minamata, Rotterdam and Stockholm Conventions, the Vienna Convention, and the UN Framework Convention on Climate Change in Central America, the Dominican Republic and Mexico, related to ESM of CHWOW, including WEEE.

5. Methodology

The applied methodology during the development of the assessment was participatory, with engagement of relevant stakeholders of the countries which participated in the initiative and who are members of the Regional Advisory Council. The communication with the Council was carried out through teleconferences, via email, and two regional workshops in El Salvador on October 16 and 17, 2014 and in Mexico D.F. on December 1-3, 2014.

The stakeholders of engaged sectors on ESM of CHWOW, including WEEE IN El Salvador were consulted through sectoral roundtables. Furthermore, three meetings were organized in situ with communities affected by the unsound management of CHWOW, including WEEE, in coordination with the team of consultants of the national Salvadoran initiative in support of the synergistic implementation of the Basel, Rotterdam and Stockholm Conventions, and others related to ESM of CHWOW. The assessment includes the documented experience of the technical visit by the Director of BRCR-CAM to BCRC-Asia Pacific and to recycling facilities of WEEE, including the treatment of Cathode Ray Tubes (CRTs) in China[5], aimed at identifying systems for ESM treatment and processes which could be adapted and applied at a ULAB recycling installation in Guatemala (Acumuladores Iberia) and to determine the feasibility for the treatment of CRTs generated within the Central American region and the Dominican Republic. A proposal for a CRT protocol is attached as Annex II.

An instrument of consultation and collection of information which consisted of 10 matrices was designed (explained in the beginning of 5.1, which includes relevant aspects for the implementation of ESM of hazardous wastes and other wastes, including WEEE,

[5] See report on the Study Tour to BCRC-China in Annex I.

like the institutional and legal framework, installed capacity for ESM throughout the life cycle, quantities generated, imported, exported, reutilized, refurbished, recycled, treated and finally disposed.

The search for information was carried out in different Internet portals of national competent authorities of the Basel, Rotterdam and Stockholm Conventions, the United Nations Environment Program (UNEP), Customs Authorities, Ministries of Finance, Ministries of the Environment and Health and Academic institutions, associations of producers and professional, National Cleaner Production Centres, among others.

The development and follow up of the feasibility for the treatment of CRTs, included two technical visits to the Acumuladores Iberia, ULAB ESM recycling facilities in Guatemala City. One visit was for planning and another for the discussion of outcomes.

The information was analyzed, systematized and presented in a proposed regional intervention aimed at contributing to strengthen and advance ESM of hazardous wastes and other wastes, including WEEE.

The outcomes were presented in advance reports and in the final report, which includes conclusions and recommendations.

The process of evaluation was carried out through a series of steps, with participation of diverse sectors and related stakeholders, who from their own perspective shared their experiences, limitations, needs, challenges and opportunities, which can be foreseen throughout the different phases of ESM.

5.1 Description of the phases.

First Phase: Design and distribution of the instrument for collecting information.

Aimed at the collection of information related to ESM of hazardous wastes and other wastes, including WEEE throughout their life cycle in Central American countries, the Dominican Republic and Mexico, and to contribute to improve the current management, an instrument of collecting information was designed denominated "EVALUATION OF THE STATUS OF ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES INCLUDING WEEE", during July 14-24, 2014.

The instrument includes 10 matrices to capture the data[6]:

Matrix A: The institutions which participate in the management through the process of generating hazardous wastes and other wastes including WEEE. This matrix captures data

[6] See instrument in Annex III.

of stakeholders, generation, type of waste and/or composition, type of waste which is separated for recovery, type of refurbishment, treatment or disassembly, type of waste generated and kind of final disposal.

Matrix B: With this matrix the existing legal and regulatory frameworks was captured for each country on environmentally sound management within Central American countries, the Dominican Republic and Mexico, on hazardous wastes and other wastes, including WEEE.

Matrix C: To capture data on quantities of hazardous wastes and other wastes.
Matrix D: To capture information on infrastructure installed capacity for ESM of hazardous wastes and other wastes, including WEEE..
Matrix E: To capture quantities of ESM of WEEE, including CRTs.
Matrix F: To capture quantities of ULAB with environmentally sound management
Matrix G: To capture lead acid batteries being manufactured, imported and exported.
Matrix H: To capture information on installed capacity for ESM of WEEE
Matrix I: To capture information on installed capacity for ESM of ULAB.
Matrix J: To collect other relevant information for the Project on assessing ESM of hazardous wastes and other wastes including WEEE in the covered countries.

Second Phase: Teleconference of Regional Advisory Council

The aide memoire of this teleconference is in Annex IV. The outcome included the preparation of a set of illustrative filled matrices to facilitate their understanding.

Third Phase: Sectoral Roundtables in El Salvador

As a result of a meeting with the Vice Minister of the Environment of El Salvador, Dr. Angel Ibarra, the process of consultation through sectoral roundtables was defined. The following sectors were identified as pertinent to organize a roundtable:

a) Academia
b) Private Sector
c) Central Governmment
d) Non Governmental Organizations
e) Municipalities
f) Communities

Besides, it was agreed to organize two national workshops, a regional workshop in El Salvador on October 16-17, 2014, and one in Mexico City on December 1-3, 2014.

In total, 6 roundtable meetings were organized.

Composition of Roundtables

The Sectoral Roundtables had a total of 80 participants. The composition of each of them is described below:

Table 2: Roundtables

Number of Roundtable	Roundtable
Nº 1	Academia
Nº 2	Private Sector
Nº 3	Non Governmental Organizations
Nº 4	Central Government
Nº 5	Municipalities
Nº 6	Communities

Rountable No. 1 Academia

It was organized on July 18, 2014, at the Holiday Inn Hotel in Antiguo Cuscatlan, El Salvador, with 16 participants, composed of:

- Universidad of El Salvador (UES), with representatives from the career of Chemistry and Pharmacy, from the Faculty of Engineering and Architecture, from the Environmental Health career and graduate programs.
- Central American José Simeon Canas University (UCA) with representatives from Law School and the Master in Environmental Management.
- Don Bosco University, represented by a delegate from graduate programs.
- Francisco Gavidia University, with a representative from Economic Sciences.
- Dr. Jose Matias Delgado University, represented by delegates from Medicine and Law.
- Lutheran University, represented by a delegate from Agronomic Engineering.

Photo 1: Roundtable 1 Academia

Roundtable No. 2 Private Sector

It was organized on July 22, 2014, with 19 participants, with participation of the following companies or business organizations:

- Salvadoran Association of Chemical Engineers (ASINQUI).
- Salvadoran Association of Chemist and Pharmaceutical Professionals.
- Agency for the Development and Agriculture and Livestock Health (AGDYSA).
- Salvadoran Association of Industrials Chemists (INQUIFAR).
- Integrated Management of Solid Wastes (MIDES).
- Laboratory from the Salvadoran Foundation for the Economic and Social Development (FUSADES).
- El Surco (agrochemicals retailer).

- AUTOCONSA (Authorized managed for the collection and temporary storage of WEEE)
- Association of Agricultural Suppliers (APA).

Photo 2: Roundtable Nª 2 Private Sector

Roundtable No. 3 Non Governmental Organizations (NGOs)

It was organized with two NGOs in two different days:

- Roundtable Against Metallic Mining, on August 22, 2014.
- Salvadoran Ecological Union (UNES), on August 25, 2014.

Photo 3: Roundtable Nª 3 NGOs

Roundtable No. 4 Central Government

It was organized on July 29, 2014, with participation of representatives from the following institutions:

- Ministry of Environment and Natural Resources (MARN).

- Ministry of Labor.
- Ministry of Governance.
- Ministry of the Economy.
- Environmental Unit, National Water Company (ANDA).
- Environmental Unit, National Civil Police (PNC).
- Environmental Unit, General Attorney´s Office.
- National Drug Directorate (DNM).
- Oversight Board for the Chemist and Pharmaceutic Professions (JVPQF).
- National Institute of Health (INS)
- Salvadoran Social Security Institute (ISSS).

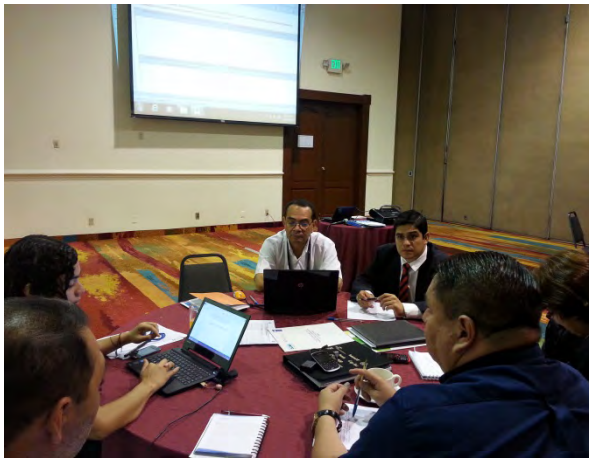

Photo 4: Roundtable Nª 4 Central Government.

Roundtable No. 5 Municipalities

Roundtable No. 5 Municipalities

It was organized on August 12, 2014, with 26 participants. The following municipalities participated:

Table 3: Municipalities which participated in Roundtable, by zone of El Salvador.

Municipalities by Zones of El Salvador		
East Zone	**Central Zonal**	**West Zone**
San Miguel.	San Salvador	Sonsonate.
La Unión.	San Tecla.	Acajutla.
	San Luis Talpa.	San Juan Opico.
	Puerto de la Libertad.	
	Chalatenango.	
	Antiguo Cuscatlán.	
	Soyapango.	
	Nejapa.	

Suchitoto.
San Martín.
Ayutuxtepeque.
Cuscatancingo.
Ilopango.

Fourth Phase: Field visits to Communities.

5 field visits were organized to communities that had been affected by hazardous wastes, aiming to learn from their opinions and experiences on hazardous substances, residues and wastes, this being Roundtable No.6 Communities.

Table 4: Visits to Communities

Community	Date of Visit	Photo
San Luis Talpa, San Luis Talpa Municipality, La Paz Departament.	August 14, 2014.	
Visit to Community Tierra Blanca. Jiquilisco Municipality, Lower Lempa River, Usulutan Depart-ment.	September 2nd, 2014.	

Community	Date of Visit	Photo
Visit to Organic Farm, San Luis Talpa. Community El Lagartero, San Luis Talpa Municipality, La Paz Department	September 2nd, 2014.	
San Juan Opico Municipality	September 3rd, 2014.	
Visit to Agroecological Farm Piedra Esmeralda. Zapotitan Valley, Ciudad Arce Municipality, La Libertad Department.	September 3rd, 2014	

Fifth Phase: First National Workshop

The first national workshop was organized on August 18, 2014, with the participation of 44 delegates, among them some members of sectoral roundtables and members of BCRC-CAM.

The main purpose was to share advances in the process of formulating the National Strategy for ESM of hazardous substances, residues and wastes.

Nonetheless, it was also used to share advances in the implementation of the Basel, Rotterdam and Stockholm at the national level, by Beatriz Vidal de Huezo (Hazardous and Solid Waste Unit, Ministry of Environment and Natural Resources- MARN).

Sixth Phase: 1st Regional Workshop

On October 16-17, 2014, it was organized in El Salvador the "Central America and the Dominican Republic Training and Experience Exchange Workshop on Environmentally Sound Management (ESM) of Chemicals Substances, Residues and Hazardous Wastes and Other Wastes"[7] in a Hotel in the San Salvador Metropolitan Area. The workshop had the participation of all sectors engaged on ESM of Chemicals Substances, Residues and Hazardous Wastes and Other Wastes: Academia, Private Sector, Non Governmental Organizations, Central Government and Municipalities. This regional event allowed the sharing by representatives of competent authorities of the Basel, Rotterdam and Stockholm Conventions and other agreements of Central America and the Dominican Republic, of their experience on ESM of Hazardous Wastes and Other Wastes including WEEE and two virtual presentations: Presentation by Nelson Sabogal from the Secretariat of the Basel, Rotterdam and Stockholm Conventions on Basel on "Advances and Challenges in the three Conventions" and the presentation "Complying with International Agreements on ESM of Chemicals" by Dr. Leila Devia, Director of BCRC-South America. Other topic presented was the advance in the current assessment of ESM of hazardous Wastes and Other Wastes in Central America and the Dominican Republic by Dr. Flor de María Perla de Alfaro, from BCRC-CAM.


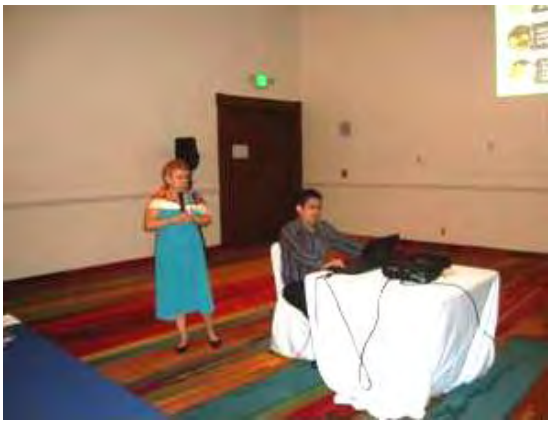

Photo 6: National Hymn during inauguration of regional workshop and presentation by Dr. Flor de Maria Perla

[7] Se realizó sinergia con los talleres Nacionales.

Photo 7: Presentation via Skype by Nelson Sabogal/BRS

Photo 8: Regional Workshop Group Photo.

Seventh Phase: The 2nd Regional Workshop

The 2nd Central America, and the Dominican Republic Workshop on Training and Experience Exchange on Environmentally Sound Management of Chemical Substances, Residues and Hazardous Wastes and Other Wastes" organized in Mexico City on December 1-3, 2014, allowed a rich exchange of experiences and advances, including, the preliminary results of the Assessment on the Status of ESM in Central America and the Dominican Republic, advances on the feasibility for an ESM treatment of CRTs and the presentation of the Salvadoran National Strategy for ESM of Chemicals and Hazardous Wastes and Other Wastes and lessons learned from the Synergies project as well as from the WEEE and ULAB Strategy for Central America and the Dominican Republic.

Photo 9: Table of Speakers, from left to right, Alberto Capra, IEG on ESM and Basel Contact Point for Argentina, Miguel Araujo/BCRC-CAM, Professor and Eng. Luis Eduardo de Ávila, SEMARNAT and Micaela Bonafina BCRC-South America during the 2nd Regional Workshop

The representative from the Global Environmental Facility (GEF), Lulwa Ali, made a presentation on the opportunities for financing ESM of Chemicals and Hazardous Wastes and Other Wastes within the GEF 6 Round of financing, while Alberto Capra, Co-Chair of the International Expert Group on ESM of the Basel Convention presented opportunities within the international agenda in support of ESM of Chemicals and Hazardous Wastes and Other Wastes.

Mexico participated in the second regional workshop with 22 delegates [8] from government, private sector, NGO and Academia. One example of their contribution was

[8] Participants at the Mexico Regional Workshop on December 1-3, 2014:
Central America and the Dominican Republic:

- Ministry of Forests, Fisheries and Sustainable Development of Belize
- Ministry of Environment and Natural Resources MARN of Guatemala
- Secretariat for Natural Resources and the Environment of Honduras
- Ministry of Environment and Energy MINAE of Costa Rica
- Executive Committee for the Integral Management of Electronic Wastes (CEGIRE) of Costa Rica
- Department of Environmental Disasters, Directorate of Protection of Environmental Quality, National Environmental Authority of Panama
- Ministry of Health of Panama
- Ministry of Environment and Natural Resources of the Dominican Republic
- Acumuladores Iberia (Guatemala)
- AUTOCONSA S.A de C.V. (El Salvador)
- Basel Convention Regional Centre for Central America and Mexico (BCRC-CAM).

Mexico

Government:

- Secretariat of Environment and Natural Resources (SEMARNAT)
- General Directorate for Industry/SEMARNAT
- Federal Attorney for Environmental Protection **(**PROFEPA)
- National Centre for Disaster Prevention (CENAPRED)/Governance Secretariat (SEGOB)
- General Directorate for Basic Industries/Secretariat of Economy
- Federal General Directorate of Transportation/General Secretariat of Communications and Transportations (SCT)
- Secretariat of Energy (SENER)
- General Directorate for Agriculture and Livestock Technology Educations/ SEP
- National Metrology Centre (CENAM)
- Federal Commission on Electricity (CFE),

Private Sector:

- HOLCIM Apasco
- National Cement Chamber (CANACEM)
- National Council of Industrial Ecologists (CONIECO)
- International Consultants on Prevention and Control (CIPREC C.A.)
- National Chamber of the Iron and Steel Industry (CANACERO)
- Institute for the Environmental Protection of Nuevo León (IPA)/ Chamber of the Transformation Industry of Nuevo León (CAINTRA)

Associations

- Psychoanalytic Association of Mexico (IPA A.C.)
- Queretaro Network of Management of Residues A.C.
- Communication and Environment A.C.
- Protection of Crops, Science and Technology, A.C (PROCCYT)

Academia

- University Program for the Environment, Mexico National University (UNAM)

the presentation by a representative of the Queretaro Network for Management of Residues AC on ideas for formulating a Plan for the National Management of Analog Televisions in Mexico.

During plenary sessions, a profile was developed for a 5 year Program/Project on ESM of Chemicals and Hazardous Wastes, with the good news that Mexico decided to fully join the Central American initiative, thus enlarging the region to include Central America, the Dominican Republic and Mexico.

Participants in the second regional workshop obtained several agreements that are beneficial for the countries of the region of Central America, the Dominican Republic and Mexico, which are detailed below.

Photo 10: Participants during the 2nd regional workshop

Reached agreements

NGO

- International Network for the Elimination of Persistent Organic Pollutants (IPEN México)

Argentina

- Secretariat of Environment and Sustainable Development
- Basel Convention Regional Centre for South America (BCRC-South)

Internacional

- Global Environmental Facility (GEF)

Participants were very satisfied of the outcome of the second regional workshop on training and experience exchange on ESM organized in Mexico, as they achieved the following very important agreements:

1st The group of countries comprising Central America and the Dominican Republic, welcome the expression of interest from Mexico to become a full member of the regional ESM initiative, including their decision to jointly seek GEF funding for their 2015-2020 program on ESM of chemicals and hazardous wastes and other wastes.

2nd Mexico will join Guatemala in the global leadership expressed at the 9 session of the Open Ended Working Group of the Basel Convention last September, towards the updating of the Basel Convention Technical Guidelines for ESM of ULAB and its corresponding manual.

Photo 11: Participants at the 2nd Regional Workshop in Mexico

3rd The participating countries and BRCR-CAM celebrated the outcome of this second workshop which gives birth to a new permanent working Alliance between Mexico, Central America and the Dominican Republic, and agreed on making all needed preparations so that this new Alliance is profiled at the Triple COP, to be held on May 2015 in Geneva, Switzerland.

4th It was agreed that BCRC-CAM should prepare the profile for the 2015-2010 Program on ESM of Chemicals, Hazardous Wastes and Other Wastes, which all countries will review and will make their contributions. It will be afterwards presented to International Expert Group on ESM of the Basel Convention, which will meet in Konstanze, Germany on January 21-23, 2015, proposing to this group their endorsement of this program because of its pioneering character worldwide as a sub-region, requesting their support in

obtaining financial support from bilateral and multilateral donors, including Japan, the European Union. Throughout 2015 a full project proposal will be developed, including schedule of activities, outcomes, indicators, identification of stakeholders, and budgets. Parallel to this financing will be sought from GEF or Project preparation.

5th Agreed to present a request of funding for immediate actions during 2015, focused on two areas: a) the design of an Exchange System for hazardous substances and wastes for Central America, the Dominican Republic and Mexico, considering that Mexico is in the process of designing its own national exchange system; b) South-South cooperation, in order to deepen the current exchange of experiences which has been generated by these two regional workshops.

6th Also agreed to capture this special moment of good working relations to organize a teleconference within February-March 2015, to prepare topics and coordinate positions before the regional Triple COP preparatory meeting to be held in Uruguay next April, 2015.

6. ASSESSMENT ON THE STATUS OF ESM ON HAZARDOUS WASTES AND OTHER WASTES FOR CENTRAL AMERICA THE DOMINICAN REPUBLIC AND MEXICO.

6.1 Institutional Framework

In all countries of Central America, the Dominican Republic and Mexico sub-region there are institutions with specific mandates to coordinate the management of chemicals and hazardous wastes and other wastes, In general En general the Ministries and/or Secretariats of Environment are responsible for leading and enforcing the regulatory framework on ESM of chemicals, hazardous wastes and other wastes. There are two exceptions: Costa Rica and Panama, where the Ministries of Health have this mandate relative to hazardous wastes and other wastes. Besides, there are other key institutions which participate in the management of hazardous materials, like the Ministries of Agriculture, Economy, Transportation, Public Finances, Municipalities, General Attorney's Office, the Police, the Judiciary System and Congresses.

The Ministries of Agriculture are responsible for authorizing the importation, registration, control and surveillance of chemical substances used as agricultural and livestock inputs (fertilizers, pesticides, vaccines and pharmaceuticals, among others).

Ministries of Labor are in turn responsible for overseeing compliance of health and occupational safety regulations in work areas while the Ministries of Economy are responsible for regulating commercial activities related to chemical substances, and Ministries of Transportation regulate and oversee conditions for transportation of hazardous materials.

The ministries of Public Finance, specifically the Directions of Customs, are responsible for the control of imports and exports of chemical substances and hazardous wastes.

The municipalities are responsible for regulating and overseeing activities carried out in their territories, while the General Attorney's Office is in charge of investigating and persecuting illicit activities, supported by the Police as an auxiliary body.

The judicial system is responsible for judicializing illicit actions and prosecuting them, when presented by the General Attorney's Office, while Congresses formulate laws which regulate the management of hazardous substances and wastes.

Nonetheless, there are other institutions and organizations which intervene in some or several phases of ESM of hazardous substances and wastes and other wastes. Among them the following sectors have been identified:

Academia: State and private universities, technological institutes which form new professionals in topics related to ESM, as well as r centers which can contribute to finding new ways of applying ESM.

Private Sector: Unions of Professionals, of industrialists, of importers, distributors, exporters, managers of hazardous wastes and other wastes, laboratories which offer their services of biological and/or physic – chemical analysis.

Non Governmental Organizations: Engaged in supporting ESM of hazardous substances and wastes in specific territories, at the national or regional level, as well as in promoting agro-ecology, mobilizing against the metallic mining, among others.

Several of the countries of the sub-region have indicated that in this moment they face big challenges for the establishment of an integrated ESM system with a life cycle approach at the national level, because there are not registries and/or inventories of products that when they reach the end of their life, they become hazardous wastes. Thus, this makes it difficult to estimate the quantities of how many of them will need to be managed in an environmentally responsible manner.

In spite of efforts and advances achieved by the countries of the sub-region in their institutional frameworks for ESM of hazardous substances and wastes and other wastes generated by several daily activities, there is still the need to modify further their institutional frameworks in order to achieve an effective inter-institutional and inter-sectoral coordination and achieve ESM, reducing the risks of these compounds to human health and to the region's ecosystem.

6.2 Regulatory Framework for the Management of Hazardous Wastes and Other Wastes including WEEE

Most of the countries of the sub-region including Central America, the Dominican Republic and Mexico has an environmental law, regulations or policies for the management and final disposal of hazardous wastes, environmental policies, policies for the management of chemical substances and hazardous wastes, and policies for the management of non hazardous wastes, policies for cleaner production, policies for the integrated management of wastes, policies as framework for environmental management, policies for the conservation, protection and improvement of the environment and natural resources, laws on animal and plant health, laws for the promotion of environmental education, bylaws for electronic wastes, bylaws for the transportation of hazardous products, Bylaws for special management wastes and residues, general bylaws for the law of integrated waste management, general bylaws for the classification of hazardous wastes, bylaws on hazardous substances and wastes, bylaws for environmental evaluation, monitoring and follow up, bylaws for discharges and reuse of grey waste waters and disposal of sludge, health codes, penal codes, municipal ordinances which regulate the management of solid household wastes, special bylaws on the control of ozone depleting substances, municipal ordinances related to the management of solid wastes and waste waters, mandatory technical regulations for the management, treatment and final disposal of non hazardous solid wastes, administrative procedures for the elimination of solid wastes generated by productive activities in Free Trade zones. Thus, there is no lack of legal framework but a very limited enforcement of it.

These countries have specific regulations to control the transboundary movement of hazardous wastes which highlight the responsibility of the generator: *The responsibility of the management and final disposal of hazardous wastes corresponds to the owner of the activity, work or project (extended producer responsibility (EPR)*, leaving the consumer and national and local authorities without any responsibility for the management of wastes generated. This is why it EPR needs to be complemented with the shared and differentiated responsibility of central and local government, and the consumers. Furthermore, the implementation of national legislation is base on the ratified multilateral environmental agreements (Basel, Rotterdam and Stockholm Conventions).

El Salvador has an Environmental Law (1998)[9], a Special Bylaw on Hazardous Substances, Residues and Wastes (2000)[10] and a National Plan for the Integral Management of Solid

[9] See http://www.asamblea.gob.sv/eparlamento/indice-legislativo/buscador-de-documentos-legislativos/ley-del-medio-ambiente
[10] See http://www.marn.gob.sv/phocadownload/reglamento_especial_sustancias_residuos_desechos_peligrosos.pdf

Wastes (2000)[11]. In relationship with WEEE El Salvador does not have an specific regulation for the importation of electronic equipment, neither for their management throughout their life cycle, either for the ones generated by households, private sector and institutions. Nonetheless, the National Plan for the Management of WEEE sets as its general goal "to promote the participation of different stakeholders in the Integrated System of WEEE, favoring the recuperation, reuse and generation of value chains".

Guatemala has a Law for the Protection and Improvement of the Environment (1986)[12], a National Policy for the Integrated Management of Solid Residues and Wastes (2005) and a National Policy for the Environmentally Sound Management of Chemical Products and Hazardous Wastes (2013)[13].

Costa Rica has a General Health Law, an Organic Environment Law, an Integrated Waste Management Policy (2010), a Bylaw for the Transport of Dangerous Goods, Solid Waste National Plan, a General Bylaw for the Integrated Waste Management Law, a General Bylaw for Classifying Hazardous Waste and an Electronic Waste Bylaw amongst other.

Nicaragua has a General Law for the Environment and Natural Resources, a Law of Amendment to the Environmental Law, a National Environmental Policy, a National Policy for the Environmentally Sound Management of Non Hazardous Residues, a National Policy for the Management of Hazardous Substances, Residues and Wastes, a National Policy on Cleaner Production, Technical Mandatory regulation for the Management, Treatment and Final Disposal of Non Hazardous Solid Wastes.

The Dominican Republic has an Environment and Natural Resources Law, a Bylaw for Chemical Substances, a Draft Bylaw for Used Lead Acid Batteries (ULAB) and a Policy for the Management of Chemical Substances.

Belize has an Environmental Protection Decree (1992) and a Bylaw on Hazardous Wastes (2009).

Honduras has a General Environmental Law, a Bylaw on Solid Wastes and a Bylaw of ESM of PCBs.

Mexico has a General Law for the Prevention and Integral Management of Residues (LGPGIR)[1], a Bylaw to the General Law for the Preventions and Integral Management of Residues, a General Law for the Ecological Equilibrium and the Protection of the Environment, a Federal Law of Rights, an Official Regulation NOM-161-SEMARNAT-2011, which sets the criteria to classify residues as special management, and that determines which ones are subject to a Management Plan; a Regulation NOM-098-SEMARNAT (2002)

[11] See http://www.marn.gob.sv/phocadownload/mids_plan_mejoramiento.pdf
[12] See http://leydeguatemala.com/ley-de-proteccion-y-mejoramiento-del-medio-ambient/67/
[13] See http://www.sia.marn.gob.gt/Documentos/POLITICAS%20MARN/12%20Pol%C3%ADtica%20Nacional%20de%20Productos%20Qu%C3%ADmicos.pdf

on Environmental Protection Incineration of residues, specifications for the operation and contaminant emission limits; a Regulation NOM-052 Hazardous Wastes: Zinc/silver oxide batteries, CRTs (lead), Switches (mercury); a Regulation NOM-053-SEMARNAT (1993), Which sets the procedure to carry out an extraction test to determine the components which make a residue hazardous because of its toxicity to the environment; a Regulation NOM-161-SEMARNAT(2011) On Management Plans for Special Management Residues and a Proposed strategy and public policy for the integral management of used tires in the border area.

6.3 Inventories of Hazardous Wastes and Other Wastes including WEEE.

In the countries of the Central America, the Dominican Republic and Mexico sub-region there are no systematized data on generated hazardous wastes by the diverse productive activities and services, which could allow decision making and the establishment of priorities to improve their management.

The obtained information on generated quantities of hazardous wastes, including WEEE, subject to ESM are estimates made by National Authorities.

6.4 Status of the Vehicle Fleet in Central America, the Dominican Republic and Mexico, and ULAB management.

The statistics indicate that the vehicle fleet in the Central America, the Dominican republic and Mexico sub-region are increasing, resulting in a negative impact in environmental quality, particularly in the air quality, because of the emission of combustion gases, as well as the tires and ULAB generated. About 9 million tires are manufactured annually in the sub-region.[14]

Generated Used Lead Acid Batteries (ULAB) are not always managed in authorized installations, as many of them are managed by the informal sector under conditions of high risks for health and the environment.

Out of 100 % of new tires for vehicles, only a small percentage is recycled or co-processed in cement kilns.

El Salvador's Vehicle Fleet

According to the Vice Ministry of Transportation (VMT), the vehicle fleet reached 826,676 units by 2013. This same institution reports that 50% circulate within the San Salvador Metropolitan Area. The ministry of Environment and Natural resources (MARN) reported

[14] La Prensa, Wednesday, April 24, 2013.

that 4,182 metric tons of used oils from internal combustion engines and 17,035 metric tons of used tires were co-processed in a cement kiln between 2010 until April 2014.

One of the main municipalities of the country reported a generation of 140 Used Lead Acid Batteries (ULAB) annually, equivalent to 6 tons per year, generating during the last 5 years 30 metric tons of ULAB. The ULAB collected by authorized companies are exported, because there is no authorized facility for their treatment. With the increase in the vehicle fleet, there will also be an increase in hazardous wastes. The importation of used tires with a short life cycle is another of the waste streams to be managed, because it represents a health risk because of the proliferation of vectors, mainly the aedes egypti transmitter of the dengue fever and Chikungunya epidemics.

El Salvador has 12 companies authorized for the transportation and temporary storage of ULAB.

Guatemala's Vehicle Fleet:
The Superintendence of Taxes Administration (SAT) reports that by November 2014 the vehicle fleet in Guatemala was 2.55 millions of units. During the first 11 months of this year almost 10,000 motorcycles entered into circulation for a total of 855,677 units operating in this country. Motorcycles registered the highest growth in sales of vehicles, showing an increase in the preference towards this kind of transportation. Additionally, SAT reported the sale of 21,847 cars in 2013, for a total of almost 600,000 cars.

In Guatemala there is an ESM Used Lead Acid Battery (ULAB) recycling facility, Acumuladores Iberia, which receives technical support from both BCRC-CAM and the Guatemalan National Cleaner Production Centre, which recycled 40,124 tons, during 2005-2014. Considering that Lead Acid Batteries (LAB) have an average duration of two years and the need to supply the existing vehicle fleet, it is estimated that during the next two years 3 million LAB will be imported, which at the end of their life cycle will become ULAB. This ULAB recycler received two international Green Lead Awards (2009 and 2011), two national cleaner production awards (2011) and two Central American Cleaner Production Awards. Moreover this facility has achieved closed to 0% solid waste, with an innovative production process, which has received international interest.

The Dominican Republic's Vehicle Fleet:
According to the Department of Economic and Tax Studies from the General Direction of Internal Taxes, by December 31, 2013, the vehicle fleet reached 3,215,773 units, registering 163,087 new vehicles in comparison with 2012. Out of these vehicles, 52.2% are motorcycles and 22.3% are cars. Most part of the vehicles are in the National District, in Santo Domingo and in Santiago de los Caballeros, with a participation of 28.5%, 16.1% and 8.2%, respectively.

Out of the different types of vehicles, motorcycles have the largest absolute growth with 112,164 new units, for a 7.2% increase, followed by cars with 19,907 additional units, for a

2.9% increase; following there are the four-wheel-drive vehicles, with 18,269 new units, for a 6.2% increase.

The increase in motorcycles helps to reduce the cost of transportation to their users, but cause a larger environmental impact, because the two-cycle internal combustion engines are less efficient in the combustion, and thus the emissions to the atmosphere are larger than four-cycle vehicles.

There are 22 companies authorized for the collection and temporary storage of Used Lead Acid Batteries (ULAB) in the Dominican Republic. There is in the country a ULAB recycling facility, Verde Eco-Reciclaje Industrial, with a Green Slag technology, which received a National Cleaner Production Award (2014), with capacity to recycle 72,000 units annually. The Ministry of Environment and Natural Resources registers the exportation of 22,501,914 metric tons of ULAB documented until 2014, destined to the United States of America mainland and Puerto Rico, Haiti, and South Korea[15]. The quantity of tires which enters the country is significant because of the vehicle fleet of 3,215,773 units. Used tires with ESM have not been documented.

Honduras's Vehicle Fleet:
According to official figures, the vehicle fleet at January 2013 was of 1.2 million units, of which 9,474 were registered in this month. There were 138,607 cars registered in 2013, with an average monthly registration of 10,000 units. The Basel Convention Competent Authority reports that during the 2010-2012 period 13,720 Metric Tons of Used Lead Acid Batteries were generated, of which 5,320 Metric Tons were exported, and because there is no registered ESM ULAB recycling facility in Honduras it can be inferred that the 8,400 Metric Tons left were not ESM.

Costa Rica's Vehicle Fleet
The official information reports that Costa Rica has a vehicle fleet of 850.000 units: Private, 48,9%; Freight, 3,87%; Light Freigth, 22,7%; Buses, 1,8%; Taxis, 0,48%; Special Equipment, 3,43%; State institutions outside Ministries, 4,97%.

Approximately 80% of the vehicle fleet operates legally with a growth of 8% to 12%, annually (including motorcycles) and 60% of them circulate in the Central Valley.[16]

9,000 tons metric tons of new Lead Acid Batteries were imported to Costa Rica during the 1997-2012 period, being imported from the United States, Mexico, South Korea, China, Colombia and Guatemala.[17]

[15] Data provided in the instrument for the collection of information on ESM corresponding to the Dominican Republic.
[16] Technical Vehicle Revision, 2011, Ministry of Public Works and Transportation (MOPT).
[17] University of Costa Rica, Faculty of Engineering, School of Electric Engineering, 2012.

The realities of used tires in Central America and Panama were analyzed recently in Costa Rica. The authorities, foundations and private companies presented the advances currently being developed in Costa Rica in dealing with this issue. Among the developments there is the ban in the importation of used tires in effect since 1963.

In Costa Rica it operates the first used tired recycling plant, own by FUNDELLANTAS, a NGO which collects, processes and compacts used tired to be used as construction material.

The cement companies and some companies with boilers used the calorific power of used tires, utilizing them as alternative fuel.

Bridgestone, the tire manufacturer, recently organized a workshop on the management of used tires, opportunity which was used for the presentation of the company's environmental policy, which aims to achieve a sustainable operation.

The Costa Rican Bridgestone representative highlighted in this occasion that the reuse of used tires is growing in roads, walls, playgrounds for children, pots and fuel for boilers, recognizing that there is a long way to go in Central America. 9 million tires are manufactured annually in Central America.[18] According to Bridgestone of Costa Rica numbers, Central America imported in 2013 2,960 containers of used tires for light vehicles. Furthermore, 3,400 containers of used tires for heavy vehicles (trucks, buses, tractors) were imported. By 2012, 4.17 million used tires were imported to Costa Rica.

"By 2012 there were 21.7 million of new Chinese tires sold in Central America, while in 2011, they were 26.3 million units, while the sales of new tires from other origins were 33.9 million in 2012 and 46.8 million in 2011", indicated the Bridgestone Costa Rica representative.[19]Out of these quantities there is no registration of the quantity of recycled used tires and/or co-processed in cement kilns or boilers.

Mexico's Vehicle Fleet

By 2012 Mexico's vehicle fleet reached 27.81 million of units, according to the Melgar consulting company through the study "Melgar Associates-Statistics of Vehicle Population in Mexico"[20].

This study reports that out of the above, 14.54 million are cars, 12.37 million are light trucks, 0.59 million are heavy trucks, 0.27 million are Tractor-trucks and 0.04 million are integral buses.

[18] La Prensa, Nicaragua, Miércoles 24 de Abril de 2013.
[19] La Prensa, Nicaragua, April 24, 2013.

[20] http://www.portalautomotriz.com/noticias/estudios-de-mercado/parque-vehicular-de-mexico-fue-de-2781-millones-de-unidades-al-cierre

Out of the vehicles circulating during the 1972-2012 period, the segment of compacts leads the volume with 6.63 million units, followed by sub-compacts with 5.54 million units, the trucks Class 1 with 4.46 million unit, vehicles for multiple uses with 4.14 million units, trucks Class 2 with 2.52 million units, luxury vehicles with 1.65 million units and trucks class 3 with 1.25 million units.

Currently Mexico has a strategy and public policy relative to the integrated management of used tires within the border region. There are reports that in the controlled dump sites in this region there is an accumulated backlog, which for 2012 was between 10.3 million units to 10.4 million units. Nonetheless, there is no information of the accumulated used tires in uncontrolled. In Ciudad Juarez, there are 4 million used tires in uncontrolled sites. The above indicates that there are about 2.53 waste used tires in uncontrolled sites per each city inhabitant[21].

It is estimated that 6.5 million Used Lead Acid Batteries were generated in 2007[22]. There is no information on the exact quantity of ULAB collected for recycling. The Environmental Cooperation Commission (ECC) reported in 2007 most of the ULAB are recycled in Mexico.[23]Considering that the current market price of lead in the international market is high and that lead acid batteries points of sale offer a significant incentive to consumers to return their ULAB, in Mexico, as well as in other countries of the sub-region there are sufficient incentives for the recycling of ULAB. On the other side the challenge seems to be in the enforcement of ESM.

ENERTEC operates ULAB recycling plants in Garcia, Nuevo Leon, with an installed capacity of 252,000 metric tons annually. The Pipsa Corporation facility has the capacity of recycling 104,760 metric tons of ULAB per year. Mexico has authorized 21 facilities with a recycling facility of 864,003 metric tons of ULAB annually

Mexican authorities report that 1,127,349 metric tons of hazardous waste are generated annually.

Nicaragua's Vehicle Fleet

According to government sources the traffic in Managua and throughout the country has risen considerably. The Police Commissioner and Chief of the National Direction of Transit, report that there are about 300,000 vehicles circulating across the capital city, Managua. This figure is about 60 % of the vehicle fleet of the country which amounts to 552,000

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21 http://www.cocef.org/uploads/files/politica_publica_para_manejo_integral_de_llantas_de_desecho_en_la_frontera.pdf

22 Instituto Nacional de Recicladores de México (INARE): "Acumuladores de baterías usadas"

23 Comisión para la Cooperación Ambiental: Prácticas y opciones para un manejo ecológicamente racional de baterías de plomo- ácido usadas dentro de Norteamérica,

vehicles. By 2003, only in the capital city, the vehicle registry was of 166,176 and in 2012 it grew to 261,242, which meant a 5.16% annual increase during the last 9 years. This indicates a 2.2 rate of vehicle growth by each four inhabitants. It is estimated that in Managua there is 1 vehicle for each four inhabitants.[24]

It should be noted that with the growth of the vehicle fleet, there is an increase in the importation of tires, including used tires, which contribution is 45% of the market.

Panama's Vehicle Fleet

Panama's Authority for Land Transit and Transportation (ATTT) estimates a vehicle fleet 1,500 units short of 1 million (2012).

According to ATTT's General Secretary the increase in the vehicle registry of about 3,000 units per month, estimating that by the end of 2013 it will reach 1 million units.

This collection system for used tires is limited, and thus used tires represent a source of contamination and conditions which fosters the proliferation of vectors which transmit diseases, thus becoming a risk to human health. Moreover, the country imports used tires without any restrictions. Approximately of every 4 tires purchased, 2 are used tires.

Panama generates approximately 486 thousand waste tires per year, which are burnt in open fires, thrown to the sea, or disposed at the sanitary landfill of Cerro Patacon.

The used tires are attractive because of their low cost, despite being less safe. The car workshops which operate in the country usually sell tires of "limited use", which generates employment to approximately 75 thousand people.

There are three sectors which participate in activities of lead recycling: industrial lead smelting, artisanal lead smelters for fishing and the workshops for ULAB maintenance and reconditioning.

There is one lead smelting plant for the recycling of ULAB at the national level "Procesos y Análisis Metalúrgicos, S.A" (PAMETSA), which has an installed capacity for the processing of lead slag of 18,000 metric tons, annually. Currently this facility is operating at 30% of its capacity, which allows them to process about 100% of lead slag generated by the country.

In relationship with the lead recycling for fishing, a small quantity of lead is smelted for this purpose, because for the organized fishing they use plummets (counterweight used for ropes and fishing nets to easily reach the bottom of the water).

Regarding the lead recovery, it is reported that there are 35 micro companies/workshops authorized, which under a social name carried out repair, recondition, reconstruction and maintenance of lead acid batteries, using parts recovered from ULAB like cases, electrolyte, and even complete cells, which according to the technicians are in good

[24] La Prensa, Nicaragua, 12/01/2014

shape. Similarly, they recycle small quantities of lead, by melting them and pouring them into molds for building terminals and elements for the internal connection of the batteries.

6.5 WEEE Management

WEEE management in Central America, the Dominican Republic and Mexico is not considered currently a priority in the agendas of local governments and to some extent of national governments. A small advance towards changing occurred on June 2012 in Roatan, Honduras, when the Council of Ministers of the Central American commission for Environment and Development (CCAD) formally recognized WEEE as a priority and instructed their executive Secretariat to coordinate with BCRC-CAM the formulation of a regional strategy, following a presentation by BCRC-CAM to this Council of Ministers. This regional strategy, which also included ULAB, was prepared and presented on June 2014 at the Council of Ministers of CCAD, after a process of 16 months of formulation, but it is still pending its formal approval.

WEEE is not included in the municipal management of solid wastes, under the argument that they are not considered “common wastes”. It is considered that it is the responsibility of the generator to give them a proper management, without having guidelines or regulations establishing ”proper management”.

Regularly WEEE are found in the routes of household collection or in special routes (served by collecting companies). Nonetheless, there is no formal registry of these companies neither the collected quantities. WEEE is often disposed in sanitary landfills mixed with common waste, because they do not represent a significant percentage in respect to the total collected waste.

At the sanitary landfill of the San Salvador Metropolitan Area it is allowed that as much as 5% of other type of waste appears mixed with common waste, relative to the total of received wastes by trip (e.g. used tires, big size end of life electrical equipment like refrigerators or stoves, end-of-life personal computers).

In all countries of the region there are networks of companies, being formal or informal, which collect, store, refurbish, and/or dismantle WEEE, their different components being exported for recycling and material recovery. Moreover, some representatives of Electric and Electronic Equipment manufacturers have adopted an environmental policy which includes the principle of “extended producer responsibility”. On October 15, 2014, Sony launched the initiative “Live the Change”, which aims to promote in Latin America the recycling of WEEE, through their appropriate treatment. In this initiative, which at the moment covers two Central American countries (Costa Rica and Panama) Sony will assume the associated management costs for end of life electronic product which have

the Sony brand on them, applying the extended producer responsibility.[25] In El Salvador Motorola has designed an extended producer responsibility program for their products, with a strict application of regulations and standards for the protection of health and the environment. This initiative contemplates the collection and monthly storage of batteries, and used equipment in all the country, aiming to recycle the valuable metals contained in mobile phones, like copper, gold, bronze and iron, reducing the negative impact to the health and the environment, which potentially these recoverable wastes could generate.

A Salvadoran municipality reports 105,282 computer parts, equivalent to 2,288 tons/year, are being thrown away. A Health Centre informed that during the 2010-2013 period 39,112 Kg of equipment were auctioned. A company which manages WEEE, reports an annual collection of 20 tons annually, part of it which is good condition is donated and the rest is destined to be exported for recycling. One municipality has a general warehouse of 250 m^2, located in a municipal market, where they temporarily store all equipment and/or appliances which have been substituted until they are auctioned.

Guatemala informed that they generated 156,513.04 metric tons of WEEE, during the 2009-2014 period. Approximately 980 metric tons were exported in 2012. According to the survey carried out by the Ministry of the Environment and Natural Resources and other partners, it is estimated that there are 13.6 million mobile phones, of which 56% are out of use and still stored in houses. 8% of their owners gave donated them or gave them away. 6% of them threw them with the common trash.

In the Dominican Republic there are 46 companies which manage WEEE and 2 which focus on plastic management.

6.6 Installed capacity for ESM of Hazardous Wastes and Other Wastes including WEEE

Currently, within the countries of Central America, the Dominican Republic and Mexico, there is limited capacity for ESM of hazardous wastes and other wastes, including WEEE, with the exception of Mexico, where the installed authorized capacity for management of hazardous wastes is of 14.5 millions of metric tons, annually.

Nonetheless, there are some advances on ESM of ULAB in Costa Rica, Guatemala and the Dominican Republic, where there are authorized recycling facilities which receive technical assistance from BCRC-CAM and its international network of experts, and in the case of Guatemala, it also has the support of the National Cleaner Production Centre, In Costa Rica there are authorized facilities for the dismantling of WEEE, which components are then exported for recycling and material recovery.

[25] http://www.residuosprofesional.com/sony-lanza-una-campana-de-reciclaje-de-residuos-electronicos-en-toda-latinoamerica/ y http://www.viveelcambio.com/

In El Salvador operates the Centre for Refurbishment, Assembly and Technical Services on computing equipment (CREST), which cannel refurbished or assembled equipment to public rural schools, provides them technical support, and take responsibility for equipment once it has arrived to their end-of-life. They have an installed capacity of refurbishing or assembling 3,000 equipments per month, but currently they operate at 10% capacity. One of their challenges is finding a way to offer ESM for end-of-life equipment and/or components.

Throughout all countries of Central America, the Dominican Republic and Mexico there are authorized facilities for the temporary storage of WEEE, ULAB, and ferrous and ferrous metals. Additionally, there are the networks of unauthorized collection and temporary storage of hazardous and non hazardous wastes wastes.

There cement companies which operate in the sub-region have been authorized to co-process some wastes which are not Persistent Organic Pollutants (POP) but are still hazardous, and other non hazardous wastes, like used oils, used tires, obsolete pharmaceuticals and pesticides, among others. Only one of this cement companies has been authorized for the co-processing of persistent organic pollutants, HOLCIM El Salvador.

Countries of the region operate sanitary landfills for the final disposal of municipal solid wastes. As of to date, none of them has a special security landfill area with properly confined areas for hazardous wastes.

6.7 Coordination Mechanisms for ESM of Hazardous Wastes and Other Wastes including WEEE

In general the mechanisms of inter-institutional and inter-sectoral coordination for ESM of hazardous wastes and other wastes, including WEEE, have been established in the framework of requirements for the development of specific projects, like the national implementation plans of the Stockholm Convention.

Additionally, within the framework of the Central American Commission of Environment and Development (CCAD), a sub-regional Chemical Safety Committee was established, but it has not operated during the last three-four years because of lack of funding.

BCRC-CAM has organized in each of its project regional advisory committees, which have help to create a fluid inter-institutional and interpersonal working relationship with officers from Basel, Minamata, Rotterdam and Stockholm Conventions and the Montreal Protocol.[26] These regional advisory committees have also helped to arrive at the

[26] Regional Advisory Committee for the Coordinated Destruction of ODS and POPs, during 2012-2013, Regional Advisory Committee for the Formulation of the WEEE and ULAB Strategy for Central America and the Dominican Republic, and the Regional Advisory Committee for the Synergies Project and for the central

conclusion that there is a need for BCRC-CAM to shift its current business model, based on temporary sectoral projects, and move towards a medium term project or program which captures potential synergies among the different multilateral agreements related to ESM of chemicals, and hazardous wastes and other wastes, as agreed in the Mexico December 2014 workshop. Such a synergy project/program presents the opportunity to reactivate the Chemical Safety Committee, by allowing the identification of seed funding for their operation, in coordination with CCAD.

At the National level, Costa Rica approved in 2010 the Law for the Integrated Management of Residues, which establishes the Executive Committee for the Integrated Management of Electronic Wastes (CEGIRE), coordinated by the Ministry of Health (MINSA), with participation from the Ministry of Environment and Energy (MINAE), Ministry of Agriculture and Livestock (MAG), Ministry of Public Education (MEP), Institute of Municipal Promotion and Advice (IFAM), the Union of Local Governments (UNGL), the Costa Rican Union of Private Sector Chambers and Associations (UCCAEP), the National Council of University Principals (CONARE), and Non Governmental Organizations (NGOs) linked to the management of wastes at the national level.

In Nicaragua, in turn, the Presidency established in 2014 the National Commission for Registration and Control of Toxic Substances.

6.8 COUNTRY TABLES WITH THE SUMMARY ASSESSMENT ON ESM OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WEEE

Table 5: Assessment on the status of hazardous wastes and WEEE in El Salvador.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
EL SALVADOR	Constitution of the Republic of El Salvador 1983. Environmental Law. Bylaw of the Environmental Law Special Bylaw on the Subject of Hazardous Substances, Residues and Wastes. Special Bylaw on the Control of Ozone Depleting Substances. Municipal Code Regional Agreement on Transboundary Movements of Hazardous Wastes Health Code	Ministry of Environment and Natural Resources (MARN) Ministry of Health and Social Assistance (MINSAL) Ministry of Agriculture and Livestock (MAG) Ministry of Economy (MINEC) Ministry of Public Finances (MH) Vice Ministry of Transportation Ministry of Labor Ministry of Education Customs General Attorney's Office	Used oils 4182 Fuel oíl sludge 6910 Ship sludge 16 Contaminated water 461 Liquid chemical materials 331 Industrial sludge 221 Paint sludge 348 High viscosity paint sludge 58 Used tires 17035 Waste non contaminated plastic and rubber 2381 Contaminated soil Volume < 25 ton. 286	Sanitary landfills for solid wastes (6 mechanized, 4 manual). Sterilization of biological infectious wastes by autoclave and posterior final disposal in sanitary landfill cells, in two of the above Treatment of pharmaceuticals and final disposal in sanitary landfill. Co-processing of hazardous wastes such as used oils, hazardous chemicals, and obsolete pharma-ceuticals and used tires, in cement kiln.	WEEE El Salvador has not established specific regulation for the importation of Electri-cal and Electronic Equipment, neither for the management of WEEE generated by households, companies and institutions. It has a National Plan for the Management of WEEE with the following General Goal:: "To promote the participation of different civil society stakeholders in the System for the Integral Management of WEEE, motivating the reuse, the recovery of components and the use and generation of a

	Penal Code Special Bylaw on Integrated Solid Waste Management Municipal Ordinance Regulating San Salvador Municipal Solid Waste Municipal Ordinance Regulating Cleanliness of San Salvador City. **Multilateral Agreements:** Basel Convention Stockholm Convention Rotterdam Convention Vienna Convention on the Control of Ozone Depleting Substances and its Montreal Protocol	National Drug Directorate Technical Secretariat of the Presidency. Municipal Governments Council of Municipalities (COMURES), Board of Oversight of the Pharmaceutical Profession NGOs: - Salvadoran Ecological Union (UNES) - Table against Methalic Mining - SalvaNATURA **Academic Institutions:** University of El Salvador (UES) Central American Jose Simeon Cañas University (UCA) Don Bosco University Francisco Gavidia University	Contaminated soil Volume > 25 ton. Hydrocarbons more than 500ppm. 49,244 Tons, from 2010 to Abril 2014 of hazardous wastes. 1861 Contaminated textiles and plastics 1482 Obsolete pharmaceuticals 622 Industrial solid chemical materials 477 Iron Oxide substitute 9965 Steel dust 373 Combustions ashes 44 Other municipality reports the existence of: 63 containers of 19 lt. of Pay off 125 E. 2 barrels of 100lt. of Pay Off E.		value added chains".[28] El Salvador has a network of companies authorized for the collection, temporary storage of ULAB and WEEEE. Beside there are unauthorized managers who collect paper, carton, bottles, and ferrous and non ferrous materials for recycling. AUTOCONSA and TODO VERDE are authorized managers for the collection and temporary storage of WEEE and the second one also for ULAB.

[28] MARN El Salvador in Regional Central America and the Dominican Republic Workshop on the Strategy for ESM of WEEE and ULAB, February 18-20, 2014. San José, Costa Rica

		Dr. Jose Matías Delgado University Lutheran University Private Sector Organizations: - ANEP - Chamber of Commerce - Industrial Association Professional Organizations; -Association of Chemists and Pharmaceuticals (ASINQUI) -Medical Union Think Tanks: - FUSADES - FUNDE	70 Kilos of Surflan 75 herbicide 4 barrels of Cytolean 250 E insecticide 5 barrels of Sponto 900 cm emulsifier 148 lt. of Sinfluoran 48 herbicide 1124 lt. of Pay Off insecticide 360 lb. of Tacremento fertile 800 lb. of Tacreafol 20-20-20 foliar 250 kg. of Malateon insecticide 250 kg of Cytolean technical **Reported BIOLOGICAL INFECTIOUS WASTE**: Clinical wastes, out-come of patient care in health centres 2010: 335,107.55 Kg 2011: 326,988.42 Kg 2012: 336,528.79 Kg 2013: 350,910.17 Kg		

			2014: 214,470.49 Kg Obsolete drugs and pharmaceutical products: 2010: 15,613.08 Kg 2011: 5,112.26 Kg 2012: 2,562.25 Kg 2013: 0 Kg 2014: 0 Kg **ULAB** One municipality reports 140 ULAB annually (equivalent to 6 Tons/year), generating in the last five years = 30 Tons of ULAB which are sold to authorized companies. Health Centre reports ULAB: 2010: 23 2011: 121 2012: 6 2013: 78 2014: 42 **WEEE** End of life computers Municipality 105,282 pieces = 2,288 ton/year Health Centre reports 39,112 Kg auctioned for		

			2010-2013. Company reports an average collection of 20 tons per year, donates some good condition equipment and the rest is destined for exports for recycling. 479 tons of computers go to final disposal[27] One of the municipal-ities has a 250 m^2 general warehouse, located in a Municipal Market where there is a temporary storage of those equipment and appliances that the commune has substituted by new equipment until they are auctioned. According to the Department of Public Lighting of one muni-cipality, they generate on average monthly: 2004 light mercury 175 W, 1684 250 W sodium light bulb, 40 400W		

[27] United Nations Development Progam- PACE-Basel Convention. Natioal E-waste Assessment, El Salvador. February 2010

			metal halide light bulbs.		

Table 6: Assessment on the status of hazardous wastes and WEEE in Guatemala.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacidad	Comment
GUATEMALA	Constitution of the Republic of Guatemala, 1985. Law for the Protection and Improvement of the Environment 1986 Law Regulating Imports, Formulation, Storage, Transportation, Sale and Use of Pesticides, Decree 43-74. Law of Animal and Plant Health, Decree 36-98. Law of the Promotion of Environmental Education, Decree 74-96. Law of Agrochemical Products Decree 5-2010 Regional Agreement on the Transboundary	Ministry of Environment and Natural Resources (MARN) Ministry of Economy Ministry of Agriculture Ministry of Labor Ministry of Public Finances General Attorney's Office Customs Municipalities Private sector Associations: . COHEP -Chamber of Commerce -Industrial Association	DDT 15 *PCB 107,994 liters of contaminated oil, equivalent to 168 tons of oil. 273 tn of contaminated materials (carcasses and nucleus) 442.3 tn (contaminated materials and oils) **WEEE** 156,513.04 Ton in 2009-2014, without classification. Exports in 2012: approximately 980 tons. Existence of 13.6 million of mobile phones, of which 56% is out of use	**WEEE** There is a network of collecting points so that the population brings their WEEE and facilities for dismantling. Selmet: Buys WEEE and materials to other collectors and also receive WEEE from public institutions which carried out seizures; have facilities for their operations. **ULAB** ULAB Recycling plant Acumuladores IBERIA, the only one authorized for the recovery of lead and its processing in lead ingots, recipient of	Guatemala is formulating a Project for final disposal of POPs with GEF funding and UNIDO technical assistance..

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacidad	Comment
	Movements of Hazardous Wastes Bylaw for Evaluation, control and environmental monitoring Bylaw on discharges and reuse of residual waters and disposal of sludge (AG236-2006) Bylaw on the Managememt of Hospital Solid Waste Health Code (Decree 90-97) Municipal Code, Decree 12-2002 and its reforms. **Environmental Polícies** Polícy for the Environmentally Sound Management of chemical products and hazardous wastes. Framework Policy for Environmental	Universities - San Carlos - Landivar Guatemalan Cleaner Production Centre Technical Commission for hazardous products, substances and chemical wastes and other related (AG 388-2013) Municipalities	but kept at home. 8% of this was donated or given away. 6% thrown away with trash. **Estimates of WEEE GENERATION in 2006-2008 (New imports)** Mobiles and Accessories 11,092,868 Photocopiers 27,348 Computers and accessories 2,951,099 Office equipment 407,171 Printers and encoders 2,284,930 **ULAB** Imports: 23,660 tons 2009-2014 from El Salvador, Honduras Exports: 16,464 tons 2005-2014	two Green Lead International Awards, 2 National Cleaner Production Awards and 2 Central American Cleaner Production Awards. It is generating virtually zero solid waste (1.76%), with a maximum capacity of recycling about 15,000 tons of batteries per year. There are 3 authorized companies for temporary storage.	

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacidad	Comment
	Management, (AG 791-2003. National Policy for the Integrated Management of Solid Residues and Wastes (AG 111-2005). Polícy for Conservation, Protection and Improvement of the Environment and Natural Resources (AG 63-2007). National Policy for the Integrated Management of Solid Residues and Wastes (AG 111-200). National Policy on Environmental Education, which responds to the Law of Promotion of Environmental Awareness and the Law for Environmental Education, Decree 38-2010. National Policy on		for the following destination countries: El Salvador, South Korea, Costa Rica. Total of ULAB collected transported, stored and recycled during 2005-2014: 40,124 tons		

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacidad	Comment
	Climate Change, (AG. 329-2009). National Policy on Cleaner Production (AG 258-2010). **Multilateral Agreements:** Vienna Convention on the Control of Ozone Depleting Substances and its Montreal Protocol Basel Convention Rotterdam Convention Stockholm Convention				

Table 7: Assessment on the status of hazardous wastes and WEEE in the Dominican Republic.

Country	Legal Framework	Institutional Framework	Waste Flows Residuos Metric Tons	Installed Capacity	Comment
THE DOMINICAN REPUBLIC	Constitution of the Dominican Republic Environment and Natural Resources Law (64-00) Bylaw for Chemical Substances Draft Bylaw for Used Lead Acid Batteries (ULAB) **Polícies** Policy for the Management of Chemical Substances **Multilateral Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on the Control of Ozone	Ministry of Environment and Natural Resources / Dr. Bautista Rojas Gómez Ministry of Agriculture Ministry of Public Health (and Hospitals) Ministry of Economy Ministry of Education Ministry of Labor Customs Municipalities General Attorney's Office **Academia** UASD Alma Master esq. Correa Isidro, D.N. UNPHU Pedro Henríquez Ureña	There is no information on quantities of hazardous wastes and other wastes such as: -Drugs and obsolete pharmaceuticals, -WEEE, -Fluorescent lamps, -Biological Infectious Wastes, -Chemical wastes, -Used tires -POPs -Used oils. **ULAB** Exportation of ULAB 22,501.914 tons to mainland US mainland and Puerto Rico, South Korea and Haiti.	Alianza Incineradora Dominicana, S.A. (AIDSA) 41 companies for the management of oil wastes and 3 companies for management of fluorescent lamps. **WEEE** 46 companies for WEEE, 2 companies for management of plastics. **ULAB** 22 companies have environmental permit for the collection and management of ULAB. Verde Ecoreciclaje Industrial facility for ULAB recycling with Green Slag Technology and National Cleaner	

	Depleting Substances and its Montreal Protocol	National University. **NGOs** National Council of Labor Union (CNUS) National Cleaner Production Centre Private Sector Associations: -Chamber of Commerce -Industrial Association		Production Award, with a maximum capacity of recycling 15,000 tons of ULAB per year.	

Table 8: Assessment on the status of hazardous wastes and WEEE in Belize.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
BELIZE	Environmental Protection Decree 1992 Bylaw on Hazardous Wastes, 2009 **Multilateral Agreements** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on	Ministry of Natural Resources and the Environment Ministry of Agriculture and Fisheries Ministry of Health Environment Department Authority for Management of Solid Wastes	There is no data on hazardous wastes. **ULAB** Lead acid batteries are imported from the US. There is no information on ULAB.	Sanitary landfill Promotora Ambiental (PASA) Regional Sanitary Landfill, Mile 24 George Price Highway	There are no statistics on hazardous wastes Final disposal is done in two sanitary landfills. ULAB final disposal is done in sanitary landfills.

	the Control of Ozone Depleting Substances and its Montreal Protocol	Forestry Department			

Table 9: Assessment on the status of hazardous wastes and WEEE in Honduras.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
HONDURAS	General Environmental Law. Bylaw on Solid Wastes Bylaw of ESM of PCBs There is no legal or technical instrument for the management of non PCB hazardous waste. Law of Municipalities **Multilateral Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on	Secretariat for Energy, Natural Resources and Environment (SERNA) Direction of Environmental Management (DGA) Centre of Studies and Control of Contaminants (CESCCO) Ministry of Economy Ministry of Health Ministry of Labor **Academia:** Currently no academic institution participates on ESM o hazardous wastes and WEEE jointly with government	**WEEE:** 2012: 12,000 tons **ULAB: Generation** 2010: 1820 tons. 2011: 3000 tons. 2012: 9,000 tons. **ULAB Exports:** 2010: 1820 tons. 2011: 3000 tons. 2012: 500 tons. 2013: None 2014: 300 tons. LAB Imports: 3,500 Aprox. México/United States/Colombia Transformers contaminated with PCB 2011: 1540 tons	There are several companies managing different type of wastes. The company Honduras Environmental Services, previously to the entrance to its facilities they have a scanner to detect radioactive wastes.	SERNA is the main authority on environmental policy and monitors the compliance with regulations, as well as compliance of international agreements. Unofficial information suggests that there are exports of WEEE to United States as raw material. **ULAB:** ULAB are exported whole. It is required that they have the electrolite. There is no importation of ULAB. There is one ULAB

	the Control of Ozone Depleting Substances and its Montreal Protocol	institutions. **NGOs** National Cleaner Production Centre. It has projects for the management of some wastes.	**CRTs:** There are no statistics on this waste stream.		recycling facility which does not have ESM. It is difficult to obtain information from prívate companies. All quantities mentioned before only reflect transboundary movements authorized under the Basel Convention.

Table 10: Assessment on the status of hazardous wastes and WEEE in Costa Rica.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
COSTA RICA	Constitution of the Republic of Costa Rica. Organic Environmental Law. General Health Law. Law for the Integrated Management of Residues. Law 8839 designates as leading institution the Ministry of Health (MINSA). General Bylaw for the Declaration on Household Waste. General Bylaw for the La won Integrated Waste of Residues Bylaw on the Integrated Management of Electronic waste. General Bylaw for the	Ministry of Health has the leadership on the Integrated Management of Residues and coordinates the Committee for the Integrated Management of Electronic Residues a (CEGIRE) Ministry of Environment and Energy (MINAE) Ministry of Agriculture and Livestock (MAG). Ministry of Public Education (MEP) Ministry of Economy, Industry and Commerce (MEIC). Ministry of Labor Institute of Municipal Promotion and Advice	67,400 tons in total 32,000 tons of hazardous (flamables, toxic, bioinfectious) **ULAB** 612,000 units, 10,200 tons **WEEE** 3000 tons 2013: 250 tons of CRT were exported to the US (TVs and computer monitors) **Used tires** 22,000 tons In 2013-2014 imported 3,242 y 4,364 tons of LAB, from Guatemala, El Salvador, Nicaragua, Panama y Filipinas. In 2013 exported 25,137 ULAB for one time only to Venezuela. Since 2014 exports of	There is a residues recycling facility in the Hatillo distric, with capacity to process 6 tons of residues daily. **WEEE** Informal dismantling is a challenge with dumping sites and unfair competition. There are several authorized WEEE dismantling facilities (e.g. GEEP). **ULAB** Pb Metals ULAB Recycling facility in Cartago with Green Slag Technology with total capacity of recycling 10,200 metric tons, annually. Cement companies co-process used oil and used tires as alternate fuel.	By law generated residues are to be collected, separated, transported, cut, and7or mixed, and recovered by authorized managers. Some residues are exported, others co-processed como alternative fuel for cement kilns. Some WEEE are refurbished and the majority are dismantled and exported. Final disposal in authorized sanitary landfill. The legal framework bans the disposal of WEEE or its components in sanitary landfill 45 authorized managers with sanitary permit

	Classification of Hazardous Wastes General Bylaw for the Declaration Wastes of Special Management Bylaw for the Transportation of Hazardous Wastes. National Plan or Solid Wastes 2007-2022 and updated in 2014, which will enter into force in 2015. Executive Decree for the Management of Hazardous Residues **Policy:** Policy for the Integral Management of Residues. **Multilateral Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on	(IFAM) National Union of Local Governments (UNGL) **Academia** National Council of University Principals (CONARE) **NGOs** ACEPESA CEPRONA CEGESTI	ULAB are not permitted applying proximity principle of the Basel Convention.		and municipal licenses to implement one or more phases of their management. Since 2010 there is a ban on exportation of residues.

	the Control of Ozone Depleting Substances and its Montreal Protocol				

Table 11: Assessment on the status of hazardous wastes and WEEE in Nicaragua.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
NICARAGUA	Constitution of the Republic of Nicaragua. General Law for the Environment and Natural Resources Law of Amendment to the Environmental Law **Policies:** National Environmental Policy National Policy for the Environmentally Sound Management of Non Hazardous Residues National Policy for the Management of Hazardous Substances, Residues and Wastes	Ministry of Environment and Natural Resources (MARENA) Ministry of Health (MINSA) Agricultural, Livestock and Forestry Ministry (MAGFOR) Ministry of Labor Ministry of Economy General Attorney's Office **Academia** National Autonomous University of Nicaragua NGOs: National Cleaner	**Ordinary Waste** 1,277,500 tons organics 494,429 tons Organics 16,000 tons being composted paper and paperboard 46,998 tons 13,825 tons of paper and paperboard are exported for recycling and 4,061 for other processing. plastic 53,247 tons glass 16,924 tons 4,360 tons of glass is washed and then reused or exported.	Collection is mostly informal; there is no infrastructure and proper conditions for the management of hazardous compounds and WEEE. 23 Sanitary landfills with capacity of 500,000 tons There are controlled confinement facilities There is co-processing of non POPs wastes. There are no safety cells for disposal of hazardous wastes. **WEEE** Authorized and vehicle fleet equipped in	There is a government initiative for the implementation of the Project "Environmentally Sound Management of Electric Residues"

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
	National Policy on Cleaner Production **Regulations:** Technical Mandatory regulation for the Management, Treatment and Final Disposal of Non Hazardous Solid Wastes. **Multilateral Environmental Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Minamata Convention Vienna Convention on the Control of Ozone Depleting Substances and its Montreal Protocol	Production Centre	metals 11,783 tons 79,518 tons of metals are compacted and exported for smelting **Hazardous wastes** Used oils 585.43 tons 23,000 tons of used oils are co-processed in cement kilns 46.2 tons of used oil are aggregated to asphalt **WEEE** CRT 17,000 tons WEEE 200 tons for export 400 tons of LCD screens **ULAB** 13,000 units collected 9,084 ULAB are refurbished LAB imports 9,084 units from	accordance with adequate technical specifications for the collection and transportation of WEEE. 10 authorized facilities for temporary storage of WEEE 4 stations for the transfer of residues. 4 facilities for the dismantling, repair, refurbishment and assembly of personal computers and laptops, repairs of screens and computer parts. Workshops for the repair of air conditioned equipment. **ULAB** 6 authorized facilities for temporary storage.	

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
			India, Ghana, Korea de Sur, Costa Rica 1,596 transformers are refurbished		

Table 8: Assessment on the status of hazardous wastes and WEEE. Panama.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
PANAMA	Constitution of the Republic of Panama. **Multilateral Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on the Control of Ozone Depleting Substances and its Montreal Protocol	National Environmental Authority (ANAM) Ministry of Health (MINSA) which is the Basel Convention Competent Authority and is the leader on WEEE Ministry of Agriculture anmd Livestock (MAG) Ministry of Economy Ministry of Labor General Atorney's Office **Academia.** Autonomous National University of Panama	There is no baseline on hazardous wastes WEEE generation is 1,354,989 Kg	**ULAB** Ulab recycling Plant (PAMESTA) has an installed capacity for processing lead slag up to 8,000 metric tons per year and is currently operating at 30% capacity, processing 100% of lead slag generated in the country. It does not operate in accordance with Basel Technical Guidelines for ULAB. 35 workshops authorized to the reconstruction and maintenance of batteries. These micro companies have a social name for the carrying out of the processes of maintenance, repair, and reconstruction of lead acid batteries, using parts recovered from ULAB, like cases,	Requested information to the Ministry of Health was not received. The data included was provided by the Panamanian representative in two regional workshops, one organized under this project and another one organized under the synergies project.

				electrolyte, and even complete cells, they recycle small quantities of lead melting it and pouring it into molds.	

Table 9: Assessment on the status of hazardous wastes and WEEE. United Mexican States.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
UNITED STATES OF MEXICO	Constitution of the Republic of the United States of Mexico. General Law for the Preventions and Integral Management of Residues (LGPGIR)[1] Bylaw to the General Law for the Preventions and Integral Management of Residues General Law for the Ecological Equilibrium and the Protection of the Environment Federal Law of Rights	Secretariat for the Environment and Natural Resources (SEMARNAT) National Institute for the Ecology (INE) Environmental Enforcement Office (PROFEPA) Secretariat for the Economy Secretariat for Labor Issues Customs **Municipalities** **Academia**	It is estimated that 1,127.349 tons of hazardous waste are generated in Mexico 415 thousand used tires are generated annually. **ULAB** By 2007 6.5 millions of ULAB were generated.	**SANITARY LANDFILLS** Between 1995 and 2011 their number increased from 30 to 196, the capacity moving from a total storage of 5.95 million tons to 26.14 million tons, besides the country has now 20 landfilled for controlled soil. Capacity for authorized management of hazardous residues is of 14,5 million tons, annually. There are 3 authorized sites for final disposal of hazardous wastes in operation There is co-processing	There are in the country more tan 750 industrial facilities which produced mainly TVs, computing equipment and mobile phones.

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
	Regulations: Official Regulation NOM-161-SEMARNAT-2011, which sets the criteria to classify residues as special management, and that determines which ones are subject to a Management Plan. Regulation NOM-098-SEMARNAT-2002, Environmental Pro-tection-Incineration of residues, specifica-tions for the operation and contaminant emission limits. Regulation NOM-052 Hazardous Wastes: -Zinc/silver oxide batteries - CRTs (lead) -Switches (mercury) Regulation NOM-053-SEMARNAT-1993, Which sets the procedure to carry out an extraction test to	Autonomous National University of México (UNAM) **NGOs** Queretaro Network for Residues Management (Red Queretana de Manejo de Residuos A.C.) Institute for Nuevo Leon Environmental Protection-IPA (Instituto para la Protección Ambiental de Nuevo León, A.C.) IPEN in Mexico Private Sector Associations		of hazardous wastes in cement kilns. **WEEE AND CRT** The generation of electronic products is estimated in 345,324 tons for 2013 and 358,024 thousand tons by 2014[29] Technologies Displays Mexicana, S.A. de C.V. Authorized capacity: 108,000 tons Icon Recycling, S. de R.L. de C.V. Authorized capacity: 27,240 tons Baja Wastewater Solution, S. de R.L. de C.V. Authorized capacity 4,552 tons Industrias P. Kay de México, S.A. de C.V. Authorized capacity: 720 toneladas	

[29] INECC, 2014

Country	Legal Framework	Institutional Framework	Waste Flows Metric Tons	Installed Capacity	Comment
	determine the components which make a residue hazardous because of its toxicity to the environment. Regulation NOM-161-SEMARNAT-2011 On Management Plans for Special Management Residues **Polícies:** Proposed strategy and public policy for the integral management of used tires in the border area **Multilateral Agreements:** Basel Convention Rotterdam Convention Stockholm Convention Vienna Convention on the Control of Ozone Depleting Substances and its Montreal Protocol			**ULAB** ENERTEC/Johnson Controls has a ULAB recycling facility in García, Nuevo León, with a capacity of 252,000 metric tons per year. Corporación Pipsa, with a capacity of 104,760 metric tons annually. Mexico has authorized 21 facilities with a recycling capacity of 864,003 metric tons of ULAB, annually. 23 recycling plants have been authorized for other wastes, with a total capacity of 1 million tons, annually.	

7. IDENTIFIED CHALLENGES IN THE ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES INCLUDING WEEE

- To clearly identify stakeholders and engaged sectors in the ESM of hazardous wastes.

- To create, revise or update the legal frameworks in each country of the sub-region, as well as the implementation of the international agreements relative to the management of chemical substances, and hazardous wastes and residues and other wastes.

- To improve training in the implementation of updated regulations and tools for different sectors and stakeholders, on environmentally sound management in countries of the sub-region.

- To organize meetings with Competent and Designated Authorities before the Conference of the Parties to coordinate and define the position of each of the countries of the sub-region. BCRC-CAM could facilitate these meetings.

- To reach agreements for the implementation of ESM among government institution, private sector, academia and organized relevant civil society organizations, through official and permanent coordination mechanisms.

- To develop and implement a network of exchange of information among the countries, using information and communication technologies and to update them regularly, including authorized companies for the collection, temporary storage, transportation, recycling/treatment and final disposal of hazardous substances, residues and wastes, and other wastes. This system should include a list of substances which are controlled, restricted and/or banned in different countries and to add a section to report theft, illegal traffic of hazardous substances, residues and wastes and other wastes.

- To design by consensus from all countries the criteria on the required information, establishing the periodicity of the updates and the rules for the use of the information.

- That Competent and Designated Authorities delegate a person as a liaison with BCRC-CAM for the follow up, coordination and information Exchange on ESM of hazardous residues and wastes and other wastes, including WEEE.

- To develop and implement inter-sectoral strategies for awareness raising interventions through massive and selective media.

8. IDENTIFIED OPPORTUNITIES FOR THE IMPLEMENTATION OF THE ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WEEE

- To use the SICA platform to coordinate efforts among different academia organizations, private sector and ministerial councils of the sub-region.

- To make use and strengthen the leadership that BCRC-CAM has shown in experiences and relationships at the regional and global level.

- To harmonize standard models at the regional level according to the realities of each country.

- To make use, as a Central America, the Dominican Republic and Mexico sub-region, of available legislation to implement mechanisms which support the environmentally sound management of hazardous substances, wastes and other wastes, including WEEE.

- To make use of the installed capacity in the Central America, the Dominican Republic and Mexico sub-region for the effective implementation of a regional system for ESM of hazardous substances, residues and wastes and other wastes, including WEEE.

- To make use of the technical capacities demonstrated in all countries of the sub-region, in order to promote priority projects in each country.

- To compile and make use of all ESM relevant initiatives in the sub-region, like the proposed Central America and the Dominican Republic Strategy for ESM of WEEE and ULAB, where Mexico has been invited to join it.

Ministry of the Environment
Government of Japan

CRCB
CENTRO REGIONAL DEL CONVENIO DE BASILEA PARA CENTROAMÉRICA Y MÉXICO

CONVENIO DE BASILEA

25 años CCAD
COMISIÓN CENTROAMERICANA DE AMBIENTE Y DESARROLLO
Promoviendo la Integración Ambiental Regional

SWOT

Strengths

1.There are academic institutions, government organizations and NGOs intrested in supporting ESM of hazardous wastes and other wastes.

2. The region is integrated on environmental management by the Central American Commission of Environment and Development (CCAD), part of the System for the Integration of Central America (SICA) and BCRC-CAM has a regional role on ESM of hazardous waste and other wastes that includes Mexico as well.

3.Central America, the Dominican Republic and Mexico have national legislation and have ratified multilateral agreements on hazardous substances, residues and wastes and other wastes.

Opportunities

1. To clearly define stakeholders and engaged sectors to develop agreements for the implementation of ESM in the subregion.

2. To make use of CCAD and SICA to coordinate regional government efforts at the ministerial level.

3. To create, revise and update legal frameworks.

4. To capture international interest of bringing synergies on chcemical and hazardous wastes on the ground and having such a large set of countries commited to the ESM initiative.

5. To develop with BCRC-CAM an electronic system that allows the compiling and preriodic updating of information on ESM and related advances countries of the sub-region.

Weakneses

1. Limited enforcement of national laws and multilateral agreements.

2. There is no subregioonal information system on ESM -

3. There is no designated contact for officioal and to follow up ESM of hazardous wastes and other wastes.

4. The sub-region does not make use of the technical cpabilities that exist in each country, to improve the effectiveness of priotity initiatives.

5. There is no education and awareness raising program on ESM of hazardous substances, residues and wastes and other wastes at the regional level.

Threats

1. Changes in governments affects their will on supporting environmental issues

2. There are strong political and economic interests against compliance with environmental law.

3. There is no appropriate control in the exports and imports of hazardous substances, residues and wastes in the sub-region.

9. CONCLUSIONS

- Limitations have been found in the documentation of the information on the different phases of management of hazardous wastes and other wastes, within national and local authorities, Academia, managers of these compounds and other stakeholders which interact in their management. This reduces the efforts of systematization of the management of these compounds, and limits the possibility of guiding policies, strategies, and the setting of coordination mechanisms to control, monitor and set goals for prevention and reduction of priority wastes streams.
- Priority waste streams of hazardous wastes have not been identified, limiting the opportunities to focalize their management.
- The informal management of hazardous wastes and other wastes in each of the countries of the region develops in high risks conditions to human health and the environment.
- All countries of the region have developed legal frameworks, nonetheless their implementation is limited.
- The extended producer responsibility of the producer/importer/wholesaler and the shared and differentiated responsibility of authorities and managers, has not been implemented in the sub-region.
- The government institutions with responsibilities and specific mandates for the management administration and monitoring do not have required technical and financial resources.
- The implementation of multilateral agreements related to ESM of hazardous wastes and other wastes is limited.
- The proximity principle of the Basel Convention and the existing capacities for ESM of hazardous wastes and other wastes within the sub-region are not considered for the authorization of exports.
- Currently, there are limited financial resources for ESM of hazardous wastes and other wastes in the countries of the sub-region.

10. RECOMMENDATIONS

- To design and implement a platform for the documentation and information exchange within the Central America, the Dominican Republic and Mexico sub-region, for the different phases of the life cycle of chemical substances, hazardous wastes and other wastes, in order to improve the effectiveness of their management.
- To identify the priority waste streams to focalize the management of hazardous wastes and other wastes in the sub-region.

- To document the information for the systematization of the management and to guide policies, strategies, coordination mechanisms to control and monitor and to establish goals for prevention and reduction of identified priority waste streams of hazardous wastes and other wastes.
- To develop and implement in each country of the region strategies for the formalization and strengthening of the informal sector, base on the extended and shared and differentiated responsibility of the producer, importer, distributor, wholesaler, retailer, national and local authorities, managers and other relevant stakeholders, as well as to enforce the legal framework, to contribute to human health and environmental quality of the communities of the sub-region.
- To strengthen the institutions with specific mandates for the ESM of hazardous wastes and other wastes, adding proper training to their staff, according to their assigned responsibilities.
- To strengthen the articulated implementation of multilateral agreements in each of the countries of the sub-region.
- To take into account the proximity of available ESM installed capacities for refurbishment, recycling and treatment within the sub-region, when authorizing transboundary movements, thus improving their ESM.
- To strengthen the legal framework and their enforcement in each country of the sub-region.
- To include and effective apply the extended and share and differentiated responsibility in the legislation of the countries of the sub-region.
- To design and active a regional fund for ESM of hazardous wastes and other wastes, with contributions from multilateral and bilateral donors, governments, producers, managers and other relevant stakeholders, allowing a controlled, monitored and strengthened system.

11. PROPOSAL FOR A FRAMEWORK FOR THE ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WEEE FOR CENTRAL AMERICA, THE DOMINICAN REPUBLIC AND MEXICO

The following elements for a framework for the ESM of hazardous wastes and other wastes were identified during the 2nd regional workshop held in Mexico.

- There is a need for the development of a sub-regional policy on environmentally sound management that addresses the lifecycle of waste and hazardous waste, incorporating all the elements and objectives established in the international conventions ratified by each of the countries of the region and therefore are part of the regulatory framework. The policy will guide the development of the different management instruments, review and update of the sub-regional legal framework.

- There is also the need for an strategy and action plan for promoting ESM of hazardous wastes and other wastes, including WEEE.

- The participation and commitment of all the involved actors in every management phase, including the established coordination and working mechanism.

- The proposal of the Regional strategy for ESM of WEEE and ULAB, can be used as a reference for the development of a Regional strategy for ESM of hazardous substances, wastes and other wastes.

- The design of an integrated system base on the ESM Sub-regional policy, targeting the prevention and/or reduction of hazardous wastes and other wastes at the source, the implementation of sustainable production and consumption strategies and extended and shared and differentiated responsibilities by producers, importers, Distributors, retailers, consumers, central and local authorities, managers, academia, and NGOs (involved). Implementing ESM through the articulation of different management instruments (regulations, strategies, plans, programmes, guidelines, standards, protocols, among others).

12. A PROJECT PROFILE FOR A 2015-2020 IMPLEMENTATION OF ESM OF CHEMICAL SUBSTANCES, HAZARDOUS WASTES AND OTHER WASTES

A very valuable profile for a 2015-2020 Implementation of Environmentally Sound Management of Chemical Substances, Hazardous Wastes and Other Wastes in Central America, the Dominican Republic and Mexico sub-region was formulated by BCRC-CAM, based on a draft prepared at the Mexico December 2014 regional workshop.

PROFILE 2015-2020 FOR THE FORMULATION AND IMPLEMENTATION OF ESM OF CHEMICAL SUBSTANCES, AND HAZARDOUS WASTES AND OTHER WASTES (CHWOW) IN CENTRAL AMERICA, THE DOMINICAN REPUBIC AND MEXICO

STRENGTHENING ESM OF CHWOW IN CENTRAL AMERICA, THE DOMINICAN REPUBLIC & MEXICO												
Activity	**Tasks**	**Expected Outcome**	**Indicator**	**Financing**	**Source of Funding**	**Reponsible**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Formulation of Sub-regional ESM Policy	National Activities (5 Sectoral Roundtables+5 Visits to Communities+2 National Workshops) times 9 countries and 2 Regional Workshops, for their Review y Updating of the Proposal for a Regional Policy (2006)	Regional ESM Policy formulated	Document containing the Regional ESM Policy	$100,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x					
Formulation of Regional Strategy and Action Plan on ESM	National Activities (5 Sectoral Roundtables+5 Visits to Communities+2 National Workshops) times 9 countries and 2 Regional Workshops, for the Review and Updating of drafts of a Regional ESM Strategy and Action Plan	Regional ESM Strategy and Action Plan formulated	Document containing the Regional ESM Strategy and Action Plan	$100,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x					
	Design of regional control and monitoring mechanisms for the implementation of ESM of Chemicals and Hazardous Wastes and Other Wastes (CHWOW)	Regional control and monitoring mechanisms designed	Document containing regional control and monitoring mechanisms for the implementation of CHWOW	$100,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x					

STRENGTHENING ESM OF CHWOW IN CENTRAL AMERICA, THE DOMINICAN REPUBLIC & MEXICO												
Activity	Tasks	Expected Outcome	Indicator	Financing	Source of Funding	Reponsible	2015	2016	2017	2018	2019	2020
	Design of a monitoring module for the implementation of Chemical Conventions for ESM of CHWOW	Module on monitoring of the implementation of the Chemicals Conventions designed	Documento containing the design of the moniitoring moduyle for the implementation of the Chemicals Conventions for ESM of CHWOW	$50,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x					
	Formulation of data collection system and updating of data on imports and exports among countries of the sub-region of CHWOW. Design of a sub-regional regional exchange exchange mechanism for hazardous residues and wastes and other wastes	Quantity and type of CHWOW imported and exported among countries of the sub-region documented. Sub-regional exchange system, with managing companies authorized and/or certified designed.	Registry of quantities and types of CHWOW imported and exported among the countries of the sub-region. Document containing the design of the Regional Exchange System for CHWOW formulated.	$200,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x					

STRENGTHENING ESM OF CHWOW IN CENTRAL AMERICA, THE DOMINICAN REPUBLIC & MEXICO												
Activity	Tasks	Expected Outcome	Indicator	Financing	Source of Funding	Reponsible	2015	2016	2017	2018	2019	2020
	Establishment of South-South Cooperation among the countries of the region	Number of South-South Coopeeratio n Agreements established	Documents containing Soouth Cooperation Agreements among countries of the sub-region	$100,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COM ISCA/SISCA/CAC/ BCRC-CAM		x				
	Development of regional training on ESM of CHWOW with a life-cycle approach for different stakeholders and engaged actors	Sectors and engaged stakeholders engaged on ESM of CHWOW trained	Number of Workshops and trained sectors and stakeholders from the sub-region trained on ESM of CHWOW	$125,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COM ISCA/SISCA/CAC/ BCRC-CAM	x	x	x	x	x	x
	Design of awareness raising and promotional material on ESM of CHWOW with life-cycle approach	Awareness raising and promotional material on ESM of CHOW design and socialized	Number of awareness raising and promotional material (bulletins, tryptics, manuals, messages in social networks and the Internet, among others) on ESM of CHWOW	$75,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COM ISCA/SISCA/CAC/ BCRC-CAM		x	x	x	x	x

PROFILE 2015-2020 FOR THE FORMULATION AND IMPLEMENTATION OF ESM OF CHEMICAL SUBSTANCES, AND HAZARDOUS WASTES AND OTHER WASTES (CHWOW) IN CENTRAL AMERICA, THE DOMINICAN REPUBIC AND MEXICO

STRENGTHENING ESM OF CHWOW IN CENTRAL AMERICA, THE DOMINICAN REPUBLIC & MEXICO												
Activity	**Tasks**	**Expected Outcome**	**Indicator**	**Financing**	**Source of Funding**	**Reponsible**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Review and updating of Regional Central American Agreement on Hazardous Wastes	3 Regional Workshops for reviewing and updating Regional Agreement on Hazardous Wastes	Regional Agreement on Hazardous Wastes revised and updated	Document containing the proposed new Regional Agreement. Report from Regional Workshops	$100,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM	x	x				
Implementation of Regional Strategy on ESM of WEEE and ULAB	Strategic Plan Approved Regional and National Capacity Building Baseline on ESM of WEEE and ULAB developed National Policies approved Plans for ESM of WEEE and ULAB formulated Financing for ESM of historical waste obtained Pilot Plan on ESM of WEEE and ULAB finalized ESM of WEEE and ULAB, including final disposal, financed Control and Monitoring for the long term implemented	Regional Strategy and Action Plan for ESM of WEEE and ULAB implemented	Advance reports on implementation	$2000,000	UNEP-Ministerial Forum for Latin America and the Caribbean/ UNEP CBERSAICM/ GEF-6 / International Expert Group, Japan, EU a and others	SICA/CCAD/COMISCA/SISCA/CAC/ BCRC-CAM/NATIONAL AUTHORITIES	x	x	x	x	x	x
TOTAL				**$2950,000**								

ANNEXES

ANNEX I

Report on Study Tour to BCRC-China

ANNEX I

Study Tour to Zhejiang University & BCRC-China

Mr Miguel Araujo, Director, BCRC-CAM and Mr Luis Marroquin, Plant Manager, Acumuladores Iberia ULAB Recycling Plant

Zhejiang University & BCRC-China

22 July, 2014-30th, 30, July 2014

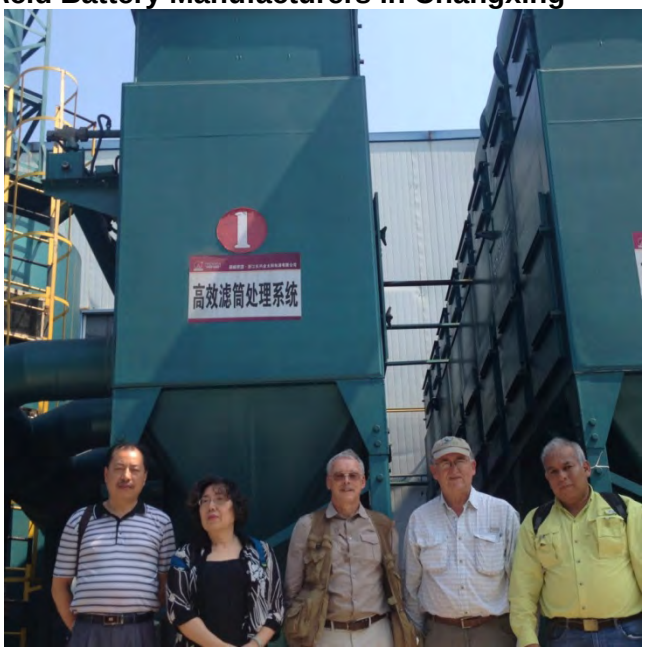
The visit was extended to nive days, because co-financing was obtained from Dr. Yeo Lin, Director, Industrial Development Research Center, Zhejiang University, Coordinator EU-China Heavy Metal Project on Lead Acid Battery including collection, transportation and recycling.

Zhejiang University

Day 21th-22th July, 2014

Participants: Dr Lin, Yeo,
Brian Wilson, Program Manager, International Lead Manager Center and Adviser Blacksmith Institute
Mr. Miguel Araujo
Mr Luis Marroquin

1) Visit to two Lead Acid Battery Manufacturers in Changxing



Visiting one Lead Acid Battery Manufacturing Facility in Chanxing with Prof Lin, Yeo and Brian Wilson

Visiting a second Lead Acid Battery Manufacturing in the Changxing with Prof. Lin,Yeo and Brian Wilson

2) Blacksmith Institute meeting

Day: 24th July, 2014

Participants: Dr Sun Xuebing, Director, Blacksmith Institute

Mrs. Wang Leyan, Program Coordinator, Blacksmith Institute
Mr. Miguel Araujo
Mr Luis Marroquin
Ms. Brenda Lopez, PhD Candidate, Tsinghua University

Issues treated during this meeting were:

- Introduction of Blacksmith Institute and its current projects in China and over the world. The Blacksmith Institute works with remediation on-site, it has an extended portfolio to 17 countries, principally working with heavy metals and carcinogens, focus in the community health and also in technology trainings. It has 14 members among engineers and social scientists, and have been working in 17 projects related to heavy metals and soil remediation. Currently the institute is part of the project EU-China for ULAB together with Zhejiang University.
- Information related to ULAB management
    - Related to the ULAB project that is now in phase one, they told about the construction of three national pilot plants, installed with Italian technologies and the capacity is 100.000/year, they are located in Shanxi, Beijing and Shanghai.
    - Currently informal sector bought a ton of ULAB in 9000 rmb and companies in 4000-5000 rmb
    - Korea pays a good price to Central America
- Proposals related to ULAB management
    - Importance of Policy framework improvement in order to meet capacity in ULAB plants
    - Incentives to informal sector to go formal sector
- Questions related to ULAB management

- Where are informal sector?
- How is the relationship between manufacturers and collectors?

- Impression about GEF project
  - Maybe could be some difficulties at the moment to apply for GEF funding, due to China takes a big percentage in the GEF general funding. The Chinese government has the major part of this funding, and it is managed through the National Execution Development. It is not easy to get funds for NGOs.
- Opportunities for cooperation
  - Connection with Brian Wilson
  - Connection with Zhejiang University

3) BCRC China first meeting

Topics covered:

- History of the relationship between two centers
  - Relationship since Barcelona' 2011
- Opportunities for cooperation
  - Both are leading ULAB management
  - Contact MEP in order to include China as party which promotes Global initiative
  - Capacity to spread information related to good practices
  - CRT Protocols developed jointly with BCRC-CAM and Acumuladores Iberia
  - To co-lead ULAB TG and Manual updating with BCRC-CAM under the formal leadership of Guatemala & China.
  - Opportunity to apply Cartagena's Declaration

4) Visit to CRT treatment plant, Tianjin
Day 25th July

Participants:

Yi Jiaji General Manager Professor, Tianjin Loyalti Glass Material Co. Ltd
Zhendong Liu Deputy General Manager, Tianjin Loyalty Glass Material Co. Ltd
Mr. Miguel Araujo
Mr Luis Marroquin
Dr. Shi Xiong, BCRC-China
Ms. Brenda Lopez

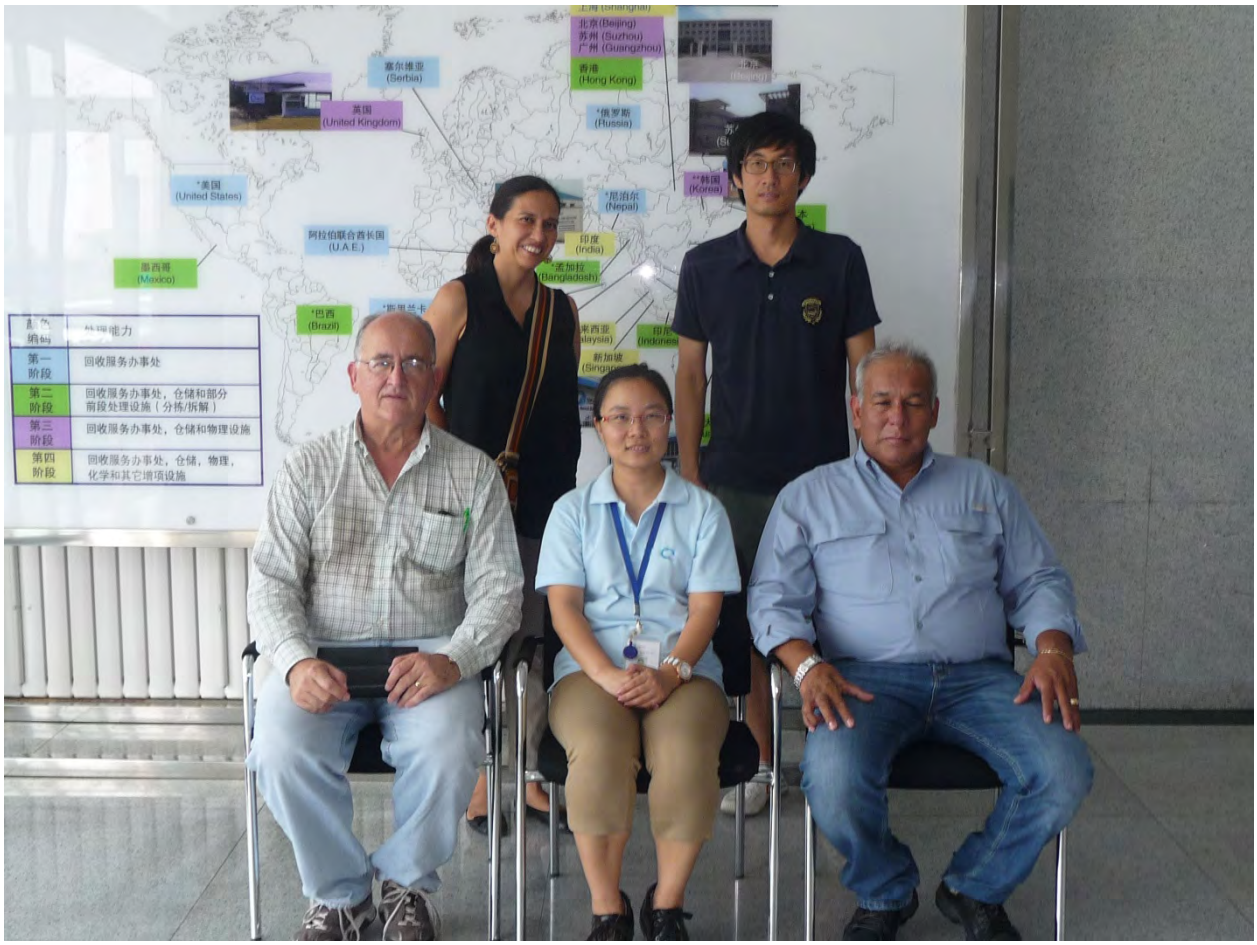
Important point: they are developing CRT treatment together with Tsinghua University, the plant director has worked with Dr Xie Fangfang and Dr Yuan Wenyi.

5) Visit to TES- AMM
Day 28th July

Participants:

Vicky Zhou Vice General Manager, TES-AMM Beijing
Mr. Miguel Araujo
Mr Luis Marroquin
Dr. Shi Xiong

Ms. Brenda Lopez



Important point: Observe the process of CRT separation

6) Visit to China Non-Ferrous Industrial Association, CNIA

Day 28th July

Participants:

Mr. Bian Gang, CNIA
Msr. Liu Rui, CNIA
Mr. Miguel Araujo
Mr Luis Marroquin
Ms. Brenda Lopez

- Opportunities for cooperation
    - Interested in to do a Workshop to compare technologies and policies in China and Central- America
    - Companies contact
    - Government contact

7) Visit to UNIDO

Day 30th July

Participants:

Liang Dan. Senior Technical Advisor on Investment And Technology Promotion, UNIDO
Mr. Miguel Araujo
Mr Luis Marroquin
Mrs. Nana Zhao, Program Officer, BCRC China
Ms. Brenda Lopez

Important point: the possibility to apply to 50.000 USD funds to finance ULAB project proposal development between China-Central America.

- About the unit
    - In this moment UNIDO is working with POPs in China, the unit is focus in Investment and Technology Promotion.
    - In China, the unit has a good relationship with the Center of Cleaner Production and could collaborate with the connection with companies and institutes.
    - The unit has in this moment its interest in the construction of Green Industrial Zones, at the moment it is in the development of guidelines where is included the issue of cleaner production but does not include hazardous waste. The guidelines will be promoted in a round table in Urumuqi and also in the South-South Cooperation Conference in New York.
    - In the South-South Cooperation, China realized an inversion of one million dollars for Latin America projects.
- Opportunities for cooperation
    - The unit is Interested to know the process in Central America

- In the case to apply to a GEF project, it is possible to include the South-South cooperation.
- The unit highlighted the importance to know the advantages and disadvantages of the ULAB technologies in China and Central America.

ANNEX II
CRT Protocols

ACUMULADORES IBERIA

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Presentation to the International Expert Group on ESM of the Basel Convention
"Projecting itself beyond its boundaries…"

Luís Guillermo Marroquín

Konstanz, Germany

January, 22, 2015

Recovery of CRT's components

ACUMULADORES IBERIA

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PLANT VISIT TO DOE RUN, USA
DECEMBER, 3, 2013

ACUMULADORES IBERIA

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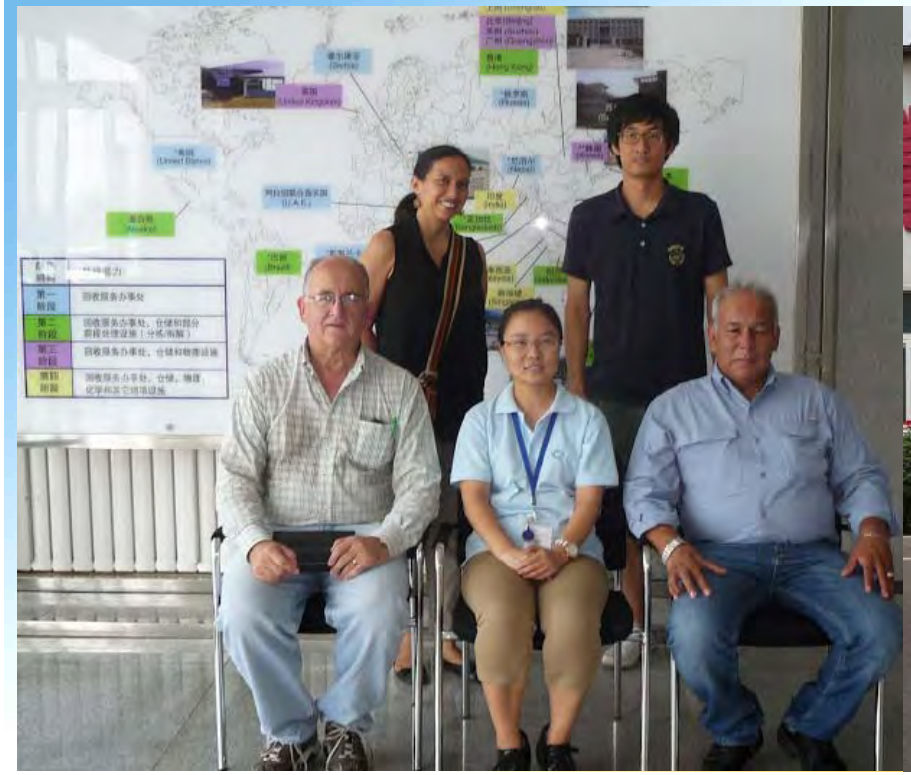
STUDY TOUR
CHINA JULY 21, 2014



ACUMULADORES IBERIA

1961-2011 50 AÑOS

STUDY TOUR
CHINA JULY 21, 2014

JUSTIFICATION

The project of recuperation of CRT components is supported by Acumuladores Iberia S.A. with the purpose of providing a significant contribution for the Central American region and to Parties of the Basel Convention, towards ESM of its toxic and contaminanting components, which cause severa health and environmental impacts.

GOALS OF THE PROJECT

The main goals of this project are to establish an ESM of CRT components and to find forms of valorizing these wastes and/or to fin ways of reinserting them into productive processes.

FOCUS OF THIS PROJECT

The Most effective methods for the economic, social and environmentally sound management of CRT'S, from its dissasembly until the commercialization of the obtained components. It is aimed that CRT's from all of Central America could be processed at the Acumuladores Iberia S.A. ULAB Recycling Plant in Guatemala City.

EXPECTED OUTCOMES OF THE PROJECT

To be able to use as raw material in other productive processes the components obtained out of the dissasembly of CRT's, generating value added, integrating them in the process of the ULAB recycling plant or finding a destination that is economically viable, withou impacting health or the environment.

To increase the image of the company with this project which seeks environmental sustainability, transforming a waste into a product or a raw material.

THEORETICAL FRAMEWORK

CRT's components

Vacuum glass tubes, armed with an electron gun, which emits an electrons current guided by an electrifield into a screen covered by small fluorescent elements.

This coverage included phosporous (P) and lead (Pb). Between the electron gun and the screen, there is a deflecting system constituted by coils located in the exterior of the tube, to deviate the electronic bean horizontally and vertically.

RECOVERY TECNOLOGY

CRT's have a glass funnel which contains heavy metals like Barium, Strontium and Lead Oxide.

Thus, CRT's are composed of:

a) A screen glass (Composed of Barium and Strontiumncio)

b) A funnels glass or bell (with high content of Lead Oxide)

Mechanical and thermic methods are used for the separation and recovery of these glasses, combined with chemical methods for the recovery of metal dust.

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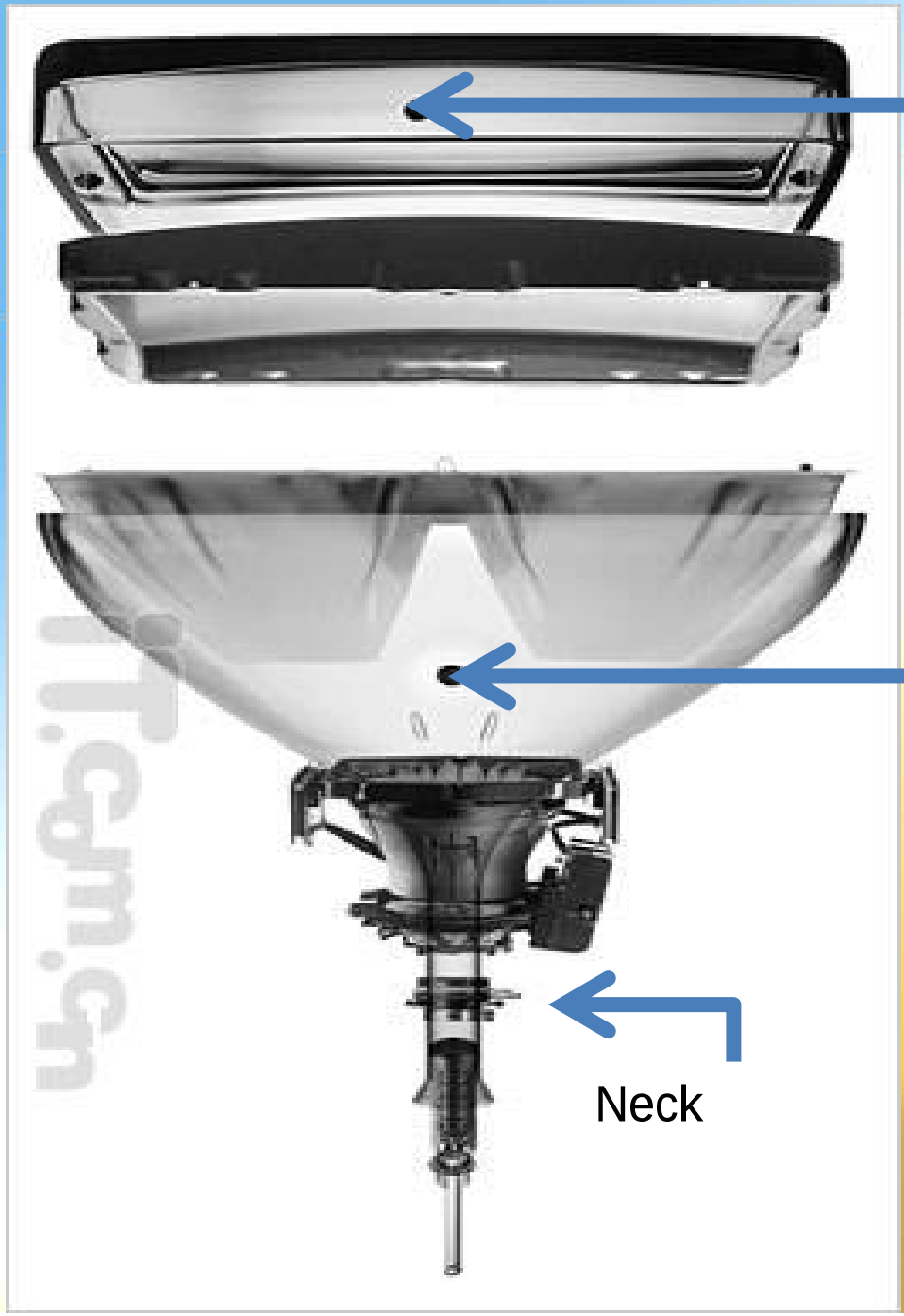

RECOVERY TECHNOLOGY

TV's and monitors have an specific treatment:

Dissasembly: Separation of plastic casings and selection according to their composition and quality.

Shredding

Perforation of the funnel glass to eliminate the interior vacuum

Separation of the screen glass from the funnel glass

Vacuum of the phosporous dust

Shredding of electrical components

RECOVERY TECHNOLOGY

Each component has its specific process of material recovery and treatment that allows its recuperation and return to the productive cycle. The recuperated components are classified in two fractions:

a) The valuable wastes, which are used as raw materials of other industries;

b) The non valuable wastes, which will require an ESM and safe disposal.

RECOVERY TECHNOLOGY

CRT's components:

- Screeen glass (TVs, monitors, video communicators) → 11%
- ABS Plastic → 0.3%
- Plastics PS → 0.17%
- Iron → 28%
- Electronic circuit boards → 3%
- Copper and brass
- Aluminum → 2%
- Leaded glass → 9%
- Fine materials→ 8%
- Cables → 2%
- Stainless steel → 0.2%

RECOVERY TECHNOLOGY

CRT's components

- PCB capacitors
- Mix materials → 10%
- Plastics residues → 8%
- Screen phosporous → 0.01%

RECOVERY TECHNOLOGY

Proposed machinery for material recovery:

1) Glass cutter, can be with done with a diamond cutter or with a heat band, including a vacuum.
2) Glass shredder (until 0.5-2.mm)

3) Metal separator by induced currents

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RECUPERATION TECHNOLOGY

RECUPERATION TECHNOLOGY

Steps in the dissasembly process

1) Cutting of the funnel glass through a diamond cutter or an electric resistance, which will separate the from glass with out lead and the funnel glass

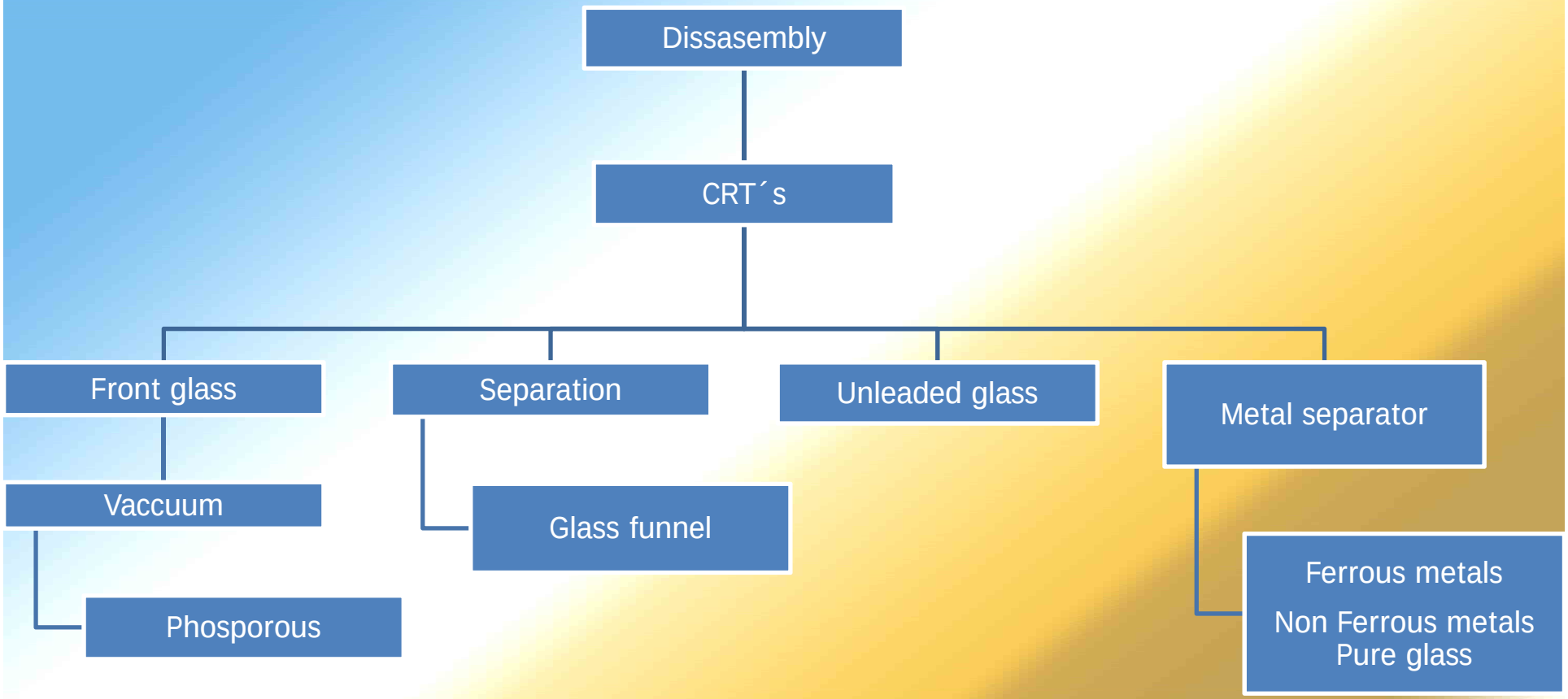
2) The funnel glass is stored separately.

3) The frontal glass is vacuumed to extract the phosforous and because of its lead content it is sent to the proces for the recovery of lead.

4) The unleaded glass is shredded until 5mm and it is sent to the separator of metals (which functions with 5mm particles), where copper, aluminum, iron, steel and pure glass are obtained.

RECUPERATION TECHNOLOGY

Diagram of the process



RECUPERATION TECHNOLOGY

APPLICATIONS OF THE MATERIALS OBTAINED THROUGH THE PROCESS

Funnel Glass and Front Glass

The funnel glass needs to be treated previously to eliminate the lead, by using the smelting process of the ULAB recycling plant, to easily recuperate the lead. The separated glass is sent to diffferent processes, and then to its commercialization. (This needs to be further researched)

The front glass is sent directly to one of the processe for its commercialization as this glass does not contain lead.

The recuperated lead could be used in the ULAB Recycling Plant of Acumuladores Iberia, S.A. for its commercialization.

RECUPERATION TECHNOLOGY

Aplications: industrial, which are being studied, based on the feasibility and market demand in Guatemala.

Among them theye are:
Front of building (tiles).
Paint additives
Additives for asphalts and pavements, by giving them characteristics of fluidity, refraction, etc
Artistic ceramic
Water filters

RECUPERATION TECHNOLOGY

Iron

Aplications: Heavy metal, it does not have many applications, it can be used for its magnetic potential. It is used for iron and steel processes, by using this element as a matrix to host other alloids.

RECUPERATION TECHNOLOGY

Copper, Brass and Aluminum

Aplications: The copper, brass and aluminum obtained from CRT's have different applications within industry, as they can be recycled almost an unlimited number of times without loosing their elemental properties.

For the obtention of these valuable materials (through clasification, smelting, etc.) there is need to utilize only 25% of the needed energy for primary extraction, thus being a very profitable process wth lower carbon footprint.

RECUPERATION TECHNOLOGY

Plastics

Aplications: for the manufacturing of plastic items of lower quality (tubes, hoses, etc.) it is intended to use the market that currently Acumuladores Iberia has for the plastic from the battery cases in the recycling of ULAB.

RECUPERATION TECHNOLOGY

Phosforous

Possible Aplications: agroindustry, manufacturing of matches and tires.

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BENEFITS OF THE CRT RECUPERATION PROCESS IN GUATEMALA

Enviromental	Country level	The demand for the extraction of metals will be reduced, due to the recuperations of residues obtained from the CRT component recuperation process during the life of the project.
	Regional	Hazardous waste will be managed in an environmentally sound and safe manner, and many of them will be used as raw materials of other indurtsial processes iand managed n an environmentally responsible manner.
Organizational	Firm	1. This project will strengthen the image of the company as a firm committed with the environment, at the national, regional and global level. 2. The firm can be projected as a reference for technical support.
	Colaborators	Participants in this project will acquire a technical growth supported by international exchanges.
Social	CSR	1. Processing of hazardous wastes which can damage health and the environment. 2. Generation of new employment to b used in the new line of processing.
		There may be financing from international organizations and donors (e.g.

OPORTUNIDADES PARA ACUMULADORES IBERIA

Organization	Collaborators	Acumuladores Iberia will generate the technical knowledge for the collaborators, in order to manage the CRT components properly. Needs of the project should be covered without increasing too much the payroll, due to the relative short term of the operation.
	Mission and Vision	Be able to guide the goals of the project with the mission and vission of the firm, applying Cleaner Production and ESM
Market	Recovered components	Market research for the different components. The correct management of the different recuperated components is essential to achieve a green chain. Proper measures for storage and distribution should be followed..

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CONCLUSIONS OF THE CRT COMPONENT RECUPERATION PROJECT IN GUATEMALA

According to our research, key elements have been identified for the recuperation, which need to be evaluated economically to explore their feasibility.

We also have found many areas that need further research, which make very appropriate to request the support of the International Expert Group on ESM and its network of international experts to complement the research done so far.

Additionally, the following factors should be considered:

1)The precise identification of the suitable required equipment, with careful advice from specialized experts.

2) Because this is a relative short term project, there is the need to identify other additional uses that may have a demand, and thus a possible income generation, in order to recuperate the investment in the research of this project.

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CONCLUSIONS OF THE CRT COMPONENT RECUPERATION PROJECT IN GUATEMALA

The physical installationsof the ULAB Recycling Plant of Acumuladores Iberia shoud be readecuated for the preparation and installation of the new equipment. This could require a reacomodation of existing equipment to make for needed space to the new process.

For the estimation of the return to the investment it should be considered that some CRTs may have a different composition.

It is necessary to consider a final disposal of remained material in an environmentally sound manner.

References

Izard, M. 2012. Estudio de Viabilidad de una planta de reciclado de componentes eléctricos y electrónicos. Universidad Pontificia Comillas. Madrid. 148pp.

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Fundación Ecotic. 2014. Gestión de RAEE: Tecnologías de reciclaje. Versión online: http://www.ecotic.es/es/tecnologias-de-reciclaje Con visita: 15/10/2014

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ACUMULADORES IBERIA, S.A.
PBX (502) 2429-7373
www.acumuladoresiberia.com

luismarroquin@acumuladoresiberia.com

ANNEX III

INSTRUMENT FOR GATHERING OF INFORMATION ON ESM OF HAZARDOUS WASTES INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE), IN CENTRAL AMERICA THE DOMINICAN REPUBLIC AND MEXICO

ANNEX III

INSTRUMENT FOR GATHERING OF INFORMATION ON ESM OF HAZARDOUS WASTES INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE), IN CENTRAL AMERICA THE DOMINICAN REPUBLIC AND MEXICO

FLOR DE MARIA PERLA DE ALFARO

PROJECT COORDINATOR

WILFREDO EVENOR VELÀSQUEZ MEJÌA

TECHNICAL ASSISTANT

INSTRUMENT FOR GATHERING OF INFORMATION ON ESM OF HAZARDOUS WASTES INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE), IN CENTRAL AMERICA THE DOMINICAN REPUBLIC AND MEXICO

GOAL: To collect information related to current ESM of hazardous wastes and other wastes, including WEEE, through their life cycle in CCAD countries and to contribute to improve ESM.

Section I

Instructions for filling the matrix: According to the mandate and responsibilities of each institution, please facilitate the requested information in the corresponding boxes.

Matrix A.

PROCESS OF GENERATION OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WEEE →					
STAKEHOLDERS PARTICIPATING IN ESM OF HAZARDOUS WASTES AND OTHER WASTES	**GENERATION** Type of waste and/or its composition	**SEPARATION & VALORIZATION** Type of waste being separated for its valorization	**COLLECTION TRANSPORTATION & STORAGE** Type of collection, transportation and storage	**REFURBISHMENT, DISMANTLING AND RECYCLING** Type of refurbishment, dismantling and recycling	**TYPE OF WASTE AND OF FINAL DISPOSAL** Type of waste and of final disposal final
GOVERNMENT INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					

PRIVATE INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					
ACADEMIC INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					
NGOs Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					
Mechanisms for collection of information, consultation, coordination, cooperation networks and other relevant issues related to ESM of hazardous wastes and other wastes including WEEE.					

Section II

Instructions for filling the matrix: Please include the names of all existing normative instruments (with electronic copy of the document) for example: Laws, Bylaws, procedures, permits, municipal ordinances, directives, international agreements in force related to ESM implementation of hazardous wastes and other wastes, including WEEE, through their life cycle.

MatrixB

EXISTING REGULATORY FRAMEWORK FOR ENVIRONMENTALLY SOUND MANAGEMENT (ESM) IN THEIR COUNTRY ON HAZARDOUS WASTES AND OTHER WASTES, INCLUDIND WEEE					
STAKEHOLDERS PARTICIPATING IN ESM OF HAZARDOUS WASTES AND OTHER WASTES	**GENERATION** Type of waste and/or its composition	**SEPARATION & VALORIZATION** Type of waste being separated for its valorization	**COLLECTION TRANSPORTATION & STORAGE** Type of collection, transportation and storage	**REFURBISHMENT, DISMANTLING AND RECYCLING** Type of refurbishment, dismantling and recycling	**TYPE OF WASTE AND OF FINAL DISPOSAL** Type of waste and of final disposal final
GOVERNMENT INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					
PRIVATE INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					

ACADEMIC INSTITUTIONS Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					
NGOs Name/Institution/administrative unit/responsible: Location: Function: Contact details: Tel, fax, email, Skype.					

Section III

Instructions for filling the matrix: Please indicate the quantities generated in tons/year or their equivalent, according to the type of waste, during the last four years (2010-2014), including the imports and exports, origin and destination.

Matrix C

QUANTIFICATION OF HAZARDOUS WASTES AND OTHER WASTES					
Data of Generation of Hazardous Wastes and Other Wastes	**GENERATION** Quantity in tons/year of wastes and their composition	**SEPARATION & VALORIZATION** Quantity in tons/year of wastes which is separated for its valorization	**COLLECTION TRANSPORTATION & STORAGE** Quantity in tons/year of wastes for its collection transportation and storage	**REFURBISHMENT, DISMANTLING AND RECYCLING** Quantity in tons/year of wastes which are refurbished, dismantled and recycled	**TYPE OF WASTE AND OF FINAL DISPOSAL** Quantity in tons/year of wastes destined for final disposal

Matrix D

Instructions for filling the matrix: Please describe the technical description of existing facilities for each waste stream in each of its life cycle phases, in tons/year or its equivalent.

INSTALLED CAPACITY (INFRASTRUCTURE) FOR ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES					
Environmentally Sound Management of Hazardous Wastes and Other Wastes	**GENERATION** Quantity in tons/year of wastes and their composition	**SEPARATION FOR VALORIZATION** Quantity in tons/year and type of waste which is separated for its valorization	**COLLECTION TRANSPORT & STORAGE** Quantity of tons/year and type of waste for its collection, transportation and storage	**REFURBISHMENT, DISMANTLING AND RECYCLING** Quantity in tons/year and type of waste which are refurbished, dismantled and recycled	**TYPE OF WASTE AND OF FINAL DISPOSAL** Quantity in tons/year of wastes destined to final disposal
Data of Hazardous Wastes and Other Wastes					
Technical description of the existing installed capacity (infrastructure) to develop activities during ESM through its life cycle of hazardous					

wastes and other wastes					

Matrix E

Instructions for filling the matrix: Please provide quantities of WEEE in tons/year or their equivalent, during the last four years (2010-2014).

QUANTIFICATION OF ENVIRONMENTALLY SOUND MANAGEMENT OF WEEE							
ESM of Waste Electrical and Electronic Equipment (WEEE)	**GENERAtION** Units, Tons/year & type of waste	**IMPORTATION** Tons/year, country origin and type of waste	**EXPORTACION** Tons/year, country of destination, type of waste	**REFURBISHMENT, & DISMANTLING** Tons/year Type of waste	**COLLECTION, TRANSPORTATION & STORAGE** Tons/year, type of waste	**TREATMENT** Tons/year, typo of waste	**TYPE OF WASTE & FORM OF FINAL DISPOSAL** Tons/year, typo of waste.
Data on Environmentally Sound Management (ESM) of WEEE							
Cathode Ray Tubescatódicos (CRT)							

Matrix F

Instructions for filling the matrix: Please provide the quantities of generated, imported and exported Used Lead Acid Batteries in Tons/year during the last four years (2010 a 2014), including origin and destination.

QUANTIFICATION OF ENVIRONMENTALLY SOUND MANAGEMENT OF USED LEAD ACID BATTERIES (ULAB)						
ESM of ULAB	**GENERATION** Units, Tons/year	**IMPORTATION** TonS/year, country of origin	**EXPORTATION** Tons/year, country of destination	**COLLECTION, TRANSPORTATION & STORAGE** Tons/year,	**TREATMENT** Tons/year	**TYPE OF WASTE & FORM OF FINAL DISPOSAL** Tons/year, type of waste.
Data of Environmentally Sound Management of wastes of ULAB						

Matrix G

Instructions for filling the matrix: Please provide the quantities of manufactured, imported and exported, lead acid batteries in units of batteries and in tons/year or their equivalent, for the years 2013 – 2014, including origin and destination.

QUANTIFICATION OF MANUFACTURED LEAD ACID BATTERIES, IMPORTED & EXPORTED							
MANUFACTURED Tons/year		IMPORTED Tons/year			EXPORTED Tons/year		
Units	Tons	Units	Tons	Country of Origin	Units	Tons	Country of Destination

Matrix H

Instructions for filling the matrix: Please provide the quantities generated in tons/year or their equivalent according to the type of waste, of WEEE, during the last four years (2010 a 2014), including imports and exports, origin and destination.

QUANTITIES OF WEEE GENERATED & INSTALLED CAPACITY FOR ENVIRONMENTALLY SOUND MANAGEMENT OF WEEE					
Environmentally Sound Management of WEEE	**GENERATION** Quantity in tons/year of wastes and their composition	**SEPARATION FOR VALORIZATION** Quantity in tons/year of waste which is separated for its valorization	**COLLECTION TRANSPORTATION & STORAGE** Quantity in Tons/year of wastes for its collection, transportation & storage	**REFURBISHMENT, DISMANTLING & RECYCLING** Quantity in tons/year of wastes which are refurbished, dismantled or recycled	**TYPE OF WASTE & FORM OF FINAL DISPOSAL** Quantity in tons/year of wastes destined for final disposal
Data of WEEE generation					
Technical Description of Installed Capacity (infrastructure) available for ESM activities in life cycle of WEEE					

Matriz I

Instructions for filling the matrix: Please provide the quantities generated in tons/year or their equivalent, for ULAB, during the last four years (2010-2014), including imports and exports, origin and destination.

QUANTITY GENERATED OF ULAB AND INSTALLED CAPACITY FOR ENVIRONMENTALLY SOUND MANAGEMENT OF ULAB					
Environmentally Sound Management of ULAB	**GENERATION** Quantities in tons/year of waste and their composition	**SEPARATION & VALORIZATION** Quantity in tons/year of waste which is separated for their valorization	**COLLECTION TRANSPORTATION & STORAGE** Quantity in tons/year of wastes for their collection, transportation and storage	**TREATMENT** Quantity in tons/year of wastes which are treated	**TYPE OF WASTE AND FORM OF FINAL DISPOSAL** Quantity in tons/year of wastes destined for final disposal
Data of generation of wastes from ULAB					
Technical Description of installed capacity (infrastructure) available for ESM activities of ULAB in their life cycle					

Matrix J

GATHERING OF OTHER RELEVANT INFORMATION FOR THE PROJECT "ASSESSMENT OF ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WEEE IN COUNTRIES WHICH ARE PART OF THE CENTRAL AMERICAN COMMISSION OF ENVIRONMENT AND DEVELOPMENT (CCAD)	
Lessons learned on ESM through the life cycle	
Identified areas for improvement (institutional, legal, infrastructure)	
Achievements related to ESM (institutional, legal, infrastructure)	
Challenges or shortcomings (institutional, legal, infrastructure)	
Recommendations for the implementation of ESM	
Other important stakeholders	
Other relevant information	

ANNEX IV

MINUTES OF TELECONFERENCE

""ASSESSMENT OF THE STATUS OF CENTRAL AMERICA, AND THE DOMINICAN REPUBLIC ESM OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT"

ANNEX IV

MINUTES OF TELECONFERENCE

""ASSESSMENT OF THE STATUS OF CENTRAL AMERICA, AND THE DOMINICAN REPUBLIC ESM OF HAZARDOUS WASTES AND OTHER WASTES, INCLUDING WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT"

FLOR DE MARIA PERLA DE ALFARO

PROJECT COORDINATOR

BRENDA STEFFANY GÁMEZ LÓPEZ

TECHNICAL ASSISTANT

Minutes of Teleconference for the Presentation of the regional initiative for the assessment of current ESM of hazardous wastes and other wastes to the Regional Advisory Council

Date: 1/08/2014 **Starting time:** 9:00 AM **Ending time:** 10:00 AM

Goal: Introduce the initiative "Assessment of the Status of Central America, and the Dominican Republic ESM of Hazardous Wastes and Other Wastes, including Waste Electrical and Electronic Equipment" and clarify the methodology for filling of the instrument to the Regional Advisory Council.

Responsibles: Dra. Flor de María Perla de Alfaro - Licda. Brenda Steffany Gámez López

Participants in the videoconference		
Country	**Name of Participant**	**Post**
México:	Sent regrets	Ministry of the Environmen and Natural Resources of Mexico (SEMARNAT)
Belice:	Absent	
Guatemala:	Elviz Ajanel / Ingrid Villalobos	Stockholm PCB Project/Ministry of the Environment and Natural Resources of Guatemala(MARN)
Honduras:	Ana Gabriela Ramírez Salgado	Ministry of Natural Resources and the Environment of Honduras (CIIHA-SERNA)
Nicaragua:	Sent regrets	Ministy of Environment and Natural Resources of Nicaragua (MARENA-Environmental Quality)
Costa Rica:	José Rodríguez / Pilar Alfaro / Manuela Mata	Ministry of Environment and Energy of Costa Rica/Environmental Quality Office (MINAE- DIGECA)
Panamá:	Sent regrets	Ministry of Health of Panama (MINSA)
República Dominicana	Alexander Moreta / Wilson Tejeda / Ana Mendoza	Ministry of Environment and Natural resources of the Dominican Republic
El Salvador	Miguel Araujo / Flor de María Perla / Teresa Castellanos/ Ivania Rivera / Brenda Gámez	BCRC-CAM

Development of the Videoconference
• Welcome and presentation of participants in the videoconference by Miguel Araujo, Director BCRC-CAM. • Introduction to the initiative by Flor de María Perla, Project Coordinator. • Report on the study tour to BCRC-China and to CRT treatment and recycling facilities. • Explanation on the methodology to be used in the collection of information in different countries. • Examples of the type of residues and wastes which will be included in the compilation of information. • Sharing of the objectives of the assessment. • Information about upcoming activities (Regional Workshop and next videoconferences). • Clarification of doubts and questions.
Agreements
- BCRC-CAM wil send the minutes of the videoconference via email to all members of the Regional Advisory Council, absent and present in this videoconference. - BCRC-CAM will send the signed SSFA between the Secretariat of the Basel, Stockholm and Rotterdam Conventions and BCRC-CAM for the implementation of the "Assessment of the status of Central America, the Dominican Republic ESM of Hazardous Wastes and other Wastes, including WEEE". - BCRC-CAM will send via email an illustrative example of a set of filled matrices to facilitate the understanding of the way this instrument shoud be filles and the type of information which should be included. - The members of the Regional Advisory Council will send the filled instrument with the required information at the latest by August 22, 2014. - BCRC-CAM will share with all members of the Regional Advisory Council the proposed WEEE Technical Guidelines for El Salvador via email. - BCRC-CAM will send the invitations and the proposed agenda for the "Regional Week on ESM of hazardous wastes" scheduled to be organized in San Salvador on September 22-26, 2014.

ANNEX V

AIDE MEMOIRE

2ND REGIONAL TRAINING AND EXPERIENCE EXCHANGE WORKSHOP ON ESM OF HAZARDOUS SUBSTANCES AND WASTES AND OTHER WASTES

Mexico, December 1-3, 2014

AIDE MEMOIRE

"2nd Central America and the Dominican Republic Workshop on Training and Experience Exchange about Environmentally Sound Management (ESM) of Chemical Substances and Hazardous Residues and Wastes and Other Wastes"

Project "Central America and the Dominican Republic Assessment on Environmentally Sound Management of Hazardous Residues and Wastes, and other Wastes, including Waste Electric and Electronic Equipment(WEEE)

Held at the Sevilla Palace Hotel

Mexico DF, December 1-3, 2014

Acknowledgements

Special thanks to the Ministry of Environment of Japan, for their financial support for the organization of this important regional workshop focused on bringing the sub-region of Central America, the Dominican Republic and Mexico advances in developing a synergistic approach in support of the Environmentally Sound Management (ESM) of Chemicals, Hazardous Wastes and Other Wastes, a worldwide pioneer approach.

Valuable was the financial support in kind of part of the Secretariat of Environment and Natural Resources of Mexico (SEMARNAT), in addition to being an excellent host, allowing the participants to know the cultural and gastronomic riches of Mexico, it collaborated with significant financial support in kind covering hotel rooms for 14 delegates from Central America, lunches, snacks and dinners during the workshop. Moreover, the participation of 22 representatives of Mexico, representing the government, private sector, Academia and NGOs, including Dr. Cristina Cortinas, enriched further discussions and products of this workshop.

Especially highlighted was the leadership shown by the Master and Ing. Luis Eduardo Avila, Director General of Integrated Management of Hazardous Materials and Activities SEMARNAT, having become a delegate's Workshop, with its responsiveness and full adoption of new synergistic approach proposed by BCRC-CAM, Dominican Republic and Central America, his willingness to share the experience of Mexico through different experts of its management, as well as the commitment formally raised like the accompaniment of Mexico in approaching bilateral and multilateral donors such as the Global Environment Fund (GEF) in support of the proposed 5 year program on ESM of chemicals and hazardous wastes and other wastes.

No less important was the contribution of Alberto Capra, Co-Chairman of the International Expert Group of the Basel Convention on Environmentally Sound Management of Hazardous Wastes and Other Wastes, and Official Contact Point of the Basel Convention in Argentina, sharing advances in the international expert group and their applicability to the sub-region, and disseminating information about various international initiatives that could support ESM in the sub-region.

The participation of GEF in this workshop, also had a high relevance, as its representative shared significant financial contributions that GEF 6 financial cycle can provide to the novel synergistic approach presented by the sub-region in support of ESM of chemicals and hazardous wastes and other wastes. GEF 6 initiates a new way to support cross-cutting themes like synergies.

Additionally, Micaela Bonafina's participation on behalf of the Basel Convention Regional Center for South America, helped strengthen the partnership that exists with the BCRC-CAM, allowing the current preparation of the "Green American", aimed at extending this synergistic approach to chemicals and hazardous wastes and other wastes to both Central and South America.

The participation of Eng. Luis Marroquin of the Used Lead Acid Batteries (ULAB) Recycling Plant of Acumuladores Iberia in Guatemala, helped give workshop participants a direct contact with companies that are committed to combining ESM with cleaner production, as a way to reduce, and even eliminate, the generation of waste, and to recycle ULAB, transforming the principles universally applied in these recycling processes.

Finally, we thank the contributions of representatives of the Ministries of Environment of Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Dominican Republic and Panama and the Ministries of Health of Costa Rica and Panama.

Agradecimientos

Un especial agradecimiento al Ministerio de Medio Ambiente de Japón, por su apoyo financiero para la realización de este importante taller regional enfocado a llevar a la subregión de Centroamérica, República Dominicana y México avances en la formulación de un enfoque sinérgico en apoyo de la Gestión Ambientalmente Racional (GAR) de las Sustancias Químicas, Desechos Peligrosos y Otros Desechos, enfoque pionero a nivel mundial.

De mucho valor fue el apoyo financiero en especie de parte de la Secretaría de Medio Ambiente y Recursos Naturales de México (SEMARNAT), que además de ser un excelente anfitrión permitiendo conocer las riquezas culturales y gastronómicas de México, colaboró con importante apoyo financiero en especie, cubriendo las habitaciones de hotel de 14 delegados de Centroamérica, los almuerzos, refrigerios y cenas durante el taller. Más aún, la participación de 20 representantes del gobierno de México, empresa privada, Academia y ONG, entre las que destacó la Dra. Cristina Cortinas, enriqueció aun más las discusiones y los productos de este taller. Especialmente destacó el liderazgo mostrado por el Maestro e Ing. Luis Eduardo de Ávila, Director General de Gestión Integral de Materiales y Actividades Riesgosas de SEMARNAT, al haberse convertido en un delegado más del Taller, con su receptividad y total adopción del nuevo enfoque sinérgico planteado por el CRCB-CAM, República Dominicana y Centroamérica, disposición de compartir la experiencia de México a través de los diferentes expertos de su Dirección, así como el compromiso planteado formalmente del acompañamiento de México en las gestiones de apoyo ante cooperantes bilaterales y multilaterales como el Fondo Mundial del Medio Ambiente (GEF, por sus siglas en inglés).

No menos importante, fue la contribución de Alberto Capra, Co-Presidente del Grupo Internacional de Expertos del Convenio de Basilea en la Gestión Ambientalmente Responsable de Desechos Peligrosos y otros Desechos y Punto de Contacto Oficial del Convenio de Basilea para Argentina, compartiendo los avances de este grupo internacional de expertos y su aplicabilidad a la subregión, y divulgando información de diferentes iniciativas internacionales que podrían apoyar la GAR en la subregión.

La participación del GEF, también tuvo una alta relevancia, al presentar las importantes contribuciones financieras hacia el novedoso enfoque sinérgico presentado por la subregión en apoyo de la GAR de sustancias químicas y desechos peligrosos y otros desechos, contempladas en la 6ª Ronda de financiamiento del GEF, conocida como GEF6, la cual inicia un nuevo camino de apoyo a temas multisectoriales.

Adicionalmente, la participación Micaela Bonafina, del Centro Regional del Convenio de Basilea para Sudamérica, contribuyó a fortalecer la alianza que existe con el CRCB-CAM, permitiendo la preparación de la iniciativa “América Verde” que busca extender este enfoque sinérgico sobre sustancias químicas y desechos peligrosos y otros desechos a Centro y Sudamérica.

La participación del Ing. Luis Marroquín, de la Planta Recicladora de Baterías Ácido Plomo (BAPU) de Acumuladores Iberia en Guatemala, contribuyó a darle al taller un contacto directo con empresas que están comprometidas a combinar la GAR con la producción más limpia, como forma de reducir e incluso eliminar la generación de desechos en el reciclaje de desechos peligrosos, transformando los principios universalmente aplicados en estos procesos de reciclaje.

Finalmente, agradecemos las contribuciones de los representantes de los Ministerios de Medio Ambiente de Belice, Costa Rica, Guatemala, Honduras, Nicaragua, República Dominicana y Panamá y de los Ministerios de Salud de Costa Rica y Panamá.

Executive Summary

BCRC-CAM organized jointly with the Mexican Ministry of Environment and Natural Resources, and with the technical support from Alberto Capra, Ministry of Environment of Argentina, and Co-Chair of the International Expert Group on ESM, the GEF, and BCRC-South America, a Regional Experience Exchange and Training Workshop on ESM of Chemicals and Hazardous Wastes and Other Wastes, which was held on December 1-3, 2014 in Mexico city.

The workshop had the participation of 9 delegates from Basel and Stockholm Convention National Authorities from Central America (Guatemala, Costa Rica, Honduras, Nicaragua, Panama, Belize) and the Dominican Republic, as well as Alberto Capra mentioned above, Micaela Bonafina from BCRC-South America, Lulwa Ali from GEF, Luis Eduardo de Alba, Director of Hazardous Materials at the Mexican Ministry of Environment and Natural Resources, plus more than 22 delegates from Mexico's public and private sector, NGOs and Academia.

The workshop Objectives were:

1. To share the Mexican experience on ESM of hazardous wastes and other wastes, especially of WEEE.

2. To Share the products of various projects related to GAR Chemical Waste and Hazardous Wastes and Other Wastes in Central America, Dominican Republic and Mexico.

3. To develop a project profile on ESM for Central America and Dominican Republic, and Mexico, to allow that by the end of six years (2020), this sub-region has the capacity to implement ESM of chemicals and hazardous wastes and other wastes (CHWOW) in an appropriate level and to support the synergistic implementation of the Basel, Stockholm, Rotterdam, and Minamata Conventions as well as the Montreal Protocol and the Strategic Approach on the International Management of Chemicals (SAICM).

During this workshop BCRC-CAM shared advance reports on: 1) the Assessment on ESM of Hazardous Wastes including WEEE in Central America; and 2) Protocols for ESM of CRT.

Additionally, key ESM products relevant to this project were shared:

a. The Central American and the Dominican Republic Regional Strategy on ESM of WEEE and ULAB, prepared by BCRC-CAM with funding from the US State Department, through the Organization of American States.

b. The National Strategy on ESM of Chemicals and Hazardous Wastes and Other Wastes for El Salvador, prepared under the Synergies project, financed by the European Union.

c. Elements for a Central American Strategy on ESM of Chemicals and Hazardous Wastes and Other Wastes, formulated as part of the above mentioned Synergies Project.

d. Advances in Mexican legislation and policies on ESM of chemicals and hazardous wastes, including WEEE.

e. The Chemicals and Hazardous wastes component included in GEF6.

f. Advances on ESM of ULAB in Acumuladores Iberia in Guatemala, which is approaching a zero waste production process.

g. The work of the International Expert Group on ESM of Hazardous Wastes and Other Wastes of the Basel Convention and the different products that are under its preparation.

As a result of this workshop:

i. Mexico announced its decision to join the Central American and the Dominican Republic initiative of a 5 year program (2016-2020) on ESM of chemicals and Hazardous Wastes, and to jointly prepare proposals to be submitted before GEF and other multilateral and bilateral donors.

ii. Mexico announced its decision to apply the Basel Convention in terms of not allowing the exportation of hazardous wastes that have ESM facilities in Mexico, and also its aim to facilitate the set up a refinery which could extract precious metals from WEEE from Mexico and from Latin America and the Caribbean, thus opening an important option for ESM of WEEE.

iii. All participating countries agreed to formalize this important ESM partnership at the Triple COP next May, 2015.

iv. A draft profile for a 2016-2020 Program on ESM of Chemicals and Hazardous Wastes and other Wastes was formulated, which intends to make use among others of the products of the International Expert Group on ESM of Hazardous Wastes and Other Wastes of the Basel Convention. This program will be implemented under the coordination of BCRC-CAM, with leadership roles by each country on specific issues and with workshop

and project activities implemented with an appropriate geographical distribution, so that all countries are benefitted by this program. BCRC-CAM shared that the Ministry of Environment of Japan is interested in co-financing such a program as long as it is implemented under the umbrella of the International Expert Group on ESM of the Basel Convention. Thus BCRC-CAM will use the opportunity of the III Meeting of this International expert group in Konstanz on January 21-23, 2014 to present this proposal for approval. The GEF also shared its interest in co-financing this program under GEF6 and expressed interest in financing the consolidation of Acumuladores Iberia zero waste ULAB recycling process and its sharing to other regions.

v. There was agreement among the participating countries that while a full project formulation is under way during 2015 on the 2016-2020 Program for ESM of Chemicals and Hazardous Wastes and Other Wastes for Central America-the Dominican Republic and Mexico, this sub-region concentrates on two issues: a) the formulation of a proposal for setting up a waste exchange system, which facilitates the material recovery and the valorization of waste, tapping into the opportunity that Mexico is already in the process of designing a waste exchange system; and b) South –South Cooperation among different countries of the sub-region. BCRC-CAM and Mexico will prepare draft TOR for these two activities and will explore financing possibilities with international, bilateral and regional donors, including the private sector.

vi. BCRC-South America announced that they will promote among its countries a similar synergistic 5 year ESM initiative.

vii. A recommendation was made by BCRC-CAM and Alberto Capra to allow Acumuladores Iberia to share its ESM and Cleaner Production almost zero waste ULAB recycling process, at the Konstanz meeting, which resulted in Acumuladores Iberia invitation to share this innovative process with the International Expert Group on ESM of Hazardous Wastes and Other Wastes of the Basel Convention, next January 21-23, 2014.

viii. Preparation of a Profile for a 5 year program on ESM of Chemicals and Hazardous Wastes and Other Wastes in Central America, to be prepared by BCRC-CAM, based on a draft produced during the workshop.

Participants at the Mexico Regional Workshop on December 1-3, 2014:

Central America and the Dominican Republic:

- Ministry of Forests, Fisheries and Sustainable Development of Belize
- Ministry of Environment and Natural Resources MARN of Guatemala
- Secretariat for Natural Resources and the Environment of Honduras
- Ministry of Environment and Energy MINAE of Costa Rica
- Executive Committee for the Integral Management of Electronic Wastes (CEGIRE) of Costa Rica
- Department of Environmental Disasters, Directorate of Protection of Environmental Quality, National Environmental Authority of Panama
- Ministry of Health of Panama
- Ministry of Environment and Natural Resources of the Dominican Republic
- Acumuladores Iberia (Guatemala)
- AUTOCONSA S.A de C.V. (El Salvador)
- Basel Convention Regional Centre for Central America and Mexico (BCRC-CAM).

Mexico

Government:

- Secretariat of Environment and Natural Resources (SEMARNAT)
- General Directorate for Industry/SEMARNAT
- Federal Attorney for Environmental Protection **(**PROFEPA)
- National Centre for Disaster Prevention (CENAPRED)/Governance Secretariat (SEGOB)
- General Directorate for Basic Industries/Secretariat of Economy
- Federal General Directorate of Transportation/General Secretariat of Communications and Transportations (SCT)
- Secretariat of Energy (SENER)
- General Directorate for Agriculture and Livestock Technology Educations/ SEP
- National Metrology Centre (CENAM)
- Federal Commission on Electricity (CFE),

Private Sector:

- HOLCIM Apasco
- National Cement Chamber (CANACEM)
- National Council of Industrial Ecologists (CONIECO)
- International Consultants on Prevention and Control (CIPREC C.A.)
- National Chamber of the Iron and Steel Industry (CANACERO)
- Institute for the Environmental Protection of Nuevo León (IPA)/ Chamber of the Transformation Industry of Nuevo León (CAINTRA)

Associations

- Psychoanalytic Association of Mexico (IPA A.C.)
- Queretaro Network of Management of Residues A.C.
- Communication and Environment A.C.
- Protection of Crops, Science and Technology, A.C (PROCCYT)

Academia

- University Program for the Environment, Mexico National University (UNAM)

NGO

- International Network for the Elimination of Persistent Organic Pollutants (IPEN México)

Argentina

- Secretariat of Environment and Sustainable Development
- Basel Convention Regional Centre for South America (BCRC-South)

Internacional

- Global Environmental Facility (GEF)

Resumen Ejecutivo

CRCB-CAM organizó conjuntamente con la Secretaría de Medio Ambiente y Recursos Naturales de México (SEMARNAT) y con el apoyo técnico de Alberto Capra, Ministerio de Medio Ambiente de Argentina, y Co-Presidente del Grupo Internacional de Expertos sobre la GAR de desechos peligrosos y otros desechos del Convenio de Basilea, el FMAM, y CRCB-América del Sur, un Taller Regional de Capacitación y de Intercambio de Experiencias sobre la gestión ambientalmente racional de los productos químicos y los desechos peligrosos y otros desechos, el que se celebró el 1 a 3 diciembre, 2014 en la ciudad de México.

El taller contó con la participación de 9 delegados de Basilea y Estocolmo Convenio de Autoridades Nacionales de América Central (Guatemala, Costa Rica, Honduras, Nicaragua, Panamá, Belice) y la República Dominicana, así como Alberto Capra mencionó anteriormente, Micaela Bonafina de CRCB- América del Sur, Lulwa Ali del FMAM, Luis Eduardo de Alba, Director de Materiales Peligrosos en el Ministerio de Medio Ambiente y Recursos Naturales de México, además de más de 22 delegados de los sectores público y privado de México, las ONG y la academia.

Los Objetivos del taller fueron

1. Compartir la experiencia mexicana en GAR de residuos peligrosos, especialmente de RAEE.
2. Compartir los productos de varios proyectos relacionados con la GAR de Sustancias Químicas y Residuos y Desechos Peligrosos y Otros Desechos en Centroamérica, República Dominicana y México.
3. Formular un perfil de proyecto para Centroamérica y República Dominicana que permita que al final de 5 años (2020), *Proyecto GAR 2016-2020 Centroamérica, República Dominicana y México*, la región tenga la capacidad de aplicar la GAR de Sustancias Químicas y Desechos Peligrosos y Otros Desechos (SQRDPOD) en un nivel homologado y que apoye la implementación sinérgica de los Convenios de Basilea, Estocolmo, Róterdam, Protocolo de Montreal y Convenio de Minamata.

Durante este taller el CRCB-CAM compartió informes de avance sobre:

1) la evaluación sobre la GAR de los desechos peligrosos y otros desechos, incluyendo los residuos de aparatos eléctricos y electrónicos (RAEE) en Centroamérica y la República Dominicana; y 2) Los protocolos para el manejo ambientalmente racional de CRT.

Además, otros productos clave GAR pertinentes a este proyecto fueron compartidos:

a. La Estrategia Regional Centroamérica y República Dominicana sobre la GAR de los RAEE y BAPU, preparado por CRCB-CAM con fondos del Departamento de Estado de Estados Unidos, a través de la Organización de los Estados Americanos (OEA).b. La Estrategia Nacional sobre el manejo ambientalmente racional de los productos químicos y los desechos peligrosos y otros desechos para El Salvador, preparado bajo el proyecto Sinergias, financiado por la Unión Europea.

c. Elementos para una Estrategia Centroamericana de gestión ambientalmente racional de los productos químicos y los desechos peligrosos y otros desechos, documento formulado por el CRCB-CAM como parte del Proyecto Sinergias mencionado anteriormente.

d. Los avances en la legislación mexicana y políticas sobre la gestión ambientalmente racional de los productos químicos y desechos peligrosos, incluidos los RAEE.

e. El componente de los productos químicos y desechos peligrosos incluido en GEF6.

f. Los avances en la GAR de BAPU de Acumuladores Iberia en Guatemala, que se acercan a un proceso de producción de residuos cero.

g. La labor del Grupo Internacional de Expertos sobre la gestión ambientalmente racional de los desechos peligrosos y otros desechos del Convenio de Basilea y los diferentes productos que se encuentran bajo su preparación.

Como resultado de este taller:

1º México anunció su decisión de unirse a los países centroamericanos y la República Dominicana en su iniciativa de un programa de 5 años (2016-2020) para la gestión ambientalmente racional o responsable de los productos químicos y los desechos peligrosos, y para preparar conjuntamente propuestas para ser presentadas antes del FMAM y otros donantes multilaterales y bilaterales.

2º México anunció su decisión de aplicar el Convenio de Basilea en cuanto a no permitir la exportación de desechos peligrosos que tienen instalaciones ESM en México, y también su objetivo de facilitar la puesta en marcha de una refinería que podría extraer metales preciosos de los RAEE procedentes de México y de América Latina y el Caribe, abriendo así una opción importante para la gestión ambientalmente racional de los RAEE.

3º Todos los países participantes acordaron formalizar esta importante asociación GAR en la Triple COP a realizarse el próximo mes de mayo, 2015, en Ginebra.

4º Un proyecto de perfil para un Programa 2016-2020 sobre la GAR de los productos químicos y los desechos peligrosos y otros desechos se formuló, que tiene la intención de

hacer uso entre otros de los productos del Grupo Internacional de Expertos sobre la gestión ambientalmente racional de los desechos peligrosos y otros desechos del Convenio de Basilea. Este programa se llevará a cabo bajo la coordinación del CRCB-CAM, con roles de liderazgo por cada país en temas específicos y con actividades de taller y de proyectos implementados con una distribución geográfica adecuada, por lo que todos los países se beneficiarán de este programa. CRCB-CAM compartió que el Ministerio de Medio Ambiente de Japón está interesado en la cofinanciación de un programa de este tipo, siempre y cuando se lleva a cabo bajo el paraguas del Grupo Internacional de Expertos sobre la GAR del Convenio de Basilea. Así CRCB-CAM usará la oportunidad de la III Reunión de este grupo internacional de expertos en Constanza en 21 a 23 en 2014 para presentar esta propuesta para su aprobación. El FMAM también compartió su interés en la cofinanciación de este programa bajo GEF6 y expresó su interés en financiar la consolidación del proceso de reciclado de BAPU cero residuos Acumuladores Iberia y su uso compartido con otras regiones.

5º Hubo acuerdo entre los países participantes que, si bien una formulación completa del proyecto/programa 2016-2020 para la GAR de los productos químicos y los desechos peligrosos y otros desechos para Centroamérica y la República Dominicana y México estará posiblemente en marcha durante el 2015, esta subregión se podría centrar en el 2015 en dos cuestiones:

a) la formulación de una propuesta para la creación de un sistema de intercambio de residuos a nivel de la sub-región, lo que facilita la recuperación de materiales y la valorización de los residuos, aprovechando la oportunidad que México ya está en el proceso de diseño de un sistema de este tipo; y

b) Cooperación Sur-Sur entre los diferentes países de la subregión. CRCB-CAM y México prepararán el proyecto de mandato para estas dos actividades y explorarán las posibilidades de financiación con los donantes internacionales, bilaterales y regionales, incluido el sector privado.

6º CRCB-Sur anunció que promoverá entre sus países una iniciativa similar sinérgica de 5 años sobre la GAR.

7º Una recomendación fue hecha por CRCB-CAM y Alberto Capra sugiriendo que Acumuladores Iberia comparta su proceso de reciclado de BAPU casi cero residuos GAR y Producción Más Limpia, en la reunión de Constanza DEL Grupo Internacional de Expertos en GAR del Convenio de Basilea, lo que dio lugar a la invitación Acumuladores Iberia compartir este proceso innovador en esa reunión del 21 a 23 en 2014.

8º Todos los participantes respaldaron la preparación de un perfil para un programa de 5 años (2016-2020) sobre la GAR de los productos químicos y los desechos peligrosos y otros desechos en Centroamérica, con base en los avances obtenidos en un borrador durante el taller, encomendando al CRCB-CAM su formulación.

Instituciones participantes en el Taller

Centroamérica y República Dominicana

- Ministerio de Bosques, Pesca y Desarrollo Sostenible de Belice
- Ministerio de Ambiente y Recursos Naturales MARN de Guatemala
- Secretaría de Recursos Naturales y Ambiente de Honduras
- Ministerio del Ambiente, Energía y Telecomunicaciones MINAE de Costa Rica
- Comité Ejecutivo Gestión Integral de Residuos Electrónicos (CEGIRE) de Costa Rica
- Departamento de Desastres Ambientales, Dirección de Protección de la Calidad Ambiental, Autoridad Nacional del Ambiente de Panamá
- Ministerio de Salud de Panamá
- Ministerio de Medio Ambiente y Recursos Naturales de Republica Dominicana
- Acumuladores Iberia (Guatemala)
- AUTOCONSA S.A de C.V. (El Salvador)
- Centro Regional del Convenio de Basilea para Centroamérica y México (CRCB-CAM).

México

Gobierno:

- Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)
- DGI/SEMARNAT
- Procuraduría Federal de Protección al Ambiente **(**PROFEPA)
- Centro Nacional de Prevención de Desastres (CENAPRED)/Secretaría de Gobernación (SEGOB)
- Dirección General de Industria Básicas /Secretaria de Economía
- Dirección General de Autotransporte Federal/ Secretaría General de Comunicaciones y Transportes (SCT)
- Secretaría de Energía (SENER)
- Dirección General de Educación Tecnológica Agropecuaria/ SEP
- Centro Nacional de Metrología (CENAM)
- Comisión Federal de Electricidad (CFE),

Empresa privada:

- HOLCIM Apasco
- Cámara Nacional del Cemento (CANACEM)
- Consejo Nacional de Industriales Ecologistas (CONIECO)
- Consultores Internacionales de Prevención y Control (CIPREC C.A.)
- Cámara Nacional de la Industria del hierro y del Acero (CANACERO)
- Instituto para la Protección Ambiental de Nuevo León (IPA)/ Cámara de la Industria de la Transformación de Nuevo León (CAINTRA)

Asociaciones

- Asociación Psicoanalítica de México (IPA A.C.)
- Red Queretana de Manejo de Residuos A.C.
- Comunicación y Ambiente A.C.
- Protección de Cultivos, Ciencia y Tecnología, A.C (PROCCYT)

Academia

- Programa Universitario de Medio Ambiente UNAM

ONG

- Red Internacional de la eliminación de los contaminantes orgánicos persistentes (IPEN México)

Argentina

- Secretaría de Ambiente y Desarrollo Sustentable
- Centro Regional del Convenio de Basilea para Sudamérica

Internacional

- Fondo Mundial del Medio Ambiente (GEF)

Metodología del Taller

Presentaciones, discusiones plenarias de los participantes, Al final de cada ponencia o actividad se dio un espacio de preguntas y respuestas, abordando las temáticas.

Agenda

HORA	ACTIVIDAD	METODOLOGÍA	RESPONSABLE
Lunes 1 de diciembre de 2014.			
09:00 – 9:30	Palabras de bienvenida y de Inauguración.	Presentación de los objetivos y alcance de la reunión	CRCB-CAM SEMARNAT
09:30-9:45	Presentación de los participantes	Ronda rápida de presentación de asistentes	Todos los participantes
09:45-10:45	Experiencia de México GAR Residuos Peligrosos, especialmente RAEE	Presentación/ Preguntas y Respuestas	Jesús Olvera SEMARNAT
10:45-11:00	Receso café		
11:00-12:00	Evaluación GAR Residuos y Desechos Peligrosos y Otros Desechos	Presentación/ Preguntas y Respuestas	Flor de María Perla de Alfaro/ Wilfredo Velásquez CRCB-CAM
12:00-13:00	Factibilidad GAR Tubos Rayos Catódicos (TRC)	Presentación/Preguntas y Respuestas	Luis Marroquín Acumuladores Iberia
13:00-14:00		Almuerzo	
14:30-15:30	Estrategia Nacional para la GAR de Sustancias Químicas y Residuos, Desechos Peligrosos y Otros Desechos de El Salvador y Lecciones Aprendidas Proyecto Sinergias	Presentación/ Preguntas y Respuestas	María Teresa Castellanos/Laura Ivania Rivera CRCB-CAM
15:30-15:45		Refrigerio	
15:45-17:00	Estrategia Regional Centroamérica y República Dominicana GAR RAEE y BAPU	Presentación/preguntas y Respuestas	Flor de María Perla de Alfaro CRCB-CAM
17:00-17:30	Conclusiones del día	Plenaria	CRCB-CAM

HORA	ACTIVIDAD	METODOLOGÍA	RESPONSABLE
Martes 2 de diciembre 2014.			
09:00-9:30	Oportunidades financiamiento GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos	Presentación / Preguntas y Respuestas	Lulwa Ali GEF
09:30-10:30	Agenda Internacional GAR Sustancias Químicas, Residuos y Desechos.	Presentación /Preguntas y Respuestas	Alberto Capra Co-Presidente Grupo Expertos GAR Convenio Basilea
10:30-10:45		Receso Café	
10:45 -13:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
13:00-14:00		Almuerzo	
14:00-15:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
15:00 -15:15		Receso Café	
15:15-17:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
17:00-17:30	Conclusiones del día	Plenaria	Todos los participantes
Miércoles 3 de diciembre de 2014.			
HORA	**ACTIVIDAD**	**METODOLOGIA**	**RESPONSABLE**
09:00-10:30	Ideas para Formular un Plan de Manejo Nacional	Presentación/Preguntas y Respuestas	Doctora Cristina Cortinas, Red

HORA	ACTIVIDAD	METODOLOGÍA	RESPONSABLE
	de Televisiones Analógicas en México		Queretana de Manejo de Residuos A.C.
10:30-10:45		Receso Café	
10:45-13:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
13:00-14:00		Almuerzo	
14:00-15:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
15:00-15:15		Receso Café	
15:15-16:00	Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México	Presentación /plenaria	Todos los participantes
16:00-16:30	Conclusiones y evaluación	Plenaria	Todos los participantes
16:30	Clausura		

<u>Resumen de Presentaciones y de preguntas y respuestas</u>

1º de Diciembre de 2014

1. **"Experiencia de México GAR Residuos Peligrosos, especialmente RAEE", por Jesús Olvera, SEMARNAT**

El Ing. Jesús Olvera indicó que en el país tienen 3 clasificaciones de residuos:

i. Residuos sólidos urbanos son aquellos generados en los hogares, que resultan de la eliminación de los materiales que se utilizan en las actividades domésticas o provienen de cualquier otra actividad dentro de establecimientos o en la vía pública que genere residuos con características domiciliarias: Los municipios tienen la responsabilidad de su gestión.

ii. Son aquellos que poseen alguna de las características CRETIB (corrosividad, reactividad, explosividad, toxicidad, inflamabilidad o agentes biológico-infecciosos) que les confieran peligrosidad, así como envases, recipientes, embalajes y suelos que hayan sido contaminados. Estos residuos son competencia de la SEMARNAT, quien regula los trámites de todas las empresas generadoras de éstos.

iii. Los residuos de manejo especial son aquéllos generados en los procesos productivos que no reúnen las características para ser considerados como peligrosos o como residuos sólidos urbanos, o que son producidos por grandes generadores de residuos sólidos urbanos. Son de competencia estatal.

- ✓ Los RAEE son considerados residuos de manejo especial ya que sus componentes no se consideran peligrosos pero si requieren de un manejo diferente.
- ✓ En el 2013 se elaboraron guías técnicas para la Gestión Ambientalmente Responsable (GAR) de los RAEE, en conjunto con la Comisión de Cooperación Ambiental de América del Norte (CCA), además de haberse organizado talleres presenciales en México y Canadá.
- ✓ El programa sectorial de medio ambiente 2013 – 2018 tiene líneas de acción muy específicas de aumentar la máxima valorización de los residuos y se aplica a los tres tipos de residuos.
- ✓ México tiene muchas empresas autorizadas que recolectan los RAEE y posteriormente son desensamblados, sin embargo no existe la capacidad para extraer los metales preciosos, por lo tanto son exportados a Europa para extraerlos eficientemente.
- ✓ Guatemala hizo un estudio para estimar la cantidad de los RAEE generados en Guatemala en varios municipios. apoyándose en normas nacionales e internacionales, y encontraron que entre los desechos sólidos hay mezclados desechos peligrosos, aunque los municipios los manejan como desechos sólidos urbanos, lo cual es una mala práctica. Por lo anterior se está trabajando en

impulsar la responsabilidad extendida del productor/distribuidor para que éstos se han responsables en todo su ciclo de vida, apoyados en nueva legislación.

- ✓ México informó que se han elaborado guías para el manejo de los RAEE conjuntamente con la Comisión para la Cooperación Ambiental (ECC)

Otros comentarios especiales a las presentaciones	**Primer día, Lunes 1 de Diciembre de 2014** **1. Factibilidad GAR Tubos Rayos Catódicos (TRC), Luis Marroquín Acumuladores Iberia.** • Como acumuladores Iberia tenemos el desafío de adaptar nuestra tecnología para poder reciclar los TRC, Comento se visitó una planta recicladora de TRC en China. • Representación México: Comento que en su país existían ya empresas que tiene la capacidad instalada y ya hacen el reciclo de TRC, que ellos proporcionaran los datos para poder contactarlas y ver en qué medida ayudan a acumuladores Iberia. Añadió que estos materiales son muy valiosos y deben de ser recuperados, ofreció un documento el cual contiene el manejo de los televisores analógicos, ya que México ha hecho estudios excautivos sobre el tema. México tiene la capacidad instalada para tratar sus TRC y que acumuladores Iberia es una buena alternativa para iniciar con el tratamiento de los TRC en la región Centroamericana, ya que un diagnóstico minucioso daría las cantidades reales de los TRC existentes en la región. • Manifestó que se siente agradecida con las experiencias que la región está aportando a México dentro del taller, ya que observa que la región es activa en los planes de GAR y le

	parece muy bueno que una empresa (Refiriéndose a Acumuladores Iberia) tenga la iniciativa de tratar los TRC en Centroamérica. • El representante de Acumuladores Iberia manifestó sus agradecimientos y agrego que hay empresas que tienen procesos burocráticos para tomar la decisión de recibir los TRC, que la empresa que él representa, solo se tardaría el tiempo que tardara el presidente de la junta directiva en tomar la decisión de recibirlos para su adecuado reciclaje. Hablo sobre actualizar las guías del manejo ambientalmente responsable de las BAPU que el gobierno está realizando ya que el Convenio de Basilea las exige, Así mismo apoyar una normativa local, por ser los mayores importadores de BAP nuevas, están exigiendo al gobierno central que los regule, para que obligue a decir en donde es que se ponen esas baterías después de importan y que se hacen con las BAPU, ya que en Guatemala entra un aproximado de 60,000 a 70,000 BAP nuevas por mes. • Representante de México expreso que ellos ya han otorgado permiso de exportación de BAPU para Corea pero se dieron cuenta que al final llegaron a China que son mejor pagadas, Reitero que en el norte de México se cuenta con dos empresas autorizadas para el manejo de TRC y se pueden gestionar visitas a ellas.

	• El representante de Acumuladores Iberia manifestó que el tráfico ilícito de BAPU hacia países asiáticos son por las siguientes razones: 1) Se llevan la BAPU seca por el peso, se sabe que el ácido termina en el sistema de aguas negras. 2) En estos países ponen a niños a trabajar en la manipulación de éstas, cometiendo el delito de explotar a menores de edad y poniendo en riesgo su salud. 3) La práctica de contratar a estos niños temporalmente les ayuda a bajar costos en los sueldos, ya que no pagan impuestos, seguro social, etc., Por lo tanto se les da la oportunidad de comprar con mejor precio el embarque de las BAPU, lo toman como una ventaja aunque es de aclarar que es competencia desleal. **2. Estrategia Nacional para la GAR de Sustancias Químicas y Residuos, Desechos Peligrosos y Otros Desechos de El Salvador y Lecciones Aprendidas Proyecto Sinergias. María Teresa Castellanos/Laura Ivania Rivera, CRCB-CAM.** • Representante de manejos de residuos de Queretano: El manejo de los residuos sólidos es complejo, es conveniente involucrar a todos los sectores, por ejemplo el sector estudiantil, ya que se debe concientizar a estos desde la

	escuela primaria, además se necesita ser acompañada la GAR con personal técnico capacitado en cada región del país y buscar financiamiento. • Un participante dio las felicitaciones por el esfuerzo y dijo que se debe dar un paso más, que es, el de incorporar el plan de acción para América Latina y el Caribe SAICM. • Ponente de la estrategia nacional: Sí está incluido SAICM, es una de las bases para el cumplimiento de las metas, además se ha incorporado la legislación nacional y nos ayuda mucho para normar y fortalecer la gestión, se está de acuerdo que se necesita una red local pero se tiene que fortalecer las instituciones para el nivel local y llegar con líneas claras y vocabulario adecuado para darnos a entender correctamente y buscar financiamiento, ya que el financiamiento nacional no alcanza porque existen otras prioridades. • Representante de Nicaragua: En mi país se creó una comisión presidencial de sustancias toxicas y es la que está de manera institucional vigente y coordinando a todos los ministerios, alcaldías y población en general para impulsar el proyecto, se está realizando primeramente con el Convenio de Minamata, se han mejorado muchos procesos que eran obsoletos, existe una disposición política para que esto se ejecute, observando su proyecto de estrategia nacional en El Salvador es muy parecido a lo

	que nosotros ya estamos implementando, que las secretarias al visitar a los ciudadanos comunes, siempre se le habla con vocabulario adecuado para que ellos entiendan lo que se les está informando, como por ejemplo una persona que recolecta BAPU son de estrato social bajo y son por quienes debemos de iniciar el proceso, es de tomar en cuenta que nunca se mencionan y son el primer eslabón en la cadena de la GAR. • Representante de Argentina: Me encanta la manera de cómo se ha abordado la estrategia nacional, el análisis del FODA que se planteado, una técnica muy buena que ayuda mucho a orientarse. El programa de la naciones unidas se aprobó el financiamiento para el tratamiento de los residuos y desechos, En la estrategia he visto componentes muy interesantes que podrían aplicar perfectamente, mañana hablare sobre unas estrategias por lo tanto no quiero adelantarme. **3. Estrategia Regional Centroamérica y República Dominicana GAR RAEE y BAPU, Flor de María Perla de Alfaro, CRCB-CAM.** • El Sector informal es el que se dedica mucho a estas actividades de recolección, por lo tanto debe de ser capacitado para proteger de ante mano su salud, el bienestar de los ciudadanos y

	que garantice la calidad ambiental, que los desafíos que se han planteado en la estrategia dinamice la economía y favorezca los sectores sociales. • México expreso que las transnacionales que importan nueva tecnología para el alumbrado, cuando iniciaron la sustitución de los focos y lámparas incandescentes por tecnología led, todos se alegraron y se importaron grandes cantidades, pero nadie se acordó de obligar con la legislación a cumplir con la responsabilidad extendida del productor, por lo tanto éstos muy complacidos de no tener que invertir su dinero en el tratamiento adecuado. Hablando de la estrategia regional hay trabajos que pueden ser comparativos, por ejemplo china ya tiene una propuesta, así como Brasil y Ecuador. **Segundo día, martes 2 de diciembre 2014** **1. Oportunidades financiamiento GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos, Lulwa Ali, GEF** • La representante del GEF preguntó si algunos de los países de la región centroamericana entra en la lista de los pequeños estados islas en desarrollo, uno de los participantes corroboro la lista en la web y los países que

	aparecen son Cuba, Jamaica, Belice, Guyana. Que existan estos pequeños estados islas en desarrollo en la región es bueno ya que el CRCB-CAM puede asesorarlos para que ellos hagan uso de financiamiento que el GEF tiene a la disposición. • Argumento que al ver la presentación de Acumuladores Iberia, recomienda contactar al GEF y preguntar si el plomo de la BAPU y en los TRC podría considerarse como un proyecto piloto para ser apoyado, financiamiento para poder descontaminar terrenos que contienen COP y de esta manera que suba su precio, hay financiamiento para pequeñas y medianas empresas que quieran trabajar el tema de reciclaje en la minería artesanal de oro y en alguna otra actividad que son riesgosas. • El GEF 6 tiene un horizonte de 4 años y tiene metas específicas, en el área de químicos vinculadas a la reducción y eliminación, sobre los COP apoyar la destrucción de 80,000 toneladas métricas, sobre el mercurio disminuir 1,000 toneladas métricas y en SAO apoyar el desfase de 3,000 toneladas métricas. • Representante de Costa Rica: Felicito por hacer una presentación tan concreta, sobre los recursos económicos, nosotros en Centroamérica teníamos un problema hace 5 años, el no saber de cuanto es lo que tenemos que aportar en los proyectos o de cuanto es la contrapartida que poníamos, ya que se decía

	que solo las agencias de cooperación daban los recursos, ya estamos aprendiendo a hacer esa contabilidad indicando cuanto es el recurso que se da a cada sector y ahora usted me dice que el GEF me da $1 por cada $6 que da el país en el cual se hace el proyecto, pero mi país Costa Rica está dando $10, en la mayoría de los casos quedamos invisibles aunque nosotros seamos los que hagamos las mayores aportaciones. • La representante del GEF agradeció el cometario, agregando que el Banco Mundial tiene cursos para enseñarle como poder calcular la contra partida ya que es un componente muy importante, el primer paso es llenar el formulario de la formulación del proyecto, en este paso se debe de incorporar los datos de la contra partida y es muy importante de hacerlo de la forma correcta para poder acceder a estos recursos, y me alegra que en tu país se esté avanzando en esta capacidad. **2. Agenda Internacional GAR Sustancias Químicas, Residuos y Desechos. Alberto Capra, Co-Presidente Grupos Expertos GAR Covenio de Basilea** • Expuso sobre la Convención de Río+20, en particular sobre los productos químicos y desechos párrafos 213 a 223, sobre la

	Cooperación Internacional. Compromiso con un enfoque de la gestión racional de desechos a todos niveles. Preocupación por la carencia de capacidad para gestionar racionalmente los desechos durante todo su ciclo de vida, De la necesidad de reforzar estructuras de gobierno y del Aumento de la coordinación y cooperación entre los convenios, Reforzar las asociaciones existentes entre los sectores público y privado, estableciendo nuevas e innovadoras entre el sector industrial, los gobiernos, las instituciones académicas y otros interesados no gubernamentales dirigidas a aumentar la capacidad y la tecnología para la ***GAR*** de los productos químicos y los desechos, incluida la prevención de los desechos. • Hablo de los enfoques basados en el ciclo de vida de los desechos, elaborando y aplicando políticas para lograr un uso eficiente de los recursos y una ***GAR*** de los desechos. Compromiso de ***aumentar la recuperación de energía y cuando sea posible, utilizarlos como recurso***. Los desechos sólidos, como los desechos electrónicos y los plásticos, plantean problemas particulares que se deben abordar en conjunto todos los actores involucrados. Explicó Río +20, Insta a los países y demás partes interesadas a que adopten todas las medidas posibles para ***prevenir la gestión irracional de los desechos peligrosos*** y su vertido ilícito. Acoge las decisiones pertinentes

	adoptadas en la décima reunión de la ***Conferencia de Las Partes del Convenio de Basilea (COP10) ,Cartagena de Indias, Octubre 2011***, Que Se amplíe la Responsabilidad de los Productores, y se fomente la investigación y el desarrollo, el diseño sostenible y el intercambio de conocimientos. 3. **Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México. Todos los participantes.** **Leer los acuerdos alcanzados *** **Tercer día, miércoles 3 de diciembre de 2014.** 1. **Ideas para Formular un Plan de Manejo Nacional de Televisiones Analógicas en México, Dra. María Cristina Cortinas Duran, Red Queretana de Manejo de Residuos A.C., México.** ▪ La Doctora Cortina sorprendió a los participantes, ya que pidió poder hacer una

	intervención con una ponencia, en la cual expreso la importancia de Contribuir al proceso de formulación de un Plan de Manejo Nacional de las televisiones analógicas que dejen de operar en el marco del Programa de Trabajo para la Transición a la Televisión Digital Terrestre 2014, de conformidad con la legislación ambiental en materia de prevención y gestión integral de los residuos, con el objetivo primordial proteger el medio ambiente de los desechos producto de la transición a la televisión digital terrestre refiriéndose a los RAEE y a los TRC, Para alcanzar la meta que en diciembre de 2015 el 70% de los televisores analógicos estarán debidamente reciclados o confinados en México. ▪ Que se debe de "Impulsar y orientar un crecimiento verde incluyente y facilitador que preserve nuestro patrimonio natural al mismo tiempo que genere riqueza, competitividad y empleo", A la vez fortalecer la política nacional de cambio climático y cuidado al medio ambiente para transitar hacia una economía competitiva, sustentable, resiliente y de bajo carbono. ▪ Lograr un manejo integral de residuos sólidos y peligrosos, que incluya el aprovechamiento de los materiales que resulten y minimice los riesgos a la población y al medio ambiente, Corresponde a quien genere residuos, la asunción de los costos derivados del manejo

integral de los mismos y, en su caso, de la reparación de los daños.

2. **Elaboración Perfil Proyecto implementación GAR Sustancias Químicas, Residuos y Desechos Peligrosos y Otros Desechos Centroamérica, La República Dominicana y México. Todos los participantes.**

3. Acuerdos alcanzados *

1ª El grupo de países de la región Centroamericana, República Dominicana reciben con beneplácito la expresión de México de ser incorporado a la gestión de recursos ante el Fondo Mundial para El Medio Ambiente (FMMA), para el programa 2016-2020 de la GAR de las sustancia químicas, residuos y desechos peligrosos.

2ª México acompañara el liderazgo de Guatemala a nivel mundial expresado en el grupo de trabajo de composición abierta Nª 9 en la reunión del Convenio de Basilea en septiembre pasado, de liderar la actualización de las directrices técnicas de la GAR de las baterías ácido plomo usadas (BAPU).

	3ª Los países participantes y el CRCB-CAM se regocijaron del resultado del taller que constituye una nueva alianza de trabajo permanente entre México, Centroamérica y la República Dominicana. Acordando realizar todas las gestiones posibles para que se formalice esta nueva alianza en el marco de la TRIPLE COP a realizarse en mayo próximo en Ginebra, Suiza. 4ª. Se acordó que el CRCB-CAM apoye todas las gestiones y prepare el perfil del Programa 2016-2020, el cual todos los países participantes revisaran y harán sus observaciones, luego se presenta ante el grupo internacional de expertos del Convenio de Basilea sobre la GAR de residuos y desechos peligrosos y otros desechos, que se reunirán el Alemania del 21 al 23 de enero de 2015; proponiéndole al grupo que avalen y acojan este nuevo programa pionero a nivel mundial como sub región y apoyar las gestiones de financiamiento con los cooperantes que se encuentren en dicha reunión, especialmente Japón, la Unión Europea, luego se preparará un calendario detallado de las actividades, actores, presupuestos, de forma que se pueda implementar con el mayor éxito y que a la vez se gestione paralelamente al Fondo Mundial para el Medio Ambiente, para la formulación del proyecto.

	5ª Acuerdan presentar una solicitud de financiamiento para acciones inmediatas en el 2015, que se concentren en dos temas: A) El diseño de una bolsa de sustancia químicas, residuos y desechos peligrosos para Centroamérica, México y la República Dominicana, considerando que México está diseñando su propia bolsa, la cual es una base. B) La cooperación Sur- Sur, de forma que el intercambio de experiencias avance durante el 2015 entre los países participantes. 6ª Aprovechar este nuevo momento de trabajo conjunto, para organizar una video conferencia posiblemente en el mes de febrero de 2015, para preparar los temas que se discutirán en la TRIPLE COP, en mayo de 2015 y cuáles son los intereses o la posición que podría tomar la región ante los temas, de forma que cuando se llegue a la reunión regional preparatoria de la TRILE COP que será en Uruguay en Marzo próximo, se tenga una posición ya discutida y acordada.