Policy Update from Brazil

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Department of Industrial Competitiveness
Ministry of Development, Industry and Trade (MDIC)
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Outline

- Introduction
- Overview of E-Waste Situation
- Status of Policy Implementation or Development
- Current Status of WEEE Management
- Lessons Learned and Future Goals
- Questions for Discussion
Introduction

- Self Introduction
- Introduction to Brazil
- The Policy of Waste Treatment and Recycling
- Current Status of Waste Treatment and Recycling
- Current Issues of Recycling in Brazil
- Ambientronic Program
- Brazilian Standard
- Investment
Self-Introduction

- General Manager of Competitiveness and Sustainable Development at Ministry of Development, Industry and Trade
- In charge of the sustainable development agenda, including climate change, solid waste, eco-labeling and eco-design policy
- Our Department is in charge of the sectorial implementation of the National Solid Waste Management Policy, establishing a system of WEEE recycling, take-back and development of financial instruments for implementation of the National Policy
- Master in Environmental Law - Paris I University – *Panthéon Sorbonne* – Paris/France
- *LL.M.* in Comparative Law – University of Florida – Levin College of Law – Florida/US
Introduction to Brazil

- The country is independent in Oil
- ~15% of Global Drinking Water
- Largest biodiversity in the world
- 46% renewable energy
- Great ethnic and cultural diversity

- 192 million of inhabitants
- 5,565 municipalities
- Area: 8,502,728.27 Km²

Brazil has a rich history and diverse geography, with major cities such as Brasília, São Paulo, Rio de Janeiro, Recife, and Manaus.
Overview of E-Waste Situation

- 6th largest economy in the world
- 3rd biggest market for computers
- 256.4 million cell phone (lines operating)
- Production of 14 million computer (year)
- Production of 61 million cell phone (year)

38% of the population was middle class.

2002

2012

53% of the population is the middle class (104 million people).

Source: Inventta
Overview of E-Waste Situation

PREMISSAS

- Volume potencial calculado a partir de informações de vendas e importações.
- Estimativa de peso médio e vida útil dos equipamentos sem variações ao longo do tempo.
- Considera o potencial do mercado cinza.
- Não inclui potencial estoque de REEE em mãos dos consumidores.
Overview of E-Waste Situation

- 192 million of inhabitants
- 5,565 municipalities
- Area: 8,502,728.27 Km²

- Large distances between cities
- Technologies for recycling
- The waste generation in Brazil is currently growing about 7-10% per year
- Biggest generator of computer waste (per capita) in BRICS
- More than 900,000 ton/year WEEE
- Improve the system of collection, sorting, recycling and treatment of solid waste
- Appropriate final disposal (increase the number of controlled landfills by 2014)
Overview of E-Waste Situation

- Brazil is a global leader in aluminium cans recycling

<table>
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<tr>
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<th>2004</th>
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<td>Japan</td>
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- Recycling rate of other materials (CEMPRE, 2010)

<table>
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<tr>
<th>Material</th>
<th>Rate</th>
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<tr>
<td>Glass</td>
<td>40%</td>
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<tr>
<td>Paperboard</td>
<td>70%</td>
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<tr>
<td>PET</td>
<td>56%</td>
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<tr>
<td>Plastic</td>
<td>19%</td>
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<tr>
<td>Steel cans</td>
<td>49%</td>
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<tr>
<td>Tires</td>
<td>92%</td>
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</table>
Status of Policy Implementation or Development

- **National Solid Waste Policy**
  - Law # 12.305/2010 (National Solid Waste Policy)
  - Decree # 7.404/2010

- **Basel Convention**
  - Member since 1993
Status of Policy Implementation or Development

- **National Solid Waste Policy**
  - Set of Principles, Objectives, Instruments, Guidelines, Goals and Actions to be adopted by National Government itself or by partnership with states, municipalities and private actors of the society aiming the integrated and environmentally sound management of solid waste

- **Principles**
  - **Joint responsibility** for the life cycle of products (manufactures, importers, retailers, consumers, public authorities)
  - **Actions**: No generation > Reduction > Reuse > Recycling > Treatment > Appropriate final disposal in landfill
  - **Sectorial Agreement**: Contract to be signed by the government and manufacturers, importers, distributors aiming to implement the common responsibility for the life cycle of products
  - **Take back System** for some products, including WEEE
Status of Policy Implementation or Development

- National Solid Waste Policy requires that manufacturers, importers, distributors and retailers design and implement take-back systems with return of products after their use by consumers.
- The country has about 5,500 municipalities that shall establish the final disposition of the waste in an environmentally and properly way. Landfills should replace all inappropriate waste disposal sites by 2014.
- It has emerged a big market for machinery and equipment used in the recycling process, take-back systems and landfills.
- That includes industrial design for waste reduction and non-generation, anaerobic digestion and plasma arc gasification technologies, mechanical sorting facilities for recyclables, and integrated municipal waste management strategies.
Current status of WEEE management

- **Sectors with take-back systems:**
  - Pesticides and their packages
  - Batteries
  - Tires
  - Lubricant oil and their packages
  - Lamps
  - Electrical and Electronic Equipment - WEEE
  - Medicines
  - Packages (steel, aluminum, glass, plastic, paper, etc.)
Status of Policy Implementation

- **Status sectorial agreements for take-back systems:**
  - Packages for lubricant oil: signed in December 2012
  - Lamps: proposals are being reviewed by the Ministry of Environment
  - Packages: proposals are being reviewed by the Ministry of Environment
  - Electrical and Electronic Equipment: public calling announcement published in February 2013 - waiting for proposals from the sectors
  - Medicines: feasibility study and public calling are being prepared
WEEE Take-Back System: Operation

➢ WEEE take-back system

• Consumers – give the products back to distributors or retailers
• Distributors and Retailers – receive the products from consumers and give them back to producers and importers
• Producers and importers – give proper and environmentally sound destination to the products
WEEE Take-Back System: Logistics

1. Transporte até o ponto de descarte/recebimento
2. Descarte/recebimento e devida armazenagem
3. Transporte até o ponto de triagem
4. Triagem do resíduo
5. Transporte até o reciclador
6. Reciclagem do resíduo
WEEE Take-Back System: Costs

<table>
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<tr>
<th>Year</th>
<th>Campanhas</th>
<th>Processamento</th>
<th>Frete Secundário</th>
<th>Triagem</th>
<th>Frete Primário</th>
<th>Ponto de Receb.</th>
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<td>2014</td>
<td></td>
<td>111.004.829</td>
<td>10.456.513</td>
<td>20.814.816</td>
<td>90.065.900</td>
<td>31.428.000</td>
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<td>2015</td>
<td></td>
<td>133.967.253</td>
<td>14.474.019</td>
<td>27.691.277</td>
<td>112.676.943</td>
<td>49.932.000</td>
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<td>2016</td>
<td></td>
<td>152.756.623</td>
<td>18.117.489</td>
<td>34.517.472</td>
<td>129.174.038</td>
<td>76.032.000</td>
<td>410.597.622</td>
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<td>2017</td>
<td></td>
<td>156.635.161</td>
<td>20.095.215</td>
<td>39.117.091</td>
<td>141.536.327</td>
<td>103.140.000</td>
<td>460.523.794</td>
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<td>2019</td>
<td></td>
<td>142.795.035</td>
<td>19.732.797</td>
<td>37.681.987</td>
<td>140.707.530</td>
<td>112.410.000</td>
<td>495.313.162</td>
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<td>2020</td>
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<td>143.560.003</td>
<td>21.070.515</td>
<td>37.959.504</td>
<td>151.209.681</td>
<td>118.188.000</td>
<td>515.314.145</td>
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Costs in R$ million:

- 2013: 218
- 2014: 264
- 2015: 339
- 2016: 411
- 2017: 461
- 2018: 494
- 2019: 495
- 2020: 515

Source: Inventta
WEEE Public Calling Announcement: Scope

- All kinds of domestic WEEE

Excludes:

- capital goods
- WEEE from major generators (they need to have their own solid waste management plan)
- Medical appliances
WEEE Public Calling Announcement: Goals for the 5th Year After the Sectorial Agreement Signature

- Implement a permanent take back system in 100% of the municipalities with a population of over 80,000 people.

- In the municipalities with a permanent take back system, there will be a collecting point for each 25,000 people.

- Collection and proper destination of 17% in weight, of what was sold in the internal market the year before the sectorial agreement signature.

- To be revised in 5 years.
WEEE Public Calling Announcement: Geographic

PREMISSAS

- In 2018, 77.1% of total WEEE generation ~350 municipalities.
- From 2018, periodical campaigns in every municipality under 80,000 hab.

% alcance do sistema

- 2013: 2.4%
- 2014: 3.6%
- 2015: 6.3%
- 2016: 10.6%
- 2017: 19.0%
- 2018: 100.0%
- 2019: 100.0%
- 2020: 100.0%
Lessons Learned and Future Goals

- Sectors presented proposals on June 12th (10)
- Analysis period – 40 days

- Public Consultation

- Sectorial Agreement Signed – 2nd Semester 2013
WEEE Take-Back System - Challenges

- Responsibility and funding to treat “orphan” waste
- Hazardous waste
- Joint responsibility – cooperation, governance and costs
- Promote the consumer action
- Promote reuse
- Innovation and recycling/technology transfer and development
WEEE Take-Back System - Opportunities

- Job creations
- Reduce incorrect disposal of WEEE
- Reduce energy consumption
Ambientronic System

Goals

- Contribute to integrate government, universities/research centers and industry in order to support the sustainability of electronics sector;

- Support the adequacy of the Brazilian electronics industry to national and international environmental legislation, standards and other relevant requirements (ecodesign, cleaner production and recycling);

- Create the necessary infrastructure for developing environmentally conscious technologies in order to fulfill the Brazilian’s needs for sustainable technologies (innovation, qualification and management);

- Support the development of social enterprises, job creation, income and social inclusion, associated with the life cycle of electronics.
Ambientronic Program

1. Development of electronic sustainable technologies for Brazilian electronics industry PNRS adequation
2. Create infrastructure to support the technology development
3. Develop national and international environmental standards
4. Support to Brazilian policy implementation trough integrated actions of Ministries (MDIC, MMA, MCTI)
5. AMBIENTRONIC is open to national and international collaborative projects
Brazilian Standard For WEEE Recycling

Norma Técnica

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<td>Resíduos de equipamentos eletrônicos — Requisitos para atividade de manufatura reversa</td>
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<td>Objetivo:</td>
<td>Esta Norma estabelece requisitos para proteção ao meio ambiente e para o controle dos riscos de segurança e saúde no trabalho na atividade de manufatura reversa de resíduos eletrônicos.</td>
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</tbody>
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Standards for WEEE Recycling

Environmental Protection
ISO 14001:2004

Occupational Health and Safety
OHSAS 18001:1999

Traceability

Data Safety
Contact Information

Thank You!

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www.mdic.gov.br