

PROSPECTS ON PACKAGING WASTE RECYCLING IN BRAZIL

Presentation Topics

- A brief overviewing of the Brazilian current situation on municipal solid wastes management.
- Relevant topics of recent legislation applying to solid wastes management public services, highlighting the Law that established the National Policy.
- Shared responsibility backing the reverse logistics system.
- General strategies developed by Federal Administration to implement reverse logistics systems (RLS) with emphasis on packing reverse logistics.
- Some critical points are considered to examine future trends.

Preliminary

The management of domestic solid wastes is a local public service, so its organization and execution is a municipal responsibility.

Brazilian municipalities must follow general directives established by federal laws.

Costs of services provision are partially supported by local tax.

Brazil has 5.565 municipalities.

MSW Generation

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REGION	2011		
	URBAN POPULATION (hab)	MSW GENERATION (t/day)	PER CAPITA (kg/inhabitant/day)
North	11.833.104	13.658	1,15
Northeast	39.154.163	50.962	1,30
Central West	12.655.100	15.824	1,25
Southeast	75.252.119	97.293	1,29
South	23.424.082	20.777	0,89
Brazil	162.318.568	198.514	1,22

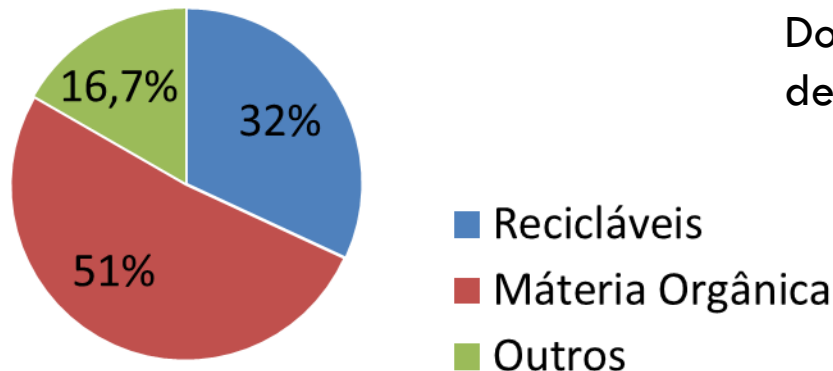
Evolution of MSW collection coverage (%)

REGION	2002 (%)	2011 (%)
North	88,12	83,17
Northeast	65,69	76,71
Central West	84,06	91,3
Southeast	91,06	96,52
South	81,33	92,33
Brazil	82,12	89,66

Gravimetric Characterization of Brazilian MSW

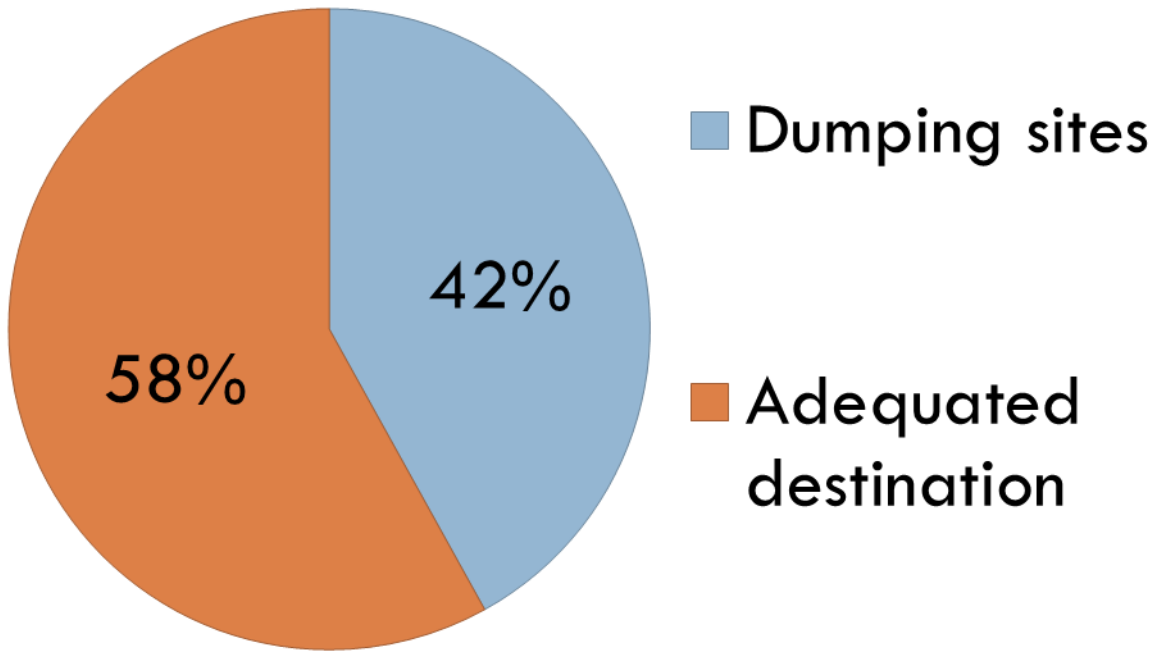
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COMPONENTS	(%)	QUANTITY (1.000T/Year)
Metals	2,9	1.610
Paper, Paperboard and TetraPak	13,1	7.275
Plastics	13,5	7.497
Glass	2,4	1.333
Organic Matter	51,4	28.545
Others	16,7	9.274
Total	100	55.534



Does not include construction & demolition debris and industrial process wastes.

MSW Final Discards (2011)



All dumping sites must be closed in 2014.

LAW 12.305/2010

SOLID WASTE NATIONAL POLICY

(SWNP)

Some bases of the Solid Waste National Policy

Polluter pays principle

Protector-receiver principle

Solid waste management hierarchy

Integrated management plans at different levels

Shared responsibility for products life cycle.

SWNP Wastes Hierarchy

The management and handling of solid wastes should observe the following priority order :

- no generation
- reduction
- reuse
- recycling
- solid waste treatment
- environmentally appropriated final disposal of rejects

SWNP Emphasys on solid wastes integrated management plans

- National Plan
- State Plans
- Regional Plans
- Intermunicipal Plans

Application of spending power by Federal Government

The development of Solid Waste Integrated Management Plans by Municipalities and States is a condition to access resources from the Federal Budget or Federal Banks.

Conditions to have priority to access Union funds follows:

States should set up microregions (agregating municipalities for the joint management of solid wastes)

Municipalities should adopt the joint management of solid wastes by intermunicipal consortium or adopt voluntarily a microregional plan

Municipalities should organize the selective collection with the participation of cooperatives and other forms of association of waste pickers

THE LOGISTICS REVERSE SYSTEM (LRS)

Reverse Logistics System - RLS

Instrument of economic and social development characterized by a set of actions, procedures and means to facilitate the collection and return of SW to the industry, to reuse in your cycle or other production cycles, or to other environmentally appropriate disposal.

It is characterized as a service of general economic interest.

Solid wastes legally requiring RLS

The following wastes require the design and implementation of RLS, independently of SW management public service, ensuring the return the products after use:

I - pesticides, their waste and packaging;

II - batteries;

III - tires;

IV - lubricating oil, waste materials and packaging;

V - fluorescent , sodium vapor and mercury mixed light lamps;

VI - electronic products and their components.

By **regulations** or **sectoral agreements** and **terms of commitment**, it is possible to extend the RLS to products sold in plastic, metal or glass packaging, and to other products and packaging.

Shared Responsibility (SR)

Shared Responsibility is the set of individualized and articulated assignments related to products lifecycle due by:

- manufacturers,
- importers,
- distributors and traders,
- consumers and
- municipalities

in order to minimize the volume of waste and rejects generated, as well as to reduce the impacts to human health and environmental quality.

Manufacturers, importers, distributors and retailers responsibilities

Investment in the development, manufacture and marketing of products that:

- a) are able to re-use, recycle or otherwise to be environmentally sound disposed;
- b) the manufacture and use generate the smallest possible amount of RS.

Dissemination of information on ways to prevent, recycle and dispose of SW.

Collection of products and residual waste after use, and the subsequent appropriated disposal.

Commitment to take part of the actions contained in the municipal solid wastes integrated management plan.

Consumers responsibilities

Consumers are responsible to adequately separate and pack the wastes and make them available to be collected or carry them to a drop-off facility.

Responsibilities relating to packaging

The packaging must be manufactured with materials that facilitate the reuse or recycling and should be:

- I - restricted in volume and weight to the dimensions required to protect the content and marketing of the product;
- II - designed in order to be reused;
- III - recycled, if reuse is not possible.

It is responsible for the care of this article whoever:

- I - manufactures packaging materials or supplies for the manufacture of packaging;
- II - puts into circulation packaging material for manufacturing packages or packaged goods at any stage.

Tasks of business sector

Implement procedures to purchase products or packaging materials from selective collection;

Provide delivering stations for reusable and recyclable waste;

Acting in partnership with the organization of collectors to obtain material benefit arising from plastic, metal, glass and other packaging.

Reverse logistics systems alternative implementation tools

SECTORAL AGREEMENTS	REGULATIONS	TERMS OF COMMITMENT
<p>Contract between the Public Authority and the manufacturers, importers, distributors or retailers.</p>	<p>Decree edited by the Executive.</p>	<p>Established between the Public Power and the manufacturers, importers, distributors or retailers.</p>

Development of sectoral agreements

These actors may participate in the development of sectoral agreements:

- National, State or Municipal Governments;
- Manufacturers, importers, distributors and dealers;
- Cooperatives or associations of waste pickers;
- Industries or entities dedicated to reuse, treatment and recycling;
- Consumer protection entities.

A sectoral agreement covering a smaller geographic area may extend, but not reduce the environmental protection measures contained in the sectoral agreements with larger area.

The waste pickers in the reverse logistics system. A Brazilian peculiarity

The insertion of waste pickers organizations in the productive chain (generation of employment and labor income) can occur in the selective collection but also in the stage of materials processing that is responsible for the production of secondary raw materials to the consumption of the national recycler industry.

The waste pickers in the reverse logistics system. A Brazilian peculiarity

In 2010 the Federal Government established the Pro-Waste Picker Program in order to improve working conditions and opportunities for social and economic inclusion of collectors organizations, recognizing them as economic agents.

RLS Management

A managing nationwide entity shall be created for implementation of RLS in national and regional levels. This entity should be established under private law, and its decisions shall be taken by consensus between government, business and community, without prejudice to the waste pickers organizations.

System funding

Considering the different degrees of responsibility, each actor of the business subsystem must pay a fraction of the cost of deployment and maintenance of RLS, according to their level of intervention in the productive cycle and compatible with the material under his responsibility.

This contribution should be permanent and the management entity will promote its due application under supervision of its board.

System funding

Units of the Federation shall grant exemption and reduction of rates or other possible forms of tax breaks to encourage the reintegration of material capable of recycling and products and post-consumer packaging in the supply chain, editing specific laws.

The States, the Federal District and the Municipalities are authorized to give tax relief to stimulate the reintegration of the material concerned in the production cycle.

Modeling RLS

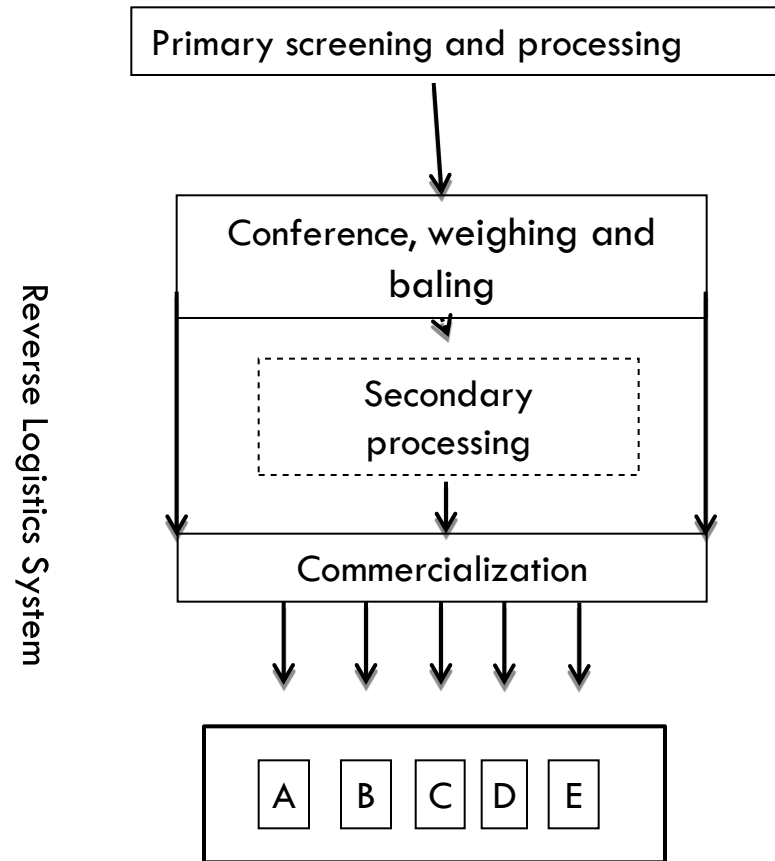
RSL modeling must:

- take into account the advantages of regionalized solid waste management.
- look for the ability to produce a real territorial logistics mobilizing the economic, social, political and cultural resources.
- provide sufficient flexibility to cope with efficiency the needs of processing, storage, and redistribution of materials extracted from solid waste, and the required transportation.
- The reverse logistics must be performed by manufacturers, importers, distributors and dealers in the proportion of the products and packaging they place on the market.

RLS activities

The steps of RLS activities consist of screening and primary processing of SW, conference and scale, secondary processing (for some productive sectors) and marketing of secondary raw materials.

Depending on the location aspects of the recycling plants, transportation costs and selling prices, the benefited raw material needs to be stored before it is marketed.



RLS Local facilities

At the local level the operational model for the implementation of selective collection should follow the *Municipal Plans*. However, the Federal Government highlights drop-off facilities. The holder of the public service that, by agreement or sectoral agreement signed with the business sector, take charge of activity responsibility of manufacturers, importers, distributors and retailers, should be properly remunerated by the development of these activities.

Regional facilities

The storage of materials screened and benefited in Primary Screening and Processing Sheds (SSP) will require the deployment of conference, scale and secondary processing central facilities.

These central units should be adequately equipped with the necessary technical capability to receive the materials previously segregated and store them for a minimum period of three months.

IMPLEMENTING THE REVERSE LOGISTICS SYSTEM FOR GENERAL PACKAGING

Steering Committee for Implementation of RLS

A Steering Committee was installed by the Federal Government in 2011, aiming to establish the rules for the return of waste to industry.

A Technical Advisory Group was also established and five Technical Thematic Groups are working since last May on the design of the Reverse Logistics Systems for the five chains identified as priorities.

Disposal of drugs and medicines

Packaging in general

Packaging of lubricating oils and their residues

Electric and electronic appliances and equipments

Fluorescent, sodium vapor, mercury and light mixed lamps

General packaging

The packaging sector is a priority to implement reverse logistics system by legal provision, indeed because it is one of the largest generators in volume of waste that is disposed of improperly in the country.

This Technical Thematic Group is coordinated by the Ministry of Environment.

It aims to develop a modeling approach of reverse logistics for packaging in general (excluding packaging of pesticides and lubricants), to prepare the Call for proposals about a Sectoral Agreement and to give technical support in the relevant decisions to the theme.

Producers and consumers

Producers

The producers of products and packaging are distinguished between those who produce or import raw material for the manufacture of products and packaging, those who produce or import semi-finished products and those that produce empty containers.

Consumers

Consumers are the users of products and packaging, dealers, distributors, bottlers and importers of filled containers.

Calling proposals for packaging RLS

The Federal Government has launched last July a call for proposals for the development of a Sectoral Agreement for implementation nationwide of packaging RLS. January is the deadline for the presentation of proposals.

This Sectoral Agreement shall cover packaging that make up the dry fraction of MSW or equivalent, except those classified as dangerous.

This Sectoral Agreement is expected to be drawn up with the participation of the business sector, the waste pickers, the recyclers, consumer representatives and the federal, state and municipal governments.

Some critical aspects to reflect about

Are the municipalities technically and institutionally prepared for the challenge of setting the reverse logistics of packaging?

The packaging RSL implementation will start by the metropolitan regions. Will the incipient regionalization of solid waste management works as expected?

Waste pickers organizations are able to deal with the important role designed to them?

Is the business sector willing to pay the costs of a universal selective collection and of the packaging processing and returning to industry?

THANK YOU!

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