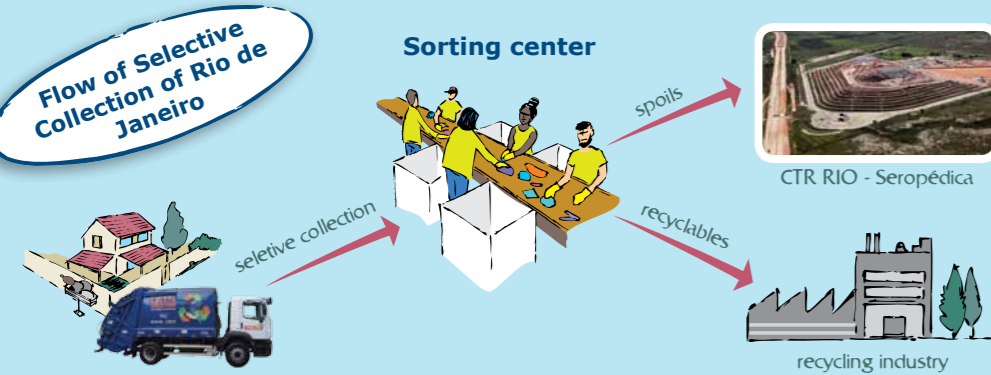


SELECTIVE COLLECTION PROGRAM

Selective collection of recyclables: collection of recyclable materials (paper, plastic, metal, glass and others) that should not be mixed with organic waste (food waste) and hazardous waste (piles / batteries, fluorescent lamps, medicine and others).

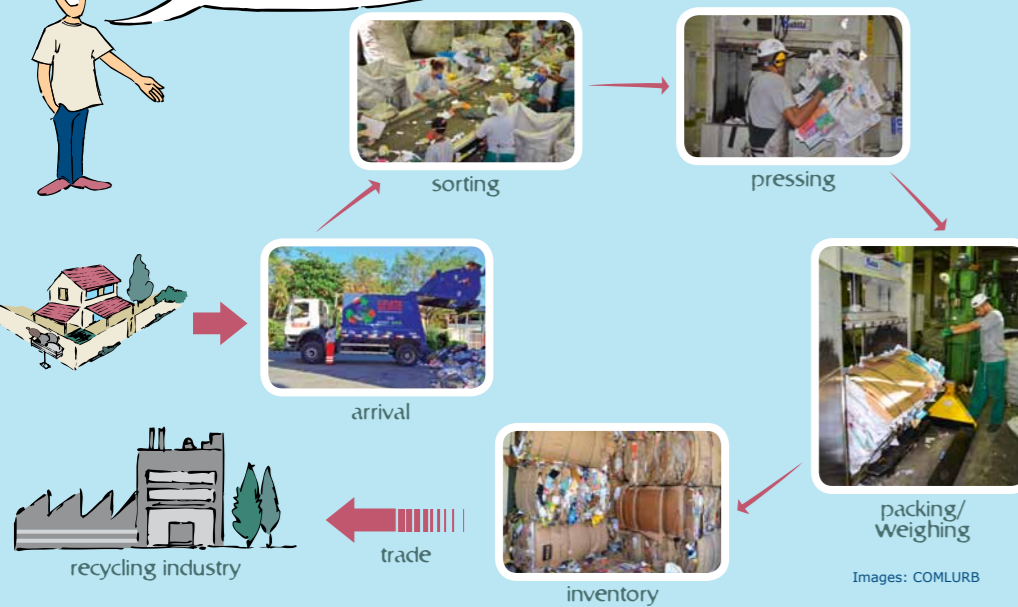
The municipal selective collection, performed door to door in the main highways of 113 of 160 neighborhoods of the City, reached 17.400 tons in all the year of 2014.



The **sorting centers**, constructed and equipped by the partnership of PCRJ / BNDES, are operated by cooperative pickers and receive the recyclables of the selective collection (held by the COMLURB).



HOW DOES A SORTING CENTER WORK?



For the days and locations of selective collection in your neighborhood, visit the Comlurb site: www.rio.rj.gov.br/web/comlurb/

INCENTIVES FOR THE RECYCLING PRODUCTION CHAIN

To stimulate the recycling production chain, the Permanent Sector Chamber of Solid Waste Management of the Municipal Council of Environment (CONSEMAC) proposed regulatory frameworks, such as:

✓ The mandatory use of recycled artifacts from waste of civil construction that works for the municipal public administration (Municipal Decree nº 33.971/2011);



✓ The mandatory use of asphalt mixtures containing useless rubber of pneumatics in the surface of municipal routes and highways (Municipal Decree nº 34.873 /2011);



✓ Proposal of tax exemption of IPTU (Urban Real State Tax) for the companies destined to the processing/reclamation of recyclables from waste generated in the City.

HOW TO CONTRIBUTE TO THE PROPER DISPOSAL OF THE WASTE?

The proper disposal begins with you!

Remember to ask at the time of the purchase of a product if the **store** has a delivery point for disposal. The **manufacturer** can also guide you!

WHAT IS REVERSE LOGISTIC?

Return the waste to the production lifetime, through the collection and disposal to the industry sector. Manufacturers, importers and stores of certain products have a shared responsibility for the product lifetime, regulated by Sectorial Agreements.

For more information, visit: www.snir.gov.br

Waste of Reverse Logistic

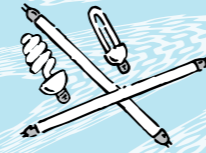
- ✓ pesticides
- ✓ piles and batteries
- ✓ tyres
- ✓ lubricating oils
- ✓ fluorescent lamps, sodium vapor lamps, mercury lamps and mixed light lamps
- ✓ electronic products



WHERE TO DISPOSE THE WASTE?

Some stores have already stepped forward to Sectorial Agreements and provide delivery points for disposal of products.

Pay attention to the disposal guidelines on the labels!



Fluorescent lamps:

Delivery points in the city of Rio de Janeiro are planned for the year 2015 (SECTORIAL AGREEMENT on fluorescent lamps, published on 27/11/2014). Some stores already offer delivery locations.

Accesse o Acordo Setorial em: www.snir.gov.br

Piles/Batteries:

Delivery points in the city of Rio de Janeiro are planned for the year 2015 (SECTORIAL AGREEMENT on fluorescent lamps, published on 27/11/2014). Some stores already offer delivery locations.



Electronic products:

Some shops already have delivery points for disposal. Ask at the time of purchase.



Medicines:

Hospitals, health centers, pharmacies and drugstores can receive these materials. Ask at the time of purchase.



Vegetable Oil used:

- Program of Reuse of Vegetable Oils in the State of Rio de Janeiro (PROVE). Tel (21) 2334-5902, or by e-mail: Prove@ambiente.rj.gov.br

- Project Light Recicla offers ecopoints for delivery of recyclable materials in exchange for discounts on their electricity bill. Just visit the nearest ecopoint to your home.

Visit: www.light.com.br

CALL CENTER FOR CITIZENS 1746

Pruned tree branches and unserviceable assets:

Free collection of COMLURB. More information, see the procedures to be followed in the COMLURB website: www.rio.rj.gov.br/web/comlurb



Civil Construction Waste

Small works on home renovation (up to 150 bags of 20 liters): Free collection of COMLURB. See the procedures to be followed in the COMLURB website above.

Larger quantities: provide a particular collection service (Caçamba Legal). See the list of registered companies in the COMLURB website above.

Works subject to environmental licensing: Must meet the Resolution SMAC nº. 519, of 08/21/2012, which stipulated the Waste Management of the Civil Construction - PGRCC. Access the list of licensed companies for processing or disposal to Waste Construction:

www.rio.rj.gov.br/web/smac/licenciamento

Pass this information forward!
EXERCISE YOUR CITIZENSHIP



SMAC/CRS - 2015

COORDINATION OF SOLID WASTE

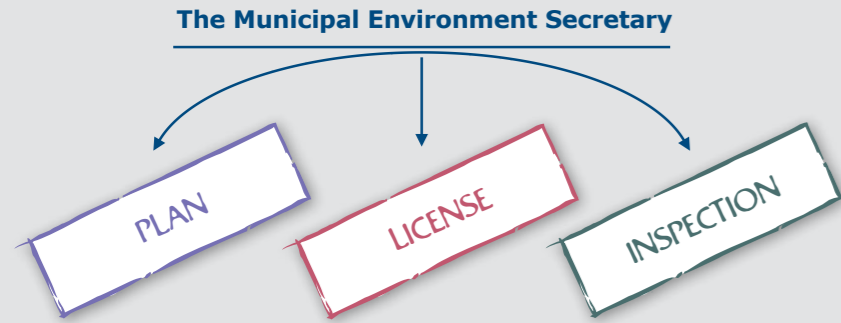
www.rio.rj.gov.br/web/smac/residuos-solidos

MUNICIPAL ENVIRONMENT SECRETARY
COORDINATION OF SOLID WASTE

MANAGEMENT OF SOLID WASTE IN THE CITY OF RIO DE JANEIRO



The **Municipal Environment Secretary (SMAC)** is the central body of the Municipal Environmental Management System. It operates, mainly, in the environmental license and inspection of potentially polluting activities. One of its specific objectives is to promote the integrated management of solid waste from the city of Rio de Janeiro.



Created in 2009, the **Coordination of Solid Waste (CRS)**, among its duties, plans, coordinates and implements actions for a properly waste management, in partnership with others government agencies and external entities. It is also significant the partnership with the Municipal Urban Cleaning Company (COMLURB), competent municipal body that manages the system of Urban Cleaning of Rio de Janeiro.

QUANTITY. ORIGIN AND COMPOSITION OF MUNICIPAL SOLID WASTE IN THE CITY OF RIO DE JANEIRO IN 2014

QUANTITY OF WASTE

Daily generation of municipal solid waste:
9.227 tons
(about 28 occupied soccer stadiums/year)

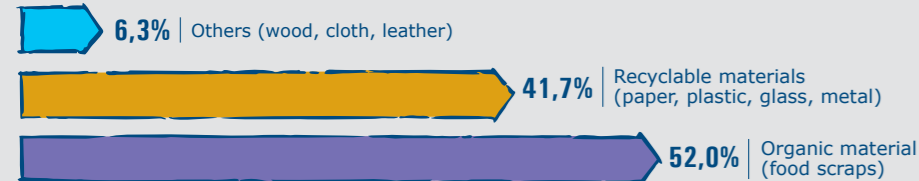
Each inhabitant of Rio de Janeiro generates per day:

- ✓ 1,43 kg, considering the total waste of the city
- ✓ 0,76 kg, considering only domestic waste

ORIGIN OF WASTE



COMPOSITION OF DOMESTIC WASTE



Fonte: COMLURB

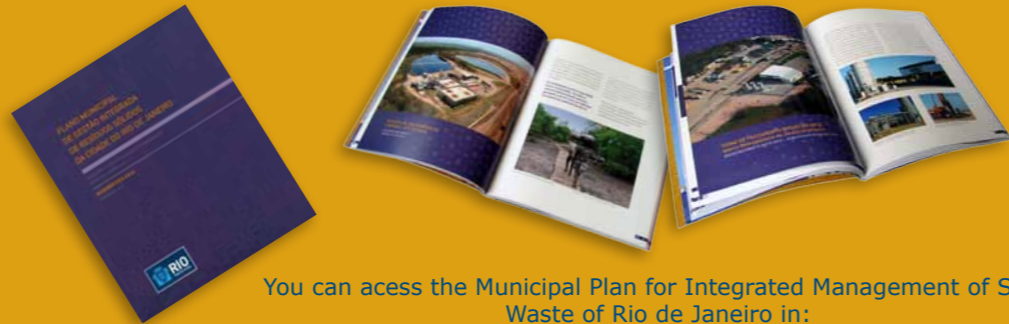
How to plan, in an integrated way, the reduction, collection, transportation, treatment and proper final disposal of the waste?

MUNICIPAL PLAN OF INTEGRATED MANAGEMENT OF THE SOLID WASTE OF RIO DE JANEIRO

The planning document for the integrated management of solid waste contains goals of reduction, reuse, selective collection and recycling for the Solid Waste. It has a perspective of 20 years and is subject to reviews every four years.

Fonte: Lei Federal 12.305/2010

The Municipal Decree nº 37.775 of 10/10/2013 instituted the waste management plan for the Rio de Janeiro city according the scenario of June 2012, considering the waste disposal alternatives in operation and including information about the environmental treatment systems maintained after closure of Gramacho and Bangu landfills. It is part of the Environmental Sanitation Plan of Rio de Janeiro city (PMSB-AE), established by the Municipal Decree nº 34.290/2011.



You can access the Municipal Plan for Integrated Management of Solid Waste of Rio de Janeiro in:

www.rio.rj.gov.br/web/smac/residuos-solidos

What is the disposal of the solid waste of the Rio de Janeiro city?

CTR-RIO, AT SEROPÉDICA



The Waste Treatment Center CTR-Rio, at Seropédica, opened on April 2011, operated by Ciclus, receives all waste generated in the city of Rio de Janeiro.

This center was built to allow the closure of Gramacho and Bangu landfills. Beyond the waste of the City, the center also serves to receive the waste of the municipalities of Itaguaí and Seropédica, and is able to receive other municipalities waste.

The waterproofing system of the cells of the landfill, composed of triple layer of waterproofing, done with reinforced blankets of high density polyethylen (PEAD), layers of compacted clay and a sensor network connected to software that indicates leakage are the major technologies used by CTR. The biogas, result of waste decomposition and rich in methane, is transformed into CO2 through incineration in a burner (flare), reducing the emission of greenhouse gases.



CTR-Rio. at Seropédica (Source: COMLURB, 2013)

JARDIM GRAMACHO METROPOLITAN LANDFILL



Considered the biggest landfill of Latin America, the JARDIM GRAMACHO METROPOLITAN LANDFILL (AMJG), located in Duque de Caxias city, was definitive closed on June 2012. The closed AMJG maintains in operation the system of leachate treatment, in addition to environmental and geotechnical monitoring during, at least, 10 more years. The biogas, generated by the landfill, undergoes a purification plant and is used by the Refinaria de Duque de Caxias - REDUC as energetic replacement of the natural gas. The exploration of the biogas also reduces emissions of greenhouse gases into the atmosphere.



1 - Plotting of the gas pipeline supply of purified biogas for REDUC (in operation)
2 - Biogas purification Plant of AMJG

Image: COMLURB

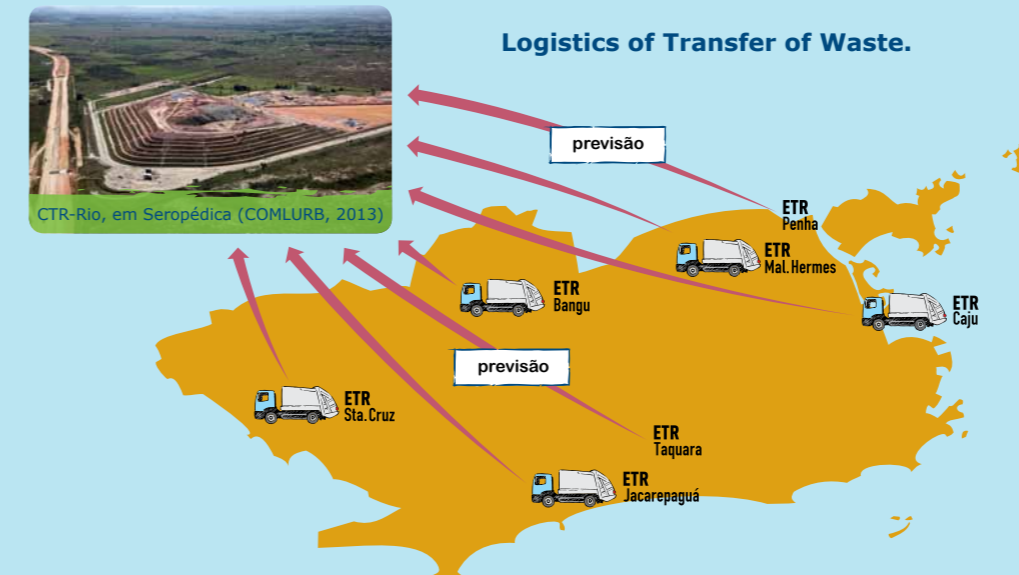
BANGU LANDFILL



Located in Gericinó, this landfill closed the receipt of domestic waste on April 2014, as required by National Policy on Solid Waste (Federal Act nº 12.305/2010) that stipulated the closure of the landfills until august 2014.

LOGISTICS OF COLLECTION AND TRANSFER OF WASTE

The Waste Transfer Stations (ETRS) are responsible for receiving waste from domestic collection and urban cleaning and its transfer to vehicles with better transport capacity in order to optimize the disposal system for CTR-Rio, at Seropédica. The ETRS Caju, Jacarepagua, Marechal Hermes, Santa Cruz and Bangu are operating to meet the waste disposal for the CTR- Rio. There are also plans for the future operations of the ETRS of Taquara and Penha.



WASTE FROM HEALTH SERVICES

The Resolution CONAMA nº 358/2005 and the RDC 306/2004 determine that it is for generators of health services waste their management, from generation to final disposal. The waste, that can present risks from the municipal health services (hospitals and clinics), are collected by municipal service and sterilized, before it is sent for final disposal in CTR-Rio, at Seropédica.



Transportation Waste from Health Service



Collection Waste from Health Service

Images: COMLURB

ACTIONS FOR COMMUNITIES

In this regard, Comlurb adapted equipment and vehicles to reach difficult access areas, contributing to urban sanitation and quality of life, important aspects of redevelopment projects in these communities.



Equipment and vehicles to reach difficult access areas

Images: COMLURB

Through articulation with the municipal management bodies, the private sector, social organizations and residents, the SMAC supports projects that among other benefits, strengthen the segregation of recyclable, reducing the amount of waste to be collected. As an example, there is the project Light Recicla, started in 2011. This project enables the exchange of recyclable by rebate on electricity bill amount, and has received since the beginning of 2011 until July 2015, 5,891 tons of recyclable material, benefiting 13.279 customers.



Light Recicla Project