

ACCUMULATED GARBAGE IN THE CITY OF PARANA:

ANALYSIS OF THE IMPLEMENTATION OF A MATERIAL RECYCLING FACILITY
(MRF)

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- Civil Engineering Department
- Facultad Regional Paraná,
Universidad Tecnológica Nacional
- Inglés I
- 2023

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INTRODUCTION

- **PARANÁ**

The Capital City of Entre Ríos

- **SURFACE**

137 Km²

- **INHABITANTS**

391,696 (2022 CENSUS)



PARANÁ

INTRODUCTION

**OBJECT OF
STUDY**

**GARBAGE
ACCUMULATION**

A large pile of garbage, including plastic bags, cardboard boxes, and various debris, illustrating the subject of the study. The image shows a significant accumulation of waste, with several large white plastic bags and cardboard boxes being the most prominent items. There is also a lot of smaller trash, including what looks like a green can, a white container, and various pieces of paper and plastic. The background is a plain, light-colored wall, suggesting an outdoor or semi-outdoor setting like a street or a public area.

INTRODUCTION

MAP OF THE PRESENTATION

- **Description of the context**
- **Statement of the problem**
- **Causes of the problem**
- **Consequences of the problem**
- **The solution to the problem**
- **Strengths and weaknesses of the proposal**

PROBLEM DEFINITION AND ANALYSIS

LACK OF EFFICIENCY IN
MAINTENANCE

CONTEXT



ACCUMULATED GARBAGE

PROBLEM DEFINITION AND ANALYSIS

DESCRIPTION OF SCENES
THAT HELP PICTURE THE
PROBLEM



Garbage in downtown center of Paraná

PROBLEM DEFINITION AND ANALYSIS

DESCRIPTION OF SCENES
THAT HELP PICTURE THE
PROBLEM



Contamination of the Beaches in Paraná

PROBLEM DEFINITION AND ANALYSIS

DESCRIPTION OF SCENES
THAT HELP PICTURE THE
PROBLEM



Open-air landfill

PROBLEM DEFINITION AND ANALYSIS

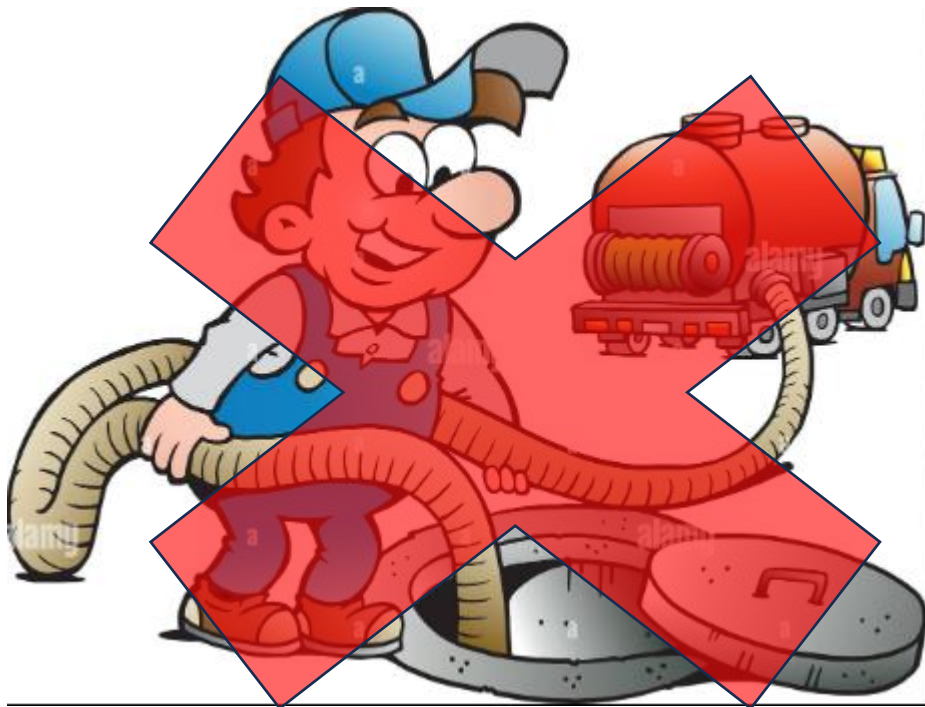
CAUSES OR FACTORS THAT GIVE
RISE TO THE PROBLEM



- 1) Increase in population
density of people
Little control of garbage
in the streets

PROBLEM DEFINITION AND ANALYSIS

CAUSES OR FACTORS THAT GIVE
RISE TO THE PROBLEM



2) Lack of maintenance
in streets, drains and
sewers

PROBLEM DEFINITION AND ANALYSIS

CAUSES OR FACTORS THAT GIVE
RISE TO THE PROBLEM



3) Improper management
of collected garbage

PROBLEM DEFINITION AND ANALYSIS

CONSEQUENCES



- 1) Impact on the health of people, animals and other living beings around urban garbage dumps

PROBLEM DEFINITION AND ANALYSIS



CONSEQUENCES

2) Traffic interruptions.
Obstruction of drains and
sewers



PROBLEM DEFINITION AND ANALYSIS

CONSEQUENCES



3) Burning garbage significantly affects the environment. Both in urban areas and also in rural areas

PROBLEM APPROACH

THE SOLUTION TO THE
PROBLEM

- ✓ Implementation of a garbage treatment plant utilizing MRF (Material Recovery Facility) technology.

PROBLEM APPROACH

THE SOLUTION TO THE
PROBLEM

STAGES

✓ Discharging recyclable materials
into a feed hopper

✓ Separation mechanical and
manual waste disposal, with
reclaimers removing bulky waste

✓ Classification of materials, using
automatic separators, with non-
classifiable materials compacted
and sent to landfill

PROBLEM APPROACH

THE SOLUTION TO THE
PROBLEM

ADVANTAGES

- ✓ Semi-automatic installation to receive, classify and prepare collected dry materials
- ✓ Increased processing capacity and improves working conditions
- ✓ Capacity to process approximately 120 tons per day

PROBLEM APPROACH

THE SOLUTION TO THE
PROBLEM

DISADVANTAGES

✓ Energy needs

✓ Material contamination

✓ Investment cost

PROBLEM APPROACH



Recycling plant in Barracas, Buenos Aires

Conclusion



Poor garbage management is a big problem in Paraná. This work highlights the broad impacts of waste, offering specific examples to contextualize the situation.

REFERENCES

- [1] "Provincia de Entre Ríos", es.wikipedia.org https://es.wikipedia.org/wiki/Provincia_de_Entre_R%C3%ADos (accessed July 4, 2023).
- [2] Google, "Google Maps location of Paraná, Entre Ríos." Accessed: July, 04, 2023. [Online]. Available: <https://www.google.com/maps/@-31.7148493,->
- [3] "Contenedores desbordaron de basura en Paraná", ahora.com.ar
- <https://ahora.com.ar/sociedad/por-el-paro-contenedores-desbordaron-basura-parana-n5331694> (accessed Oct. 18, 2023)
- [4] "La bajante del Río Paraná deja al descubierto la contaminación", www.elmiercolesdigital.com.ar
<https://www.elmiercolesdigital.com.ar/la-bajante-del-rio-parana-deja-al-descubierto-la-contaminacion/> (accessed Oct. 18, 2023)
- [5] "El Volcadero , donde la gente vive del reciclado de la basura en Paraná, Argentina", cnnespanol.cnn.com
<https://cnnespanol.cnn.com/video/volcadero-gente-vive-de-la-basura-parana-argentina-pkg-belen-bustamante/> (accessed Oct. 18, 2023)
- [6] "Reciclaje: ya funciona en Saavedra la tercera planta de tratamiento de residuos secos de la Ciudad", observatorioamba.org
<https://observatorioamba.org/noticias-y-agenda/noticia/reciclaje-ya-funciona-en-saavedra-la-tercera-planta-de-tratamiento-de-residuos-secos-de-la-ciudad#:~:text=Mediante%20la%20implementaci%C3%B3n%20de%20una,luego%20ser%20reutilizados%20o%20comercializados.> (accessed Oct. 19, 2023)
- [7] "Reciclado: inauguran una nueva planta para los residuos del Norte de la ciudad" www.lanacion.com.ar
<https://www.lanacion.com.ar/buenos-aires/reciclado-inauguran-nueva-planta-residuos-del-norte-nid2279871/> (accessed Oct. 18, 2023)



THANK YOU!



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