



CLIMATE AND CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

SEMARNAT



SECRETARÍA DE
MEDIO AMBIENTE Y
RECURSOS NATURALES

Querétaro, México

National Institute of Ecology
and Climate Change (INECC)

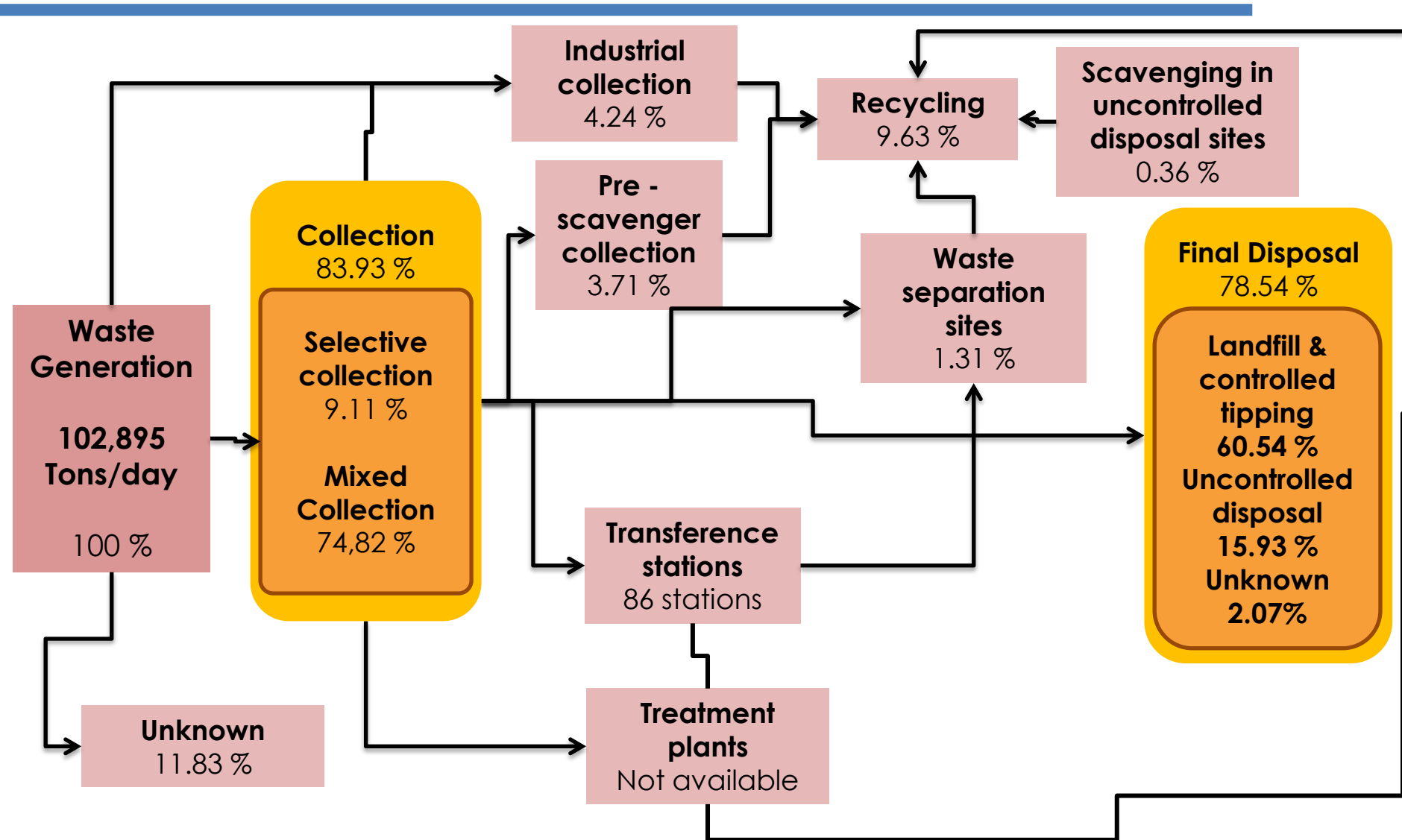
Natalia Reyna Bensusan

INECC

INSTITUTO NACIONAL DE

ECOLOGÍA Y CAMBIO CLIMÁTICO

Waste management operations in Mexico

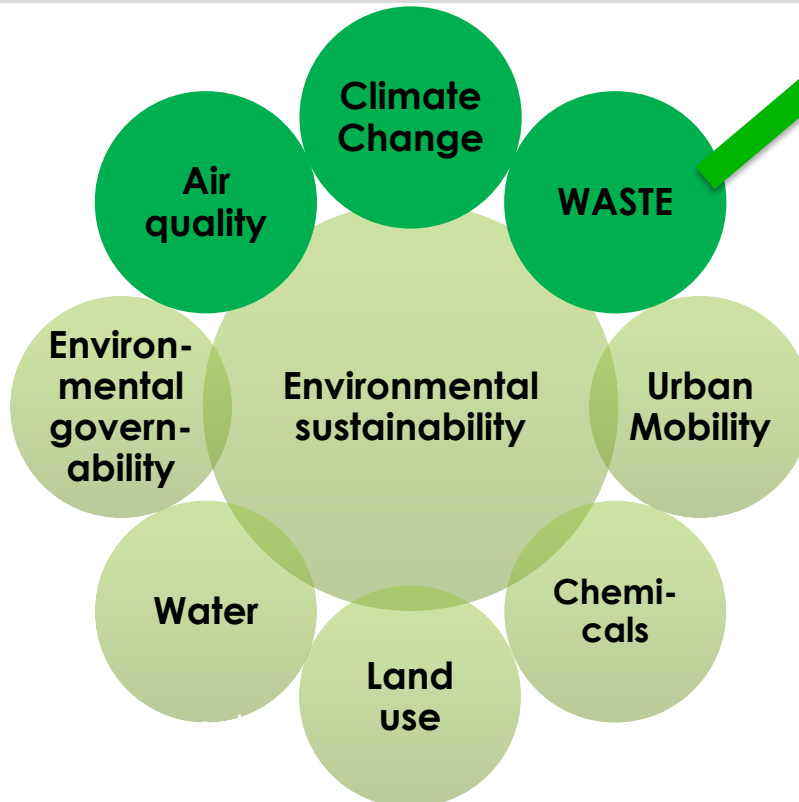


INECC's Sustainable Cities Project

1. Assessment of environmental performance (set of indicators) for medium-sized cities: initial phase completed for two cities (Aguascalientes and Querétaro)
2. Public policy recommendation to address main environmental problems in Querétaro (including SWM)

INDICATORS FOR WASTE

1. Waste final disposal (%)
2. Separation of recyclables (%)
3. Waste recycling (%)

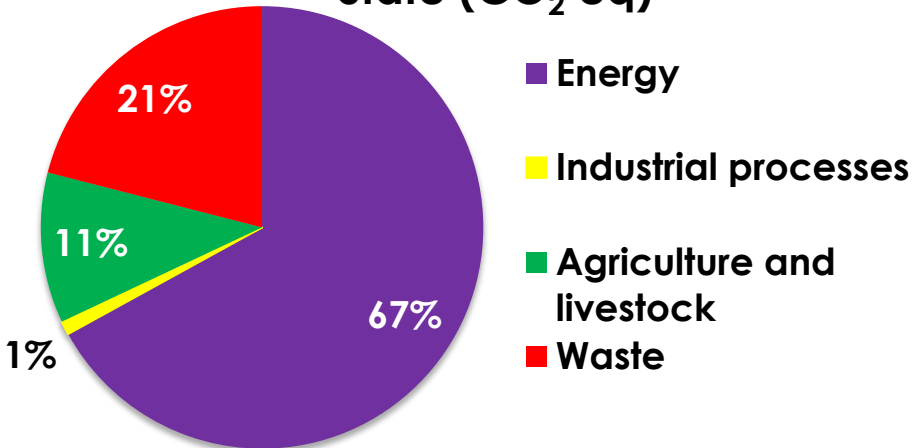


NEXT STEPS FOR SLCP RESEARCH

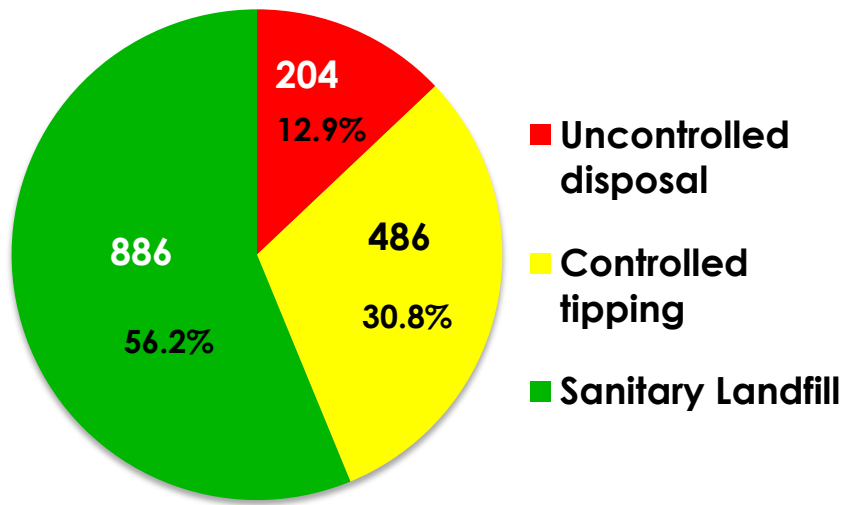
1. Integrate new indicators to assess black carbon and methane from **MSW**, wastewater treatment plants and diesel transport in Queretaro.
2. Creation of a **policy alternatives toolkit** to reduce black carbon and methane emissions in Queretaro

Waste management operations in Queretaro

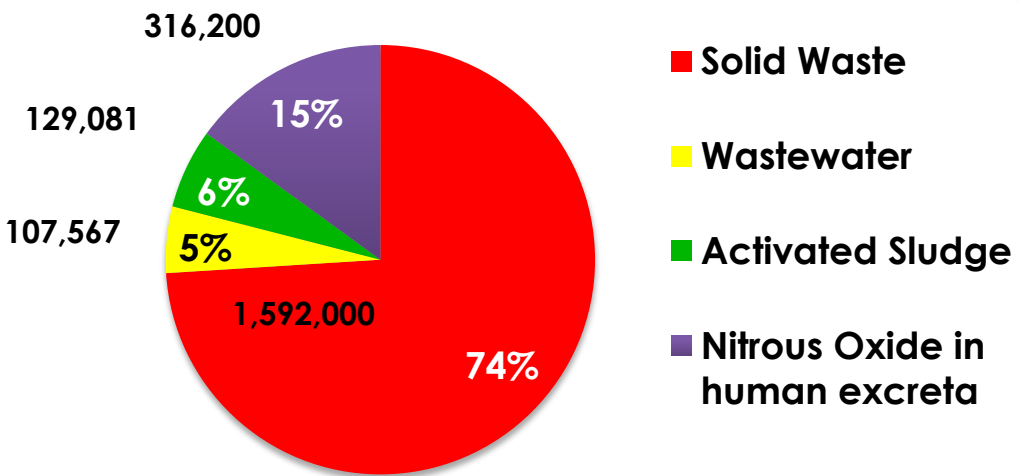
GHG emission sources in Queretaro State (CO₂ eq)



Type of waste disposal sites in Querétaro State (Tonnes/day)

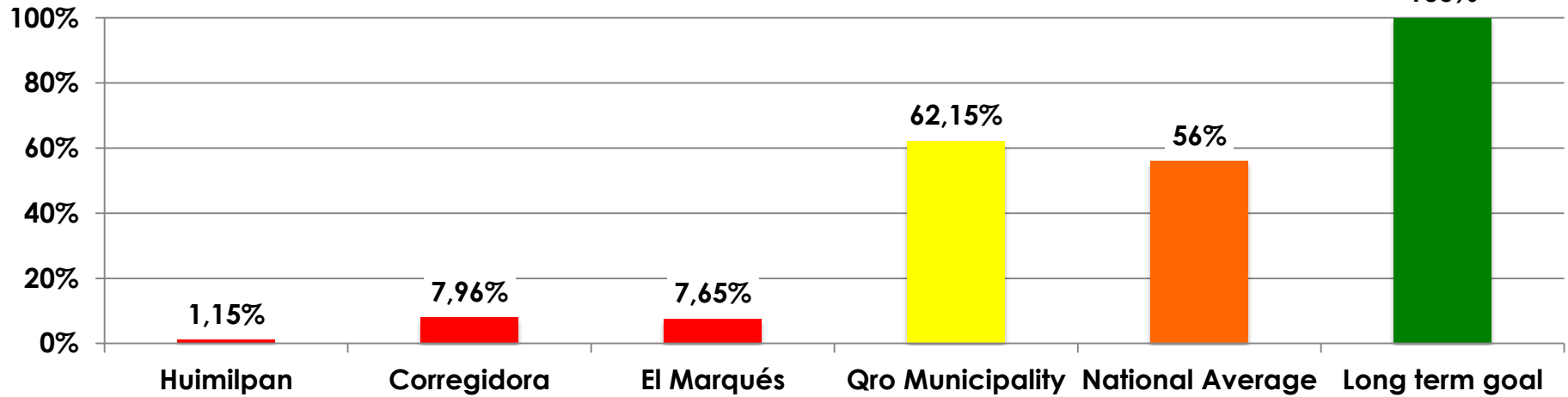


GHG emissions from waste in Querétaro State (Tonnes of CO₂)

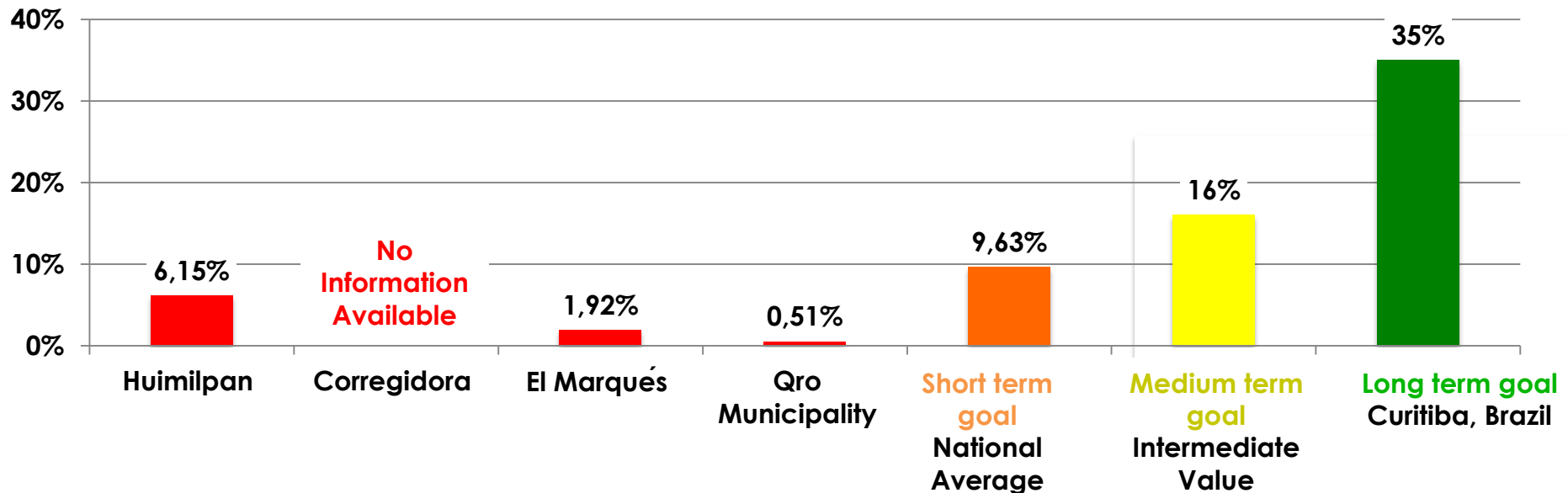


Waste management operations in Querétaro

Final Disposal in Querétaro City



Waste Recycled in Queretaro City



Local challenges of the MSW sector in Queretaro

- **Fulfill waste regulation** requirements for landfills and controlled tipping sites in peri-urban areas.
- Federal funding to **improve management in peri-urban areas**
 - Perform an assessment of the final disposal sites.
 - Finance the process to fulfill waste regulation requirements.
- **Thorough implementation** of the Integral Waste Prevention and Management Programme
- Viability of establishing a **tariff** for waste collection services.
- Waste assessment in Queretaro City: Designing a **recycling strategy (which technologies?)** and identification of opportunities for the creation of **markets for recycled waste**.
- Exploration of public policy tools that include the **private sector** as an option for waste management in the city.

Success stories in managing SLCPs from MSW: **Bioenergy and separation of waste**

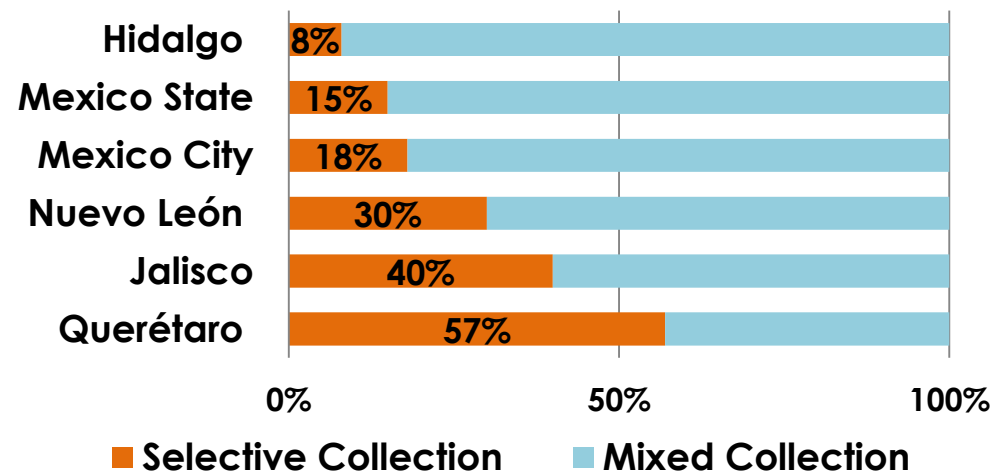
NUEVO LEÓN: Bioenergy

- **First project in Latin America** that recovers biogas from a landfill
- Since **2003**
- Installed generation capacity of **12.72 MW**
- Energy is used for public lightning and the subway
- It has **prevented 85,000 tonnes of methane** emissions (1,800,000 tonnes of CO₂eq)
- **Future Expansion**
 - 120,000 MWh per year to cover 90% of the public lightning of the city.

QUERÉTARO: Recycling

- Since 2005,
- Won the **National Recycling Prize** in 2008
- **Recovers 50 tonnes /day** of recyclables
- 60% of the city participates as well as public schools
- **Reduction by ≈ 27% of final landfill deposits**

Selective collection in Querétaro





Thank you!

natalia.reyna@inecc.gob.mx

SEMARNAT

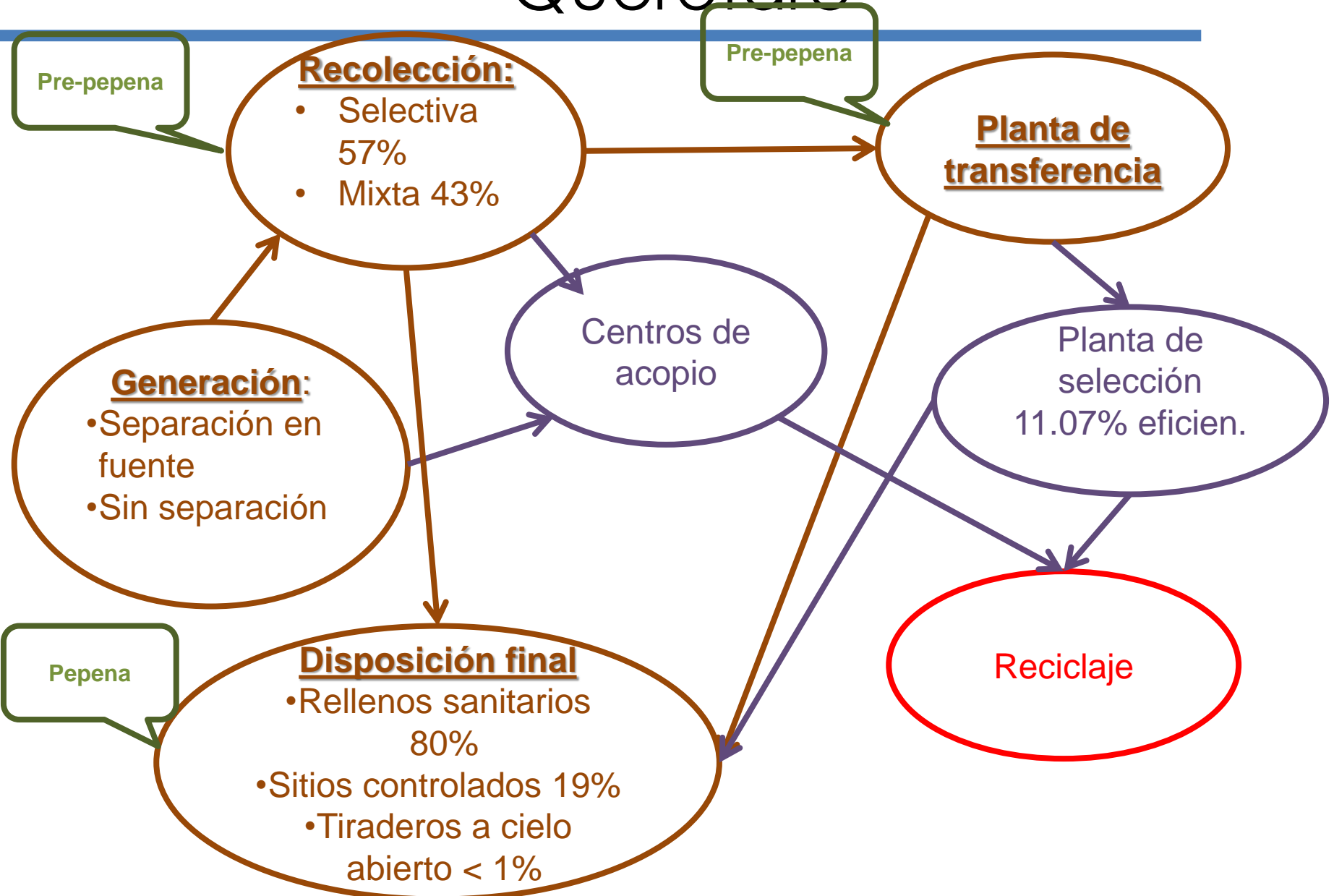


SECRETARÍA DE
MEDIO AMBIENTE Y
RECURSOS NATURALES

INECC

INSTITUTO NACIONAL DE
ECOLOGÍA Y CAMBIO CLIMÁTICO

Waste management operations in Querétaro



Guide for preparing presentation:

- Each presentation is 10 minutes, with 5 minutes afterwards for questions from the audience. We will be keeping very strict time in order to allow everyone the opportunity to present and ask questions.
- The objective is to introduce yourselves to the Municipal Solid Waste Initiative.
- We would like to know:
 - What are your current waste management operations like?
 - Can you describe the responsibilities for waste management in your country?
 - Are there local or regional challenges in the waste sector that you would like to overcome?
 - Do you have success stories in managing SLCPs from your waste sector?
- Please limit your presentation to 6 slides total (excluding the title slide).
- Feel free to use photos and examples!