



“A Municipal Waste Analysis in Mexico’s Southeast Region for GreenHouse Gases (GHG) Reduction”

Arq. Ramón Delgado Aguirre

Southeast region coordinator

ICLEI-Local Governments For Sustainability

Regional Secretariat for the Mexico, Central

America and Caribbean Secretariat

ramon.delgado@iclei.org

What does ICLEI is?

ICLEI- Local Governments for Sustainability

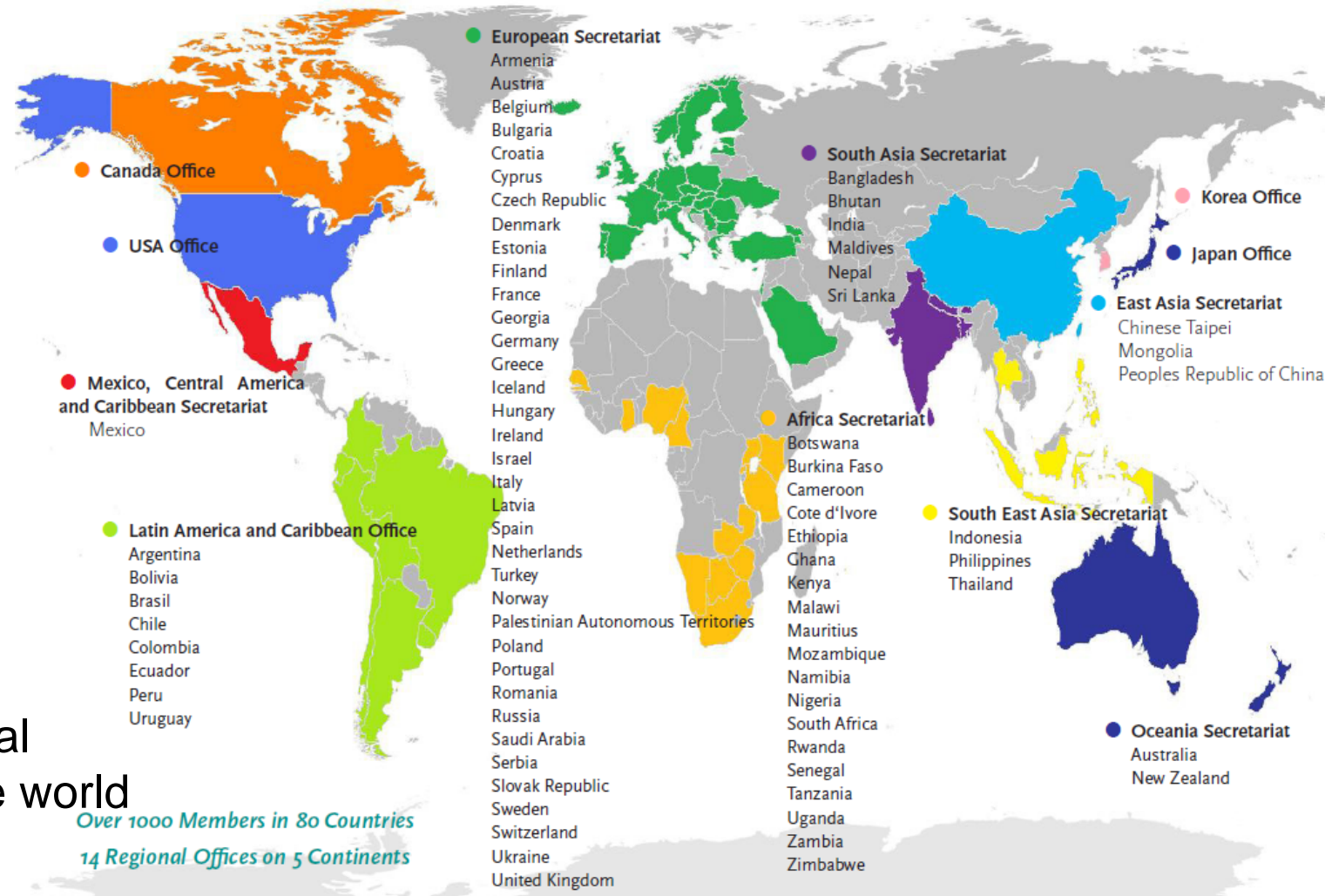
- **International network** working for local sustainability
- A movement that drives cities projects, programs and campaigns for sustainability
- **Founded in 1990** at the UN headquarters in New York
- Introduced the **Local Agenda 21** in 1992 and continues with its dissemination and implementation around the world



Global network of local governments

World Secretariat (Bonn, Germany) and **regional Secretariats** :

- **Mexico, Central America and the Caribbean**
- **South America**
- **Europe**
- **Africa**
- **South Asia**
- **Southeast Asia**
- **Oceania**



+150 collaborators and experts

+1000 members in **80** countries: Cities and local governments around the world

*Over 1000 Members in 80 Countries
 14 Regional Offices on 5 Continents*

What does ICLEI is?

Is the only local governments organization which is **official observer** of the three UN conventions for the sustainable development:

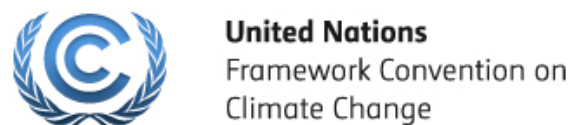
– **Desertification**



– **Biodiversity**



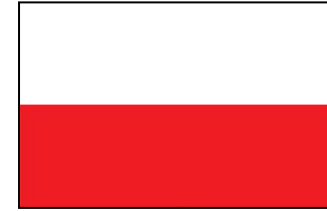
– **Climate change**



ICLEI Mexico partners



Unión Europea



EMBAJADA DE LA REPÚBLICA DE POLONIA
EN MÉXICO



World Bank



Inter-American Development Bank



British Embassy
Mexico City



USAID
FROM THE AMERICAN PEOPLE

ICLEI Technical committee 2010-2013




ICLEI works in areas such as:



Sustainable water management

Agenda 21

Climate Change

Sustainable Tourism







Renewable energies

Integrate waste management




Biodiversity



Energeic efficiency



Smart edification



Sustainable transport



- “A Municipal Waste Analysis in Mexico’s Southeast Region for GreenHouse Gases (GHG) Reduction”
EPA Project <http://www.biogas-iclei.org.mx/>



Analyze the municipal waste generation and its disposal by proposing the bidding basis for the use of biogas as well as recommendations to obtain carbon credits, in order to reduce the open dumps and the greenhouse gases.

● “A Municipal Waste Analysis in Mexico’s Southeast Region for GreenHouse Gases (GHG) Reduction”

<http://www.biogas-iclei.org.mx/>

EPA Project



Financed by the EPA, ICLEI selected 350 municipalities of Chiapas, Oaxaca, Quintana Roo and Yucatan states, as they are the most populated. These municipalities represent almost the 40% of the 2,445 total municipalities in the country.

A survey was realized to find the following information;

States	Municipalities
Chiapas	111
Oaxaca	162
Quintana Roo	9
Yucatán	68
Total	350

- ✓ Volumes and waste percentages by the local governments themselves,
- ✓ Collection systems,
- ✓ Final disposal areas,
- ✓ Separating and recycling actions,
- ✓ Ownership of the site available for the Landfill, and
- ✓ Environmental awareness,

Project objectives

- **Demonstrate and spread the possibility of recovering biogas of the landfill in order to use it as a renewable energy source by using available technology.**
- **Avoid methane and carbon dioxide emissions to the atmosphere.**
- **Implement the legal bidding basis for waste licensing and access to carbon credits using existing resources and local expertise.**
- **Select the pilot municipality to implement the bidding of the biogas for using it as an energy source.**

Expected benefits

- **Improvement of the operation conditions of the landfills**
- **Smells and explosion hazard decrease**
- **Social valoration of the waste management**



Results	
Average waste recolected (tons per day)	90.66
Municipalities with landfills (LF)	23.7%
Shared dumps or landfills with 2 or more municipalities	23.7%
Owned waste disposal area	65.8%
Performed waste separation before disposal	55.3%
Municipalities with landfills under-exploiting methane gas	36.8%
Municipalities who know the emission of methane gas and the potential power generation of landfill	5.3%
Selecting the pilot municipality for implementing the bidding for waste licensing and access to carbon credits	1

● Pilot Municipality

The municipality **Othón P. Blanco** was selected for implementing the bidding basis for landfill licensing and access to carbon credits (in process), because of the following:

- Its landfill characteristics;
- Urban waste volume collected per day (300 ton.) ;
- Organic waste percentage (70%);
- The Town Hall owns the landfill;
- Municipal project for the waste management;
- Municipal project of climate action ;
- They perform activities of care and awareness of the environment;
- Government period.



● Bidding basis; Legal Framework

Federal level

- **Political Constitution of the United Mexican States**
- **General Law of ecological balance and environmental protection**
- **General Law of integrate waste management and prevention**
- **Planning Law**
- **Law of Public Works and Services**
- **Federal Law of Transparency and Access to Public Government Information**



● Bidding basis; Legal Framework

State level

- **State Laws of Public Works and Services**
- **Other State Laws and regulations**

Municipal level

- **Municipal Organic Law**
- **Regulation of Municipal Sanitation Service**

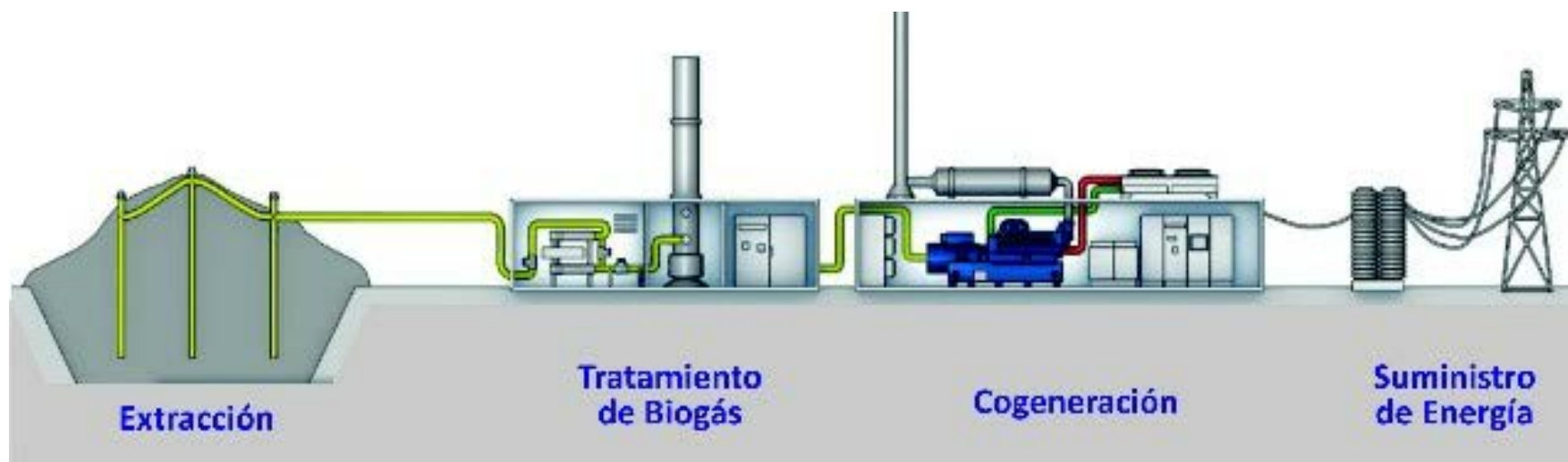
Other regulations

- **Mexican Official Standard 083-SEMARNAT-2003**
- **Municipal development projects**

● Work Bidding

. Public works contracts and related services, are awarded by general rule through public biddings in national or international contests.

- Bidding with project
- Bidding without project (PPA)



Importance of Business Participation in biogas projects:

- **Scarcity of municipalities' resources and utilities to invest directly**
- **Availability of technology for the design, construction and operation of projects.**
- **Long-term project continuity**
- **Investments with long payback periods (15-20 years).**
- **Complexity of mexican standards**
- **Complexity of funding mechanisms**
- **Business focus other than a landfill**

● Bidding without project (PPA)

Project Summary

- **Municipality's landfill concession for using the biogas generated, in order to use it as fuel and/or electric energy generation, as well as registering the Clean Development Mechanism (CDM) with the corresponding agency for the greenhouse gases reduction.**

Installment terms for the concessionaire

- **The concessionaire will be responsible of its expenses, as well as keeping active, as long as the landfill is in use, all governmental authorizations, licenses and permits with the provisions.**

● Bidding without project (PPA)

General Objective

- Design, construction and commissioning of site closure consisting of; Cover System ,Closing System Leachate, Landfill Gas System, Drainage System and Post Closure Maintenance.

Use of the Biogas

- The bidder shall develop a strategy for the use of landfill gas in a way that is compatible with existing methodologies of international markets to reduce emissions.



● Bidding without project (PPA)

Emission reduction

- Get the collection of funds through the sale of GreenHouse Gases reduction.

Quality Management System

- The bidder shall include in its technical proposal the description of a general quality plan and specific plans for the construction, operation, operation and maintenance of the project that meets the requirements of the ISO standards.

Environmental Impact Statement

- The bidder shall prepare and process the Environmental Impact Statement and Risk Study in the terms established by Law

Thanks!!

<http://www.biogas-iclei.org.mx/>

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