Exploring urban low emission development and green growth

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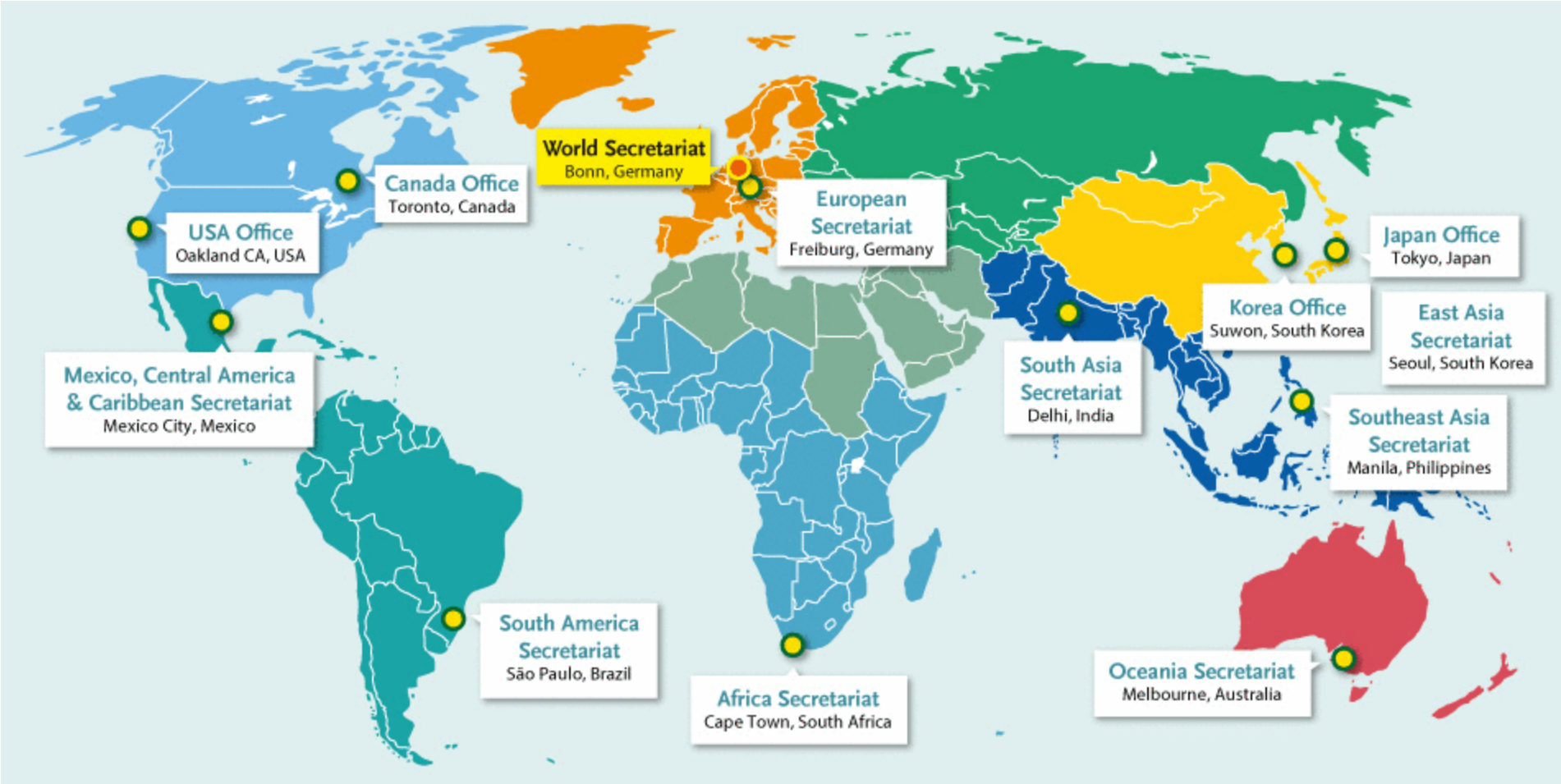
Introducing ICLEI

- **ICLEI - Local Governments for Sustainability** (ICLEI)
- A city network that advances **local sustainability**.
- Established in **1990** in New York **by cities, for cities**.
- **1000+ members** in **86 countries,** representing **660 million people** in mega-cities, super-cities, urban regions, large cities, small and medium-sized cities & towns.
- **Membership organisation -** city peer exchange, advocacy, representation, networking
- **Thematic network** - technical expertise, tools, guidance and support for local governments

ICLEI offices



ICLEI‘s roles

Political

Technical

Exploring inter-connections

Are green growth and low-carbon development connected?

Driving urban energy transition

Reduce it!
Energy savings and efficiency
- Plan in all sectors
- Reduce waste (also energy)
- Mobilise people

Clean it!
Plan, manage and use it
- Renewables
- Clean fuels, green fleets
- Local production, local use
- Waste-to -energy

Control it!
Change behaviour
- Reduce traffic
- Promote cycling & walking
- Offer good public transport

Urban-LEDS project

Definition:

Urban Low Emission Development Strategies – defined as a pathway to transition a community to a low-emission, green and inclusive urban economy, through its integration into city development plans and processes.

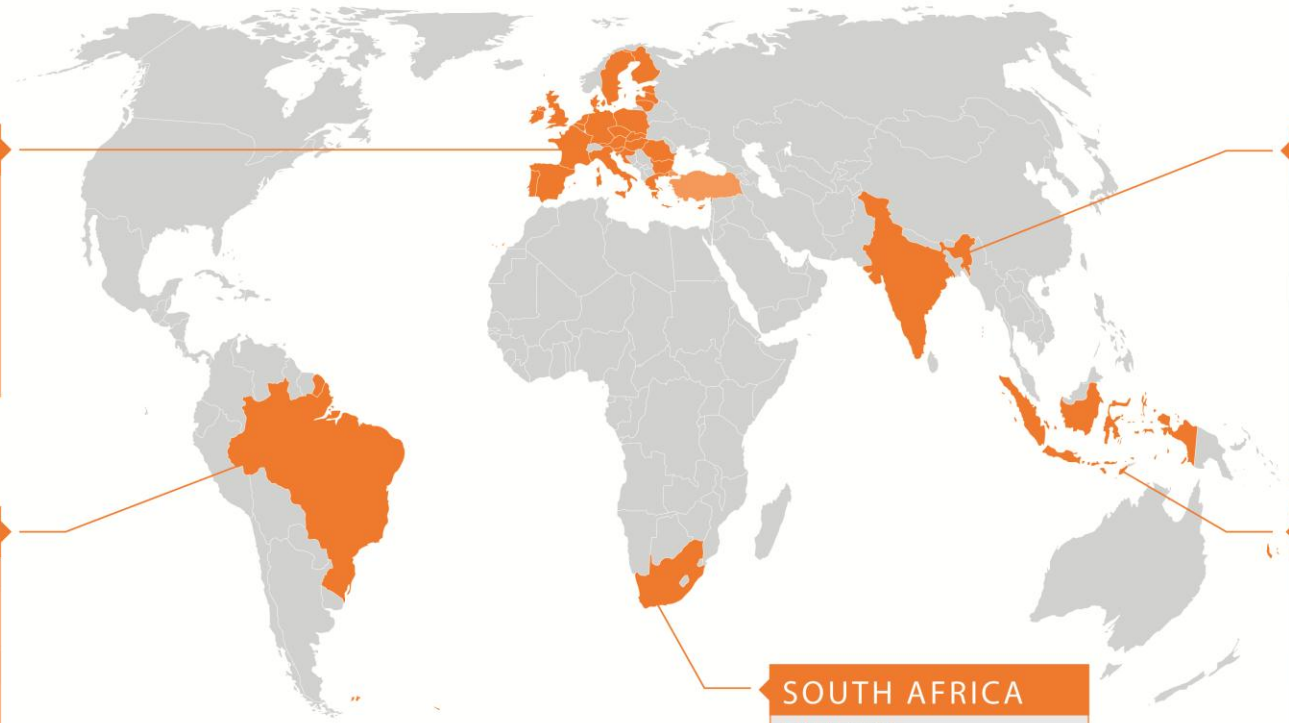
URBAN LEDS
URBAN LOW EMISSION DEVELOPMENT STRATEGIES

Funded by:

Implemented by:

Urban-LEDS project cities

URBAN LEDS
URBAN LOW EMISSION DEVELOPMENT STRATEGIES



EUROPE

Almada, Portugal
Bologna, Italy
Copenhagen, Denmark
Gaziantep, Turkey
Hannover, Germany
Helsinki, Finland
Warsaw, Poland
Zagreb, Croatia

INDIA

MODEL CITIES
Rajkot
Thane

SATELLITE CITIES
Coimbatore
Gwalior
Nagpur
Panaji
Pimpri-Chinchwad
Shimla

BRAZIL

MODEL CITIES
Fortaleza
Recife

SATELLITE CITIES
Betim
Belo Horizonte
Curitiba
Porto Alegre
Rio de Janeiro
Sorocaba

INDONESIA

MODEL CITIES
Balikpapan
Bogor

SATELLITE CITIES
Bontang
Kabupaten Bogor
Tangerang Selatan
Tarakan

SOUTH AFRICA

MODEL CITIES
Steve Tshwete Municipality
Kwa Dukuza Municipality

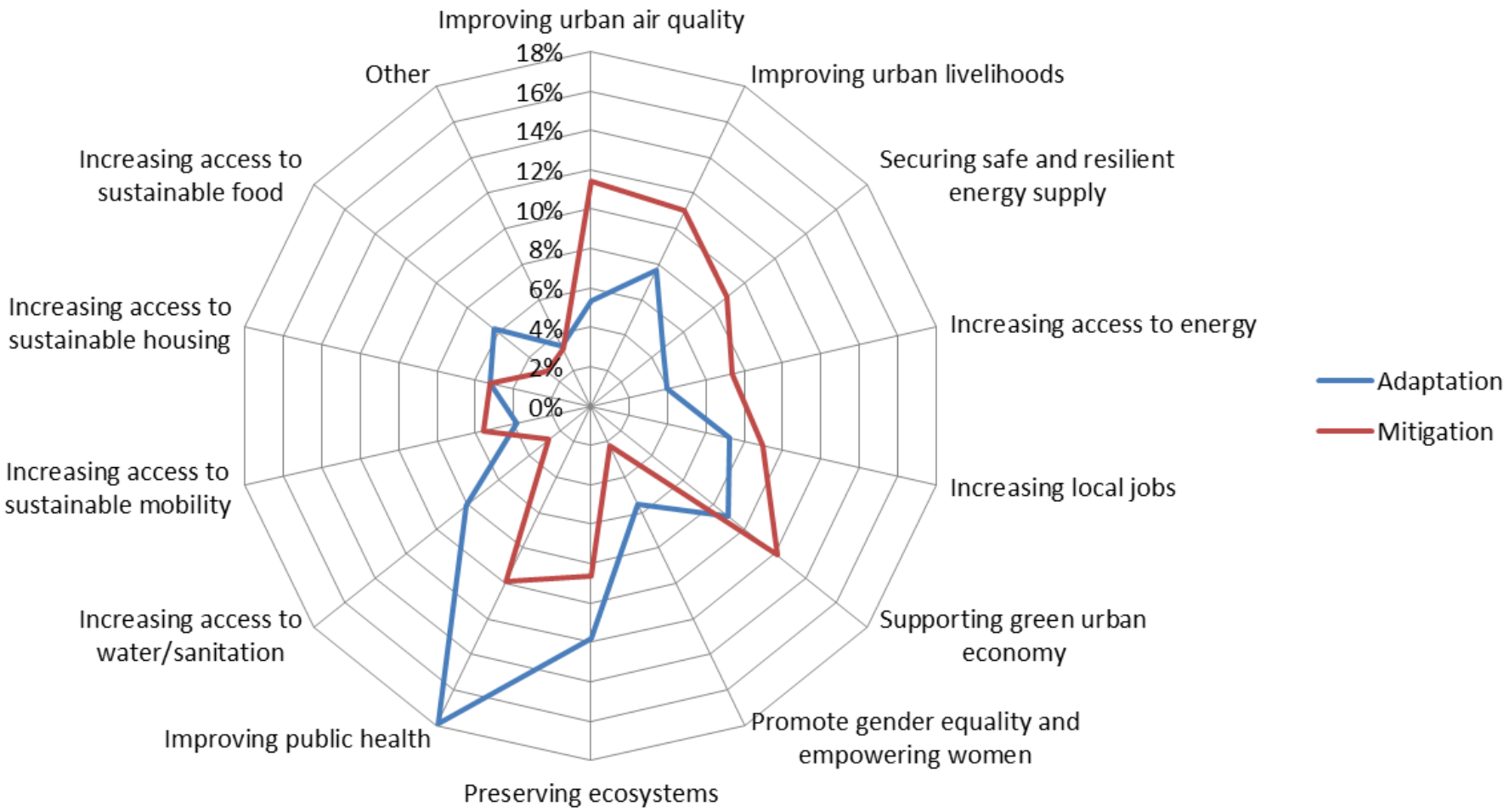
SATELLITE CITIES
Mogale City Local Municipality
Nelson Mandela Bay Municipality
Saldanha Bay Municipality
Sol Plaatje Municipality
uMhlathuze Local Municipality

37 cities involved:
8 Model Cities
21 Satellite cCties
8 experienced European cities

GreenClimateCities program

- Process for local governments
- Methodology,guidance and tools offered
- Measurable, Reportable, Verifiable (MRV) process for local climate action
- Aim: Institutionalizing approach, inclusive, socio-economic benefits

Reasons why cities act: climate change and …

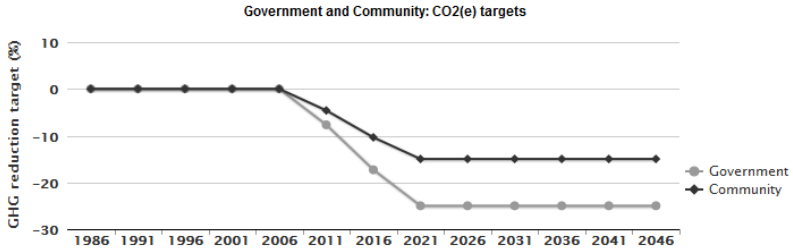


City report: public

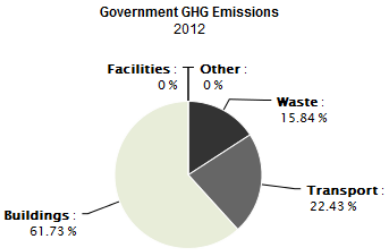
City of North Vancouver
Canada, Northern America
Population: 48168
Territory Size: 12 km^2

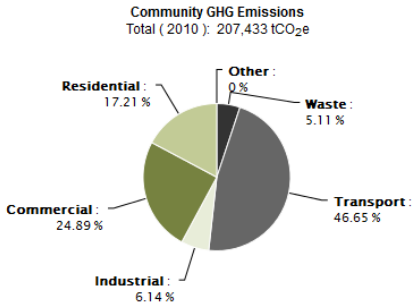
Commitments

	Government	Community
CO_2e reduction target:	25% by 2020 (2007)	15% by 2020 (2007)
CO_2 reduction target:	n/a	n/a
Carbon intensity target:	n/a	n/a
Renewable energy target:	n/a	n/a
Energy efficiency target:	n/a	n/a



Performance





Other available GHG inventories: 2005, 2006, 2007, 2008, 2009

City Climate Report: City of North Vancouver

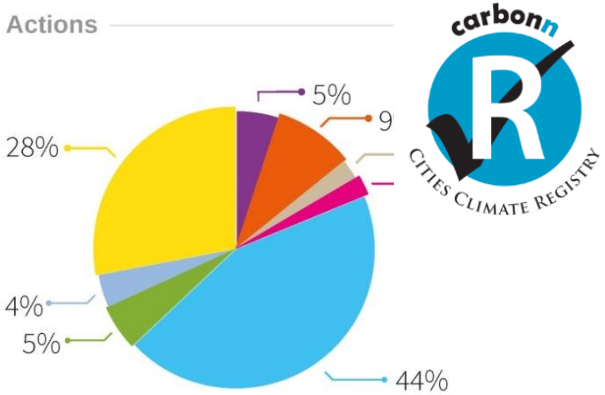
Actions and Action Plans

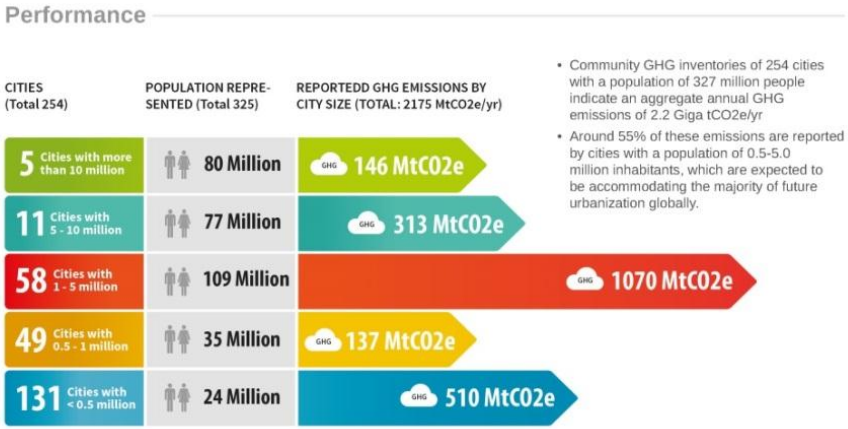
City of North Vancouver
Canada, Northern America
Population: 48168
Territory Size: 12 km^2

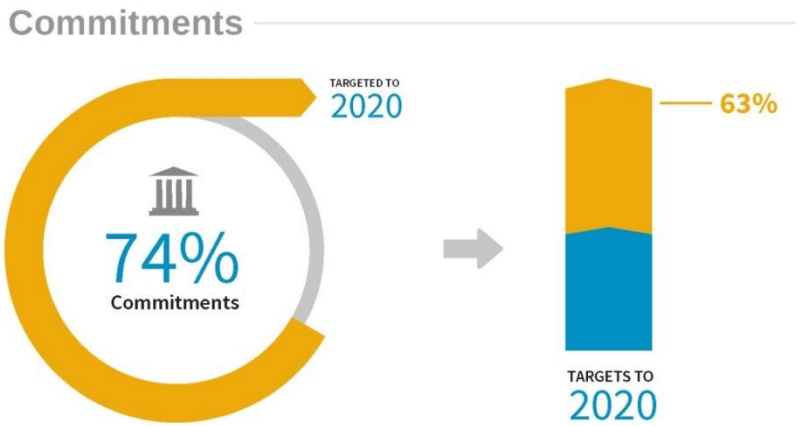
Mitigation actions

Action Title	Sector	Field	Funding Source	File	Status
Canadian Solar City Designation				download	In Progress
Living City Summary Report				download	
Lonsdale Energy Corporation (LEC) District Energy Heating System	Energy – switch to low-carbon fossil fuels	Technology Investment	Public Private Partnership		In Progress
Heat Recovery and Geo-Exchange System at School District No. 44 LEC Connection	Energy – switch to renewable energies	Technology Investment	Public Private Partnership	download	In Progress
Solar Thermal Panels Contribute Renewable Energy to the LEC's District Energy System	Energy – switch to renewable energies	Technology Investment	Local	download	Completed
Solar Hot Water Ready Regulation Opt-in	Energy – switch to renewable energies	Technology Investment	Local	download	Completed
City Plaza Fountain Conversion to Cooling Tower	Facilities	Technology Investment	Local		Completed
Higher Energy Efficiency Zoning Bylaw Amendment and Density Bonusing Bylaw	Buildings	Legislation	Local	download	In Progress
Retrofit Program for Improved Energy Efficiency in City Facilities	Buildings	Technology Investment	Local		In Progress
New Civic Building Design Guidelines	Buildings	Technology Investment	Local	download	In Progress
Corporate and Community Energy Reporting and Management System	Other Emissions	Capacity Building	Local	download	In Progress
Climate Action and Energy Implications in Budget Process	Other Emissions	Capacity Building	Local	download	In Progress
Interdepartmental Climate Action Teams	Other Emissions	Capacity Building	Local	download	In Progress
		Technology			

Data analysis







Source: http://citiesclimateregistry.org/archive/reports

Cities in action

Reality check

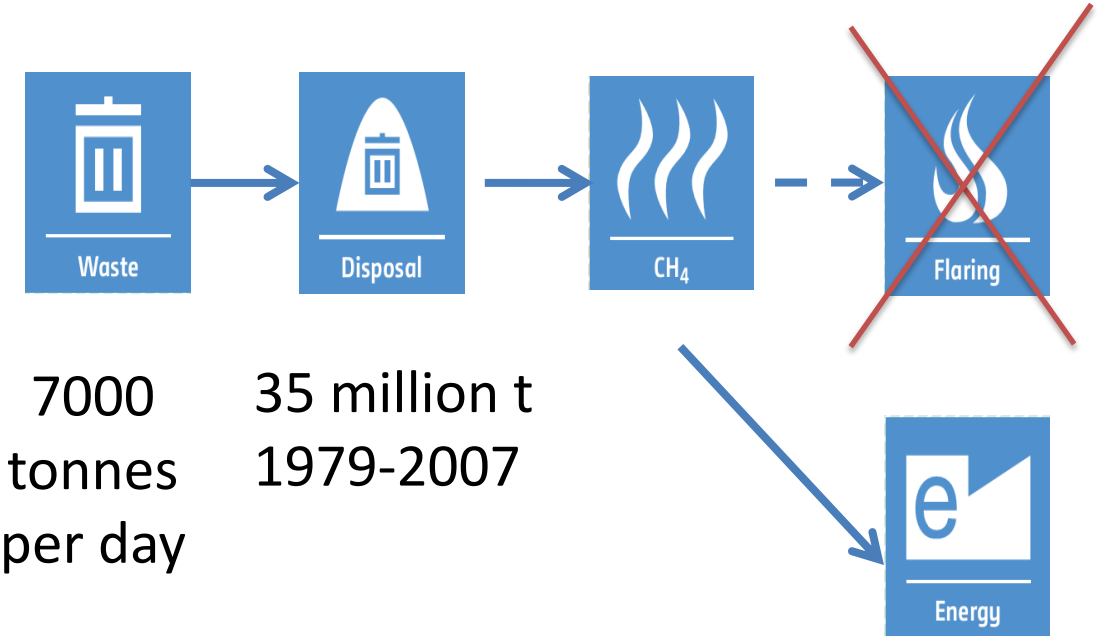
- a glimpse

Sao Paulo, Brazil

Bandeirantes Landfill Gas to Energy Project

Population: 11,189,000 (2009)

Area: 1,523 km^2



7000 tonnes per day

35 million t 1979-2007

170,000 mwh/year

Benefit from waste-to-energy

- Extracting methane gas until 2018
- Annual electricity generation: 170,000 MWh
- Providing energy supply to 400,000 inhabitants
- Annual CER (Certified Emissions Reduction): 1,070 tonnes of CO2e
- 26 jobs created for operation
- São Paulo can now invest in measures to improve rubbish dumps, and in financing recycling and waste management awareness project

Rajkot, India

- Population: 1,286,995 (2011)
- Area: 104.86 km^2
- Population growth rate: 4.25% (annually)
  - 6th fastest growing urban area in India
  - 22nd fastest growing urban area in the world
- Selected to develop as a Solar City (2009) in the national government programme
- Aim: Achieve at least 10% reduction in conventional energy in 5 years

Use of Solar Appliances in Rajkot, India

Sphere:	Appliance:	Qty.
Domestic		
Cooking	Solar Cookers	25,000 Approx.
Lighting	Lamps	10,000 Approx.
Heating Appliances	Water heater/Room heaters	28,300 Approx.
Lifting Device	Water lift pumps	50
Commercial/Industrial		
Hotel	Water heater/Room heater	500 Approx.
Drying/Dewatering	Dryers	05
Direct sun drying for Papad etc.	Dryers	60
Hospitals/Clinic etc.	Water heater/Room heaters	200 Approx.
Fifting Device	Pumps	15
Automatic timer for Streetlighting	Timers	26

Bogor, Indonesia

- Vision: Transition to sustainable development
  - Back to the Future: Retrofitting Old Town Area
  - Sustainable Building Design
  - Eco-mobility facility in the city
  - Revolution in transportation system

People
Policy
Money
Technology

City‘s entry point

Clean and green

Connected

Self-sufficient, full employment

Innovative, hi tech

People centred

Contact

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