





## 93% of waste in lowincome countries goes to uncontrolled dumping

source: World bank, What a Waste 2.0



















Waste in low-income countries contains 50 to 80% organic waste



















## Mismanaged organic waste emits:

20% of global methane

Source: Global Methane Hub



















# Taking action now to reduce methane emissions is 3 times more effective\*

\*to reduce short term global warming than reducing CO<sub>2</sub> emissions















WASTE FOR ALL SDG

HOLISTIC WASTE MANAGEMENT/ METHANE REDUCTION



**CHINA - Shaoyang** 





## Restaurant food waste recovery

Reducing sanitary health risks, promoting waste to energy



Diverting restaurant food waste from animal farms use, through dedicated collection and treatment systems:



- Introduction of a dedicated collection system for restaurant food waste
- Collection and pre-treatment of used food oils
- Anaerobic digestion facility producing biogas for heat and power co-generation
- Financial viability of the operations through:
  - Waste collection tax
  - · Sales of oil, electricity and heat

#### **CLIMATE BENEFIT:**

- > 70 kTonCO<sub>2</sub>eq/y **avoided** compared to former situation (methane emissions from biowaste)
- > Green energy production

#### **CO-BENEFIT:**

- > Reducing major public health risks through proper management of biowaste
- > 174 jobs created



→ FOCUS | La gestion des déchets solides | AFD - Agence Française de Développement



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**FRANCE – Greater Paris** 



### **Organic waste recovery**

## Supporting local authorities to sort, collect and treat domestic food waste



## Mandatory source separation of organic waste as of January 2024:

- Collection schemes: on-site composting, door to door collection, voluntary deposit
- Targeting 100 kTon/year of biowaste collected in the service area
- Construction of a methanizer on the river port of Gennevilliers by 2026 to produce biomethane and organic fertilizers

#### **CLIMATE BENEFIT:**

- > Biogas production
- > Organic fertilizer use, to avoid GHG emissions from chemical fertilizer production

#### **CO-BENEFIT:**

> Citizens' awareness on reducing food waste and recovering the value of waste



→ Plan Biodéchets : améliorer le tri et la valorisation des déchets alimentaires - Syctom (syctom-paris.fr)





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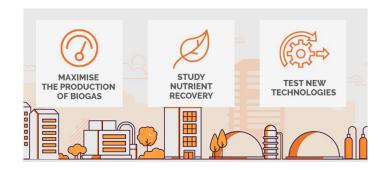
**FRANCE - Paris** 



## **CoMétha Pyrogazification Project**



A disruptive technology opposing incineration and complementary with methanization



#### From R&D to a full-scale pilot

- Treat a mix of organic waste, including food waste and sewage sludge
- Maximize the transformation of organic matter into syngas
- Minimize the volume of solid residues (ashes)
- Recover nutrients (nitrogen and phosphorus)

#### **CLIMATE BENEFIT:**

- > Renewable energy production
- > Phosphorus recovery, to avoid GHG emissions from phosphorus mining

#### **CO-BENEFIT:**

- > Synergies between organic waste producers
- > New type of contracting models to support innovation
- > Nutrient recovery



→ Cométha (cometha.fr)



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**CARBON SINK** 



**CANADA - Quebec** 



## Biochar to regenerate soil health



Pyrolysis conversion of unused biomass into biochar and bioenergy



Biochar application in soil stores carbon while improving soil health and productivity.

The first of its kind plant is set up in Quebec:

- Phase 1: 10 kT biochar/y by end 2024
- Phase 2: ramp-up capacity up to 30 kT biochar/y

SUEZ has the ambition to sequester 800 kTon CO<sub>2</sub>eq/y by 2035.

#### **CLIMATE BENEFIT:**

- > 1 ton of biochar produced
- ~ 2.7 ton of net CO<sub>2</sub> sequestered
- > Green energy production
- ~ 50 GWh/y of bioenergy surplus for a 20kt/y biochar plant **CO-BENEFIT**:
- > Regenerate soil biodiversity and productivity
- > Improve and sustain soil health



→ Carbonity - Décarboner grâce au pouvoir du biochar