

Global Methane Mitigation in the Waste Sector

Key Findings and Strategic Pathways

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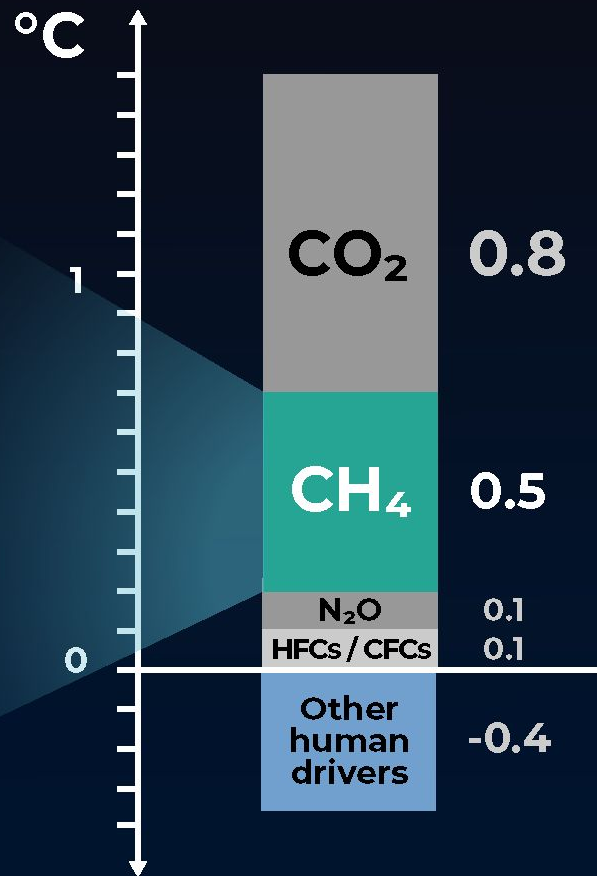


Canada · Chile
Accord de coopération environnementale
Acuerdo de Cooperación Ambiental
Agreement on Environmental Cooperation



CH₄ has
contributed
to 45% of
recent net
warming

IPCC AR6 report.



60% of methane
comes from



**Food
production**



**Food
waste**

Temperature Impact



Critical to keep **1.5°C** within reach

-0.3°C warming avoid by 2050

Avoided Climate damages



\$8.3 trillion avoided damages annually by 2050

Economic & health co-benefits

4.2 million premature deaths avoided



50 million tonnes of crops saved

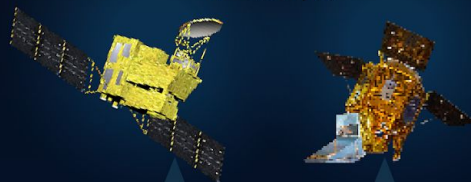
\$370 billion annual savings in health costs & productivity

Different satellites, different opportunities

**GOSAT2
GOSAT GW**

**Sentinel 5P
Sentinel 5**

Sensitivity
1+ ton/h



Resolution:
Paris Central



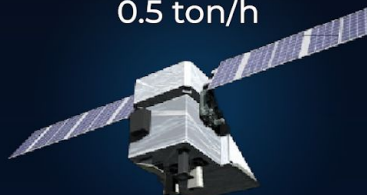
7.5x7.5km



Aerial emissions &
Very large point sources

**Methane
SAT**

Sensitivity
0.5 ton/h



Resolution:
8 Football fields



140x400m



Aerial emissions &
Large point sources

**CarbonMapper
Tanager** **GHGSat**

Sensitivity
0.1 ton/h



Resolution:
1 Basketball court



30x30m



Point sources

WASTEMAP



<https://wastemap.earth>



Mexico City



Casablanca



Delhi



Santiago



Buenos Aires



Mumbai

-  Heat Map & Emissions Data
-  Decision Support Tool
-  Citizen Waste Champions Community
-  End-to-End Waste Management Strategies Playbook
-  South-to-South Convenings & Information Sharing

Referential picture



UCLA: Spotlight on Top Plumes

Rank	Location	Nearby City / Area Served	Rate (metric tons/hr)	Date Range Observed	Open the Data
1	Algiers, Algeria	Algiers	7.4	Jan 2-Sept 18	Data link
2	Bekasi, West Java, Indonesia	Jakarta	7.1	Feb 15-Sept 13	Data link
3	Penco, Biobío, Chile	Concepcion	5.0	Jan 10-Aug 22	Data link
4	Talagante, Chile	Santiago	5.0	Jan 20-Oct 3	Data link
5	Al Jumum, Saudi Arabia	Jeddah	4.7	Feb 1-Sep 29	Data link
6	Jeram, Malaysia	Kuala Lumpur	4.5	May 7-Jul 9	Data link
7	Rodriguez, Philippines	Manila	4.4	Jan 26-Sept 21	Data link
8	Fazenda Rio Grande, Brazil	Curitiba	4.2	May 9-Sept 14	Data link
9	Mauá, Brazil	São Paulo	4.0	Feb 5-Jun 20	Data link
10	Hong Kong North District	Hong Kong	3.9	April 3-Sept 27	Data link
11	Campo de Mayo, Argentina	Buenos Aires	3.9	Jan 9-Sept 16	Data link

ANNOUNCING:

UCLA's STOP Methane Project (Spotlight on Top Plumes)

Check out our new user-friendly ranking of super-polluting methane emissions across multiple sectors.



WASTEMAP <https://wastemap.earth>



- Heat Map & Emissions Data
- Decision Support Tool
- Citizen Waste Champions Community
- End-to-End Waste Management Strategies Playbook
- South-to-South Coverings & Information Sharing

Global Methane Hub | ARMI | CLEAN AIR TASK FORCE | SRON | CARBON MAPPER | Google

Waste
A major methane source

20%

of methane emissions come from **waste**



1.- Organic Waste Disposal



2.-Size & Open Working Areas



3.-Delays / Poor Pipeline Interconnections

4.-Leaks in biogas capture, flare, and/or energy generation system.

5.-Poor-Quality or Delayed cover/biocover Installation

GMH goal and role in pushing solutions to implementation
Support 30% reduction of waste methane by 2030



Prioritize prevention

Scale food recovery and change behaviors

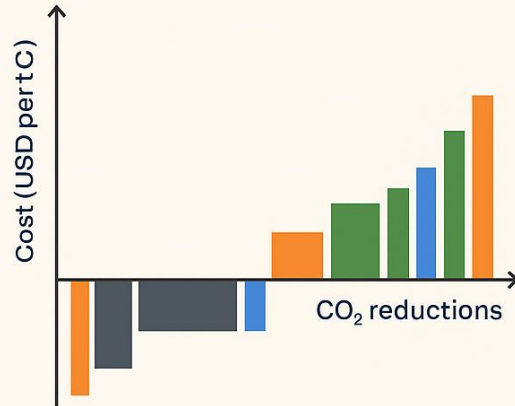
Divert organic waste

Keep organic waste out of landfills

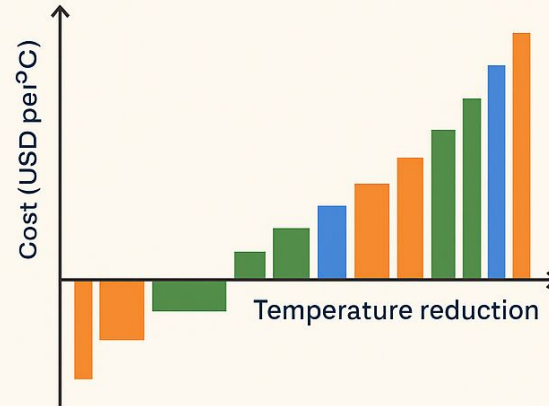
Focus first

Cut landfill methane while we shift upstream

MAAC vs. T-MACC



**Marginal Abatement
Cost Curve (MAAC)**



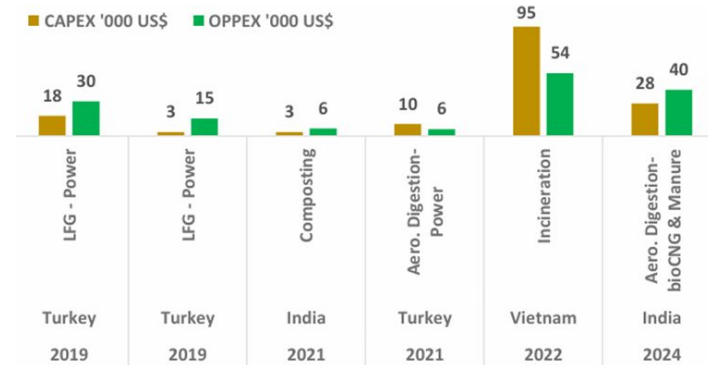
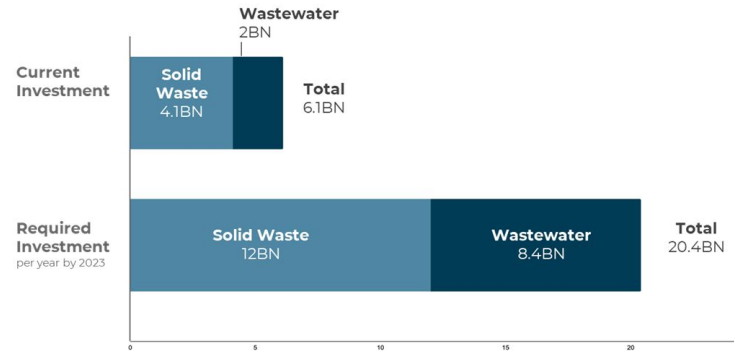
**Temperature Marginal
Abatement Cost Curve
(T-MACC)**

Finance

70% of solid waste services fall to local public authorities.

Investment from the national budget (primarily from MDBs) and the private sector (banks), without a focus on methane mitigation.

WASTE sector: **OPEX** is almost always higher than **CAPEX**



CLIMATE
POLICY
INITIATIVE

Catalytic
cities

giz

Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

ACS Carbon Advisory

Finance Mobilization

Public and Private finance sector

1. Inter American Development Bank and World Bank

US\$5 billion in Investment, >15 countries, potential abatement of 8 million tons CH₄. New tools are being developed to measure methane mitigation levels> AfDB.

2. New Taxonomy

Food Value Chain, Waste & Wastewater sub sectors.

3. Private sector

How to address systemic barriers preventing capital deployment



To be Updated by 2026

Reducing organic waste is a highly effective solution for climate change and sustainable development

WE MUST CONSIDER THE CONTEXT OF GLOBAL SOUTH COUNTRIES AND CITIES:

Western Europe vs LAC

GDP per capita: 65,000 vs 6,500 USD

% Informal economy: 0.5 vs >60 %

Waste regulations: Mature vs in development

Collecting and recovering **food and organic waste** has been shown to generate

60% more **GDP** and **4 to 10** times more jobs than disposal.



C40 Sustainable Waste Systems Accelerator

Cities committed to 3 targets by 2030:

- ✓ Providing Citiwide collection services.
- ✓ Treating at least 30% of organic waste.
- ✓ Reducing waste disposal emissions by at least 30% (METHANE!).

22 Cities are on track to reduce 1.2 mtCH₄ by 2030 by improving their organic waste management.

Removing over **100 million tons of CO₂** or taking **22 million** cars off the road.

Organic Waste at COPs

- ✓ COP27, first-ever Waste Solutions Pavilion
- ✓ COP28, LOW Methane, and Too Good to Waste (IDB). Jurisdictions, at the subnational and national level, to mobilize at least US\$10bn and 1 MtonCH₄ mitigation well before 2030
- ✓ COP29, ROW (reducing organic waste), endorsed by countries representing more than 50% of methane emissions.

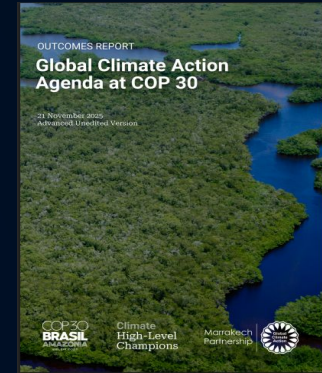


Organic Waste at COPs

✓ Circular Economy NOW
(Umbrella Initiative)
+50 organizations: Data, Capacity
Building, Policies, Finance

✓ GMH (30mUSD): Catalytic
Support for methane mitigation.

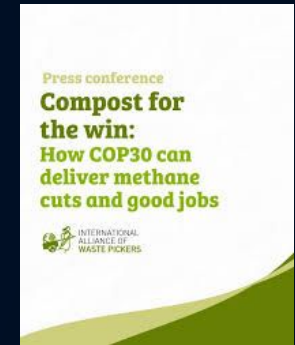
✓ IKI (15mEUR): Urban value
chains through bioenergy use:
scalable solutions for sustainable
methane reduction



Composting Plant, BELEM

Belem + Catadores + Instituto
Polis + GAIA+ MMA + COP30 +
GMH, among others:

- Design and operation
- Cost-effective
- Just Transition
- Capacity Building
- Job Creation



Partnerships example

COLLABORATIVE INITIATIVE AIMS TO:

- 🗑️ mobilize finance
- ♻️ Keeping organic waste out of landfills
- 💡 Promote circular business models (composting)
- 🤝 Strengthen the role of cities and local communities
- 🌿 Just transition for waste pickers and small enterprises

SEBRAE (Brazilian Micro and Small Business Support Service) + FNP (National Front of Mayors), ABRASEL (Brazilian Association of Bars and Restaurants) + Instituto Pólís and the Global Methane Hub



Brazil leading by the example

- National Strategy for Organic Waste
- Waste Mitigation Action Plan
- National Plan on Super emitters
- 12 subnational governments committed to Landfill Methane Mitigation
- LIR (Lei de Incentivo à Reciclagem e a economia circular)



FLW Prevention & Recovery

- **More than 30 NDCs:** Cameroon, Cape Verde, Ethiopia, Jordan, China, Gambia, Uruguay, Qatar, Malawi, Sierra Leone, Maldives, Mozambique, Senegal, Indonesia, Uruguay, Sri Lanka, United Kingdom, Vanuatu, Cambodia, Jordan, Chile, Uruguay, Colombia, United Arab Emirates, Indonesia, Nepal, Somalia, Angola, Micronesia (Federated States of), Mauritius, Kyrgyzstan, Nigeria, Eswatini,...
- **Food Waste Breakthrough:** UNEP, GEF; GFN, WRAP, REFED, Private Sector, among others



What's next?

- **✓ COP31**, High Level Champion, Zero Waste Priority
- Action Agenda
- Drive Implementation and Finance Mobilization
- **LAC**, through the Regional Collaboration Programme, can lead by example and mobilize additional funds for implementation.
- ***March 30**, Zero Waste Day: Food Waste
- ***June**: Zero Waste Forum



Reducing **organic waste** is a highly effective, cost-efficient solution for **significantly lowering methane emissions**

31
MINUTOS

