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ZERO FOOD WASTE

From the waste cycle to the food cycle



Ian McKee · Carrot

Alimenta · Sebrae-DF · Brasília · November 5, 2026

COP31 STARTS NOV 9

The world gathers to talk climate.

What does that have to do with your kitchen?



UNFCCC · unfccc.int/cop31 (accessed Nov 5, 2026) · photo: Brasília at night seen from the International Space Station, NASA (public domain)

You feed the city.

Every day. Meal by meal.
With hard work, skill and care.

And you are an integral part of the biological cycle, of nature.



Photo: Almeria, Instituto Ecozinha member (2023 institutional presentation)

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And every kitchen also generates scraps.

Waste generated in cities · Latin America

~50% organics other materials

Municipal waste with biological treatment (composting or anaerobic digestion)

less than 1% is treated



UNEP, Waste Management Outlook for Latin America and the Caribbean (2018) · World Bank, What a Waste 3.0 (2022 data)

WHAT ISN'T TREATED

It decomposes without oxygen, becomes pollutants and generates methane.

About 80 times more potent than CO_2 over 20 years.



IPCC AR6 (2021), methane GWP-20 · photo: Estrutural open dump (2014), Edilson Rodrigues/Agência Senado, CC BY 2.0

DISTRICT LAW 5.610/2016

Large waste generator: the bill is now yours.

Above 120 liters a day of mixed waste, the establishment is responsible for collection, for disposal — and for the costs.



DF Law 5.610/2016 (> 120 L since Jan 1, 2018) · photo: Instituto Ecozinha

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HOW SO?

Are we part of the problem?

In two years, Brasília turned the page on the open dump.

In two generations, the planned capital produced the largest open-air dump in Latin America.

2016
Federal District large-generator law

Jan 2017
Brasília Sanitary Landfill opens

2017–18
SLU stops collecting from large generators

Jan 2018
The Estrutural open dump closes

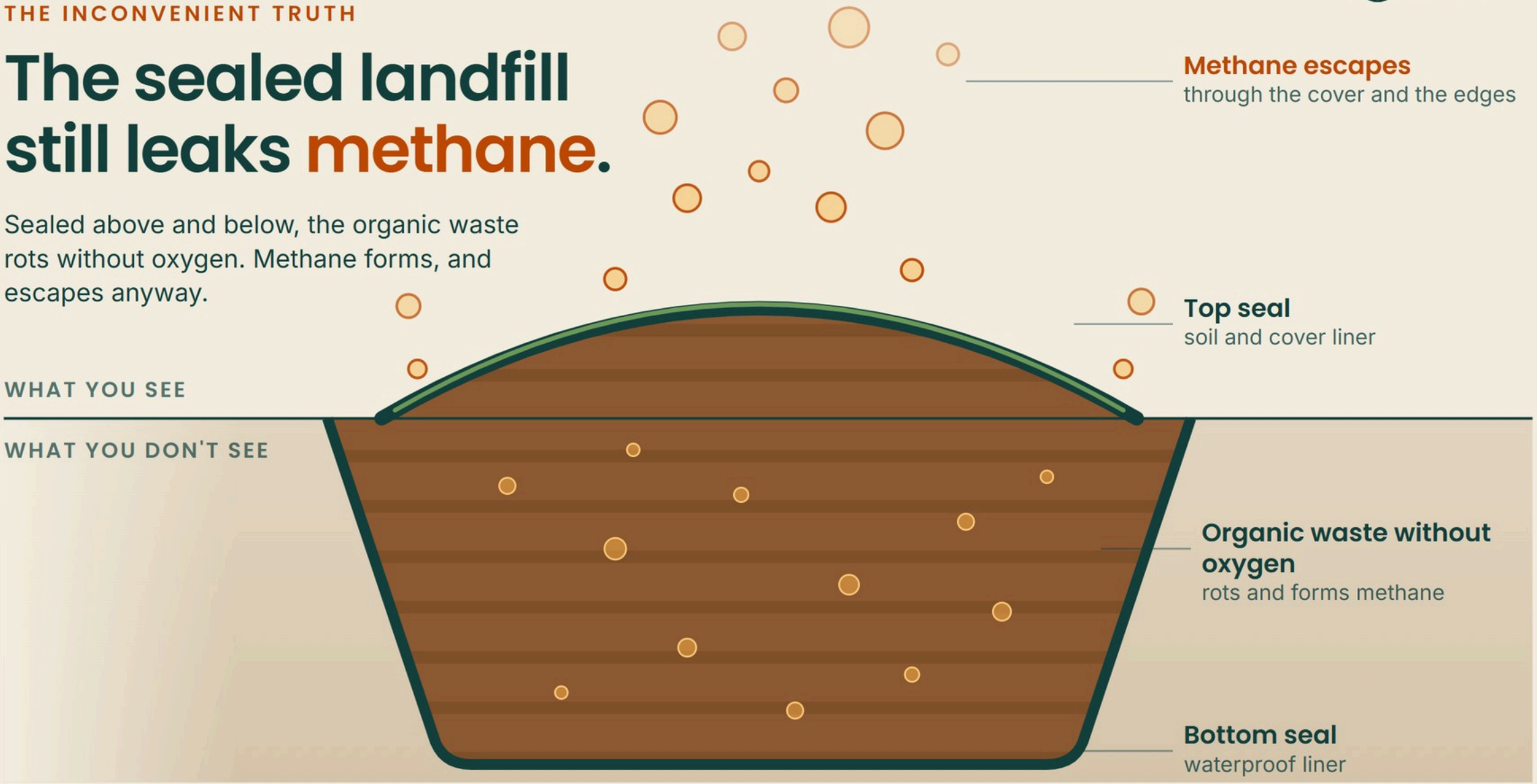
And the inconvenient truth...

DF Law 5.610/2016 · SLU-DF, 2017 report and "Como fechamos..." (2020)

THE INCONVENIENT TRUTH

The sealed landfill still leaks methane.

Sealed above and below, the organic waste rots without oxygen. Methane forms, and escapes anyway.



Schematic illustration, not to scale · Carrot canon: anaerobic sealing effect (CDM baseline, AMS-III.F)

ANOTHER PATH

A solution that worked.

The world's first digitized Zero Waste network of bars and restaurants, recognized by GIZ and the Ellen MacArthur Foundation.

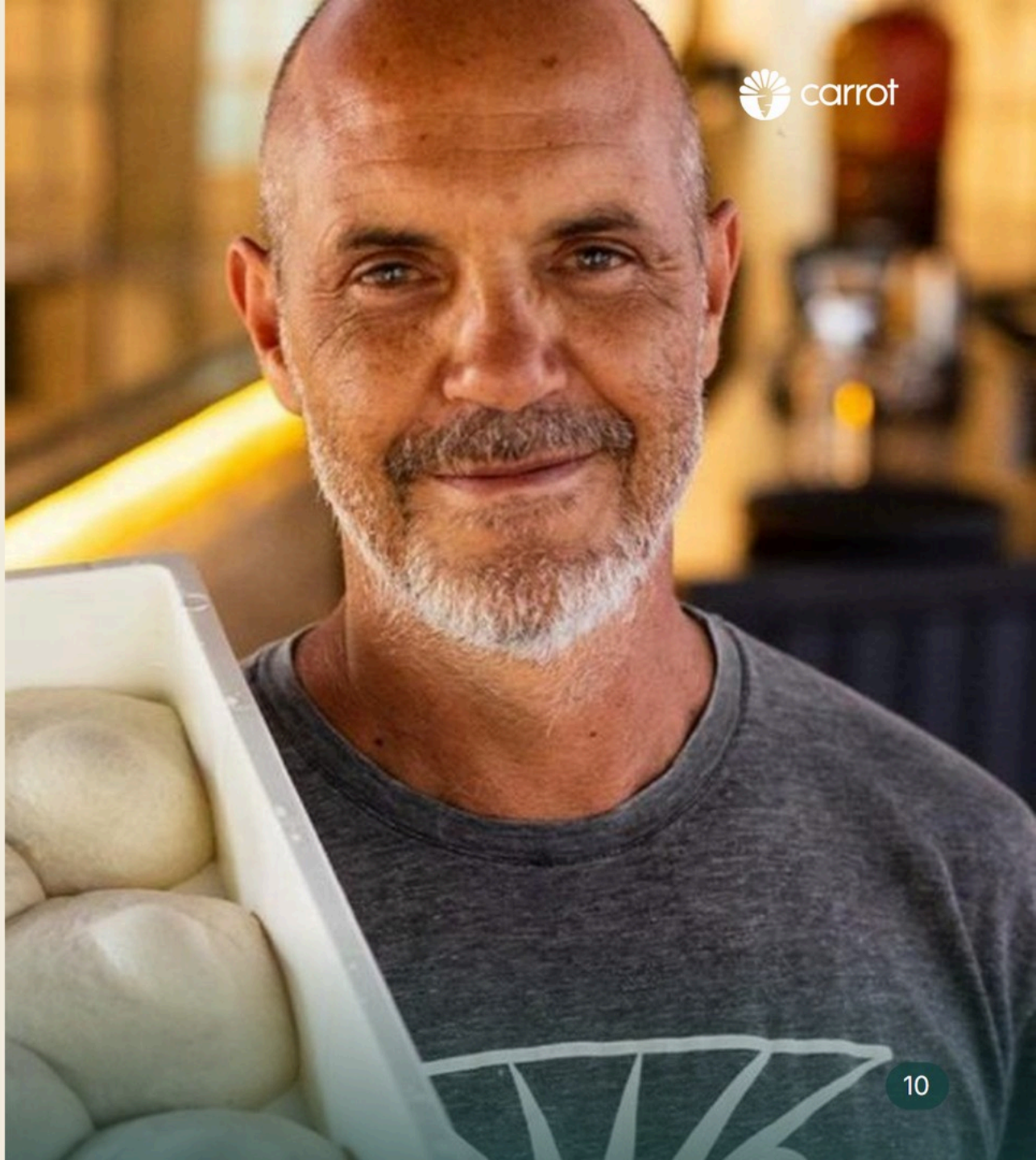


PAULO MELLO'S QUESTION

How much more would it cost to do the right thing?

Founder and first president of Instituto Ecozinha

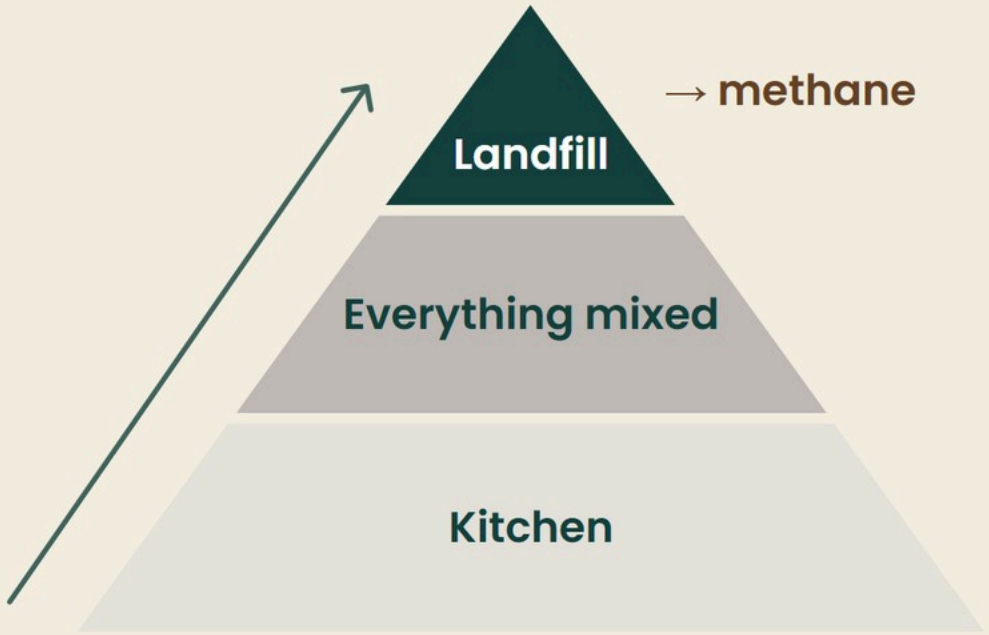
Portrait: Correio Braziliense, 2024



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Divert organics from the landfill. Return them to the food cycle.

BEFORE



vs.

AFTER



INSTITUTO ECOZINHA · BRASÍLIA

With courage, owners and chefs moved forward.



Paulo Mello



Flávia Attuch



David Lechtig



Daniel Briand

Founding minutes: September 5, 2017, 26 founders · portraits: institutoecozinha.org.br and Correio Braziliense (2024)

INSTITUTO ECOZINHA MEMBERS · 2023

Some of the people who made it happen.



Logos: “49 members” composite, Instituto Ecozinha (2023) · Petite Boulangerie: founders' archive

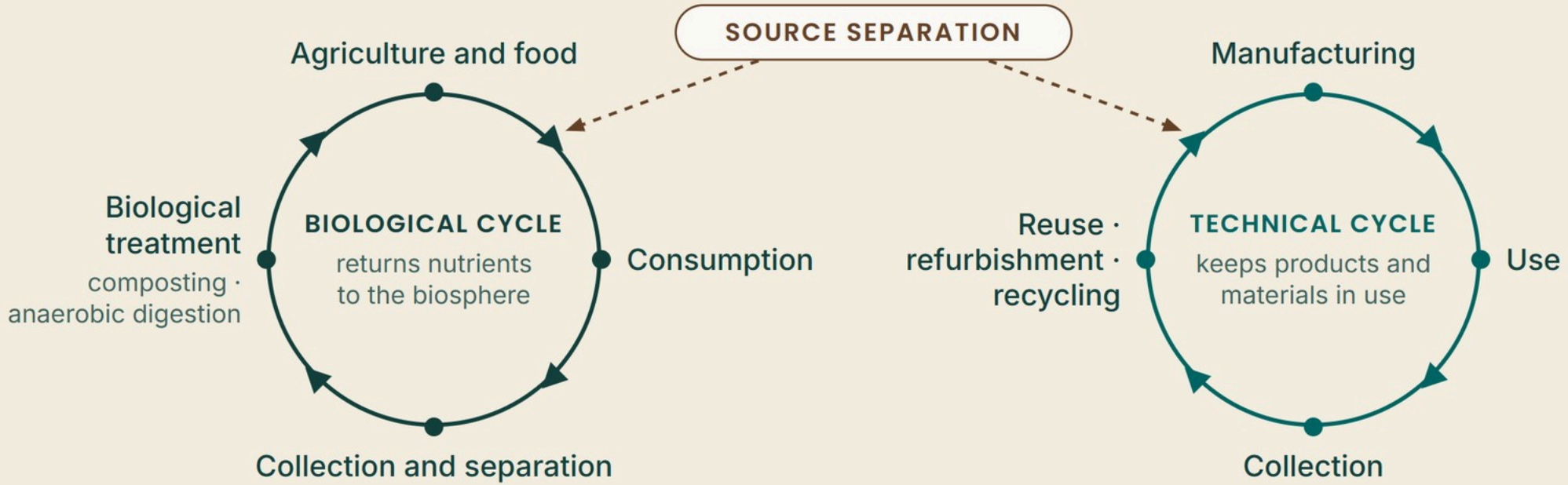
Separate at the source.

On site, before it's mixed.



Photo: separation station, Instituto Ecozinha, Brasília

Two cycles.
Each material in its own.



Biological

Organics → compost → soil

Technical

Glass, paper, plastic, metal → recycling

Adapted from Ellen MacArthur Foundation, Circular economy systems diagram (Feb 2019) · carrot.eco/the-case

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Each material in its own.



Biological

Organics → compost → soil



Technical

Glass, paper, plastic, metal → recycling

Biological and technical cycles: concept from the Ellen MacArthur Foundation (2019) · photos: Instituto Ecozinha, Brasília

The glass had to come back too.



Flávia Attuch led the glass boycott.

Photos: Instituto Ecozinha · institutoecozinha.org.br

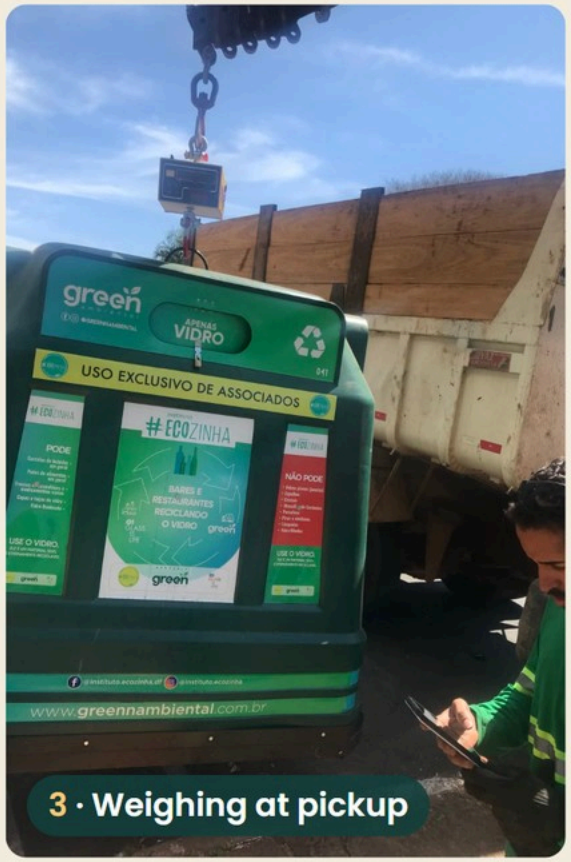
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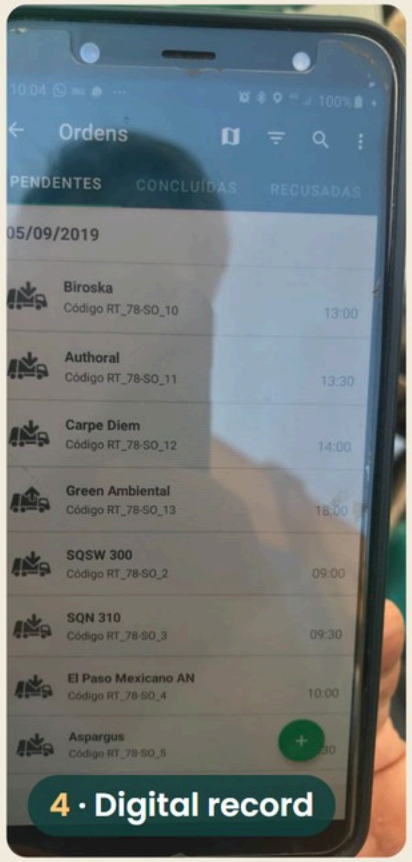
INSTITUTO ECOZINHA · BRASÍLIA

How it worked, in practice.













Photos: Instituto Ecozinha operations archive

THE PROOF

Zero Waste is possible.

In under six months, in a supported network of 86 bars and restaurants.

~93%

landfill diversion in the network

~3%

actually recycled in the DF, in the open-dump days

Instituto Ecozinha operating records · DF: Carrot estimate (SLU data) · Zero Waste = ≥ 90% diverted from landfill

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86

establishments willing to pay more

And it stalled there.

Willingness wasn't missing. **A payer for the difference** was.

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It wasn't logistics. It was economics.

Additional cost

~R$ 200

per tonne

How do we solve this?



Cost of managing organics · order of magnitude



Carrot estimate (carrot.eco/en/founder-story) · photo: Ian McKee and Marcelo Doria planning the economics of collection

WE HAD TO LEARN

Climate. Methane. Capital. Market.

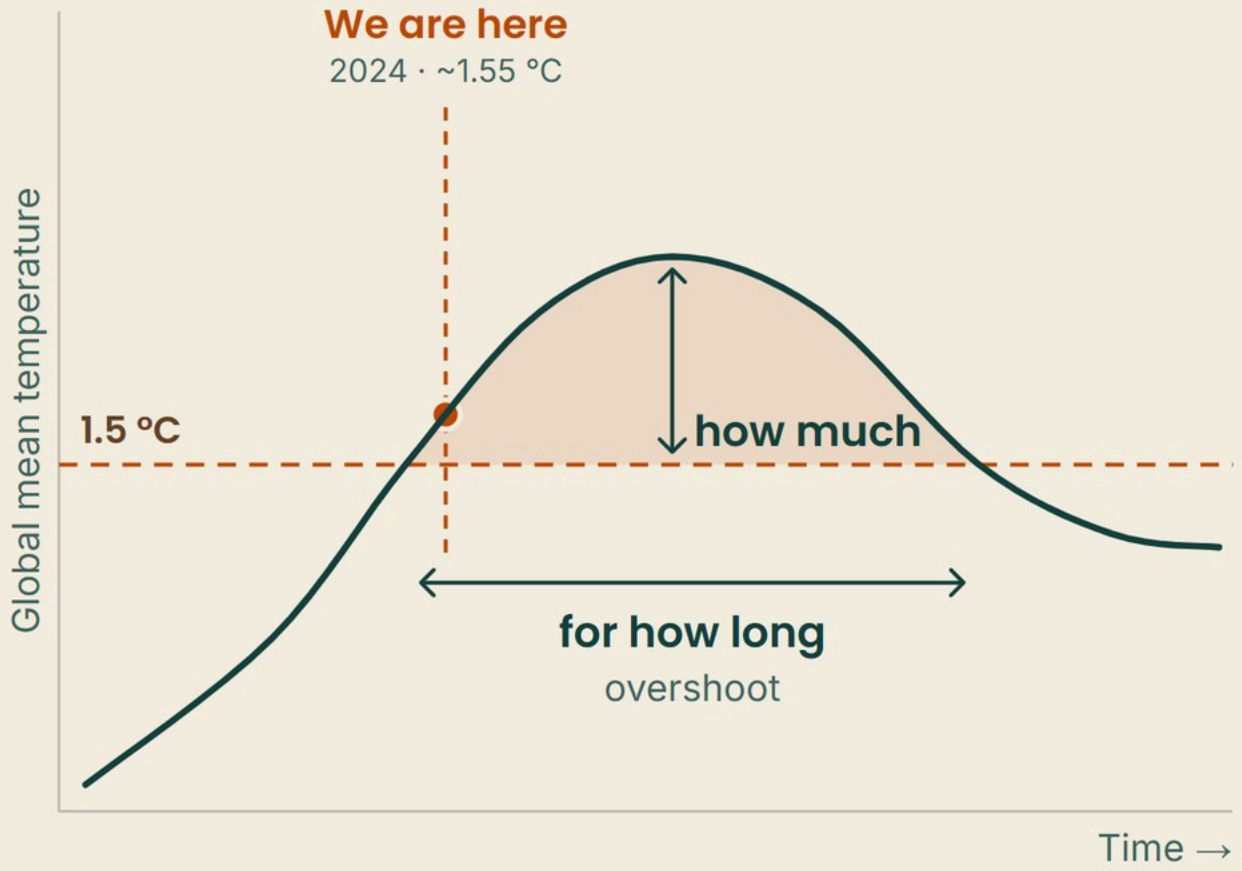


Photo: Ian McKee and Marcelo Doria, collection, Apr 30, 2019

Time is up.

In 2024, the world had already passed 1.5 °C.

The challenge now: how much, and for how long.



2024: WMO, State of the Global Climate 2024 (~1.55 °C) · concept adapted from UNEP (2026), Limiting Overshoot, Fig. 1.1 — illustrative

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THE PROBLEM IS THE SOLUTION

Cutting methane is the fastest way to slow warming.

~30%

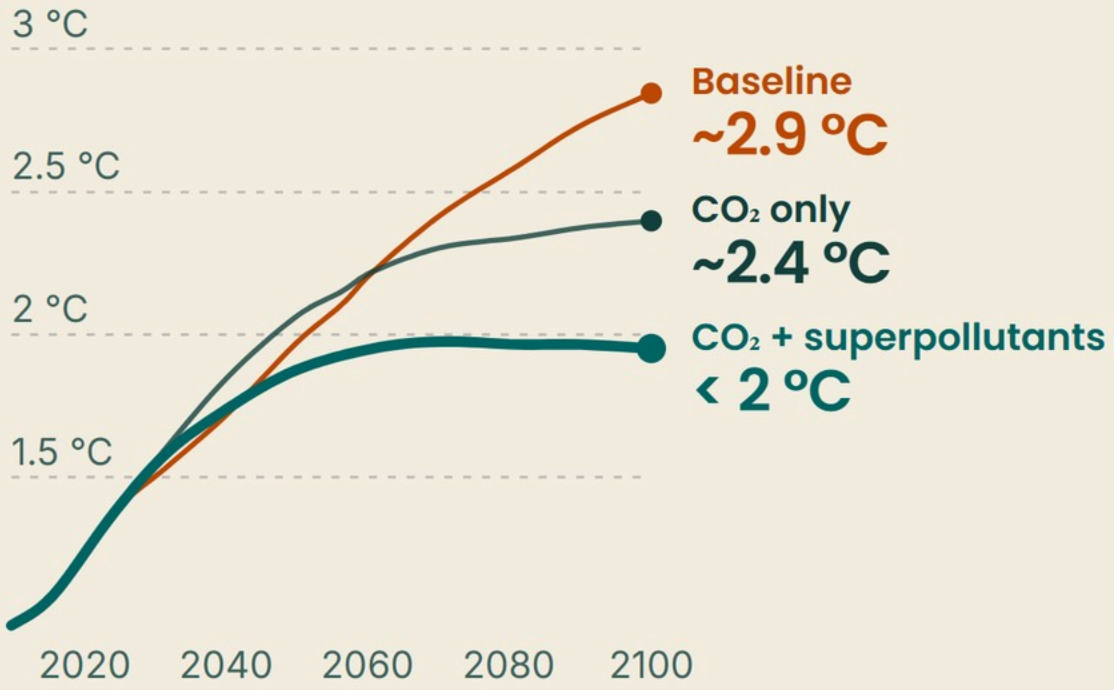
of current global warming comes from methane emitted by human activities.

UNEP/IMEO, Methane Data FAQ · UNEP/CCAC, Global Methane Assessment (2021)

WHERE IT MATTERS

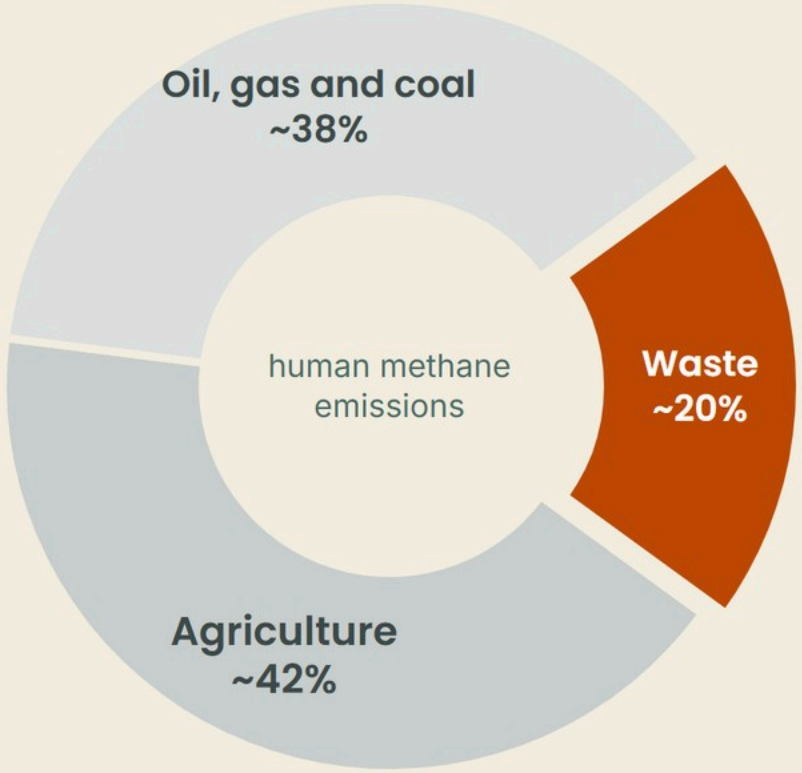
Cutting methane is indispensable.

Methane and other superpollutants, together with CO_2, change the curve within this century.



Change vs. 1850–1900 · adapted from Carbon Containment Lab (2026), Superpollutant Roadmap, Fig. E1

Three fronts. Different challenges.



ORGANIC WASTE

The solution is known. What's blocking it:

Costs more than landfilling

Separating, collecting and composting costs about 2× landfill.

Almost no funding

Almost none of the methane money reaches composting.

Scattered decisions

Every kitchen, every collection service, every city decides on its own.

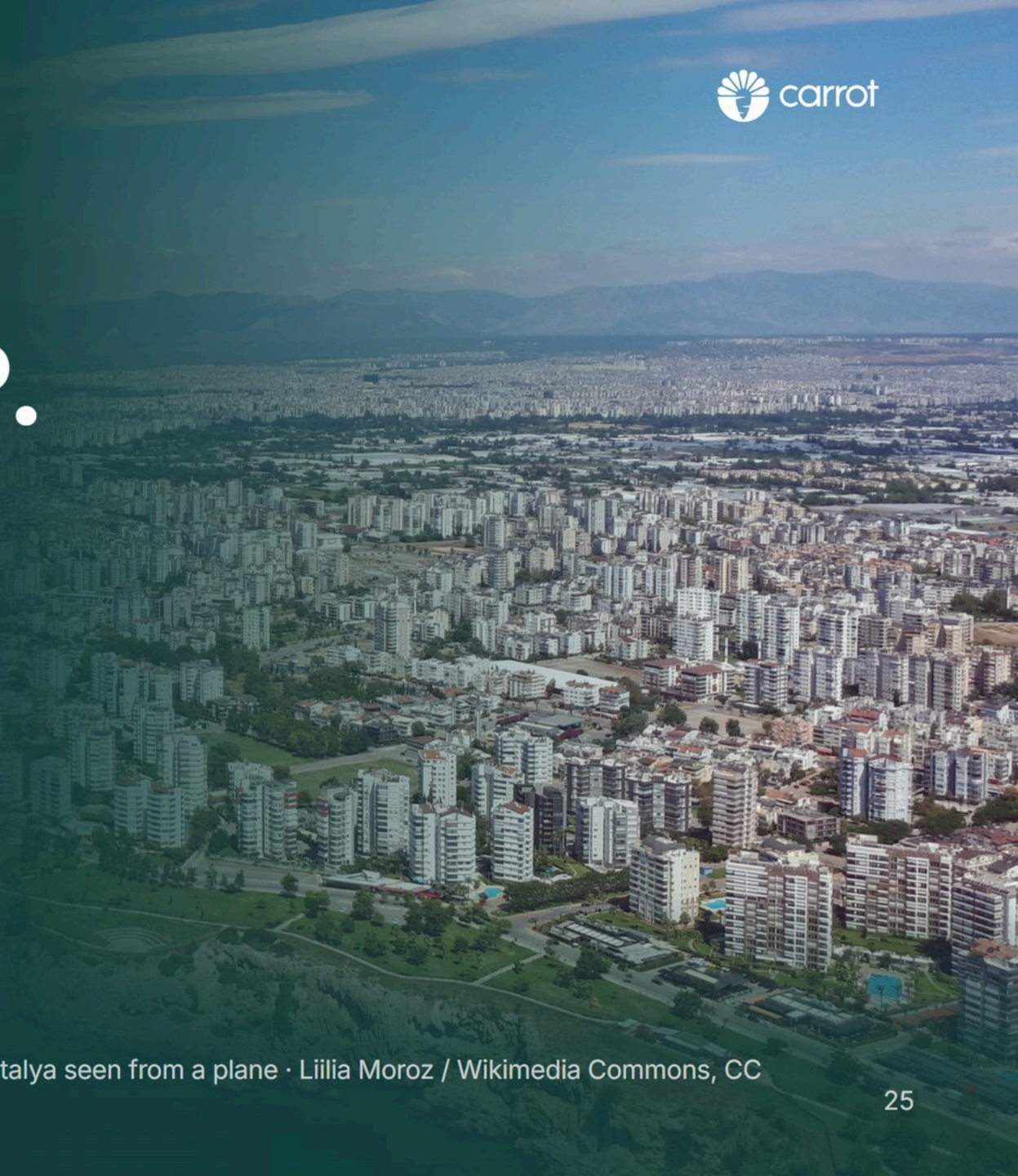
Human methane emissions, 2020 baseline: UNEP/CCAC, Global Methane Status Report (2025) · ~2×: Carrot estimate · CPI, Waste not (2025)

COP31 · ANTALYA · NOV 9–20, 2026

The Zero Waste COP.

Methane
↓
Organic waste
↓
Your kitchen

That's where methane meets its solution:
separate at the source and compost.



COP31, Action Agenda, Zero Waste theme (cop31.tr, Nov 4, 2026) · photo: Antalya seen from a plane · Liilia Moroz / Wikimedia Commons, CC BY-SA 4.0

Organics get almost nothing.

Climate finance
actually invested · annual average 2021–22

~US$ 1.3 trillion

~1% goes to methane

Methane finance
annual average 2021–22

US$ 13.7 billion

Organics management and composting
2022

US$ 22 million · about 0.16% of methane finance

CPI, Landscape of Methane Abatement Finance (2023) · CPI, Waste not (2025) · ~1% and 0.16%: calculated ratios

WHAT IS A CARBON CREDIT?

1 credit = 1 tonne of CO_2e reduced.

In waste, it's the difference between what the landfill or open dump would emit and what composting emits. Per tonne of organic waste (tCO_2e):



Example: 1 t of waste (60% yard trimmings, 40% food), GWP100, UNFCCC AMS-III.F · BOLD Carbon presentation, Carrot (2025)

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ONE WAY TO COVER PART OF THE DIFFERENCE

Fund the verified result.

How a carbon credit is produced

1. **Organic waste treated**
   at a composting facility
2. **Measured and verified**
   from source to treatment
3. **Two credits from the same batch**
   carbon (methane reduction) · recycling
4. **Who buys**
   individuals and companies

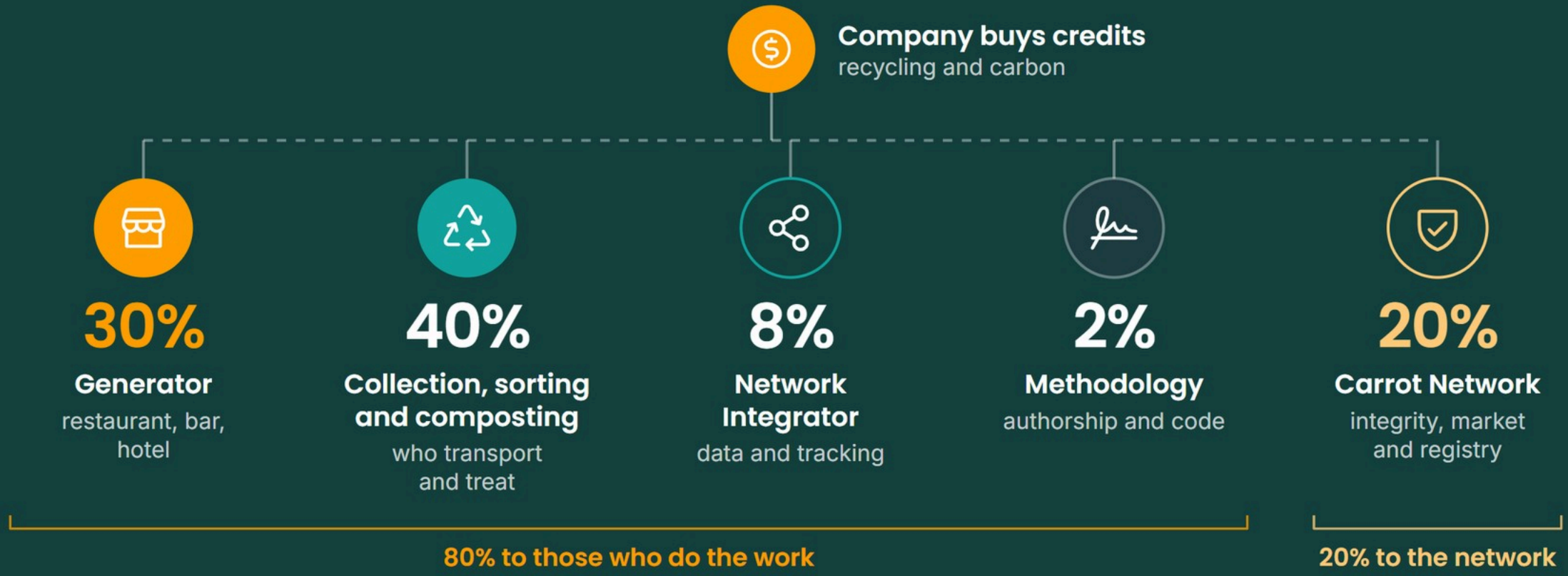
≥ 80%

of every sale is allocated to those who did the work — from whoever separates at the source to whoever collects, composts and records.

CHANGE STARTS WITH PEOPLE

We change a system together.

Every credit sold is allocated to those who did the work, starting with whoever separates at the source.



Carrot Rewards Distribution Policy, v2.0 (Oct 28, 2026) · credit for composting of mixed organic waste

THE RESULT

What Brasília taught travels.

- **8** **accredited**
  composting facilities in the Carrot network
- **14** **in audit**
  one of them in Brasília
- ○ **10** **in the pipeline**
  identified, not yet located on the map

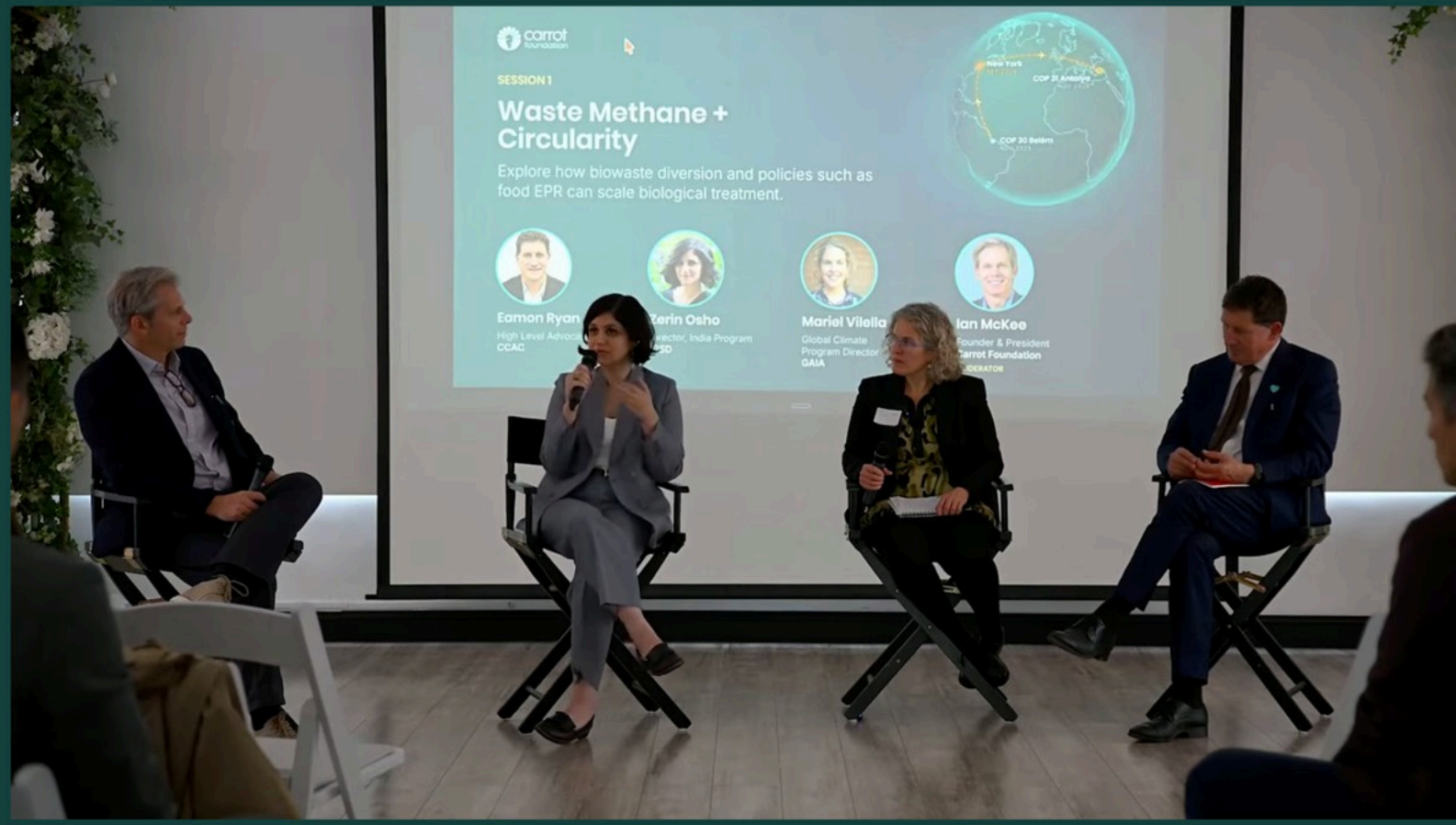


● largest methane-emitting landfills

carrot.eco, Project Portfolio · accredited through Oct 2026; audit and pipeline through Jul 2026 · locations by municipality · landfills: Climate TRACE 2025

NEW YORK · SEPTEMBER 2026

Brazil became an example of a Zero Waste project.



Eamon Ryan, Zerin Osho, Mariel Vilella and Ian McKee — Waste Methane + Circularity panel

Frame from Carrot's recording of the panel · NY Climate Week, Sep 24, 2026

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It's time, folks.

We need everyone acting together.

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IF YOU HAVE A KITCHEN

Start tomorrow morning.

1 **Separate organics**

2 **Organize the service**

3 **Build the system**

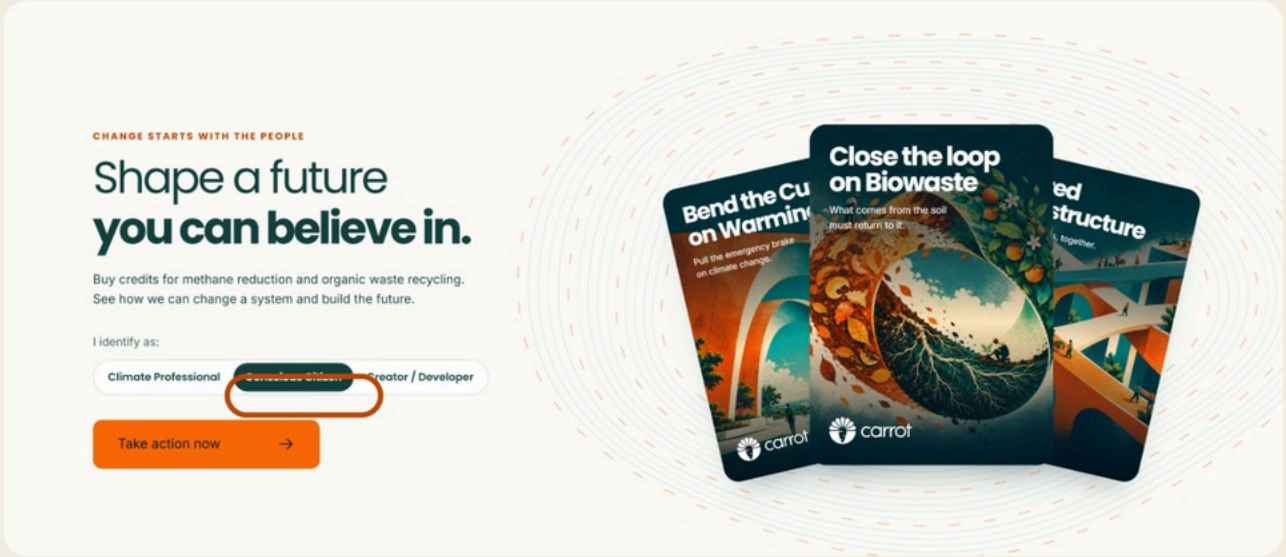
Visit the website
www.ecozinha.org.br



Photo: compost windrows (Instituto Ecozinha archive, 2023 institutional presentation)

AS A CITIZEN

Results for the climate today.



store.carrot.eco

COMPOSTING PROJECTS IN THE CARROT NETWORK



store.carrot.eco with revised headline and profile (Nov 7, 2026) · photos: Carrot network projects, courtesy of Biocomp, Composta+ and others

Imagine buyers from around the world funding what starts here.

TODAY

That's already possible today.

It's the Ecozinha case and the projects from Brazil presented at COP30.

IMPACT

Nothing delivers more value for the climate, for the country's natural resources and for people than composting.

The Zero Waste journey.

WHAT DOES COP31 HAVE TO DO WITH YOUR KITCHEN?

We stand together.



Ian McKee
President, Carrot Foundation

More information

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