

CDM and waste or how to burn climate finance

Mariel Vilella

GAIA Climate policy campaigner

CDM Watch workshop
Contemporary Service Centre of Beijing

Beijing, 01.10.10



gaia global anti-incinerator alliance
global alliance for incinerator alternatives

our mission

GAIA network formed in December 2000 to end all forms of incineration and to promote safe and sustainable alternatives.

Our ultimate vision is a **just, toxic-free world**, and an economy where all products are **reused, repaired or recycled back into the marketplace or nature.**



GAIA - A global movement

600 members in 85 countries in 2010

Offices in Berkeley, Manila, Buenos Aires, Barcelona



Waste
Climate
Health
Jobs
Economy



CDM and waste

AM25: CDM framework for waste management proposals

*Avoided emissions from organic waste through
alternative waste treatment processes*



Treatment of
municipal solid waste (MSW)

Started in 2005

It presumes that waste would
have otherwise been dumped

CDM and waste

Main project types under the M25

Treatment of municipal solid waste (MSW)

- Aerobic composting
- Landfill gas systems
- Incineration of fresh waste for energy generation

172 projects in CDM
pipeline
30 million CERs by 2012

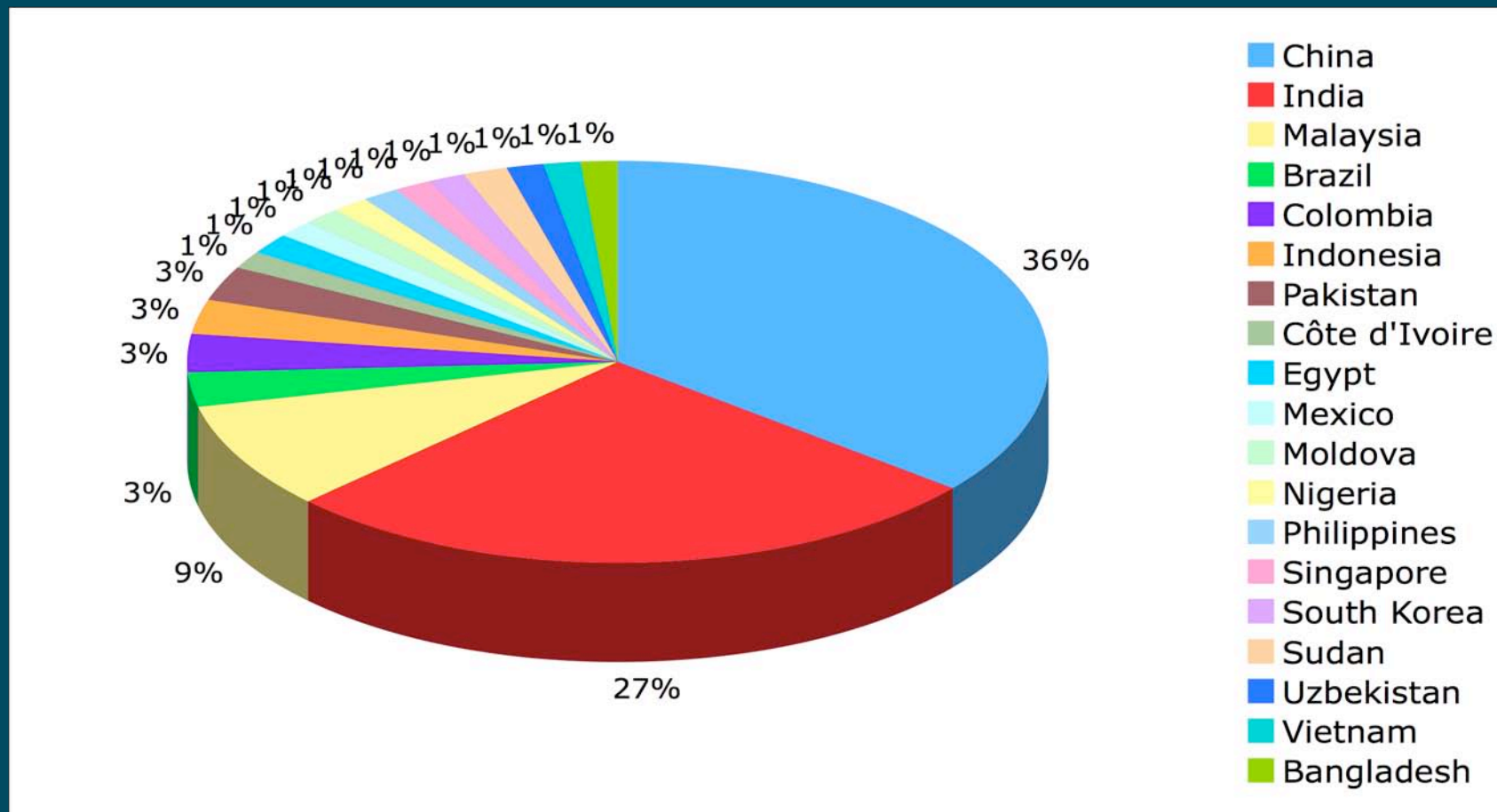


Methane avoidance actually means
burning or burying waste

Reduction, re-use, recycling?
Clean energy?

Projects under AM25

By region



Source: Riso/CDM Pipeline Database

Other CDM-backed waste projects

Mixed waste or landfill composting - a “second worst” solution

Mixed waste stream (paper, glass, metals, cardboard, organics) is composted before being buried.

Methane production decreases but compost cannot be used

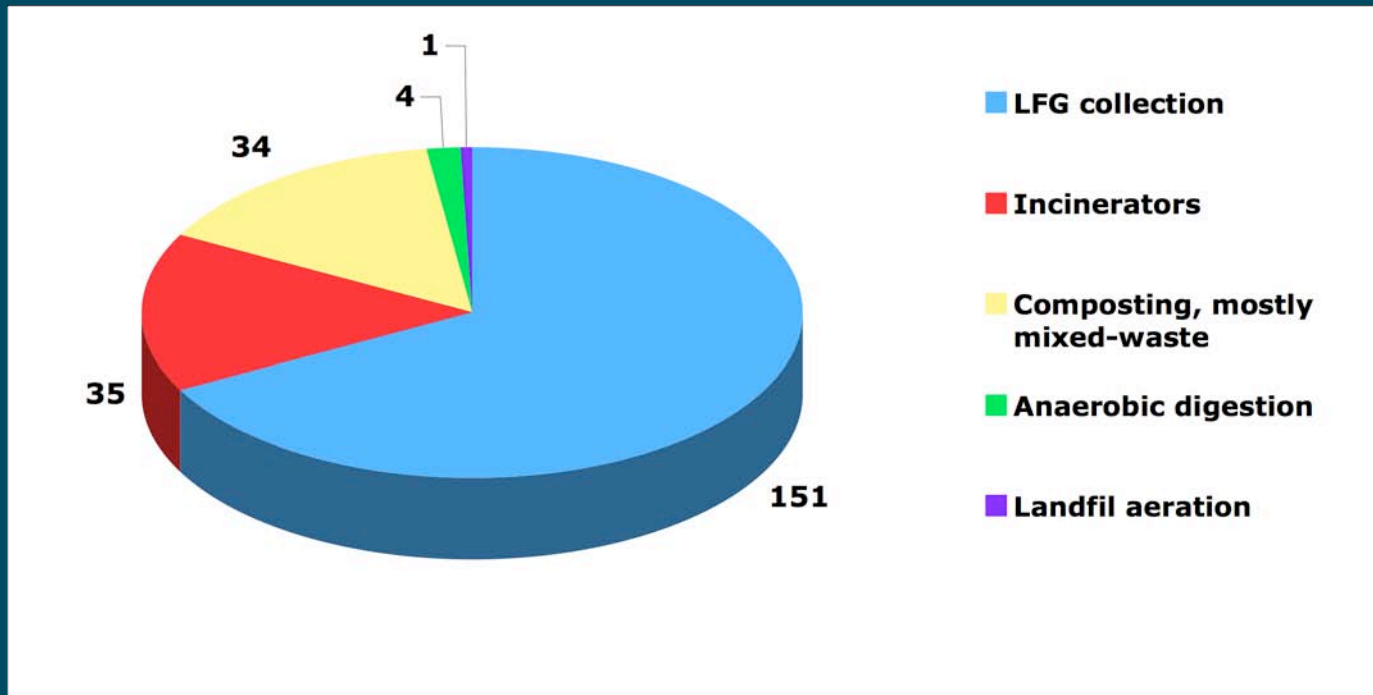
Anaerobic digestion of animal waste

Unsustainable large-scale pig farms generating a lot of manure

Perverse incentive at the project and policy level

CDM-backed waste projects

- Total estimated: around **300 projects under different methodologies**
- Total documented: **228 projects**



Source: UNFCCC/CDM Database

Incineration of MSW



Key issues

**Consume vast quantities
of resources**

Undermine recycling

Produce toxic ash

**Poison our bodies and
food supplies**

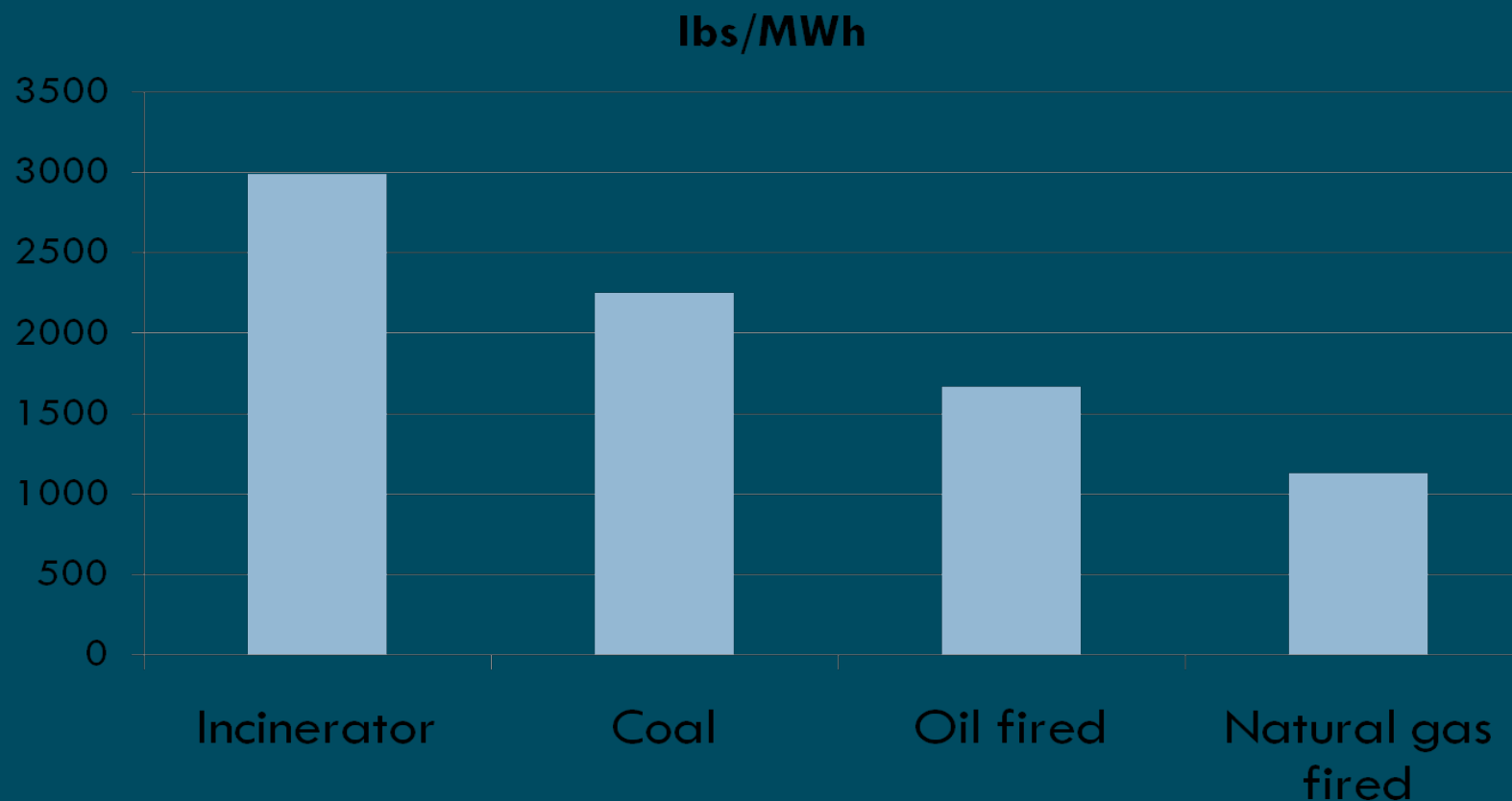
Suck public coffers dry

Provide far fewer jobs

Contribute to climate change



CO2 emissions from incineration



Source: U.S. EPA, 2007, epa.gov/cleanenergy/energy-and-you/affect/airemissions.html

Including biogenic emissions, according to the IPCC

CDM and Incineration in China

China: expansion of incineration **prior to CDM**
now the **major recipient** of CDM support for
incineration.

2001: 36 MSW incinerators for 6.520 t/day

2005: 67 MSW incinerators for 33.071 t/day

Incinerators rely on imported and expensive technology

0.6-0.7 million (RMB) / daily ton treatment capacity

Technology does not perform well

Incineration in China and fossil fuels

World Bank review of calorific value of waste in China (WB, 2005):

- low calorific value, mostly **organic**, so **wet**
- need to use **supplemental fuel** to burn solid waste

Reports on this situation say:

Normally, Chinese municipal waste incinerators cannot be operated without support firing (Solenthaler and Rainer, 2004)

Some incinerators may only operate if diesel fuel is added to waste, which defeats arguments that waste-to-energy is energy efficient (Forsyth, 2006)

Landfill gas collection of MSW



Municipal Waste Dump or Landfill



Sanitary Landfill with Landfill Gas Collection System under Construction (dwells and plumbing to collect the gas)

Key issues of LFG system

Consume vast quantities of resources, it's a **waste-of-energy**

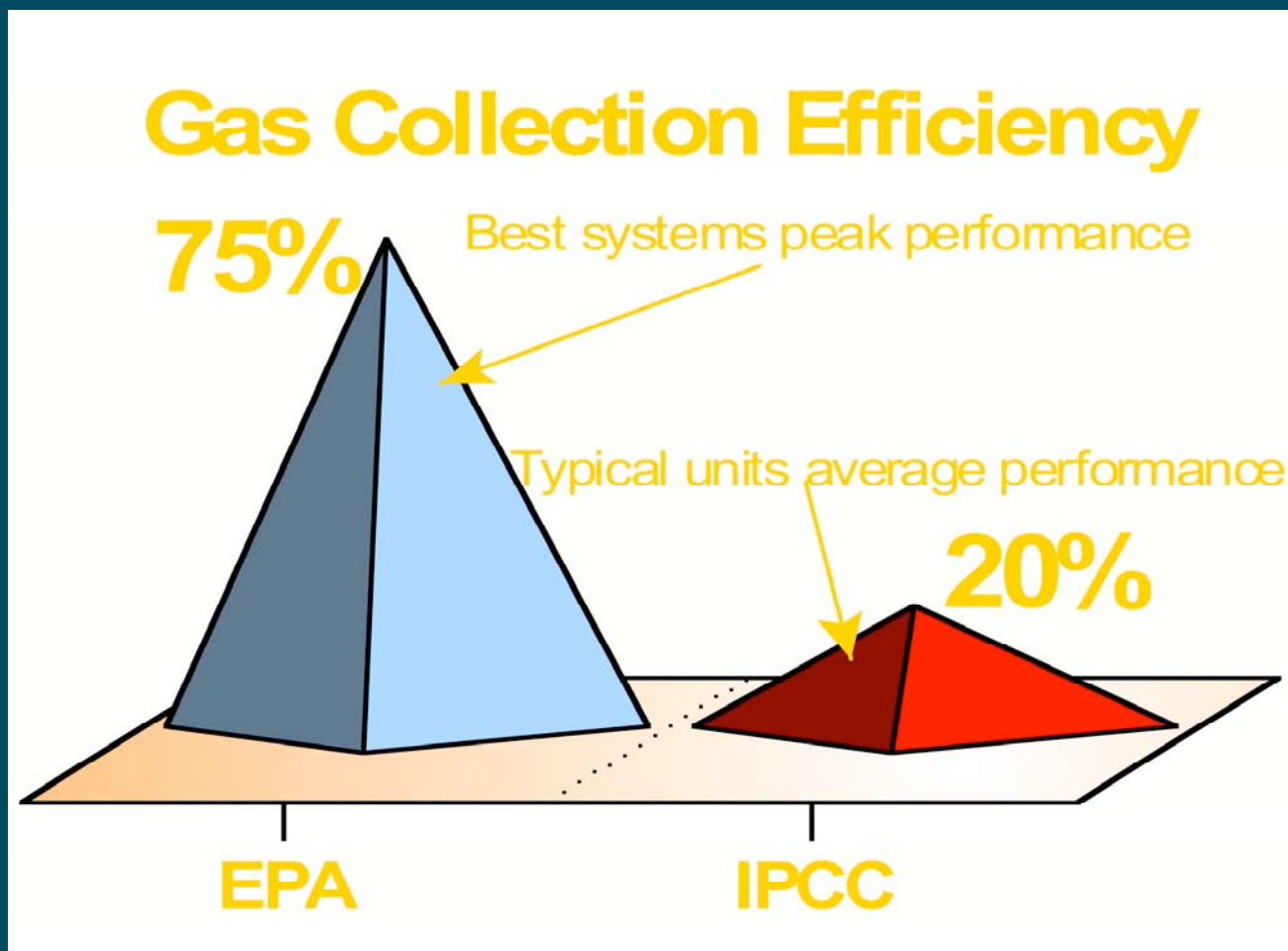
Undermine sustainable alternatives like **recycling** and **composting**

Exaggerated methane recovery, **no energy efficiency**

Perverse incentives **to methane production**



Landfills gas capture systems do not work as expected



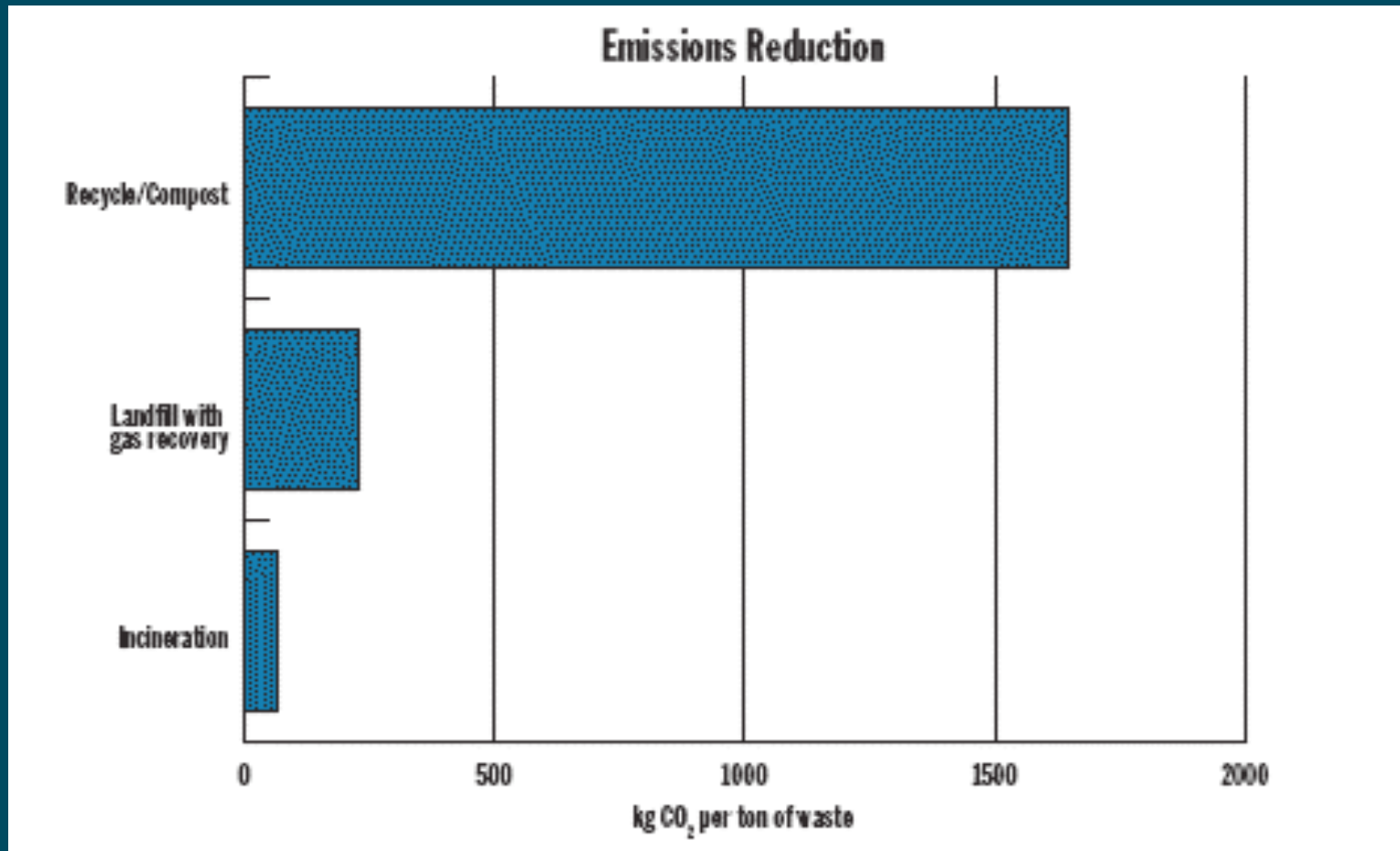
The solution is not techno-enthusiasm

“Even if you
made
incineration
SAFE, you
would never
make it
SENSIBLE”



Trashing the planet

CDM ignores the real alternatives



Source: "Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review," Tellus Institute December 2008, p.2.

Comparing costs of recycling and incinerating

Recycling/Composting: Less Industrialized Nations	Cost per ton/day
Philippines, recycling collection and composting	\$5,000
India, recycling collection and composting	\$1,650
Egypt, recycling micro-enterprises	\$450
Brazil, recycling cooperatives	\$5,300
Recycling: Industrialized Nations	
Typical U.S. recycling facility	\$30,000
Incineration	\$136,000-270,000

Composting in Bali



Source: "Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review," Tellus Institute December 2008, p.2.

Composting at large-scale



Domestic/collective vermicompost



Animal feed



Small-scale biogas plant in Bali



Wastepickers in the world



15 million people worldwide

1% population in
developing countries

Wastepickers in China





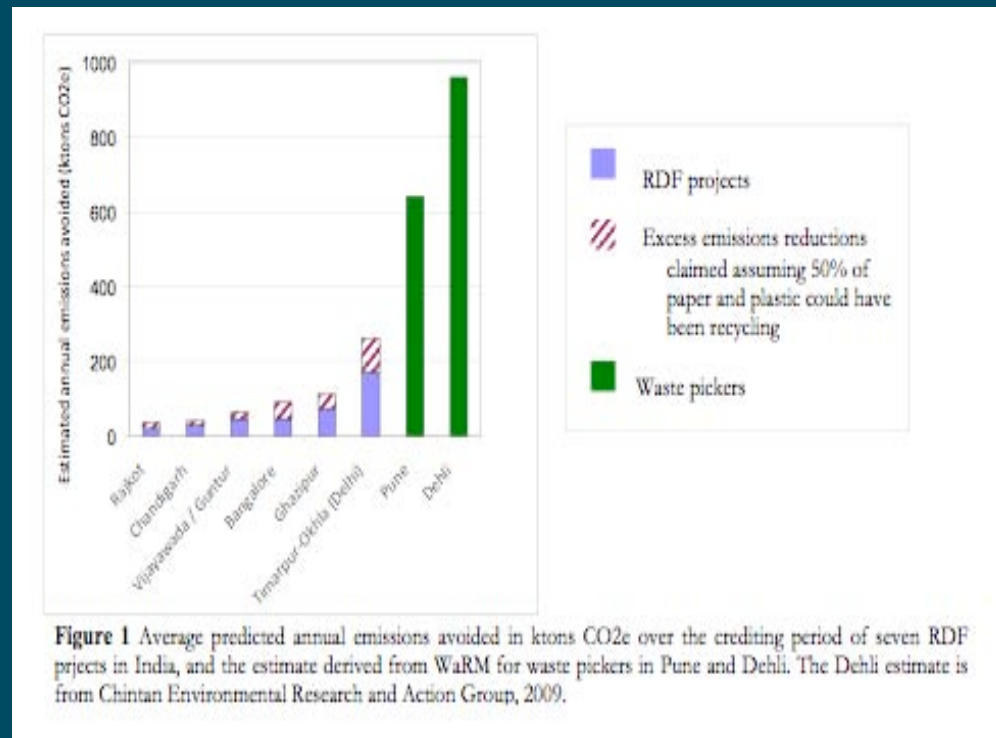
Catadores in Brasil

India: Recyclers are the Real Climate Heroes

RDF Waste-to-energy plants: 7.700 t/C02 by 2020 = USD 150 million

Main issues:

- WPs achieve the **highest rate** of emissions reductions
- 80% of MSW is organic, so **plastic and paper** become very important to the quality of the RDF and **compete directly** with WPs
- 50% of plastic and paper can be recycled, so there's a **surplus of credits**



Source: Cushing, 2010

Respect for recyclers!

YAHOO! NEWS

HOME U.S. BUSINESS WORLD ENTERTAINMENT SPORTS TECH POLITICS SCIENCE HEALTH OPINION

Science Video Weather News Space & Astronomy Animals & Pets Dinosaurs & Fossils Biotech Energy E

POPULAR SEARCHES: tiger woods elin nordegren eminem bryant gumbel

 **DECADE IN REVIEW:** Yahoo! News looks back at the top stories of 2000-2009

Wastepickers of the world unite at climate talks

AFP Buzz up! 2 votes [Send](#) [Share](#) [Print](#)

by Richard Ingham — Tue Dec 8, 10:05 am ET



AFP/File — A Chinese garbage collector with her child searching through the rubbish at a garbage disposal site in ...

Climate Change
Video: **Obama looks to stoke job growth** AP

COPENHAGEN (AFP) — Ignored, marginalised or despised in many countries, wastepickers from Asia, Latin America and Africa have come together in Copenhagen to lobby for recognition as unsung heroes in the fight against climate change.

An estimated 15 million people around the world survive by sifting through trash, rooting out plastic packaging, glass bottles, scrap metal, paper and other tossed-out goods that are then resold for recycling.

In some places, the recycling rate reaches more than 80 percent, an exploit in efficiency that saves the planet a fortune in environmental terms.

Top Stories

- Senate bloc
- Wave of co
- McChrysta Congress
- China exel missing
- Students, r
- Ohio execu
- Fierce win

INTROD

Enha

glob

Respect for recyclers!

guardian.co.uk

UN incineration plans rejected by world's rubbish-dump workers

Pickers say waste-to-energy incineration plants increase emissions and take away their only means of survival

John Vidal

guardian.co.uk, Thursday 5 August 2010 12.46 BST

[A](#) [larger](#) | [smaller](#)



People scavenge for items of value in the garbage in the Truitier municipal garbage dump in Port-au-Prince, Haiti (AP Photo/Alexandre Meneghini)

The waste-pickers who scour the world's rubbish dumps and daily recycle thousands of tonnes of metal, paper and plastics are up in arms against the UN, which they claim is forcing them out of work and increasing climate change emissions.

Global Alliance of Wastepickers and Allies



Thanks!

Polite people get
polluted

Concerned people get
organized

mariel@no-burn.org

**GAIA - Global Alliance for
Incinerator Alternatives**

