

Conclusion

Projects such as incinerators and landfill gas projects within the Clean Development Mechanism supply the European carbon market with highly problematic carbon credits. Not only do many of these credits represent no real emissions reduction, their purchase supports projects which do not comply with minimal European waste management and quality standards.

In the developing country context, incinerator and landfill gas projects also generate a number of serious problems that escape the purview of the CDM. They threaten the livelihoods of a large but vulnerable population, grassroots recyclers; they produce uncontrollable toxic emissions; they consume additional fossil fuels; and they encourage intensive destruction of natural resources. Finally, the carbon credits generated by such projects are supposed to help the EU meet its greenhouse gas emissions targets. Yet these credits are often spurious - they do not represent real emissions reductions - and their importation into the European carbon market undermines EU climate policy.

For all these reasons, **the European Union Emissions Trading System (EU ETS) should immediately discontinue the use of carbon credits from waste disposal projects.** The EU ETS Directive (2009/29/EC) allows the European Commission and the Member States to restrict the use of credits from certain project types. The European Commission has previously taken action to prevent spurious carbon credits from undermining the environmental integrity of the European carbon market, and should do so again.

This report also recommends the consideration of the following principles, to be applied prior to any EU support for waste management in developing countries:

Glossary

- **EU ETS Directive (2009/29/EC)** regulates the European carbon market and allows the European Commission and the Member States to restrict the use of credits from certain project types.
- **Landfill Directive (1999/31/EC)** stipulates that biodegradable waste has to be phased out from landfills, setting up progressive reduction targets for all Member States.
- **The Waste Framework Directive (2008/98/EC)** defines the Waste Hierarchy and establishes recycling targets of 50% for paper, metal, glass, and plastic.
- **The Waste Incineration Directive (2000/76/EC)**, sets emission limit values for incineration and co-incineration.
- **Waste Hierarchy** provides criteria to prioritise waste management options. Landfilling and incineration are the least desirable options.
- **Landfill gas:** gas, approximately 50% of which is methane, resulting from the decomposition of organic waste in waste dumps.
- **Landfill gas project:** installation of wells and pipes aimed at capturing the landfill gas to flare it or to produce electricity with it.



Respect for the Waste Hierarchy must prevail. The EU should be consistent in prioritising waste prevention and recycling over end-of-pipe disposal strategies, since waste prevention and recycling generate lower greenhouse gas emissions, whether in Europe or the Global South. If the Waste Hierarchy is not respected, increased emissions associated with disposal and lost recycling can easily outweigh any savings from reduced methane emissions.

The informal sector must be integrated. The informal recycling sector comprises a large population with an essential skill set for proper solid waste management in developing countries. Rather than exclude them or create programs which compete directly with them, they should be included in every stage of program planning, development, and implementation. This will ensure improved social as well as environmental outcomes.

Organics diversion from landfills must be supported. Organics diversion is critical to reducing greenhouse gas emissions. The EU should shift support from long-term landfilling and landfill gas projects to promote strategies that will avoid dumping organics in the first place. The “diversion of organics” principle of the Landfill Directive is one of the landmarks of EU environmental policy, and the EU should not incentivize lower standards elsewhere.

Separate collection and zero waste policies must be encouraged. Without separate collection of waste within an overall policy framework aiming at waste reduction, it is difficult to increase recycling rates or find safe, environmentally friendly uses for organic waste. End-of-pipe technologies such as incineration and landfill gas projects should not be encouraged as a climate change abatement strategy.

For a more detailed discussion of the CDM methodological flaws, see GAA's submission to the CDM, available at www.no-burn.org/cdm. CDM Project Design Document, Project 2944: *Goval Landfill closure and Gas Capture Project, Mumbai, India*, August 2009. CDM Project Design Document, *Project 1626: Feira de Santana Landfill Gas Project*, September 2007. CDM Project Design Document, *Changshu Municipal Solid Waste Incineration Project*, February 2008. CDM Watch and Environmental Investigations Agency, *HFC-23 offsets in the context of the EU Emissions Trading Scheme*, July 2010 in <http://www.cdm-watch.org/?p=1065> Chintan, *Cooling agents. An analysis of Greenhouse Gas Mitigation by the Informal Recycling Sector in India*. Delhi, 2009. IPCC, *2006 IPCC Guidelines for National Greenhouse Gas Inventories. Waste Generation, Composition, and Management Data*, Ch. 2, 2006. Leonard, L., *Carbon Trading Prolongs Environmental Racism at Africa's Largest Municipal Dump*, November 2011, in <http://www.no-burn.org/cdm-case-studies> Müller, M., et al, *The Clean Development Mechanism in the waste management sector. An analysis of potentials and barriers within the present methodological framework*. Bifa Environmental Institute, Bifa Text-42, September 2009. US EPA Region 9 (2007), *Ideas for Consideration to Strengthen WARM Model* (EPA, 2007:1). Shah, D., *The Trinapur-Okhla Waste to Energy Venture*, November 2011, in <http://www.no-burn.org/cdm-case-studies> UNEP, *Waste and Climate Change. Global Trends and Strategy Framework*, December 2010. *The Danger of Corporate landfill-gas-to-energy Schemes and how to fix it*, Recycling works, Sierra Club and International Brotherhood of Teamsters, 2010 Sierra Club LFGTE Task Force, *Sierra Club Report on Landfill-Gas-to-Energy*, January 2010. Zhao A., Mao D., Chen L., *The CDM Incinerator in Chengdu Luo Dai*, November 2011, in <http://www.no-burn.org/cdm-case-studies>

GAA is a worldwide alliance of more than 650 grassroots groups, non-governmental organizations, and individuals in over 90 countries whose ultimate vision is a just, toxic-free world without incineration. Contact: info@no-burn.org

Global Alliance for Incinerator Alternatives



Global Anti-Incinerator Alliance

DISCREDITED

Carbon credits from waste undermine EU waste policies and efforts to reduce climate change

Executive Summary

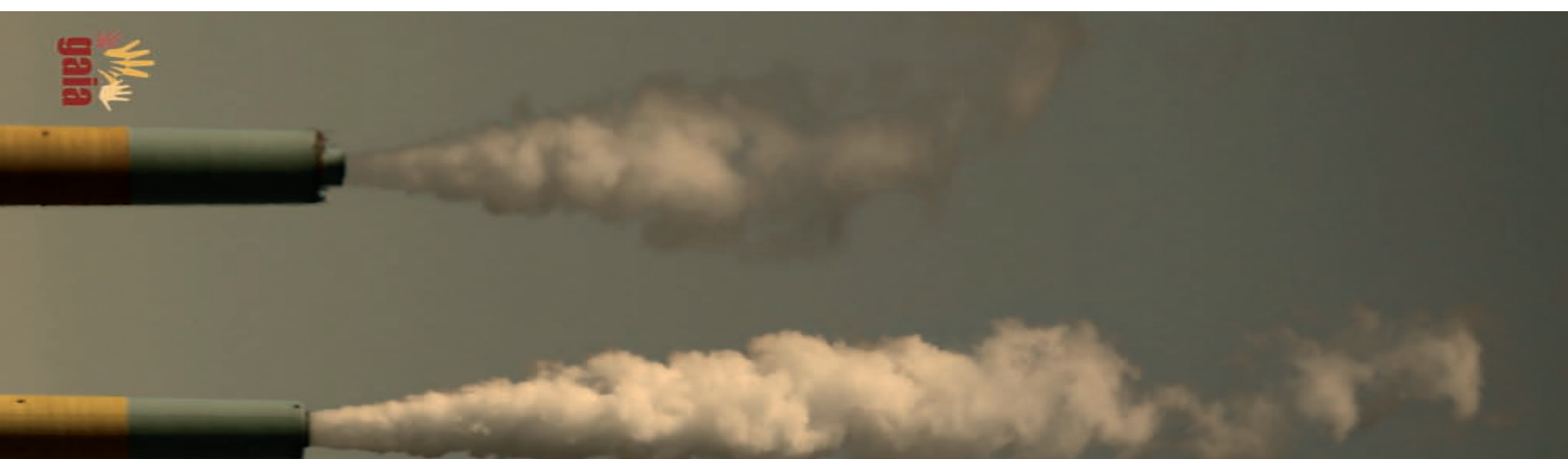
Through the purchase of carbon credits, European Union states are financing municipal waste projects in developing countries that would be illegal in the EU, according to an investigation of almost 300 projects in 50 countries by the Global Alliance for Incinerator Alternatives (GAA).

These projects - incinerators and landfill gas projects - are evidence of a glaring double standard. They contradict the EU's waste hierarchy - embodied in the Waste Framework Directive - the Landfill Directive and the Incineration Directive. They increase greenhouse gas emissions and toxic pollution while undermining recycling and composting. Nevertheless, the Clean Development Mechanism (CDM) awards them carbon credits which are then sold to EU industries that choose not to reduce their own emissions.

GAA's investigation found that by supporting the purchase of incinerator and landfill carbon credits, EU policy is working against itself. Although the Waste Framework Directive and the Landfill Directive aim to minimize the environmental impacts of waste, as well as reduce greenhouse gas emissions, the effect of the EU Emissions Trading System is to increase them both. Furthermore, these projects are responsible for the displacement of informal sector recyclers (waste pickers), whose efforts are capable of achieving higher emission reductions through recycling.

The countries with the worst track records of buying carbon credits for incineration and landfill gas projects that would be illegal in the EU are the United Kingdom, France, Spain and the Netherlands. **To maintain the integrity of their own efforts to reduce greenhouse gas emissions, these nations - and the EU as a whole - should immediately halt all future investment in such projects, and the Executive Board of the Clean Development Mechanism should immediately cease issuing carbon credits for such projects.** There is clear precedent for this action: In January 2011 the EU banned the trade in carbon credits for projects claiming to destroy industrial gases after investigations found most of these projects to be fraudulent.

GAA's report, *EU's Double Standards on Waste and Climate Policy*, presents in detail the glaring contradictions between increasingly strong European waste management policies and the environmentally and socially counterproductive municipal solid waste projects supported by the EU carbon market through the Clean Development Mechanism. Europe's official priorities - waste reduction, reutilization, recycling, limiting toxic emissions from incineration, and diverting organic waste from landfills - are being systematically undermined by carbon credits from landfills and incinerators. Therefore, these need to be banned



gaa

10 ways carbon credits from landfills and incinerators undermine the EU's waste policy and efforts to reduce global warming

Landfill gas operations increase greenhouse gas emissions.

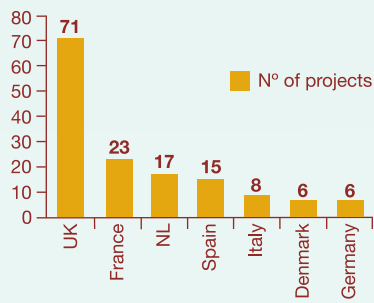
Many landfill gas projects are recirculating leachate (landfill liquids), adding moisture and adopting other management practices intended to accelerate organic waste decomposition and increase methane production. The United Nations Environmental Programme has noted that the trend towards more managed landfill practices in developing nations - such as those promoted by the CDM - is ironically leading to enhanced anaerobic conditions and therefore generation of greater quantities of methane.

At the Doña Juana landfill in Bogotá the implementation of a gas capture scheme resulted in increased emissions during the crediting period of the landfill.

UK, France, NL and Spain are the countries with the worst track record of buying carbon credits from waste disposal projects.

They are the main countries responsible for introducing these carbon credits in the EU Emissions Trading System.

Countries buying carbon credits from waste-to-energy



European waste management standards seek to minimise waste disposal in favour of best waste management practices such as composting and recycling.

CDM-backed incinerators burn fossil fuels alongside municipal solid waste in order to burn the organic waste fraction.

The CDM rules for waste incineration allow up to half of the energy generated by an incinerator to be from auxiliary fossil fuel. As the World Bank has stated, "Most Chinese cities would have to use supplemental fuel in order to burn their solid waste, and thus there would be no net energy generation to offset the high costs of incineration."

In Hanyang, as in most of CDM-backed incinerators, using fossil fuel to burn such "wet" wastes does nothing to abate climate change and has serious implications for the CDM's environmental integrity.

Many of the CDM-backed incinerators are not new projects.

The CDM is not supposed to support business-as-usual projects - only projects that would not have been built without CDM support can be approved. Yet many Chinese incinerators were built before CDM approval. At least 6 incinerators currently waiting for CDM approval are already operational, according to their own websites.

The Huzhou city incineration plant was approved by the CDM in September 2010, despite the fact that it had been operating since May 2008, according to the company website.

CDM-backed incinerators generally lack pollution control.

CDM does not require strict monitoring of incinerator pollution rates, nor does it impose toxic emissions limits as a condition for the approval of these projects, as the EU waste legislation does. Consequently, CDM-backed incinerators represent a major source of global toxic pollution. In China, the 2001 National Standards for Pollution Control set the standard for dioxin emissions at 1.0 nanograms per cubic meter, which is ten times higher than the standard in the EU Waste Incineration Directive and in the Stockholm Convention. The World Bank estimates that current incinerator-building trends in China alone will double the concentration of dioxins in air worldwide.

In Chengdu, 70-80 households have been forced out of the area, as they could not bear the pollution caused by the Luo Dai incinerator.



Landfill gas projects issue spurious carbon credits.

At least 67% of CDM-backed landfill gas projects plan to continue landfilling organic waste in order to generate methane and sell carbon credits from its capture. Instead of diverting waste away from landfills - as required by the Landfill Directive - these projects are receiving carbon credits for creating and then "avoiding" methane emissions.

The Copiulemu landfill in Concepción, Chile did not have enough methane gas to be flared until the CDM supported a gas capture system and incentivized the landfilling of organic waste.

Landfill gas projects are wrongly incentivized to bury organics.

The Clean Development Mechanism awards carbon credits in proportion to the amount of methane captured from landfills; methane is generated from buried organics. So the more organic waste that goes into the landfill, the greater the profit. This is in contradiction to the Landfill Directive (1999/31/EC), which mandates organics diversion from landfills.

The landfill of Feira de Santana in Brazil is landfilling 365 tons/day of waste, more than 80% of which is organic waste. The disposal rate is expected to steadily increase for the next 21 years.

Landfill facilities leak methane into the atmosphere.

Even projects designed to capture landfill gas result in considerable uncontrolled methane releases (referred to as "fugitive emissions"). Capture efficiency rates from landfill gas facilities range from 10% to 85% (according to the Intergovernmental Panel on Climate Change) and average as low as 30%. Methane leaks into the atmosphere through cracks, tears, and broken seams along the sides and top of the landfill gas structure, and can also escape from leachate collection trenches and piping at the bottom of the facility. The more methane is created, the more is released into the atmosphere.

At the Bisasar landfill in Durban, South Africa, field research has shown that more than 60% of methane produced is escaping unburnt.

CDM-backed landfill gas projects and incinerators ignore the informal recycling sector,

which often results in the displacement of their livelihoods. The informal recycling sector typically represents a work force of about 1% of the urban population in the Global South who rely on access to waste to make a living.

The CDM-backed closure of the Gorai Landfill in Mumbai displaced 150 to 200 waste pickers who had made a living from recycling, without making any provision for alternative livelihoods.

CDM-backed landfill gas projects and incinerators have a negative impact on recycling rates

by burning and burying materials that are currently being recycled. Replacing the recyclers with landfill gas projects and incinerators will result in less recycling and therefore in a net increase in emissions. However, CDM-backed landfill gas projects and incinerators systematically disregard their impact on recycling rates, which implies that emission reductions are overestimated and that these projects are issuing spurious carbon credits.

In Delhi, the annual greenhouse gas emissions savings that the informal sector brings to the city is over three times greater than that claimed by the CDM's waste incinerators which are replacing them.

The CDM backs incinerators that maximize the burning of recyclable materials.

At least 32 CDM-backed incinerators are in violation of the waste hierarchy established by the Waste Framework Directive 2008/98/EC and contradict the EU Resource Efficiency Roadmap, which gives priority to waste prevention and reuse of materials before energy recovery or incineration.

As is typical of this kind of incinerator, the Changsu incinerator burns valuable resources without considering any waste prevention, reuse or recycling strategy, which incentivizes incineration as a main waste management option.

