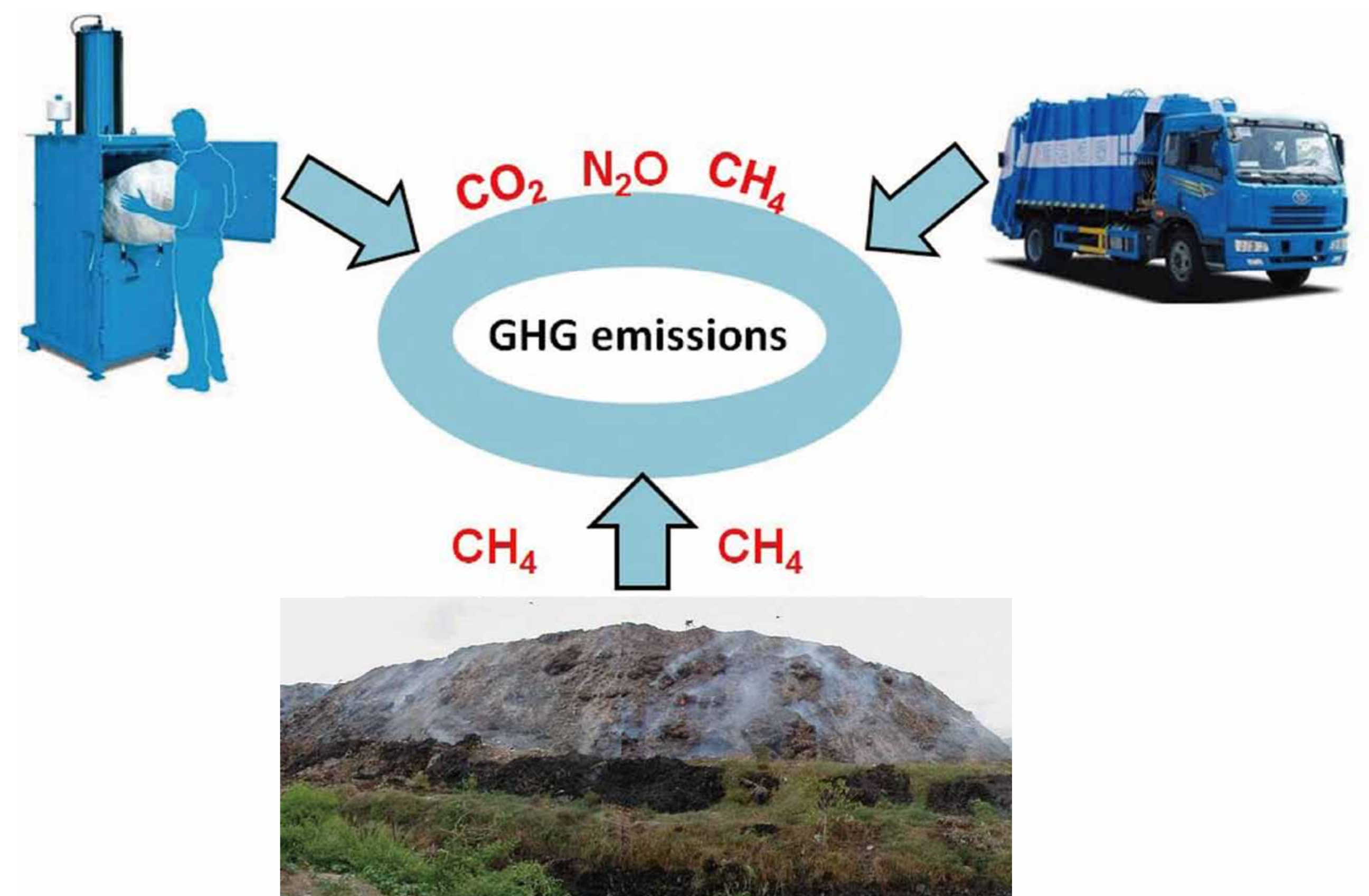


A Calculator to Quantify Climate Impacts from the Waste Sector

IGES developed a tool now used by stakeholders at local and national levels in Asia-Pacific countries such as Cambodia, Thailand, and Malaysia, to help select climate-friendly waste management technologies to address waste crises while reducing GHG emissions.

Issue

- Most Asian developing countries are suffering from waste management crises and impacts from climate change.
- Greenhouse gas (GHG) emissions from waste management are significant and can occur at every stage of waste management.
- It is difficult for local waste management authorities to address the link between waste management and climate change.



Seeking solutions

- Local climate-friendly waste technologies can make important contributions to climate change mitigation and addressing waste crises.
- Local authorities need relevant information and practical support for decision making, implementation, and reporting GHG emissions.

Role of IGES

- Developed a user friendly calculator and manual to quantify the GHG emissions considering most waste treatment options.
- Applicable to municipalities in countries across the Asia-Pacific region.
- Translated into local languages: Thai, Khmer.
- Provided training programmes to over 50 local governments.

Activity	Direct GHG Emissions	Indirect GHG Savings	Net GHG Emissions	Unit
Transportation				kg of CO ₂ -eq/tonne of waste
Landfilling of mix.MSW				kg of CO ₂ -eq/tonne of mix waste
Composting				kg of CO ₂ -eq/tonne of organic waste
Anaerobic digestion				kg of CO ₂ -eq/tonne of organic waste
Mechanical Biological Treatment (MBT)				kg of CO ₂ -eq/tonne of waste
Recycling				kg of CO ₂ -eq/tonne of mixed recyclables
Incineration				kg of CO ₂ -eq/tonne of incinerated waste
Open burning				kg of CO ₂ -eq/tonne of open burned waste
GHG emission from whole system				kg of CO ₂ -eq/tonne of collected waste
Total GHG emissions per month				kg of CO ₂ -eq/monthly managed waste

Layout of the calculator



Training programme for local governments

Impact

- The tool is being used by local and national governments, universities and NGOs to estimate GHG emissions from solid waste management and select best-suited climate friendly technologies and also to quantify national level climate impacts.
- Useful to assess potential and facilitate project development for carbon markets.
- This tool will be expanded to include Short-Lived Climate Pollutants (SLCPs), linking air pollution and GHG reductions through the Climate and Clean Air Coalition (CCAC).