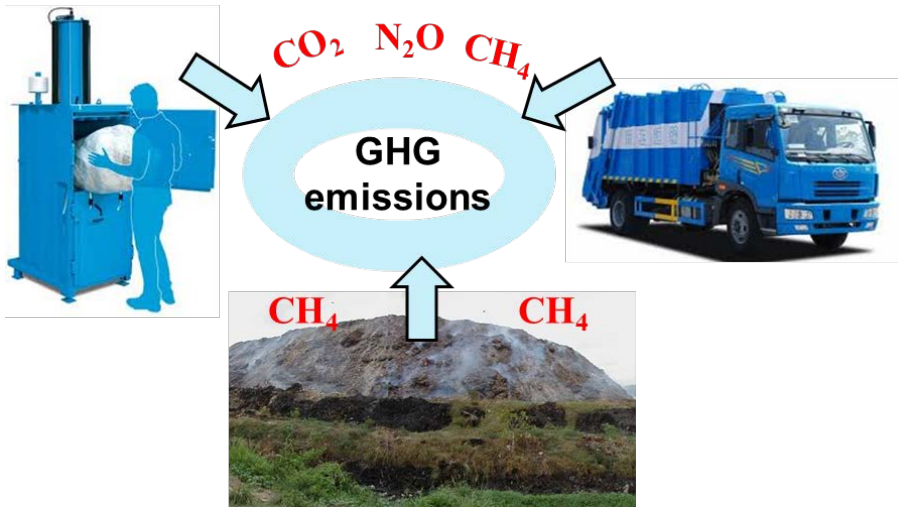
A Calculator to Quantify Climate Impacts from the Waste Sector

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.

Problems

- 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



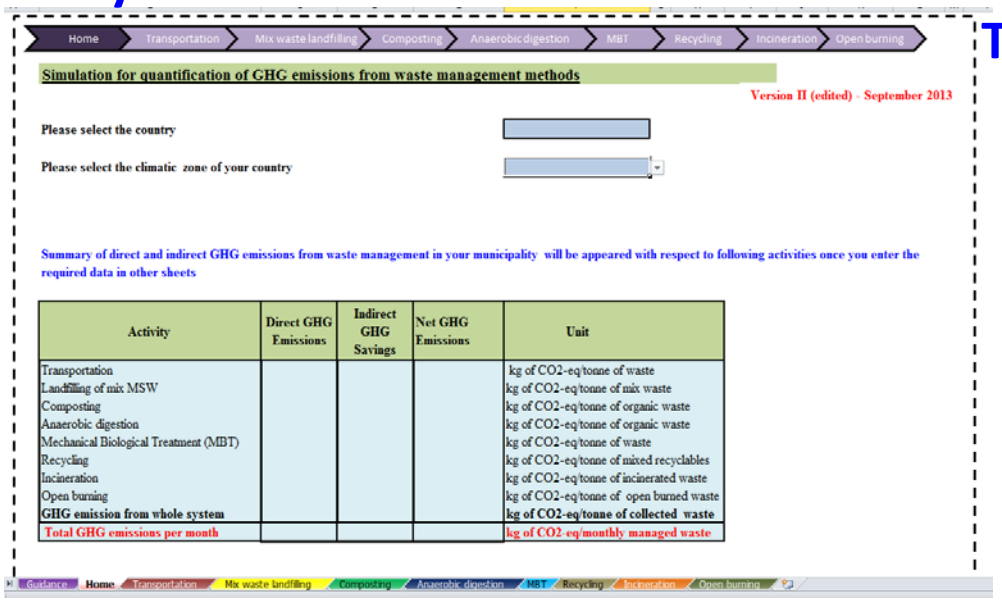
Seeking solutions

- 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

Layout of the calculator


Home | Transportation | Mix waste landfilling | Composting | Anaerobic digestion | MBT | Recycling | Incineration | Open burning

Simulation for quantification of GHG emissions from waste management methods

Version II (edited) - September 2013

Please select the country

Please select the climatic zone of your country

Summary of direct and indirect GHG emissions from waste management in your municipality will be appeared with respect to following activities once you enter the required data in other sheets

Activity	Direct GHG Emissions	Indirect GHG Savings	Net GHG Emissions	Unit
Transportation				kg of CO2-eq/tonne of waste
Landfilling of mix MSW				kg of CO2-eq/tonne of mix waste
Composting				kg of CO2-eq/tonne of organic waste
Anaerobic digestion				kg of CO2-eq/tonne of organic waste
Mechanical Biological Treatment (MBT)				kg of CO2-eq/tonne of waste
Recycling				kg of CO2-eq/tonne of mixed recyclables
Incineration				kg of CO2-eq/tonne of incinerated waste
Open burning				kg of CO2-eq/tonne of open burned waste
GHG emission from whole system				**kg of CO2-eq/tonne of collected waste**
Total GHG emissions per month				kg of CO2-eq/monthly managed waste

Guidance | Home | Transportation | Mix waste landfilling | Composting | Anaerobic digestion | MBT | Recycling | Incineration | Open burning

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).
- Freely available at http://pub.iges.or.jp/modules/envirolib/view.php?docid=4273