

# Overview of Belize's Waste GHG Inventory

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*Table 2.22: Categories for estimation of Waste Sector Emissions*

## Categories

### 4 – Waste

#### 4.A – Solid Waste Disposal

4.A.1 – Managed Waste Disposal Sites

4.A.2 – Unmanaged Waste Disposal sites

4.A.3 – Uncategorized Waste Disposal Sites

#### 4.B. – Biological Treatment of Waste

#### 4.C - Incineration and Open Burning of Waste

4.C.1 – Waste Incineration

4.C.2 – Open Burning of Waste

#### 4.D – Waste treatment and Discharge

4.D.1 – Domestic Wastewater Treatment and Discharge

4.D.2 – Industrial Wastewater Treatment and Discharge

#### 4.E – Other (please specify)

# Background

Belize's waste sector can be divided into the Solid Waste and Liquid Waste Sectors, both accounted for under the Waste Sector in the IPPC software.

Carbon dioxide, Methane, and Nitrous oxide were the GHG gases for which the emissions were estimated in this sector.

Reporting years for the current Waste sector GHG inventory were similar to the other sectors surveyed, 2012, 2015, and 2017.

# Activity data

- The Waste sector inventory was calculated for GHG emitting activities such as solid waste disposal including landfills, open burning of solid waste, and some limited domestic and industrial wastewater treatment and disposal.

# Types of activity data

Solid waste

Waste  
composition

Population  
data

Liquid  
waste data

Industrial  
solid waste

# Recalculations

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Efforts were made to recalculate past sector inventories, but this available data in this sector has benefited from the fact that the solid waste generation rate has more scientifically generated rates derived from additional studies (Hydroplan and Hydea).

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Different methodologies, which were incompatible, were utilized in the two studies.

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As a result, it was concluded that earlier data was rendered obsolete

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Recalculation would have proven extremely difficult.

# Emission factors

*Table 2.23: Emission /Carbon – stock change Factors of the Waste Sector*

Activity	Emission Factor
Solid Waste Disposal (Tier 1)	0.6 Kg CH <sub>4</sub> /Kg BOD
Solid Waste Disposal (Tier 2)	0.5 Kg CH <sub>4</sub> /Kg BOD
Indirect N <sub>2</sub> O (Tier 2)	0.005 Kg N <sub>2</sub> O –N Kg N
Waste water treatment and disposal	0.5 Kg CH <sub>4</sub> /Kg BOD ( Default value)
Methane Correction Factor – Solid Waste Disposal	
Unmanaged Deep	0.8
Shallow	0.4
Managed Aerobic	1.0
Managed semi-aerobic	0.5

Note: Organically Biodegradable BOD (Biochemical Oxygen Demand) = 14.6 Kg BOD/yr.

# Methodology

The calculations of the GHG emissions from the Waste sector utilized the Tier 1 approach as reliable information exists.

For the calculations of the MCF and other parameters the default coefficients are utilized and where known figures based on the composition of waste, they are inserted.



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Thank you. Questions?