

WASTE



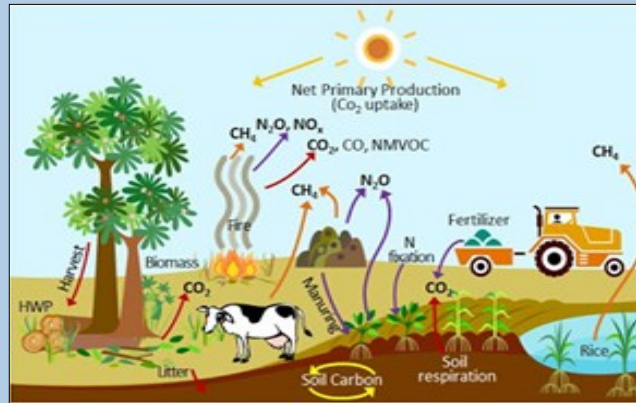
Burning of bus contributes to GHG emissions

Waste sector in Vanuatu contributes to a total GHG emission of **299.517 Gg CO₂e**; 78% of the total waste from the MSW while the other 22% from the Waste Water Treatment. However, to the total GHG emission in Vanuatu; it contributes about **6%**. Emission in this sector are not significant but are increasing and posing other environmental hazards. The emission sources from Municipal Solid waste with a calculation of 1.5kg of waste/person/day for urban areas only given they have landfills. The other is the Waste water; an assumption of 130 liter of water per person per day; 60% of the total liter is the wastewater. The major potent GHG gas in this sector is the Methane (CH₄) and Nitrous Oxide (N₂O).



AFOLU

The total AFOLU Sector GHG emission is **3715.567 Gg CO₂e** (Excluding removals). It contributes about 74% of the total GHG emission from 2007 to 2015.



The sub-categories estimated in this sector were the Enteric Fermentation & Manure Management from Livestock (Cattle, Goats, Horses, Pig & Poultry). Enteric Fermentation contributes 69% of GHG emission while manure management contributes 27% and 4% from manure and land management. Below is the Forest sector cover in-terms of Carbon uptake or release and Emission or Removals.

	Annual increase in biomass carbon stocks due to biomass growth	Annual carbon loss due to biomass removals	Net Annual Carbon Uptake (+) or Release (-)	Convert to CO ₂ Annual Emission (-) or Removal (+)
	(tonnes C yr ⁻¹)	(tonnes C yr ⁻¹)	(tonnes C yr ⁻¹)	(Gg CO ₂)
2007-2009	2109800	194938.45	1914861.55	(+) 7021.15
2010-2015	2109800	207884.95	1901915.05	(+) 6973.68

DEPARTMENT OF CLIMATE CHANGE

GOVERNMENT OF VANUATU

SECTORS CONTRIBUTING TO GREENHOUSE GAS EMISSIONS IN VANUATU



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DOCC

"Working Together for a Resilient Vanuatu"

WHAT IS GREENHOUSE GAS EMISSION?

The atmospheric gases are responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Less prevalent but very powerful greenhouse gases are hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) and sulphur hexafluoride (SF₆).



GHG emissions from power plants

<https://www.bbc.com/news/uk-scotland-44453764>

GHG EMISSION SECTORS IN VANUATU

In Vanuatu emission is estimated from 3 different sectors; Energy, Agriculture, Forestry, and Other Land Used (AFOLU) & Waste.

The IPCC 2006 guideline Version 2.54 was used to estimate emission based on the Activity data from Fuel Consumption (Total petroleum imported), Solid Waste and Waste Sewage, and Enteric Fermentation and Manure Management from Livestock.

WHY WE ESTIMATE GHG EMISSIONS?

Vanuatu is a signatory to the UNFCCC, so it is an obligation to report the status of GHG emission for a country over an inventory year and so implement programs and initiatives/interventions to curb the level of GHG emission (Mitigation Actions) to contribute to the goal of keeping the global temperature rise well below 2 degrees Celsius and as close as possible to 1.5 Degree Celsius.

Anthropogenic or human made activities also contributed GHG emission that led to global warming leading to impacts of climate change.

ENERGY

Energy sector contributes 20% of the total Vanuatu GHG emission. The emissions locally sourced from Fuel Combustions or burning of Fuel through Electricity Generation, Transportations, Manufacturing Industries and Construction. The major GHG gas in this sector is Carbon Dioxide (CO₂)



Energy subsector that contributes to emissions

The inventory year 2017—2015 shows that the total GHG emission from this sector is **989.533 Gg CO₂e**.

Thump Rule: 1 ton of fuel is equivalent to 3 tons of CO₂.