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# NATIONAL GREENHOUSE GAS INVENTORY SYSTEM

## GREENHOUSE GASES AND CLIMATE CHANGE

Greenhouse gases (GHGs) trap the sun's heat, making life possible. Yet the world's growing demand for energy, food, and materials has caused too many GHGs to be released into the atmosphere. As a result, we are experiencing dramatic changes in climatic patterns and an increase in global temperatures. This has major and wide-ranging impacts on meteorological, agricultural, ecological and socioeconomic systems across the world.

## MALAWI AND GREENHOUSE GAS EMISSIONS

Malawi's GHG emissions are increasing as the country's population grows. The country has committed to monitoring, reporting, and taking action to limit its GHG emissions as a party to the United Nations Framework Convention on Climate Change (UNFCCC). This commitment will work to ensure the country will not further contribute to climate change and that the economy will continue along a sustainable development trajectory.

## MALAWI'S GREENHOUSE GAS INVENTORY SYSTEM

Defining, financing, and promoting policies and actions to lower its emissions effectively requires Malawi to first credibly understand its GHG emissions sources and quantities. A Greenhouse Gas Inventory System (GHG-IS) has been developed to meet this need. The GHG-IS provides tools to comprehensively archive GHG emissions data and to annually quantify and report emissions by sector to the UNFCCC.

Managed by the Government of Malawi's Environmental Affairs Department (EAD), the GHG-IS combines local data with internationally-sanctioned standard guidelines from the United Nations Intergovernmental Panel on Climate Change (IPCC) to generate emissions estimates across all IPCC sectors. These sectors are Agriculture, Forestry and Other Land Use, Industrial Processes, Waste, and Energy. The GHG-IS was custom-built to accommodate Malawi's existing data sources, capacity, and reporting needs. Its user-friendly interface and automated processes were designed to require minimal training and to support the country's UNFCCC reporting commitments as well as its efforts to access climate finance.

**AGRICULTURE,  
FORESTRY & OTHER  
LAND USE (AFOLU)**



**75%**

**INDUSTRIAL  
PROCESSES &  
PRODUCT USE**



**<1%**

**WASTE**



**14%**

**ENERGY**

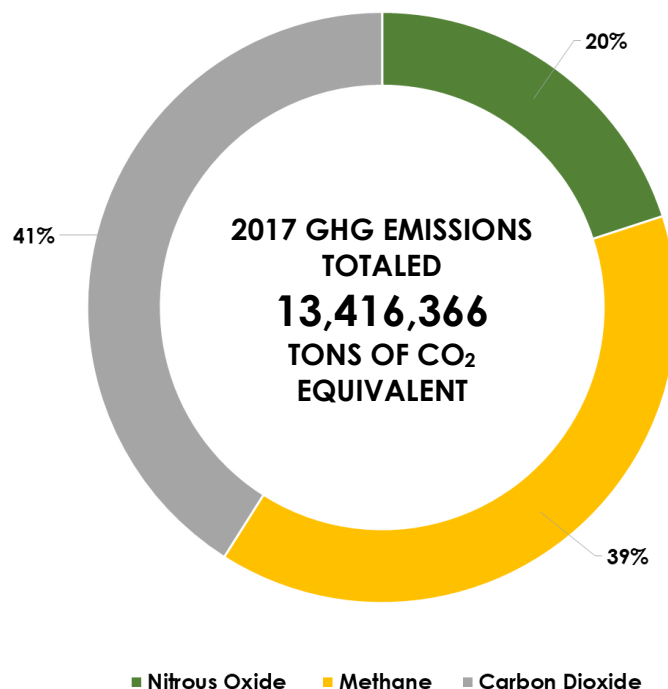


**10%**

**2017 NATIONAL GREENHOUSE GAS EMISSIONS BY SECTOR**

## GHG-IS COMPONENTS

- Documented procedures and processes for producing and archiving data of annual GHG estimates for all sectors;
- Emissions calculators that perform automatic analyses for each sector in accordance with IPCC guidance;
- Guidance on planning annual data collection and analyses;
- Reporting templates aligned with UNFCCC standards and requirements;
- Outreach templates for efficient and timely data collection;
- Embedded and documented quality assurance and quality checks and procedures; and
- Publicly accessible website housing documentation, annual reports, and other GHG-IS material.



## 2017 MALAWI GREENHOUSE GAS EMISSIONS

### HOW DOES THE GHG-IS SUPPORT SUSTAINABLE DEVELOPMENT IN MALAWI?

- Identifies opportunities within each economic sector or specific geographies to reduce emissions while balancing economic growth needs;
- Informs and helps monitor targeted policies intended to lower emissions;
- Promotes resource efficiency in climate change policies and programs;
- Improves cross-sectoral data production, management, and archives;
- Reinforces national commitment to sustainable development;
- Produces more accurate GHG accounting and reporting to UNFCCC;
- Attracts international climate finance to support green growth; and
- Demonstrates credible emissions reductions can be achieved and verified.



2019

### TIMELINE AND NEXT STEPS



Malawi's GHG-IS was officially launched in 2019. The GHG-IS works toward meeting the environmental and sustainable development goals of Malawi, both of government and private actors. The GHG-IS will be used in producing Malawi's Third National Communication to the UNFCCC, developing the National Reduced Emissions from Deforestation and Degradation (REDD+) Forest Reference Emissions Level of the National REDD+ Strategy, and engaging public and private entities in climate finance opportunities for climate change mitigation and adaptation activities.



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