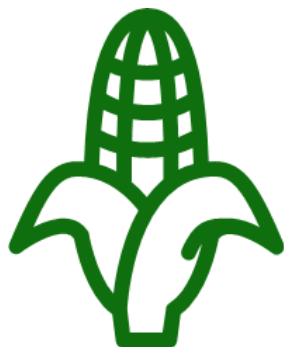




# NATIONAL GREENHOUSE GAS INVENTORY SYSTEM



## GREEN INVESTMENT OPPORTUNITIES FOR MALAWI'S AGRICULTURAL SECTOR

The population and economy of Malawi rely heavily on agriculture, which makes up 28% of the country's gross domestic product (GDP). The agriculture sector is Malawi's largest source of employment (64%) and forms the basis of most Malawians' livelihoods. Agricultural goods are overwhelmingly produced by Malawi's smallholder farmers, with larger estates growing cash crops like tobacco, tea, sugar and coffee.

Malawi's dependence on rain-fed agriculture is makes it highly vulnerable to the impacts of climate change. The country has already faced devastating losses associated with drought and floods in recent years and the demands of a growing population for food and resources make building resilience to climate shocks and stressors imperative.

Agriculture is also the largest source of greenhouse gas emissions in Malawi, contributing to climate change. These emissions come from soil

**In 2017, emissions from the agriculture sector accounted for 38% of Malawi's total greenhouse gas emissions.**

management for crop production as well as livestock. In 2017, emissions from the agriculture sector made up 38% of total emissions, with 14% from managed soils and 24% from livestock. This brochure focuses on green investment opportunities relating to agricultural soil management and crop production (see separate Livestock Green Investment Brochure)

In 2019, the Government of Malawi, through the Ministry of Natural Resources, Energy and Mining, in the Environmental Affairs Department (EAD), launched the **Greenhouse Gas Inventory System (GHG-IS)** to monitor and report national emissions across all economic sectors. This comprehensive system establishes a process through which EAD engages public and private sector partners to collect critical information needed to produce reliable estimates of greenhouse gas emissions .

Emissions estimates produced by the GHG-IS can help the government, investors, and development partners develop effective, practical and mutually beneficial strategies to achieve green growth. Understanding the greatest sources of emissions allows Malawi to make targeted interventions and better access climate finance.

Through improved data collection and management processes, the GHG-IS generates more com-

plete information about agriculture sector emissions in Malawi. This can help identify and recognize actors already implementing practices that enhance sustainability and lower emissions. Those in need of assistance can also be targeted and supported.

## AGRICULTURE AND CLIMATE CHANGE

Greenhouse gas emissions from managed agricultural soils come from nutrient inputs such as chemical fertilizers and manure. These contribute to carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) emissions.

In the context of Malawi, whose lands are already marginally productive in many areas, the role of fertilizers will become increasingly more important. Therefore this source of emissions is anticipated to increase unless actions are taken.

## AGRICULTURE SECTOR OPPORTUNITIES FOR GREEN GROWTH

Understanding emissions sources presents opportunities to lower the climate impact of agricultural soils in Malawi. Given the role agriculture plays in Malawian livelihoods, investments in sustainable soil management practices can have a significant impact on the well-being of the population by improving resilience, increasing incomes, and lowering greenhouse gas emissions.

Where facilitated through extension services, other technical support, or economic incentives, activities that promote sustainable soil management in Malawi's landscapes can also support national GHG accounting efforts by establishing improved data sharing channels.

### Beneficial actions could include:

- Decreasing or eliminating soil disturbance caused by tilling - offers multiple benefits including helping to retain soil moisture, slowing

loss of topsoil, and lowering greenhouse gas emissions.

- Promoting organic agriculture - can help lower greenhouse gas emissions because this practice reduces the use of inorganic fertilizers which emit greenhouse gases. Given increasing global demand for organic commodities, this might be an economically beneficial transition for some of Malawi's cash crop producers.
- Covering agricultural soils with vegetation (otherwise known as 'cover crops') during fallow periods - improves soil fertility and moisture, lowers rates of topsoil loss, and lowers greenhouse gas emissions.
- Using natural forms of fertilizers, such as integrating legumes into crop rotations - can limit the need to purchase and apply inorganic fertilizers.
- Promoting the integration of appropriate trees in agriculture, otherwise known as agroforestry - offers a multitude of potential benefits. These include supplying a source of wood fuel and fodder, diversifying crop income, improved soil fertility, less susceptibility to wind and rain damage, and improving resilience against drought.



## SOURCES

- [http://www.fao.org/fileadmin/templates/mafap/documents/Malawi/MCR\\_May2015.pdf](http://www.fao.org/fileadmin/templates/mafap/documents/Malawi/MCR_May2015.pdf)

**For more information about the GHG-IS and its uses, contact the EAD representative listed below.**

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