



GREENHOUSE GAS ESTIMATION FOR AGRICULTURE IN KENYA

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INTRODUCTION

- Kenya has a vision - *The Kenya Vision 2030* - which is the country's long - term development blueprint
 - aims at creating a globally competitive and prosperous country with a high quality of life for all its citizens by 2030.
- To achieve the *Vision 2030* which aspires to transform Kenya into a newly industrializing middle income country by 2030, Kenya has adopted a Low Carbon Climate Resilient Development Pathway.
- Agriculture is the key economic driver to this Vision, it is threatened by Climate Change.
- Being a signatory to UNFCCC, Kenya is committed to Green House Gas Emissions reduction (as evidenced by the adoption of the Low Carbon Development pathway to its V2030)

INTRODUCTION

- A national inventory system incorporates all elements needed to estimate, report and archive GHG emissions and sinks
- Kenya did the First National Communication in 2002
- The Second National Communication is to be ready by December, 2014
- Main challenges
 - Technical expertise
 - Data required
- Currently – regular data is collected through the government reporting systems
- Ad Hoc Surveys

Current GHG Emission Estimation Approaches

- Assembly of cropland data (area, Ha)
 - Area under perennials (tea, coffee, sugarcane,)
 - Area under rice – irrigated; non irrigated
 - Area under annual crops
 - Area under horticulture; oil crops
- Assembly of crop residue data (area in Ha)
 - Area of harvested crop residue burnt
 - By administrative unit, by crop, on a time scale (yrs)
- Assembly of fertiliser data (tonnage)
 - Nitrogenous fertilisers
 - Phosphatic
 - Potassium; others
- Assembly of paddy rice data (by area, by year)

Current GHG Emission Estimation Approaches

- Wetlands Data
 - Area converted to wetlands; managed wetlands; croplands; settlements; forestlands; grasslands; other lands
 - Area of land under managed wetlands/flooded areas (estimated area under water for a specified period of time)

Current GHG Emission Estimation Approaches

- Livestock population (ha)
 - By type; by year; by admin unit
- Area under grasslands (ha); Area under grasslands burnt(ha)
 - Managed grasslands (rangelands and ranches)
 - By year; by admin unit

Current GHG Emission Estimation Approaches

- Forestland data
 - Managed forestland outside/inside gazetted forest
 - Unmanaged forest
 - Area of land converted to forestland (cropland, settlements, wetlands, grasslands, other lands)
 - Area of land under forestland burnt (ha)
[managed forestland outside/inside gazetted forest; unmanaged forest land]
 - Amount of harvested wood product

Innovations

- Data collection manuals (to enhance harmony in procedures and methods)
- Use of modern technology
 - Mobile phones (rapid simple data transfer)
 - ACME Planimeter (estimation of areas)
- Training of data collectors (to improve skill, create uniformity of approach)

Major Challenges

- Unsuitable formats of data
- Incomplete data
- Inadequate availability or accessibility of data
- Data inconsistency
- Unreliable and inadequately documented data sources
- Non uniform data collection methods and formats
- High cost of data collection