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## 1. Rationale

Climate change has proved to be global phenomenon requiring all countries to join hands and tackle the effects that is evident everywhere; increased temperatures, sea level rises, unpredictable weather patterns just to mention but a few. The fundamental cause of these changes is the increase in Green House gases (carbon dioxide, methane and nitrous oxide).

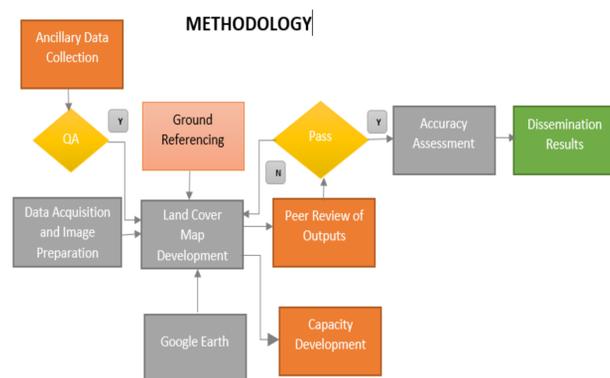
All Non-Annex I countries which are members of United Nations Framework Convention on Climate Change (UNFCCC) are required to report on their GHG emissions biennially. The countries have made some efforts in their reporting but it was noted that they required assistance in developing quality GHG inventories for the AFOLU (Agriculture Forestry and Land use) sectors.

The project was implemented to support countries in developed consistent, reliable and replicable Land Cover maps for use in GHG inventories. Initially six countries were selected: **Malawi, Rwanda, Zambia, Namibia, Botswana and Tanzania** but the number was later increased to cover three more countries in 2014/15, **Ethiopia, Uganda and Lesotho**.

## 2. Objectives

- ▶ Collect Ancillary Data and In-situ data
- ▶ Develop Land Cover maps for GHG Inventories
- ▶ Capacity Building of the countries participating

## 3. Approach/Project Activities



Land Cover Maps have been developed in two Schemas. Scheme I uses the IPCC six categories: Forestland, Grassland, Cropland, Wetland, Settlement and Otherland. Scheme II is more country specific and differs from country to country.



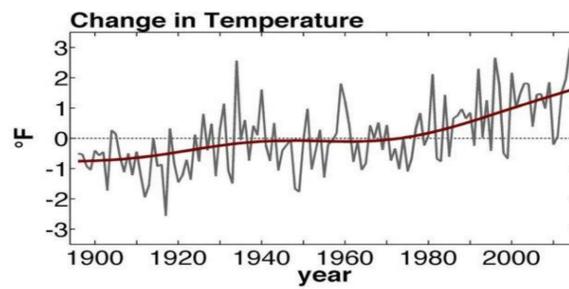
Ancillary Data Collection Workshop



Capacity Building



Fieldwork



Floods resulting from rise in sea level

## 4. Earth Observations and Other Inputs

- ▶ Landsat Imagery
- ▶ Google Earth
- ▶ Ancillary data
- ▶ In situ data
- ▶ High Resolution Imagery

## 5. Results

- ▶ 40 Land Cover maps for the nine (9) countries (Malawi, Rwanda, Zambia, Botswana, Tanzania, Namibia, Ethiopia, Uganda and Lesotho) have been developed.
- ▶ Over 120 people trained in the duration of the project.
- ▶ Online platforms for accessing maps developed:
  - ▶ <http://geportal.rcmr.org/layers/>
  - ▶ <http://apps.rcmr.org/landcoverviewer/>
- ▶ Network with over 50 institutions in the region established.
- ▶ Baseline data to support GHG emission reporting created.

## 6. Outcome/Anticipated Impacts

- ▶ Countries have improved capacity develop their own Land Cover maps from training given: Zambia, Ethiopia.
- ▶ New projects awarded for further work based on experienced gained: SLEEK.
- ▶ Better Reporting on National Communications.
- ▶ Informed Decision making.
- ▶ Policies developed to better to Conserve Environment.
- ▶ Better monitoring of the environment.
- ▶ Consistent, replicable and transparent methodologies for Land Cover Mapping transferred to countries.
- ▶ Fundamental dataset for use in further analysis in areas of:
  - Land Degradation
  - Crop yield prediction
  - Vulnerability Assessment

## 7. Project Partners

- ▶ USAID
- ▶ NASA
- ▶ US EPA
- ▶ ICIFI
- ▶ University of Colorado
- ▶ Governments Ministries
- ▶ Universities
- ▶ International Organizations

## 8. Project End Users

Ministries/Departments of:

- ▶ Forestry
- ▶ Land Management
- ▶ Surveys and Mapping
- ▶ Environment
- ▶ Land Use and/or Planning
- ▶ Land Use
- ▶ Natural Resources
- ▶ Universities
- ▶ Climate and Meteorology
- ▶ Water and Wetlands
- ▶ Wildlife
- ▶ Agriculture
- ▶ International Organizations
- ▶ Private Sector

