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Strengthen an Innovative System for the Reduction of Greenhouse Gas Emissions and Environmental Impacts of the Nascent Beef Industry in Uganda in Support to Rural Sustainable Transformation

2,200,000 EUR **01.01.2021 – 31.12.2023**

CONTEXT

In East Africa, few countries have models to **identify and quantify Greenhouse Gas (GHG) emissions**. In Uganda, stakeholder consultations revealed the need to address the GHG emissions from the **livestock sector**, which is widely expanding and has a high carbon footprint. Notably, Uganda needs a **functional inventorying process** to enhance national capacity for GHG reporting to the United Nations Framework Convention on Climate Change (UNFCCC). Presently, estimates of GHG emissions have a high degree of uncertainty, mainly relying on default values (IPCC 2006 Tier 1 Methodology) developed by the IPCC, combined with expert opinion. SIRGE aims to develop the current basic monitoring systems to enable Uganda to collect, quantify and model comprehensive and precise data on GHG emissions from the livestock sector (IPCC 2006 Tier 2 Methodology) and thus be able to design more targeted mitigation policies. The data collection and characterization is currently being tested by SIRGE in two pilot districts: Nakasongola and Mbarara

THE CONSORTIUM

ACTED : Administrative and financial management of the consortium; Overall reporting, engagement with government authorities; capacity-building training and farmer mobilization.

AgriTechTalkAfrica (ATTA) : Research on main factors of GHG emissions, data collection on livestock management practices, livestock body condition, nutrient and rangeland.

Implementing Partners

Global Agripastoral Resilience Investment (APRI) : Research on genetic and dietary factors of GHG emissions.

National Livestock Resources Research Institute (NaLIRRI): Research on rangeland development and animal nutrition.

Environmental Surveys, Information, Planning and Policy Systems (ESIPPS) : Development of the measurement model and data characterization.

Punta360: Collection of data on weather patterns and methane emissions using drones.

Associate partner

Ministry of Water and Environment – Climate Change Department (MWE-CCD)**:** Harmonization of SIRGE with other related projects, uptake of the deliverables at project closure.

ACHIEVEMENTS

- ✓ Data collection of livestock breed GHG emissions and development of reports on:
  - Livestock management practices and livestock body characteristics
  - The beef value chain in Uganda
- ✓ Review of current and previous EU- supported beef industry projects (MOBIP) to characterize dietary strategies in the beef production systems in Uganda.
- ✓ Establishment of a committee of experts to support data characterization for Tier 2 livestock inventory structure.
- ✓ Development of a database on livestock characteristics, as well as a methodology to estimate emissions from manure management.
- ✓ Support to MWE-CCD for participating in COP-26 and regional benchmarking tours to exchange on best practices.
- ✓ Training on GHG data collection for government agricultural officers.
- ✓ Collection of methane data in predetermined sites to correlate with satellite imagery on vegetation cover to determine relationship.

MAIN UPCOMING ACTIVITIES

- ❑ Analysis of GHG emissions per breed and design of incentive packages for farmers to adopt low emissions intensity breeds.
- ❑ Policy gap analysis on GHG emissions from the livestock sector.
- ❑ Training for policy-makers, as well as small-scale farmers on impacts of GHG emissions and use of IPCC GHG emission measurement tool.
- ❑ Design of forecasting model for GHG emissions and development of a desktop application for easy access to all stakeholders.

LESSONS LEARNED

Work needs to be done to inform stakeholders about the high carbon footprint of the livestock sector, as well as to sensitize farmers and private sector to the long-term intangible benefits of climate-change mitigation. To ensure more buy-in of stakeholders, further tangible activities are recommended to be included in the project, such as capacity-building or provision of agricultural inputs. In terms of data collection, it is crucial to find synergies among government ministries to optimize inventorying processes. The consortium is key, as it leverages different kinds of expertise to capture all GHG emission factors. Finally, it is important to involve governmental authorities at each step of the process and to provide them capacity, as they will be implementing the model and mitigation measures once the project is completed.

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