RUFORUM Global Research Alliance Graduate Research Grants

Call for Proposals - May 2020

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM; www.ruforum.org) and the Global Research Alliance on Agricultural Greenhouse Gases (GRA; https://globalresearchalliance.org/) invite applications from RUFORUM Member Universities for the first Global Research Alliance Graduate Research Grants (GRA-GRG) call. The Global Research Alliance Graduate Research Grants (GRA-GRG) are aimed at building the capability of graduate and post-graduate level students in Africa to conduct applied research on agricultural greenhouse gases.

The GRA-GRG will be offered in line with the RUFORUM Competitive Grants System, with the common goal of supporting the development of capability in RUFORUM member universities to support Africa to respond to the goals established by the Paris Agreement on Climate Change, the 2030 Agenda for Sustainable Development, as well as national and regional priorities of African States. The first round of the GRA-GRG will support participatory action research and training on topics related to the measurement and management of greenhouse gas emissions and removals in pastoral and agro-pastoral ruminant livestock farming systems in Sub-Saharan Africa.

This specific Call seeks to extend university activities to work more closely with rural communities through multi-disciplinary and multi-institutional partnerships involving key stakeholders such as research, extension and development agencies, policy-makers and the private sector. This call will support proposals focusing on any of the following areas:

i) Animal-scale observations to better characterise feeding systems and practices, to assess animal behaviour and responses to feed variation in terms of quantity and quality.

ii) Spatio-temporal modelling and mapping of livestock herds' distribution and mobility in relation to inter-annual climatic variability to improve livestock population and distribution data throughout the year.

iii) Improving national estimates of available fodder, integrating all feed resources available for livestock, including crop residues (e.g. straw and leaves) and agro-food industry by-products (bran, oil cake, molasses, etc.), their spatio-temporal variability, protein and energy requirements of livestock, taking mobility into account.

iv) Assessing the distributions and temporal dynamics of different types of vegetation communities (e.g. scattered woody perennials and herbaceous annuals) to improve estimates of the carbon balance in different ecosystems.

v) Monitoring vegetation to assess the impacts of management practices (e.g. avoiding, annually or seasonally, mows, monitoring pastures, over-seeding and organic fertilisation) on production, carbon sequestration, and woody regeneration. Testing management strategies for crop residues and livestock effluents (e.g. harvesting and storage, sale, common pasture, composting, manure conservation, etc.) in order to assess the potential impacts on production and animal feeding, as well as the impact on greenhouse gas emissions and removals.

vi) Direct measurement of greenhouse gas emissions from soils (CO_2, CH_4 and N_2O) and ponds to improve understanding of spatial and temporal (intra- and inter-annual) variability of emissions, taking into account spatial heterogeneity by distinguishing the zones of high concentration of faeces on the ground (rest areas, enclosures, parking area, campsite, water points) and the grazing areas (pathways, plots, fields, plantations).

vii) Soil organic carbon stock measurements to determine soil organic carbon stocks and their spatial variability, under and outside tree canopy, as well as in areas with high concentration of faeces on the ground and in different grazing areas

Eight GRA-GRG projects will be funded under this call, each with a maximum budget of **US$70,000** for a period of two years.

Potential applicants are invited to review the detailed guidelines, Application template, CV template and Budget template for the Call

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