

Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)

First call for proposals of the Global Research Alliance Graduate Research Grants

Call ID: RU/GRA-GRG /2020/

Call for research proposals

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 Africa.**

Eight GRA-GRG, with budgets of US\$70,000, will be selected for the first funding round.

Funding for the GRA-GRG is provided by the Governments of New Zealand and the Netherlands.

Background

Climate change is transforming the planet's ecosystems and threatening the wellbeing of current and future generations. Agricultural greenhouse gas (GHG) emissions are a major contributor to climate change. The global livestock sector contributes a significant share to anthropogenic GHG emissions, but the sector has potential to deliver a significant share of the necessary mitigation effort. Low GHG emissions agricultural development offers countries an opportunity to achieve economic gains, while responding to climate change.

The Paris Agreement, adopted in 2015, strengthened the global effort on climate by requiring all countries to set climate targets, particularly in terms of greenhouse gas (GHG) reduction, through Nationally Determined Contributions (NDCs). To support the implementation of NDCs in the livestock sector, countries must move towards having more detailed (at least Tier 2) greenhouse gas inventories for livestock, which are able to reflect changes over time in animal production and productivity and

associated GHG emissions. In doing so, countries will be more likely to be able to access climate finance and align other investment in livestock with their development and climate goals.

Despite such obligations, most countries are currently estimating GHG emissions and removals in the livestock sector using a Tier 1 methodology with limited activity data and IPCC default emissions factors.

Access to reliable country specific livestock activity data is the first major step in the progression towards better identification of climate responses that are consistent with their rural development and food security objectives, including preserving natural resources, increasing resilience of production systems and creating new employment opportunities.

The first round of the new GRA-GRG will therefore support local level research that can contribute to improving livestock GHG emission estimates in national GHG Inventories.

Research proposals that demonstrate relevance/links to national processes and/or projects with significant potential to benefit the lives of local farmers will be prioritised.

Priority research topics

Priority will be given to proposals whose outputs contribute to supporting an improvement in the quantification and mitigation of greenhouse gas emissions and removals in pastoral and agro-pastoral ruminant livestock farming systems of different agro-ecological zones, in the African region. Outputs should be available to be used by other African States sharing the same farming systems and environment.

Priority research topics include:

- 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. This can be used to evaluate the production and emission of enteric methane based on an estimate of seasonal intake levels.
- 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.
- 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.
- 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.
- 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.
- Direct measurement of greenhouse gas emissions from soils (CO₂, CH₄ and N₂O) 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).

- 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.

For West Africa

Preference will be given to proposals from those West African universities which are aligned with the CaSSECS project (Carbon Sequestration and greenhouse gas emissions in (agro) Sylvopastoral Ecosystems in the Sahelian CILSS States; <https://www.ppzs.org/news/cassecs>). The CaSSECS project has been designed to improve the assessment of carbon footprint of Sahelian agro-silvopastoral ecosystems in order to better quantify their impacts on climate change for the development of livestock policies adapted to the Sahel, strengthen the capacities of involved actors and support the changes of practices and policies.

Applicants interested in aligning their proposals with the CaSSECS project, for the purpose of this call, must contact the CaSSECS project staff through the *Institut Sénégalais de Recherche Agricole* (ISRA; El Hadji Traoré, elhadji.traore@isra.sn) and the French agricultural research and international cooperation organization (CIRAD; Paulo Salgado, paulo.salgado@cirad.fr) during the design phase of their research proposals. Conducting research aligned with the CaSSECS project comes with advantages – access to local research partners, datasets, and established, well-connected country support teams.

For the rest of Africa

Preference will be given to proposals that demonstrate links to national livestock greenhouse gas inventory reporting, relevant national and regional research activities, and relevant development activities.

Eligibility and Compliance

1. The Principal Investigator applying for a Graduate Research Grant must be a PhD holder in a relevant academic or professional field, on full time employment in any one of the RUFORUM Member Universities.
2. Applicants must not have pending accounting of RUFORUM funds or projects. Applicants who do not currently hold a RUFORUM Grant may be considered on priority basis.
3. The research should be participatory and demonstrate its relevance and/or response to demand. It must have a monitoring and evaluation component and a dissemination strategy for the results of the research. These must all be specific to the particular issues being researched by the two Masters students. The research activities for each of the two students must be separately and clearly specified.
4. There must be partnerships with other institutions, faculties and/or departments, whether local, regional or international. Partners may include private universities, government departments, local and international research centres, NGOs, community or farmer organisations, private sector, and development agencies or other relevant institutions. Letters from each partner, indicating their role, must be submitted.
5. Only proposals that comply with the budget limit and duration of the project and are achievable within the time limit will be considered.
6. All applications must be channelled through respective University offices (usually the Deans or Principals). The Dean/Principal is required to provide a signed covering letter (scanned copy) indicating that the proposals have undergone internal review and received approval within their respective institutions.

For further information on the GRG and the application process for the first funding round please refer to the [Competitive Grants System Manual](#)¹ and to the Graduate Environmental and Agricultural Research guide ([GEAR](#)).

GENERAL GUIDELINES FOR PROPOSAL FORMAT

The complete proposals must be 1.0 spacing, Times New Roman, font size 11 with normal margins (1 inch all through; top, bottom, left and right).

Main proposal

i) Cover page (1 page)

- Title of the proposal
- Call ID (RU/GRA-GRG /2020)
- Names of Principal Investigator and institutional affiliation with full addresses including email and telephone.
- Names of participating researchers and their institutions with full addresses including email.
- Project start date and duration (**September 1, 2020**);
- Total Budget requested in US\$.
- Short specific abstract of no more than **200 words** (respect the word count).

ii) Summary (1000 words maximum)

Provide a succinct summary of the Project. Please note that this summary will be provided to the evaluators for review and should provide a clear summary of the project including rationale, objectives, outputs to be delivered by the project and potential impacts to be achieved.

iii) Background (1 page)

Provide background information relating to the problem your research will address. Your background should also introduce readers/evaluators to the 'niche' issue(s) which your project seeks to address and how this will lead to the outcomes that are envisaged. Clarify alignment of your proposal to local, national and development as well as at the African Union level Agenda2063 and the Sustainable Development Goals (SDGs). Demonstrate how this build on previous related initiatives. Who are the target beneficiaries and what process has been undertaken to engage them in the development of the proposed action. What are the needs and challenges of each of the target groups identified and how do these relate to the action proposed. What value proposition does your action make e.g. promotion of private-public partnership, university-business partnership, innovation and best practices, giving opportunity to the disadvantaged communities and what cross-cutting issues does your action address. You can create sub-sections to this broad section to keep you organised if you deem it relevant but not more than two sub-section headers.

iv) Associated Project (1 page maximum)

Where relevant, provide details of any relevant and related project related to the proposal. Clarify how your projects is associated and be sure to show how your proposed research complements these projects.

v) Literature Review (1 page max.)

Provide the body of knowledge related to your research and highlight how your research will add value to existing knowledge. In particular outline earlier research that underpins what your project will be doing; and why it should be done. The literature review needs to be focused to the **specific** research addressed in this proposal and provide evidence of understanding of the main issues to be researched, and of the current literature on the topic.

vi) Objectives (1/2 page)

What are the overall and specific objectives of your proposed research against which success or failure can be assessed?

¹ <https://repository.ruforum.org/system/tdf/RUFORUM%20Competitive%20Grants%20System%20Manual-Updated.13.11.15.pdf?file=1&type=node&id=31683&force=>

vii) Hypotheses to be tested (1/2)

It is important, where applicable, to include an underlying hypothesis/research questions that drives the research and then to provide some general hypotheses to be tested.

viii) Research Approach and Conceptual Framework (3 pages max.)

Outline how you will approach the problem, where the students, the farmers and partner agencies are involved and in particular identify the main concepts that underpin your approach to carrying out the research, relating this to the literature review. You need to specifically outline the participation of graduate students and how this is related to the problem framework. This project targets to support two Master level graduate students with at least one being female. However, depending on your use of resources, you may have more than two students engaged in the research process. You should within the description of your conceptual framework articulate the innovative nature of this proposed project detailing out what is new. Provide a conceptual framework.

ix) Methodology (3 pages max.)

Provide the methodology. Highlight what research will be undertaken and how. Include the roles of each graduates student and where possible, describe what each graduate student will do including draft objectives/hypotheses/research questions. Please indicate how will you engage and involve stakeholders in the research - they should not be passive "subjects of research" but active participants. This Call is not primarily focused on improving livelihoods. It is directed at improving livestock GHG emission estimates in national GHG Inventories. Where possible you should employ pastoralists/farmers as co-researchers in generating the evidence. You do need to clearly indicate how you will engage with other key stakeholders, especially the national agencies researching, collecting and collating data on climate change. It is also important to state how gender and other cross cutting issues will be addressed in differentiating management system impacts.

x) Value for money and impact? (1 page max.)

Applicants should outline current national efforts and justify their approach, articulating the potential contribution to the national effort of meeting climate change goals. Where appropriate, also outline the potential research impact for local pastoralists/livestock producers and co-researchers in the project.

xi) Dissemination and communication (1/2page max.)

Indicate how the results of your research will be disseminated to the various stakeholders. Be realistic and not overambitious and show that the dissemination strategy is linked in with the available budget or other support sources.

xii) Sustainability (1/2 page max.)

Show how you will engage and collaborate with the national (and if appropriate regional and international) agencies involved in collecting and analyzing information on the country's ability to report on the Climate Change and Sustainable Development goals.

xiii) Project Management

a) Team organization and qualification (1/2 page max.)

How do you propose to organize your team in order to achieve your project objectives? The role of each team member must be clearly described. Include CVs for the project team (use the provided template).

b) Monitoring and evaluation (1 page max.)

How will the project's achievements be monitored and evaluated to ensure proper management and enable early corrective action where necessary? Indicate clear milestones that will demonstrate progress whilst describing how the project will monitor progress towards milestones.

c) Results Framework (3 pages max.)

A results or a log frame matrix must be included in the project proposal (use the template plate provided).

xiv) References (1 page preferred)

Include only references that you have quoted in the proposal and this should be within the 25 page

limit.

xv) Budget (2 pages max.)

Give the anticipated cost of your project, with explanatory notes where necessary using the attached budget template. All budgets must be in United States Dollars (use the template plate provided).

xvi) Timeline (2 pages max.)

All GRG projects are two (2) year projects (use the template plate provided).

Submission of applications

Please complete the application on line.

1. Open this website link: <http://rims2.ruforum.org/>
2. If you do not have an account you will be asked to register here:
www.rims2.ruforum.org/contacts/register/
3. After registering successfully you will be taken to your dashboard. What you see on your dashboard depends on the permissions that you have been assigned by the RIMS Administrator.
4. For most members of the RUFORUM network we have captured your emails in RIMS. So the system might tell you that your account already exists. If this is the case then follow the steps related to resetting your password / forgotten your password

What to do if you have forgotten your password or need to reset your password

1. Open this website link: <http://rims2.ruforum.org/>
2. Instead of logging on, Click "Forgot Password"
3. You will be asked to enter your email address and then click reset password
4. The link to enable you to reset your password will be sent to your email address. Please also check for this link in your spam folder in case it is delivered to your spam. Follow the instructions to reset your password
5. Use your email and the new password to log into RIMS
6. After successfully logging on you will be taken to your dashboard. What you see on your dashboard depends on the permissions that you have been assigned by the RIMS Administrator

How to log on if you have an existing account

1. Open this website link: <http://rims2.ruforum.org/>
2. Click to log into RIMS by entering your email as the username and your password

After successfully logging on you will be taken to your dashboard. What you see on your dashboard depends on the permissions that you have been assigned by the RIMS Administrator.

How to submit a fellowship grant application via RIMS

1. After successfully logging on click '**Apply for a Grant**'
2. Choose correct call ID which is : **RU/GRA-GRG /2020/**
3. Complete the online application form.

Selection criteria

RUFORUM relies on the professional expertise, experience and judgment of the reviewers in the Proposal review process.

The following key aspects will form criteria of awarding the applicants;

- i) Overall project design and quality, including write-up
- ii) Appropriateness/relevance to this Call and contribution to GRA-RUFORUM priority areas
- iii) Strengthening national research and information on reducing or mitigating the impact of livestock systems on the environment, using participatory approaches.
- iv) Graduate students research activities clearly defined
- v) Feasibility: can the M.Sc. students achieve this in the time available and is it of the expected standard for the level?
- vi) Good conceptual framework and clearly defined hypotheses
- vii) Clear identification of achievable research issues, objectives and research methods
- viii) Evidence of a good understanding of the literature and the theoretical basis for the research
- ix) Evidence of good understanding of the applicable research approach and methodology
- x) Contribution to scientific knowledge and methods and to the national data base and research
- xi) Clear, simple, monitoring and evaluation incorporated in the project

Time Frame

The foreseen time frame for the award process is as follows:

- i. The deadline for receiving applications at RUFORUM Secretariat is 30th June 2020,
- ii. Administrative check / Compliance Review and feedback to applicants by 3rd July 2020.
- iii. Review of Proposals completed by 17th July 2020.
- iv. Communication to Successful applicants by 31st July 2020.
- v. RUFORUM Secretariat sends out Grant Award letters by 10th August 2020
- vi. Grant advances disbursed by 18th August 2020
- vii. Official commencement of project implementation 1st September, 2020

For information

RUFORUM: <https://www.ruforum.org/>

GRA: <https://globalresearchalliance.org/>

GOOD LUCK WITH YOUR APPLICATION!