Grand Challenges Rwanda Request for Proposal (RFP)

Summary	
Grant Title	**Accelerating and Catalyzing Solutions for Climate Change's Impact on Health (GC Rwanda Climate for Health)**
Grant Number	**NCST-NRIF/GCR-CH/13/xx/2023**
Number of grants	A total of 3 projects will be funded
Funding Purpose	The purpose of this grant is to support and promote innovative research pilot projects utilizing transdisciplinary approaches and scientific collaboration that accelerate the development of transformational solutions to address the intersection of climate change and public health with the aim of fostering a healthier population. This grant will provide funding to multi-sectorial and multi-disciplinary research project teams to implement comprehensive and competitive research projects leading to tangible and measurable outcomes after some interventions.
Collaboration: Academia-Industry Partnership and global collaboration encouraged	This RFP encourages broadening opportunities for collaboration between academia and private sector focusing on use of emerging/frontier technologies that address the unprecedented health risks and challenges posed by climate change. The main goal is to support the most creative scientists in Rwanda to implement research that fosters innovation and promotes regional and global collaboration in solving climate change-related most critical development challenges affecting the health of citizens in Rwanda.
Budget information	• Approximately **Frw 120 million** per grant • Funds will be disbursed to the host institutions in Rwanda • Proposed budget should be commensurate with the scope of research project work proposed.
Source of funds	National Council for Science and Technology (NCST) through **Grand Challenges (GC) Rwanda**
Duration*:*	24 months from commencement date
Key Dates:	
Date of Issue:	**03rd December 2023**
Closing Date:	**31st January 2024, 11:59 pm, Kigali time**

1. Background

Climate change threatens hard-earned global health & development progress, and puts the health, well-being, and livelihoods of future generations in jeopardy. The 2015 Paris Agreement and the Sustainable Development Goals (SDGs) signaled a promise from global leaders to act—to limit global average temperature rise to within 1.5°C by 2040 and prevent the worst health and development effects of climate change. While no one is safe from these risks, the people whose health and wellbeing are harmed first and worst by the climate crisis, are also the ones who contribute least to its causes, and who are least able to protect themselves and their families against it. These are mainly people from low-income and disadvantaged countries and communities. In low-income settings, rising heat, extreme weather events, changes in precipitation patterns, shifts in duration and prevalence of climate-sensitive diseases (malaria, dengue, many foodborne and water-borne diseases, etc.), and increased potential for the emergence of novel diseases all contribute to the damage of already weak primary health care systems and community health structures. This compromises accessibility, availability, provision, and uptake of essential health services for the most vulnerable populations.

Catalytic research and development (R&D) as well as innovations to scale the impact of green technologies is essential to cut greenhouse gas emissions to net-zero, and to address the unprecedented health and environmental challenges posed by climate change. It is crucial to understand the emerging problems in health, either directly triggered by climate change, or as a result of disruptions (e.g., operational) downstream of crises created by climate change. Consequently, there is an urgent need to invest in creative solutions to help populations adapt and build their resilience to the existing and future climate related challenges impacting health, and build alternative livelihoods.

In recent years, global leaders, philanthropies, and private investors have begun committing significant resources to climate change mitigation through funding R&D efforts. However, more is needed to unite partners across sectors and accelerate innovations addressing challenges at the intersections of climate and health. The Grand Challenges family of initiatives seeks to source and seed innovations and accelerate the development of transformational solutions. To this end, Grand Challenges (GC) partners including GC Rwanda through National Council for Science and Technology (NCST) with the support from the Bill & Melinda Gates Foundation (BMGF) is launching this request for proposal (RFP) call to raise awareness of the problems and promote actionable solutions in areas of climate for health.

The Government of Rwanda's policy on Environment and Climate Change underscores its commitment to have clean and healthy environment resilient to climate variability and change that supports a high quality of life of Rwandan citizens' health and wellbeing. Improving high quality and standards of life for Rwandans is an important pillar of Rwanda's Vision 2050, and this is well enshrined in the National Strategy for Transformation (NST-1) as the medium-term plan to achieve this vision. In order to achieve the national development targets, it is imperative to address the current and emerging national social, economic, and environmental challenges through addressing challenges of climate change's impact on the health of the population through funding high-quality research addressing specific climate change challenges. In this regard the Government of Rwanda is committed to funding research and technology development through National Research and Innovation Fund (NRIF) that was launched in June 2018 to enhance opportunities for data-driven innovations and integration of research findings into policy and practice to improve the wellbeing of Rwandan citizens. As such, translation of knowledge and application of research findings is critical to determine reasonable

interventions that promote climate change adaptation, mitigation and response towards better health and social well-being of a population.

Therefore, the National Council for Science and Technology (NCST) through **Grand Challenges (GC) Rwanda** intends to support and promote innovative research projects that address the intersection of climate change and public health with the aim of fostering a healthier population under the research theme "**Accelerating and Catalyzing Solutions for Climate Change Impact on Health**" (***GC Rwanda Climate for Health***).

2. The Challenges and Areas of Interest

This RFP aims to support and promote innovative research pilot projects utilizing transdisciplinary approaches that accelerate the development of transformational solutions to address the intersection of climate change and public health with the aim of fostering a healthier population. Preference will be given to innovations that are formulated locally or adapted from other contexts to better adapt to, mitigate, or reverse the combined, deleterious effects of climate change on health in Rwanda. These innovations include early warning and disease surveillance systems to respond to climate-event-driven surges in malaria and other vector borne diseases, as well as improved mapping of expanded vector ranges and vector-borne disease transmission.

The main thematic areas of interest for this RFP will focus but not limited to health outcomes-including systematic and compounding impacts of climate change on health. Researchers/innovators are encouraged to propose innovative ideas related to these topics:

- **Health Monitoring and Early detection and Warning Systems**: Develop and implement advanced health monitoring and early detection and warning systems to identify, predict and respond to climate-related health diseases and challenges. This might involve developing diagnostic tools, technology and predictive models for disease outbreaks based on climate data, enabling timely interventions and resource allocation.

- **Building Climate-Resilient Health Systems**: Build resilient health systems at both national strategy level and community level to mitigate health impact of climate change, including direct impact of climate-related events (e.g.: excessive heat, floods). Projects may focus on understanding health-related vulnerabilities to climate change including at the system level, building resilience of health systems and health care, implement health adaptation actions, monitor and learn health adaptation.

- **Monitoring, Measurement and Evaluation**: Proposals that focus on the development of harmonized monitoring, measurement and evaluation (M&E) frameworks and systems for programs that better incorporate climate considerations.

- **Community Health Ecosystems**: Proposals that strengthen the resilience and adaptability of health care service delivery and supply chains to climate related changes. These solutions can include anticipatory action, adaptation of provisions, quality, and accessibility of essential services to vulnerable communities, especially women, capacity building for health care professionals and community health actors. This RFP will seek for solutions that help individuals and families respond locally to new ailments and challenges brought about by climate-related events.

- **Climate and environment-related Gender Equality, Diversity, and Inclusion:** Women are disproportionately impacted by climate-sensitive health risks. As such, this RFP will seek solutions that address the increased risks associated with climate and environment change as social and economic gender-disparities related to women's health issues, maternal, newborn, and child health mainly the under five years' children, and their social-economic well-being, or broader health topics that incorporate a gender lens. This RFP will also seek solutions that address the vulnerability to forms of gender-based violence and post-traumatic stress disorders arising from climate change-driven conflict.

The research proposals should demonstrate cross-cutting solutions at the intersection of multiple scientific and engineering disciplines; and locally led and system-level innovations that are scalable and sustainable to address climate change impact on health. In addition, we will provide funding to research proposals that demonstrate strong collaboration between academia, private sector and global partnership focusing on use of technologies that address the unprecedented health challenges posed by climate change. The goal is to support the most creative scientists in Rwanda to implement research that fosters innovation and promotes collaboration in solving the most critical development challenges in Rwanda and Africa.

3. Funding description and Period of performance

The funding level is up to approximately Rwanda Francs one hundred and twenty million (**RWFs 120,000,000**) (USD $100,000) for each grant for a period of performance up to **24 months (2 years)**. The funding is earmarked for Rwandans and permanent residents working in Rwandan institutions. However, global collaboration is encouraged, but 80% of the funding is going to a local Rwandan institution. Further, application budget should be commensurate with the scope of work proposed.

4. Key requirements and Eligibility Criteria

4.1 Projects should lead to novel Innovations

This RFP encourages proposals that lead to innovations while meeting the following:

a) Proposed projects are required to demonstrate the capacity to lead to novel innovations on climate change impact on health. Projects shall demonstrate novel approaches to addressing the impact of climate change on the health of population in Rwanda, and interventions shall show proof of concept and with capacity and potential to be scaled up.
b) The projects shall demonstrate strong, tangible and well measurable collaborations between academia and public research institutions/private sector/non-government organizations such as national universities, public research institutions, private sector or industry and non-government organizations (NGOs). A strong collaboration with wide range institutions demonstrated by letters of support and curriculum vitae of experts involved as well as each co-investigator's roles is required.
c) Proposed projects shall demonstrate that they are large scale and with collaborations between national scientists and globally renowned experts in the field of the two (2) priority areas, namely **Resilient Environment and Climate Change and Life and Health Sciences**. Projects that include multi-sectorial and multi-disciplinary teams and areas are encouraged.

Collaborations may focus in any of the following:

- Implement studies to address identified gaps on the intersection of climate change and public health through use of emerging technologies and innovative approaches to enhance innovation creation, development and transfer;
- Promote R&D knowledge transfer and best practice (such as joint mentorship, collaborative and guided data measurement experiences, simulation, work pairing, dissemination of data findings through periodic seminars), and sharing between researchers from both universities and industry;
- Produce preliminary data that supports demonstration of proof of concept/principle of the research innovative idea, to determine viability of the idea to be tested and supported for scaling up of the projects;

4.2 Eligibility Criteria

What We Are Looking for:

We are looking for projects that meet the purpose of this RFP and above thematic areas, and applicants abide with the following eligibility criteria:

i. Demonstrate that the projects are led by a Principal Investigator (PI)/Program Director (PD) with scientific excellence in relevant field, and based and working in Rwanda. The project research team shall be from multi-sectorial and multi-disciplinary team and areas, and from strong academia, research, private sector/industry, and non-for-profit institutions who shall form partnerships with global renown experts in the field;

ii. The PI/PD must be affiliated with Higher learning institutions (HLIs)/Universities, research institutions or private sector/industry, Non-for-profit organizations or for-profit organizations in Rwanda. Proposals will be implemented at any of HLIs/ universities, research institutions or private sector or industry in Rwanda. For-profit organizations will, however, not be allowed to charge indirect costs;

iii. The private sector/industry/non-for-profit organizations must be registered in Rwanda with proof of registration;

iv. Applicant(s) (PI: host institution and Co-PI: collaborating institution) must provide **support letter** from their primary university, research institute or R&D company where the research project will be carried out. The letter shall state a) support by head of institution and b) justification of employment to applicant PI/PD;

v. The composition of the project research team shall be at **least 30% of women**. We particularly encourage applications from women-led projects and organizations;

vi. Demonstrate and promote **inter-sectorial strong collaboration and partnerships**: project should demonstrate engagement with local and/or regional/global scientists, researchers/innovators, communities, decision-makers, and adopters. **The applicants shall demonstrate a partnership from at least 2 institutions one in Africa or global and at least one in Rwanda**. Teams working with other African and global institutions within or across countries will be given preference over applicants from single institution. However, at least 80% of the funding goes to Rwandan institution(s) and 20% to regional and international collaborations. Applicants must provide **support letter from each partner institution** in Rwanda, Africa and globally expressing commitment by the institution to support implementation of the project.

vii. The proposed project should clearly articulate a creative idea for a solution and how the project will lead to near-term impact and how the impact will be sustainable. In addition, the project should demonstrate the potential to lead to product or service development, and articulate the scalability of the solution beyond a small local region

or population. Strong consideration will be given to approaches that can scale to multiple geographic areas, demographic groups, etc.

viii. The project should describe clear community outreach activities or strategy for dissemination so that wider Rwandan/African community understands the project and its findings e.g. through Radio, TV and newsletters, etc.

We Will Not Consider Funding for Projects that:

- Do not demonstrate that the majority of the work proposed will be undertaken by Rwandan or stakeholders in Rwanda.
- Do not demonstrate the scale and context for resilience to the effects of climate change on health.
- Do not plan for or demonstrate a pathway to sustainable impact and scalability.
- Do not clearly consider the current contexts and relevant socio-cultural, economic, health and climate, environmental and infrastructural constraints of available services/systems.
- Do not demonstrate (or are not linked to) a clear development plan for collaboration and partnerships to engage national, regional and global partners and relevant key stakeholders, decision makers and from affected communities.

5. Review and Evaluation Process

5.1 Review process and team composition

The process of evaluation shall start with administrative checks for eligibility criteria. Ineligible applications shall automatically be disqualified.

The submitted applications (projects) will be screened for administrative compliance with criteria indicated in this RFP. Thereafter, an independent external review committee with expertise in areas highlighted in this RFP shall be appointed by NCST to scientifically and technically evaluate the submitted proposals that fulfill the administrative requirements and screening.

The appointed review expert committee will be composed of 3 reviewers per application, and the scores will be calculated to obtain an average score for each application. The composition of the three (3) reviewers shall be least one (1) reviewer from industry and one (1) from outside Rwanda.

Through the NCST RIGMS (Research and Innovation Grant Management System), the appointed review committee shall be anonymous to provide opportunities for better objectivity in the review process. Further, the reviewers will provide quantitative scores and qualitative information describing rationale for the scores provided to each grant, which will be shared through RIGMS to each of the applicants.

The aspects to be considered in the review and selection steps include:

- **Alignment to thematic areas of this RFP** shall be required to maximize potential for impact
- **Feasibility** including work plan, project organization, project scheduling and timelines
- **Scientific merit** of the proposal including the literature review, objectives, methodology, novelty, scientific contribution, multidisciplinary aspects, industry collaboration

- **Experience and competence** of the PI and project team shall demonstrate experience in carrying experimental development studies.

The final selection will be based on the recommendations of the review committee criteria underneath. Reviewers will consider each of the review criteria below and award scores equally to determine scientific merit of the following areas: a) Significance, b) Approach, c) Innovation, d) investigators competence, and e) Research environment.

a. Significance

Provide a description of how the study addresses important problem or critical barrier in impact climate change on health. Are there any prior research findings that serve as the key basis and support for the proposed study to make it rigorous?

If the aims of the proposed project are achieved, how will scientific knowledge, technical capability, and or findings inform policy and practice to improve Rwandan society? How will successful completion of the aims change the concepts, methods, technologies, services, or interventions that drive related research and innovation?

b. Approach

Describe how the proposed study strategy, methodology and analyses are appropriate for the specific aims of the project. Describe a strategy to support your study methodology and how to address any weaknesses in the rigor of prior research that serves as the key support for the proposed research project. Please present potential problems, alternative strategies, and benchmarks for success of the proposed study.

For any project development, justify how the strategy to establish feasibility will particularly manage anticipated research risks. Describe details of research variables justified in terms of the scientific goals and research strategy proposed. Please provide insights into data management and analysis.

c. Innovation

Describe how the proposed research study findings may present novel or state-of-the-art findings as a contribution to the scientific field, and whether your findings may lead to development of new products or services to advance national agenda for transformation.

Describe how the current study is broad enough and seek to shift current practice paradigms by utilizing novel/ground breaking theoretical concepts, approaches or methodologies, instrumentation, or interventions to contribute to value addition, improved quality of products or services, improve national industrial development and wellbeing of Rwandan society.

d. Investigators' competence

Describe how the main project director/ principal investigator (PD/PI) is well suited scientifically to successfully implement the project. Do the PDs/PIs and co-investigators have scientific track-record of doing similar studies, and do they have appropriate managerial and scientific experience and training required? Have the PDs/PIs and co-investigators demonstrated ongoing scientific record of accomplishments that have advanced their field(s)? Describe how the composition of investigators is multi-disciplinary enough from variety of teams: a) academic-industry/private sector; b) multi-disciplinary complementary scientific and leadership teams and c) national, regional and internationally recognized/renowned experts.

Describe how the project collaborative team and co-investigators have complementary roles and responsibilities with integrated expertise for added value. Please describe how the team will be coordinated to ensure smooth implementation of the project. Is the leadership approach,

governance and organizational structure appropriate for the project? Please describe how the leadership governance will ensure good management for optimal internal controls and accountability of resources for the study project, as well as track record of high quality of institutional audit.

Describe institutional procedure and processes for project inputs, verifications, approvals and M&E of scientific and/or resources that will lead to suitable outputs and long-term outcome and impact of the project.

e. Research Environment

Describe how the scientific research environment in which the study will be done contributes to high probability of success. Describe how adequate are the available or current institutional equipment and physical resources for the investigators to carry out this study, and indicate whether additional equipment will be required. Describe how the project benefits from unique features of the current scientific environment, or collaborative arrangements. Is there evidence of institutional support for this project to build sustainable research capacity through utilization of the proposed study findings.

5.2 Evaluation criteria and scoring

Each application will be evaluated and rated on the basis of the evaluation criteria outlined below. The criteria listed are closely related and are considered as a whole in judging the overall quality of an application.

Criteria	**Description**	***Reviewer comments***	**Marking**
Relevance and significance	The proposal should demonstrate how the study will contribute to sustainable innovation and product and or service development. Statement of the problem and justification of the study should be well elaborated to justify potential for innovation to address challenges in areas of climate for health. ***Goals and objectives stated shall be specific, clear measurable, achievable, relevant and time-bound with the pathway to outcome and impact for innovation shall be well defined.***	***Reviewer comments shall be <u>between 100-200 words</u>*** *justifying the scores given to the applicant*	23
Novelty, research, development, social innovation with the potential to lead to product or service development through scientific and technological	The proposal should clearly define the uniqueness of the **research idea, product or service** to be developed addressing specific community scientific challenge or need in areas of this RFP. The proposal should clearly define the quality and **originality/novelty of the innovative idea, that will lead to product or service to be developed**. The applicant shall **demonstrate how the research will contribute to the societal community and community challenges**	***<u>Between 100-200 words</u>*** *justifying the scores given to the applicant*	22

excellence and innovation			
Clear community outreach activities and/or strategy for research communication and uptake, and disseminating project findings	The proposed **research shall demonstrate strategies for transferring research outputs** and demonstrate evidence of research findings uptake and adoption to reduce the persistent gap between research and practice	***Between 80-150 words*** *justifying the scores given to the applicant*	15
Primary Investigator and research team's capacity, qualification and record on previous grants, **Partnerships and collaborations**	Investigators must have and **demonstrate expertise** in the stated fields through **prior research experience and collaboration,** and they must show the ability to undertake the research. The proposal must demonstrate the contribution of the participating institutions **and clearly define the roles of each partner** towards ensuring research excellence and innovation capacity development.	***Between 80-150 words*** *justifying the scores given to the applicant*	10
Monitoring and evaluation plan	Applicant must demonstrate ability to **measure the project success against key indicators and provided milestones** to indicate progress toward goals outlined in the proposal. The project includes output and outcome indicators and shows how and when those will be measured.	***Between 80-100 words*** *justifying the scores given to the applicant*	12
Impact and Sustainability	Project activities are likely to have a positive impact after the end of the project and funding for continuation of the project if needed must be sought from other funding bodies.	***Between 100-150 words*** *justifying the scores given to the applicant*	18

6. Application guidelines

All applications are submitted through RIGMS. We do not accept applications through emails.

6.1 Required documents.

1. Completed **online application form** obtained from RIGMS
2. **Project proposal** (template is provided)
3. **Activity plan** (as per the template) **(highly encouraged)**
4. Proposed Budget (as per template) **(Mandatory)**
5. Justification for personnel work at industry (highly encouraged)
6. CVs of the PIs and Co-PIs to the project **(Mandatory)**

7. Support letter for PIs provided by head of host institutions (**Mandatory**)
8. Proof of registration for private companies/NGOs (highly encouraged)
9. Team composition: List of Partners with their contacts (phone numbers and e-mails), and with their respective responsibilities to the project (as per template) **(highly encouraged)**
10. Support letter for Co-PIs from collaborator institution and global partner detailing areas of collaboration (**highly encouraged)**

6.2 How to apply

- Proposals shall only be in English language.
- Applications can ONLY be submitted online through the Research and Innovation Grants Management System (RIGMS) (https://rigms.ncst.gov.rw/). The applicant must create an account on RIGMS where application templates are available. However, if you have questions or require further information, you can submit your queries via email to: research@ncst.gov.rw
- Applications not meeting the minimum requirements and eligibility criteria will be automatically disqualified.

Note: We strongly recommend that you do not wait until the deadline but submit the application as early as you can.

7. Grant Agreement

If selected, a trilateral written agreement is drawn up between NCST, the research scientist grantee and the host institution. The agreement consists of the provisions that are to be fulfilled by the parties in regards with implementation of the project.

8. Important Dates

S/N	Steps	Timeline
1	Applications open (RFP Call Open)	03rd December 2023
2	Deadline for Submission (RFP closes on)	31St January 2024
3	Pre-selection (administrative screening)	15th February 2024
4	External review	15th April 2024
5	Approval of the selection report	30th April 2024
6	Notification of outcome date	2nd May 2024
7	Signing agreements	15th June 2024
8	Start of project implementation	01st July 2024

9. Guidelines for acceptable Budget Expenditures

Below information provides a summary of allowable expenditures under this RFP. Only costs (eligible expenses) related to the project activities are to be included in the project budget. Institutions/organizations, industries receiving funds for execution of the research project shall assume financial and legal administrative responsibility for the execution of the project, and shall demonstrate good governance and accountability practices.

Eligible funding:

The following are important funding and budgetary information to be justified under the budget note (see budget template):

i) **Budget expenditures supported under this grant**: eligible research running costs, justifiable conferences, research field visits, scientific publications, approved lab equipment, and approved consumables. The following items are **explicitly excluded** from funding of this project: *funding of student tuition fees as scholarships, postdoctoral tuition fees/fellowships, vehicles, infrastructure/building renovation, heavy equipment or land purchase/acquisition*.

ii) **Equipment, Supplies and Materials:** includes all equipment, items, consumables to be purchased, fabricated, or hired that will be used during the course of the project.

iii) **Research expenses**: includes costs related to carrying out the research activities and specific costs towards disseminating research findings through workshops.

iv) **Travel -** Includes mode and cost of transportation, costs for accommodation, meals, airfare, per diem, and related expenses for regional and international travels.

v) **Training**: The PI/PD may include short term training related costs not exceeding 2% of annual grant budget. Post graduate (Masters and PhD level) students may work on this project, but no expenses shall be expected for student related tuition training costs as part of undertaking this project.

vi) **Personnel allowances:** The PI/PD may include stipend allowances as facilitation funds to facilitate the PI and Co-investigators for research project coordination and management of the grant while working at universities and research institutions. This budget should not exceed 10% annually of the total grant budget.

vii) **Additional Personnel Funding while working at Industry:** The PI/PD may include additional stipend allowances for time effort (40-50% of his research time) dedicated by the PI/PD and the research team while working at industry or at a private sector premises. The grantor, i.e.: NCST will periodically monitor this indicator on percentage time effort at industry and monitor and measure R&D knowledge transfer and implementation of best practices. If 40-50%-time effort was budgeted and dedicated to R&D time effort, NCST will monitor and measure frequency and proportion of % effort at industry (on joint mentorship, collaborative and guided data measurement experiences, simulation, work pairing, dissemination of data findings through periodic seminars and community outreach activities) as % of overall time effort for the project.

viii) **Consultant -** Includes expenses related to acquiring consultancy services for a specific activity(ies) within the Project whereby the project team members are lacking the expertise to carry out that activity.

ix) **Overhead -** Includes the overhead budget cost not exceeding 3% of the overall total grant budget, which is provided to the main applicant's host institution.

x) **Indirect Costs -** Includes administrative costs not directly related to the research (e.g., communication, acquisition of stationeries, etc.).

Disclaimer: The items listed above are not exhaustive. Therefore, any budget items submitted are subject to NCST's final decision, and may be approved or rejected at NCST's discretion.