



SCIENCE GRANTING COUNCILS INITIATIVE **SGCI**  **IOSRS** INITIATIVE DES ORGANISMES SUBVENTIONNAIRES DE LA RECHERCHE SCIENTIFIQUE



CALL GUIDELINE FOR THE ZAMBIA – GHANA CALL FOR COLLABORATIVE RESEARCH PROPOSALS

PRECISION FARMING FOR ENVIRONMENTAL SUSTAINABILITY AND ECONOMIC TRANSFORM

Opening Date: 20 January 2025

Closing Date: 28 February 2025

1.0 BACKGROUND

The Ministry of Environment, Science and Technology (MEST) and the National Science and Technology Council (NSTC) of Zambia are proud partners in the Science Granting Councils Initiative in Sub-Saharan Africa (SGCI). The SGCI is a continent-wide initiative designed to enhance the capabilities of Science Granting Councils (SGCs) in Sub-Saharan Africa, empowering them to drive the development of policies based on evidence and research that can promote sustainable socio-economic development. This collaborative effort is underpinned by support from several renowned international organizations, including South Africa's National Research Foundation (NRF), the German Research Foundation (DFG), the UK's Foreign, Commonwealth and Development Office (FCDO), Canada's International Development Research Centre (IDRC), the Swedish International Development Cooperation Agency (SIDA), and the Norwegian Agency for Development Cooperation (NORAD).

The overarching goal of the SGCI is to build the capacity of African science and research institutions, enabling them to generate innovative solutions to the region's most pressing challenges. By improving research quality and enhancing the use of research in policymaking, the initiative aims to bolster economic and social development in the region. The partnership between NSTC and MEST is a direct outcome of the SGCI framework, with both institutions collaborating to offer a Collaborative Research Grant under the NRF-DFG partnership. This initiative is aimed at fostering research collaboration between Zambia, Ghana, and the broader African region, facilitating cross-border sharing of knowledge, resources, and expertise.

This Collaborative Research Grant will support cutting-edge research across a variety of disciplines, focusing on issues that are of critical importance to both Zambia and Ghana. Through this initiative, both countries aim to improve their capacity to conduct high-impact research that can address national and regional priorities, including challenges related to natural resources, health systems, agriculture, and emerging technologies. The research outcomes are expected to influence public policies and strategies, while also contributing to scientific innovation and economic progress in both nations.



The initiative is designed to be inclusive and promotes the active participation of early-career researchers, as well as female scientists, to ensure that diverse perspectives are incorporated into the research process. By prioritizing diversity and inclusivity, this collaborative effort aims to empower underrepresented groups in the scientific community, creating equal opportunities for researchers from all backgrounds.

Through strategic partnerships and the fostering of research excellence, the Collaborative Research Grant will help establish both Zambia and Ghana as regional leaders in scientific research and technological innovation, playing a key role in achieving the United Nations Sustainable Development Goals (SDGs) in the region. Ultimately, the initiative will contribute to the economic growth and prosperity of both nations, while simultaneously promoting Africa's position in the global knowledge economy.

2.0 RATIONALE FOR THE COLLABORATIVE RESEARCH CALL

Zambia and Ghana share common developmental challenges, opportunities, and goals, particularly in key areas of sustainable resource management, health systems, agriculture, and technology. By collaborating on research in these areas, both countries aim to foster economic growth, innovation, and sustainability. Focused on sustainable mining, agriculture, health systems, and space science, this partnership aligns with the national and regional priorities of both countries, which emphasize agriculture, natural resource management, health, energy, and education.

Research in sustainable health systems, including the use of natural and traditional medicine, is essential to both countries' policies for promoting comprehensive, culturally sensitive healthcare services. Space science research also holds significant societal and economic value, contributing to climate change mitigation, environmental monitoring, weather prediction, and disaster management through technologies like earth observation satellites.

This joint research call offers an opportunity to address national and regional challenges, with research outcomes supporting sustainable development, economic growth, and evidence-based policymaking aligned with both countries' development strategies.

3.0 RESEARCH THEMATIC AREA: Precision Farming for Environmental Sustainability and Economic Transform

The thematic area is central to advancing socio-economic development in both countries have been identified for this joint call. Researchers are encouraged to align their proposals with these themes to address critical challenges and opportunities.



This thematic area focuses on precision farming and its critical role in environmental sustainability and economic transformation. The aim is to leverage precision farming to improve agricultural practices, minimize environmental impact, stimulate economic growth, and ensure inclusive access for farmers. Proposals are invited in one or more of the following key research areas within this theme:

- i. Advanced sensor technologies for real-time data collection on soil conditions, weather, crop health, and livestock well-being.
- ii. Impact of precision practices on crop yield, quality, and resource use efficiency.
- iii. Assessing the social, environmental, and economic impacts of certified precision farming systems.

4.0 ELIGIBILITY

- i. This call is open to researchers from public and private science and technology research and development (R&D) institutions/centers, as well as institutions of higher learning in Ghana and Zambia. Institutions/centers in Zambia must be registered with NSTC.
- ii. Each research proposal must consist of two research teams, one from Ghana and one from Zambia, with Principal Investigators based in each country leading their respective teams. The Principal Investigators will be the main applicants and will bear overall responsibility for the project, including its technical and administrative coordination, as well as the timely delivery of scientific and financial reports.
- iii. Principal Investigators must hold a Ph.D., preferably in a related field to the proposed thematic area, demonstrate prior research experience in the proposed work, and be able to mentor research teams.
- iv. The research team must possess significant capacity, capability, and leadership in the proposed field, including the inclusion of early-career researchers.
- v. The projects must involve private sector partner(s) in both countries, and confirmation letters of collaboration from these partners must be submitted.
- vi. Applications must include letters of support from host institutions in Ghana and Zambia. Proposals lacking institutional support letters will not be considered.

Note: Applicants are responsible for finding research partners in the collaborating country.



5.0 SCOPE OF FUNDING

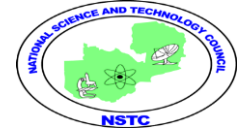
- i. The maximum funding amount per research project is the equivalent of **GH¢ 600,000.00** or **Euro 38,000.00** for the research team in Ghana, and the equivalent of Euro 55,000.00 or ZAR 1,000,000.00 in Zambian Kwacha for the research team in Zambia.
- ii. Two separate budgets must be submitted: one for the project activities of the research team in Ghana and another for the research team in Zambia.
- iii. The funding may cover the following costs:
 - a. Research materials and consumables directly related to the research project.
 - b. Small research equipment and accessories directly linked to the research project.
 - c. Local travel expenses.
 - d. International travel expenses (including travel to partner countries).
 - e. Transportation and shipment of research materials.
 - f. Postgraduate student research support.
 - g. Workshops, seminars, conferences, including national and international cooperation and networking activities directly associated with the funded research.
 - h. Dissemination of results, including publication costs.
- iv. The following costs are not eligible:
 - a. Salaries and honoraria for the research team.
 - b. Institutional overheads.

6.0 PROJECT DURATION

The maximum project duration is **thirty-six (36) months**, starting from **July 2025**.

7.0 ELEMENTS TO BE CONSIDERED IN PROPOSAL PREPARATION

- v. Research proposals must fall within the research thematic area stated in section 3.
- vi. ii. The proposed research should be applied, practical, and focused on problem-solving in the identified priority area. It must be innovative, with strong potential for utilization and/or commercialization.
- vii. Proposals must demonstrate a strong interdisciplinary and collaborative approach among researchers and institutions.



- viii. Female Principal Investigators are strongly encouraged, and the review and selection process will prioritize projects with female PIs or co-investigators.
- ix. The proposed project must include early-career researchers and contribute to human capital development in research and innovation.
- x. **Cross-cutting considerations:** The proposal should clearly demonstrate how the project will address issues of:
 - a. Diversity, gender equality, and inclusivity,
 - b. Public-private partnerships,
 - c. Risk management, and
 - d. Intellectual property.
- xi. **Results and Dissemination:** Applicants should clearly define the major outputs expected from the research project and describe how the research findings will be disseminated or used. Applicants must also expressly state the following:
 - a. Who are the target audience/beneficiaries?
 - b. How will the findings be used to influence policy and practice?
 - c. What media engagement plans are envisaged?
 - d. Indicate how open access will be fostered.
- xii. **Project Governance:** Explain how the project will be governed, including:
 - a. The composition of the research team,
 - b. Their qualifications,
 - c. Field of expertise, and
 - d. Specific roles in the proposed project.
 - e. Description of the role of the university's/institution's management (if any) and how this governance structure might influence the success of the project.
- xiii. **Partnerships:**
 - a. Describe the planned partnerships with other universities/research institutions.
 - b. Explain how the private sector or beneficiaries will be involved in the design, management, and execution of the project.
- xiv. **Ethical Clearance:** Where applicable, the Principal Investigator shall obtain ethical clearance from an appropriate research ethics committee before any grant disbursement and project implementation.
- xv. **Budget:** Provide an explanation and justification for each budget item. All rates used for budgeting purposes should be those acceptable to the institutions of the Principal Investigators hosting the projects.



- xvi. **Proposed Project Timeline:** Include a Gantt chart showing key activities, timelines, and key milestones within the project duration.
- xvii. **Monitoring and Evaluation:** MEST and NSTC, in collaboration with host institutions in **Ghana** and **Zambia**, will be responsible for monitoring and evaluation. Successful applicants will receive monitoring and evaluation templates.

8.0 PREPARATION, SUBMISSION, AND PROCESSING OF PROPOSALS

- a. Project proposals must be jointly prepared but submitted separately to the respective institutions (MEST and NSTC) in the two countries.
- b. Joint proposals must adhere to the provided guidelines. The full proposal template is available on the MEST website at www.MEST.gov.gh. Applicants can access the portal to apply for the grants through the MEST Online Grants Management System at www.grants.MEST.gov.gh for applicants in Ghana, and through the NSTC Online Grants Management System at www.nstcms.nstc.org.zm for applicants in Zambia.
- c. The full application package should include a complete research proposal, a covering letter, letters of support from the Principal Investigators' institutions and private sector partners, abridged CVs of the Principal Investigators, and all research team members, as well as a detailed work plan and budget.
- d. Submission of Applications
- i. **In Ghana:**
- Applicants must register to apply for the call.
 - Applicants must visit the MEST website for more information about the Call at www.MEST.gov.gh.
 - Applications must be submitted through the MEST Online Grants Management System (OGMS) at www.grants.MEST.gov.gh.
 - Applications not submitted via the online application system will not be accepted.
 - A guide on how to use the OGMS is available on the MEST website at www.MEST.gov.gh.
 - All attachments uploaded to the Online Grants Management System must be in PDF format, and the budget must be uploaded in Excel format.

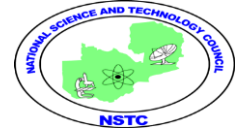


ii. In Zambia:

- Applications must be submitted through the NSTC Online Grants Management System (OGMS) at www.nstcms.nstc.org.zm. Applications not submitted via the online application system will not be accepted.
 - A guide on how to use the OGMS is available on the NSTC website at www.nstc.org.zm.
 - All attachments uploaded on the Online Grants Management System must be in PDF format.
- iii. The deadline for submission of proposals is **28th February 2025**. Applications received after the deadline will not be considered.
- iv. All applications will be received and processed confidentially, with acknowledgment of intellectual property rights of the applicants.

v. Processing of Applications

- i. A three-tier evaluation and review process will be used as follows:
- Screening of applications.
 - Review of proposals in each country, by an equally represented review panel nominated by each collaborating Council, to make recommendations for funding.
 - Funding decisions by a Joint Committee of the collaborating Councils.
- ii. All research proposals will be evaluated and reviewed by independent experts and selected based on their quality and merit, taking into consideration their potential for high impact at the societal level, feasibility within the project timeline, and reasonable cost, as follows:
- Scientific merit and quality of the proposed research.
 - Evidence of the capacity and capability of the research teams and their contribution to and leadership in the proposed field.
 - Potential social and economic impact.
 - Potential for human capital development for research and innovation.
 - Consideration for gender and inclusivity dimensions.



- Demonstration of collaboration and interdisciplinarity of the proposed research.
- Originality and innovativeness of the proposed research.
- Strong innovation/commercialization potential.
- The review, selection of proposals, and communication to applicants are expected to be completed by **June 2025**.
- The decision of the NSTC and MEST Joint Committee will be final.

9.0 CONTACT DETAILS

For further information and inquiries, contact:

i. **In Ghana:**

Wilfred Edem Dennis
Telephone: +233 24 327 4389
E-mail: wilfred.dennis@MEST.gov.gh

Prince James Quarcoo
Telephone: +233 54 339 3300
E-mail: prince.quarcoo@MEST.gov.gh

ii. **In Zambia:**

Atridah Mulonga
Telephone: +260-211-255854
E-mail: amulonga@nstc.org.zm

Phica N. Jalabani
Telephone: +260-211-255854
E-mail: pnjalabani@nstc.org.zm