

TERMS OF REFERENCE (TOR)

A Multi-Country Study on Doctoral Training

Project Name: Regional Scholarship and Innovation Fund for Applied Sciences, Engineering and Technology (RSIF)

Reference No: KE-ICIPE-001/2024-CS-RG

Expected duration: Six Months

Expected start date: 26/09/2024

Application deadline: August 8, 2024 - Extended to August 19, 2024

A. Background

The Regional Scholarship and Innovation Fund (Rsif)¹ is the flagship program of the Partnership for Skills in Applied Sciences, Engineering, and Technology (PASET) established by African governments to address systemic gaps in knowledge and skills necessary for long-term, sustained economic growth in sub-Saharan Africa (SSA).

The Rsif aims to (a) support competitively selected African host universities (AHUs) to establish high-quality PhD training, promote research excellence and improve innovation environments in the universities; (b) provide a model for inter-Africa student exchange and international collaboration in training and research; (c) develop transformative technologies to tackle the continent's most pressing challenges; and (d) build a critical mass of highly skilled leaders in science and engineering, and (e) support more women in science. The priority sectors for Rsif are ICTs including big data and artificial intelligence; food security and agribusiness; minerals, mining, and materials engineering; energy including renewables; and climate change.

Rsif is funded by African governments, and other key partners and contributors including the World Bank, the Government of the Republic of Korea and Carnegie Corporation of New York. The International Center of Insect Physiology and Ecology (*icipe*) located in Nairobi, Kenya is the Regional Coordination Unit (RCU) of the Rsif.

Risf includes a network of 15 African Host Universities (AHUs), competitively selected universities offering PhD programs in any of Rsif's theme areas. The AHUs offer a three- to four-year PhD training scholarship program and are responsible for key aspects of the scholarship program, such as candidate selection, providing support for the scholars they enroll; offering high-quality PhD programs; and monitoring their progress. The AHUs also

¹ For more information on PASET and the Rsif please visit <https://www.rsif-paset.org/>

implement research and innovation grants in the Rsif priority areas aimed at developing develop scientific, technology, and engineering capabilities in SSA.

Postgraduate education, particularly doctoral education in SSA, remains challenged by inadequate research infrastructure, equipment, and funding and is characterized by few numbers of well trained and highly qualified human resources. For example, few numbers of qualified PhDs are available to mentor students and undertake high-quality research.

icipe as the Rsif RCU is seeking services of a Research Group or team to carry out a multi-country study on postgraduate and postdoctoral training in Rsif-related fields. The target countries are Kenya, Ethiopia, and Rwanda.

B. Objective

The objective of the study is to assess challenges of and opportunities for doctoral and postdoctoral training and research and their contributions to the national economy in Kenya, Ethiopia, and Rwanda.

C. Scope

The study will cover Ethiopia, Kenya and Rwanda, and will focus on Rsif thematic areas. It will identify key training and research gaps and challenges or opportunities, including pipeline and employment issues for PhD graduates, and provide recommendations to inform policy. Important information will include data on existing PhD programs, PhD student enrollment, and completion rates disaggregated by thematic areas, gender, and training mode (coursework, research-based, etc). The study will also examine the funding sources and cost of the PhD programs and postdoctoral research opportunities.

D. Approach

The study should be scientifically designed to assess PhD training and postgraduate research opportunities in the region, and their contributions to the national economy. Both qualitative and quantitative approaches will be used to collect the relevant data from primary and secondary sources.

E. Activities

Specific activities to be undertaken by the Research Group include the following:

1. Document the status of post-graduate and post-doctoral training in Rsif-related fields in Kenya, Ethiopia, and Rwanda.
2. Identify key gaps and challenges in PhD training and research, including pipeline and employment issues for graduates.

3. Analyze existing PhD programs, the number of PhD students, completion and completion rates disaggregated by thematic areas, gender, and training mode (coursework, research-based etc).
4. Review funding sources for PhD research and align them to the national development contexts.
5. Collect data through questionnaires and interviews to supplement available documented information, funding sources, international partnerships, and collaborations.
6. Prepare a report detailing findings, analyses, and recommendations for improving the quality and impact of doctoral education in the SSA.
7. Provide actionable recommendations to inform policymakers at various levels, for enhancing the quality, relevance, and impact of doctoral education in SSA.
8. Write a paper or short articles for high-level policy discussions and engaging with key higher education stakeholders including the private sector.

F. Deliverables and Timelines

The assignment will be undertaken within six (6) months as follows:

Deliverable	Time Frame	Remarks (% Payment upon achievement of deliverable)
1. Study Proposal: An inception meeting to discuss the assignment. Submit a detailed proposal outlining how the study will be undertaken including methodology, and a work plan.	15 Days	10%
2. Interim Field Report: An interim field report summarizing the outcomes of meetings and interviews with key stakeholders, including universities, policymakers, and other high-level stakeholders.	60 Days	20%
3. Final Study Report: A final study report that includes findings, analyses, cross country comparisons and actionable recommendations for improving the quality and impact of doctoral education in SSA.	60 Days	40%
4. A Paper or Short articles that will used for high level policy discussions and engagement with the private sector	30 Days	10%

<p>5. Report Validation: The research group representatives will participate in the validation of the report, which will involve presenting the findings and recommendations to relevant stakeholders and incorporating feedback received.</p>	<p>15 Days</p>	<p>20%</p>
---	----------------	------------

G. Qualifications and experience

The Research Group should have the necessary academic qualifications and sufficient experience to undertake research in relevant fields; and should have key personnel with the following expertise:

- i. The lead researcher should have a PhD qualification in a relevant field, and a post PhD research experience of at least 5 years in the higher education sector or science and technology policy development.
- ii. Other team members should have a PhD qualification or a Master's degree with at least seven years' experience.
- iii. All research group members should possess knowledge and experience in research methods and should have well demonstrated analytical skills and excellent writing skills.

H. Reporting & Supervision

The Research Group will report to the Manager, Rsif RCU and his designated RCU-icipe staff.

I. Time Frame

The estimated effort to undertake the assignment is **6 months** from the date of contract signing.

J. Application guidelines

Completed **Technical and Financial proposal** including all the requirements and details specified should be submitted to rsiftenders@icipe.org by **Monday, 19th August 2024 at 15:00Hrs** East Africa time:

Description of what is expected in the technical proposal.

- i. A 2-page concept note with a proposed methodology for the study.
- ii. Experience with related studies.
- iii. A description of the key personnel and their competence in undertaking analytical research.
- iv. A work plan clearly indicating the maximum time and duration required for the study.