

## Science Granting Councils Initiative in Sub-Saharan Africa (SGCI)

### Theme: Ethics and Integrity in Research and Innovation for Development

#### Terms of Reference

#### INTRODUCTION

The Science Granting Councils Initiative (SGCI) seeks to commission a state-of-the-art paper on the theme: *“Ethics and Integrity in Research and Innovation for Development.”* This Concept Note and Terms of Reference serves to invite eligible and interested experts to apply for the authorship of the paper under the aegis of the Science Granting Councils Initiative (SGCI). The SGCI is a multi-donor Initiative which aims to strengthen the capacities of Science Granting Councils (SGCs) in sub-Saharan Africa (SSA) in order to support research and evidence-based policies that will contribute to economic and social development. The Initiative is jointly funded by the United Kingdom’s [Foreign, Commonwealth and Development Office \(FCDO\)](#), Canada’s [International Development Research Centre \(IDRC\)](#), the [Swedish International Development Cooperation Agency \(SIDA\)](#), South Africa’s [National Research Foundation \(NRF\)](#) and the [German Research Foundation \(DFG\)](#). Since its inception in 2015, the Initiative has been strengthening the capacities of Science Granting Councils in 15 SSA countries to support research and evidence-based policies that will contribute to economic and social development.

Each year, the SGCI convenes Annual Forums (AFs) that bring together the Initiative’s participating Councils from 15 African countries<sup>1</sup> and other key stakeholders around the world to deliberate and develop interventions in strategic areas of interest to the Councils and the wider science, technology and innovation (STI) community. To facilitate sharing of lessons and good practices, the SGCI commissions a state-of-the-art paper on a topic of interest for Africa’s development to inform a Masterclass held during the Forum. The 2020 theme is

<sup>1</sup> The SGCI currently works with 15 sub-Saharan African countries namely: Kenya, Rwanda, Uganda, Tanzania, Ethiopia, Côte d’Ivoire, Botswana, Burkina Faso, Senegal, Ghana, Zambia, Mozambique, Malawi, Namibia, and Zimbabwe

*“Ethics and Integrity in Research and Innovation for Development”*. This document provides guidelines on the concept for a research paper to be commissioned on the above topic.

## Background and Context

African leaders and policymakers recognize the central role played by science, technology and innovation (STI) in addressing development challenges. This recognition is manifested in continental policy initiatives such as The African Union (AU) Science, Technology and Innovation Strategy for Africa 2024 (STISA-2024)<sup>2</sup>. STISA’s mission is to *“Accelerate Africa’s transition to innovation-led knowledge-based economies”*. The Science Granting Councils (SGCs) are key players in the development of strong national STI systems which are the precursors for transformation to knowledge-based African economies proposed by STISA 2024. The Councils are key actors promoting Ethics and Integrity in Research and Innovation (R&I) within a country’s national system of innovation. The Councils act as agents of the government while representing the interests of the country’s scientific community. They are important ‘intermediaries’ in the flow of funding and technical support to R&D performing institutions in a country”<sup>3</sup>.

The SGCs perform crucial functions<sup>4</sup> that contribute to the evolution and effective functioning of national STI systems including:

- i) Funding research and innovation – this function entails disbursement and management of different categories of research grants;
- ii) Valorization of research results/ dissemination/ uptake of research reports and findings;
- iii) Policy advice/ advocacy; data/ statistics/ evidence collection and surveys; and
- iv) Capacity strengthening of stakeholder organizations and individual researchers through scholarships and grants.

The SGCI aims to strengthen the ability of the Councils to: i) manage research; ii) design and monitor research programmes, and to formulate and implement policies based on the use of evidence and robust STI indicators; iii) support knowledge transfer to the private sector, and iv) establish partnerships among the Councils and with other science system actors. In SGCI-2, two cross-cutting themes - research excellence and gender equality – have been incorporated into the SGCI activities.

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<sup>2</sup> African Union Commission (2013). African Union Science, Technology and Innovation Strategy for Africa 2024.

<sup>3</sup> Mouton, J., Gaillard, J., & van Lill, M. (2014). *Science Granting councils in Sub-Sahara Africa*. Stellenbosch University, CREST, IRD. South Africa.

<sup>4</sup> CREST Scoping Report - Science Granting Councils in Sub-Saharan Africa (2014).



The SGCI's expected outputs include: i) more effective research management practices among Councils, ii) strengthened ability of the Councils to design and monitor research programmes, and to formulate and implement policies based on the use of robust STI indicators, iii) increased knowledge exchange with the private sector, and iv) increasingly coordinated and networked Councils. The anticipated outcome arising from these outputs is more effective Councils that will strengthen national systems, leading to nationally-led research that contributes to development in participating countries. The Initiative seeks to improve the quality and relevance of science research, increase the uptake of research findings, and increase coordination between the key science system actors, increase linkage and collaboration among these actors to improve efficiency in the field of research and innovation. Equally emphasized is the greater level of engagement and involvement of private sector and other civil society actors so that research findings are taken up and utilized.

### **Gaps and Emerging Opportunities in Ethics and Integrity in Research and Innovation**

Ethics and integrity apply broadly through the research cycle from knowledge creation / generation, analysis, compilation (documentation), storage and uptake, utilization and application. Within this context, the mandate of the Councils involves igniting and managing the process of scientific research from its inception, facilitation of scientific research through creating an enabling environment, developing protocols and ensuring ethical and quality compliance. The Councils support in seeking funding for research and creating infrastructures that ensure that all stakeholders are engaged including private sector actors and commercialization entities. Further, the Councils support dissemination by increasing access to research findings. Finally, they communicate research findings and promote its uptake and utilization to solve developmental challenges. In addition, the Councils evaluate the impact of the research on social and economic development.

Strategically, and in light of the above, the Councils should be progressing to a position to:

- a) Play a bigger role in research grant management by utilizing data and evidence to make award decisions. This includes steering regular R&D surveys to increase awareness of knowledge gaps and use data to drive research priorities as well as drive the institutionalization of data for decision making;
- b) Build the human resource capacity along the research chain so that ethical and quality research is the norm. This includes developing research kitty for offering high level scholarships that will further strengthen the human capacity for research especially in policy making;
- c) Strategically engage and involve the private sector and civil society in the entire research continuum so that they appreciate the value for investment in research and



innovation as well as driving public engagement and participation towards a science culture; and

- d) Actively spearhead enhanced gender mainstreaming in research design, innovation and to increase engagement of women in STI activities.

Science Granting Councils operations are modelled on government operations thus developing MOUs with private sector and universities and research institutes not an easy task. The political economy reviews conducted by the SGCI in 2017 show that government cycles, party politics and policies determine the focus of the scientific and innovation agenda. The private sector, in particular, is generally uncomfortable with the vicissitudes that political shifts bring. Insulating the Councils from politics would be a major step in enabling them to define the research agenda.

The Councils recognize the persisting gender inequality which severely limits women from achieving their potential and effectively contributing to development challenges. Women scientists have a critical role to play in Africa's development, including pushing the envelope on gender equality, one of the 17 Sustainable Development Goals (SDGs). In science, where women remain heavily underrepresented, data from UNESCO<sup>5</sup> show that only 30% of the world's researchers are women. According to the 2016 SCGI Annual Report<sup>6</sup>, STI can only lead to better lives for all when the concerns, abilities and needs of both males and females are taken into account when research priorities are determined, the parameters of research questions drawn, research teams are diverse, research funding decisions are gendered, research methodologies apply the gender lens, the findings and conclusions reported are disaggregated by gender, and finally, the gender dimension is considered when future research areas are suggested.

The emergence of digital technologies in the recent decades have led to new ideas about the opportunities that they offer for science and how science systems and norms might need to be re-configured in order to seize the opportunities they offer. The open science is based on open data and open access to the results of scientific inquiry, to enhance efficiency, the rate of discovery, understanding of complex systems and, in collaboration with other societal actors. On the hind side, due to data deluge there is need for greater discipline in data use if science is to retain statistical rigour and uphold the principle of reproducibility<sup>7</sup>.

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<sup>5</sup> <https://en.unesco.org/news>

<sup>6</sup> SGCI 1-2016 Annual Report 2016.

<sup>7</sup> Boulton G. et al., (2020). Open Science in Research and Innovation for Development of Africa. The African Technology Policy Studies Network Research Paper No. 32.

Although, digital revolution has shown to have short-term disruptions, from rapidly redefining relationships between customers, workers and employers, and permeating almost everything we do, progressively overhauling all industries whilst creating new ones, it has already shown enormous capacity to create long-term benefits. African governments cannot avoid these forces that technology has unleashed. In order to capitalize on the digital revolution there will be need to take a cue from other counterparts elsewhere by developing systematic adoptive and adaptive responses that are aligned with the aspirations of STISA-2024.



## Scope and Terms of Reference

The key functions of the Councils include but not limited to: i) playing a bigger role in research grant management including: utilizing data and evidence to make award decisions; working with other agencies to steer regular R&D surveys to increase awareness of knowledge gaps and use data to drive research priorities; ii) building the human resource capacity along the research chain so that ethical and quality research is the norm; developing research kitty for offering high level scholarships that will further strengthen the human capacity for research especially in policy making; iii) engaging and involve the private sector and civil society in the entire research continuum so that they appreciate the value for investment in research and innovation as well as driving public engagement and participation towards a science culture and iv) actively spearheading gender mainstreaming to increase involvement of women in research and innovation.

While performing these functions, the Councils confront a number of ethical and integrity challenges that define both the boundaries of their influence as well as the opportunities that stretch their imagination. Without being definitive and prescriptive, the following issues come to mind:

- a) **The cultural and ideological conflicts.** Essentially, the academic/ scientific culture that treats knowledge as a “public good” stands in toe with the commercial/ business culture that treats knowledge as a “private good” that should be commercialized. The ethical concern is that whereas “the public good” advocates argue that the government funding uses public/ tax-payers money and hence the knowledge so generated should benefit the whole society who should have the right to access that knowledge; the commercial culture advocates view knowledge as a private commodity whose purpose is to create new products that generate profits.
- b) **Effects on the individual researchers and potential conflicts with institutional policy.** The ideological dilemma described in a) above shapes the choices and freedoms of researchers. While some may be more leaning towards the traditional academic culture; others may be more commercial in their approach. Either of these may stand in direct contrast to official institutional policies. Where such a conflict exists, it will affect the choices and freedoms of researchers in their quest for publications, follow on innovation, new networks and partnerships as well as the speed of communication and dissemination of results.
- c) **Openness or secrecy?** There has been increased calls for and adoption of open access publications and open science more generally. In some establishments, however, there is still preference for and practice of secrecy in scientific research and innovation.

- d) **Conflicts of interest:** When private companies can offer direct financial rewards to academics in the form of consultancy fees, royalties, equities etc, opportunities are created for potential conflicts of interest. Similarly, recruitment of private sector actors into university positions – whether as faculty (adjuncts) or in management boards (Councils/ Senate) in some cases have been viewed as bridled with demands for reciprocal favours.
- e) **Gender and inclusivity.** The decision to incorporate the marginalized in society – whether such marginalization results from gender, cultural, linguistic, locational or some other forms of disabilities – is an ethical question.

Within the generalized scope above, the following issues could be:

- At the national/ Councils level, what are the guidelines for ethics and integrity in research and innovation? Do the Councils have ethical guidelines for their grantees? How do such guidelines (where they exist) address the key issues under this call? How are these aligned (or not) with national research and STI policies? Are there specific ethics and integrity issues that peculiar to collaborative research (collaborations with private sector, cross-country collaborations? How are these issues managed?
- At the funders level (with specific reference to the SGCI multi-donor Initiative IDRC/SIDA/DFID/NRF/DFG), how do the policies and guidelines on ethics and integrity affect their relationships with grantees? What can the Councils learn from the funders “good practices” and experiences?
- At the research level, how are issues of ethics and integrity captured and implemented? What are the practical experiences of research managers, technology transfer officers and grant managers? How are the institutional policies on research, innovation, commercialization and valorization facilitated or hindered by practical requirements of ethics and integrity?
- What are the views, perspectives and experiences of individual researchers and grantees? How do the issues affect their promotions and career opportunities; freedoms and choices on publications, innovation, networks etc.?
- What are the experiences of the business community and implications for public – private partnerships (PPPs). How do the issues affect technology transfer and knowledge exchange; participation in university programmes such as boards of management; faculty appointments; course accreditation etc.?
- How are issues relating to ethics and integrity handled for rapid research? Are there guidelines? Are there any new lessons that can be gleaned from funding research during the covid-19 pandemic?

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- What are the gender perspectives and other marginalized/excluded groups? What strategies have worked/ not worked in what settings? How could the Councils ensure more direct and intentional approaches to gender and inclusivity in research and innovation? How could this be better framed as an ethical issue?



## RESEARCH METHODOLOGY AND EXPECTED OUTPUTS

### Approach

Interested authors are invited to propose a methodology/ approach for delivering the paper. Such methodology or approach could draw from primary data, secondary data, as well as insights and experiences of practitioners and other experts.

### Expected Outputs

In addition to the final masterclass paper which will be presented at the 2020/21 Annual Forum scheduled tentatively for 25<sup>th</sup> February 2021, the authors are expected to produce the following:

- i. An Expression of Interest (Eoi) comprising detailed CV(s) of potential author(s); an annotated outline of the paper and a detailed work plan
- ii. Final technical paper incorporating review comments by the Scinnovent Centre and its partners as well as participant views and observations after the Annual Forum
- iii. At least one article published in an international peer-reviewed journal
- iv. At least one policy brief emanating from the paper

## PROCESS AND TIMELINES

S/n	Deliverables	Timeframe	Remarks
1	Call for expressions of interest (Eoi)	8 <sup>th</sup> October 2020	Closes on 29 <sup>th</sup> October 2020
2	Selection and Contracting of authors	5 <sup>th</sup> November 2020	Eoi, detailed CVs, annotated outline/table of contents and detailed work plan required
3	Submission of the 1st draft paper	5 <sup>th</sup> December 2020	Reviews by Scinnovent Centre and revision by authors
4	Submission of the 2nd draft paper	20 <sup>th</sup> December 2020	Second round of reviews by Scinnovent Centre and revision by authors
5	Submission of final draft paper	15 <sup>th</sup> January 2021	Should be ready for circulation
6	Presentation of the paper during the 2021 Masterclass/AF	25 February 2021	Draft final paper presented by lead author at the 2021 AF and additional input collected and incorporated into the masterclass paper
7	Submission of the final paper	April 2021	After inclusion of comments/additional input from stakeholders and revision of the draft final paper

8	Submission of draft article for publication in a peer-reviewed journal	April 2021	Journal to be selected in consultation with Scinnovent Centre; Manuscript preparation and publication is the responsibility of the author(s).
9	Submission of Policy Brief	April 2021	Authors in consultation with the Scinnovent Centre

### SUBMISSION OF EXPRESSION OF INTEREST (EOI)

The deadline for submission of the Expression of Interest, Detailed CV(s), Annotated Table of Content, and Work plan is on or before **Thursday, 29 October 2020 by 6:00 pm East African Time**. All submissions should be sent to [info@scinnovent.org](mailto:info@scinnovent.org) with a copy to [Bolo@scinnovent.org](mailto:Bolo@scinnovent.org). Submissions received after this deadline will not be considered.

Should you require any further information, contact Dr. Maurice Bolo on: Email: [Bolo@scinnovent.org](mailto:Bolo@scinnovent.org) ; Phone: +254-727-701 917 or +254-733-670-979 on or before **15<sup>th</sup> October 2020**.

The successful candidate will be notified within one week after the deadline. Please note that the **Expression of Interest** should not exceed one page of an A4 paper, single spacing, font type- Times New Roman, and font size- 12. The **CVs** should demonstrate experience from previous related assignments and publications around open science.

### BUDGET

An estimated budget of up to **US\$20,000.00** has been ear- marked for this assignment. Applicants are highly encouraged to form teams that demonstrate relevant expertise and experience. Gender and inclusivity are key considerations. Please note that it is a requirement that the main author of the paper be available to present the paper during the Masterclass/Annual Forum event.

