

# GOOD PRACTICE GUIDELINE ON THE QUALITY OF RESEARCH COMPETITIONS



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## Definition of Terminologies

- **Call for Proposal or Request for Proposal** is a document that solicits proposals, often made through a bidding process, by Science Granting Councils (SGCs). SGCs are interested in procurement of a commodity or service in research and development from suppliers, typically researchers at Universities or Research Organisations.
- **Grants Management or Call Management** are the processes that SGCs use in administering a call for proposals or of running research competitions. Functions typically can be divided into pre- and post-award processes. The pre-award process encompasses everything done before a grant is awarded, such as searching for specific grant types open for application; putting together and opening up a call for applications; receiving and screening applications; and sending out rejection or award letters to applicants. The post-award process encompasses tasks after an award is made, such as signing of contracts and grant agreements; finalising budgets and disbursements; tracking and certifying research efforts, accounting tasks, and reporting.
- **Funding Instruments or Research Competitions** are the different competitions that SGCs run to solicit proposals. These can include for example: Research Grants, Post-graduate Scholarships, Mobility Grants, and Equipment Grants etc.



## About the Science Granting Council Initiative (SGCI)

The Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa is a 5-year initiative that aims 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 Department for International Development (DFID), Canada's International Development Research Centre (IDRC), and South Africa's National Research Foundation (NRF).

Science Granting Councils (SGCs) include for example science academies, boards, commissions and foundations that are central to funding and catalysing research and innovation across Africa whilst at the same time representing the interests of the scientific community nationally as well as regionally and internationally. They are important role players in the Science, Technology and Innovation (STI) system and act as crucial "intermediaries" in the flow of international funding and technical support to R&D performing institutions in a country.

The recognition of the importance of the SGCs for STI development in sub-Saharan Africa is evident by the increase in the establishment of SGCs or policies advocating for the development of SGCs, over the past decade. However, in sub-Saharan Africa the SGCs are at different stages of development of which only a few are considered as well established. The key functions performed by SGCs include disbursement of research grants, support for infrastructure development, setting research agenda/research priorities, management of scientific collaborations and agreements and coordination in the National Innovation System.

Effective performance in the key functions of the SGCs requires a broad range of research management skills as effective research management is an essential enabler of excellent research. Research management has emerged as a specialised area in government and funding agencies. There is a variation in capacity, expertise and experience in research management amongst the SGC's in Africa. The SGCI through Theme 1 on Strengthening capacity to manage research will build the skills and expertise of the SGC staff to manage research and ensure that the scarce research resources available to them are effectively deployed and managed.



## About SARIMA

SARIMA, the Southern Africa Research and Innovation Managers Association, was formally established in 2002 as a not-for-profit membership organisation of Research and Innovation (R&I) managers. Its purpose is to strengthen the R&I system to ensure the social and economic development of the Southern African region and to contribute to respective national systems of research and innovation.

SARIMA provides a platform for engagement between R&I managers in any organisation active in R&I in the region, as well as offering networks and linkages for broader engagement within Africa and the rest of the world.

SARIMA's key focus areas include research management, innovation and technology transfer and Africa engagement. Described as a stakeholder organisation, SARIMA currently has around 515 members but has an expanded network of over 2000 stakeholders that are kept informed of its activities and events.

Over the years, SARIMA has established strategic collaborations with various national and international bodies that enhance the Association's offerings and opportunities for members. This expanding list includes:

- South African Department of Science and Technology (DST) and its agencies,
- Southern African Development Community (SADC) Secretariat,
- Association of Research Managers and Administrators in the United Kingdom (ARMA UK),
- Society for Research Administrators (SRA International) in the United States (US),
- National Council for University Research Administrators (NCURA) in the US,
- Association of Commonwealth Universities (ACU),
- International Network of Research Management Societies (INORMS),
- and the Alliance of Technology Transfer Professionals (ATTP), to name a few.

In Africa, SARIMA played an important role in the establishment of the West African Research and Innovation Management Association (WARIMA) and participated in initiatives to formalise the establishment of the East African Research and Innovation Management Association (EARIMA), and the Central African Research and Innovation Management Association (CARIMA).

SARIMA is engaged on an annual basis with a large number of R&I management capacity development interventions, including training workshops, exchanges and networking events, in collaboration with local, regional and international partners. SARIMA co-ordinates and participates in a growing portfolio of multilateral programmes and was selected as the Collaborating Technical Agency (CTA) for developing and implementing Theme 1 (Strengthening the capacity of Science Granting Councils to Manage Research) of the SGCI. SARIMA established a consortium to implement Theme 1 including WARIMA, CARIMA, EARIMA and the ACU.



## Introduction

Running research competitions is one of the key functions of a SGC. This encompasses a wide range of activities from designing the call to peer-review and award to monitoring, evaluation and learning. This good practice guideline has been developed as part of Theme 1 of the SGCI to offer guidance on the criteria that can be used to ensure that research competitions are of high quality. This is significant as there currently is no consensus in the science and technology community on what constitutes a *high-quality* research competition and how this impacts on research excellence and the quality of research outcomes. SGCs are encouraged to adopt the guideline and use the relevant processes to improve the efficiency, quality and impact of their research competitions.

A number of scholars have reported on research impact as being part of research quality (Yates, 2005; Boaz, 2003; OECD, 1997), while others have concluded that quality and impact are two different elements of research excellence (Grant, Brutscher, Kirk, Butler, & Wooding, 2010; Sørensen *et al.*, 2014). It has been recognised that the purpose of research for development should go beyond generating new knowledge to generating knowledge that can contribute to development outcomes. Some scholars argue that excellence in research is desirable in any type of research; but, the stakes are higher when findings are meant to influence decisions that affect people's lives, the environment, governance, or other areas of development such as the achievement of a knowledge based economy (Sørensen *et al.*, 2014). Most scholars concluded that research findings gain credibility and are more likely to be used if they are derived from excellent research (Mendez, 2012).

Within the SGCI context, the understanding around research excellence in Africa was recently shared by Tijssen and Kraemer-Mbula (2017). SARIMA's interest in the quality of research competitions is based on the assumption that there is a high probability that the quality of the research competition can enable research excellence. It is important therefore that criteria be identified and utilised by SGCs to ensure high quality research competitions. There is no available literature on what constitutes the quality of a research competition. However, most findings on the topic of excellence includes one or more quality dimensions. Research funders can draw from these sources and also craft their own criteria to apply in assessing the quality of research competitions.

This good practice guideline has been co-developed by the CTA, the Funding Partners and the SGCs and is based on the experiences of the SGCs, other funders and research managers within the University setting. A draft was presented by SARIMA during the Stakeholder Workshop organized jointly by the National Research Foundation (NRF) and SARIMA in July 2017 and was finalised after several iterations with the SGCs. The final step prior to its full utilisation will be an online validation process by stakeholders of the SGCs.



## Elements of a High Quality Research Competition

Several recurring conceptual elements and specific criteria that could be used in assessing the quality of a research competition have been identified and are shown in Figure 1 and Box 1 respectively. The conceptual elements include:

- (i) **Call for applications**, which includes all the pre-call activities until the call has closed;
- (ii) **Reviews and Assessment** are the call closing, internal screening, reviewer identification, panels, and funding decisions;
- (iii) **Awarding** of the grant includes the dispatch of the award letters, signing of the research contracts and disbursement of the funding to the successful applicant; and
- (iv) **Monitoring, Evaluation and Learning** includes the annual performance reports, implementation plans, technical visits and ending where the whole process itself is reviewed, in readiness for the next cycle.



**Figure 1: Conceptual elements used in assessing the quality of research competitions**

## Criteria to apply in assessing the quality of research competitions

The specific criteria that unfold from these conceptual elements are summarised in the below Boxes and include issues such as priority setting and strategic alignment, organisational efficiency, applicant eligibility, clarity of the call, peer review process, etc.

### **Box 1: Call for Applications**

#### **1. CALL FOR APPLICATIONS –*the following should be considered***

##### **1.1 Priority Setting And Strategic Alignment**

- National, continental and international strategic priorities (e.g. national research priority areas, national development plans, institutional strategic plans, STISA 2024, Agenda 2063, Sustainable Development Goals) are considered. In addition, expected outcomes of a research competition in addressing these strategic priorities are clearly defined.
- The funding instrument or research competition best suitable to meet the expected outcomes is identified and could be based on postgraduate/ student grants; research (national and international) grants; mobility or travel or conference grants; institutional (capacity strengthening) grants; and infrastructure grants etc.
- A framework is developed that describes for each specific funding instrument, its objectives and expected activities. The framework forms the substantial basis for subsequent calls for applications

##### **1.2 Organisational Efficiency**

- The governance of the SGC and the research fund is clear – who are the staff involved including their roles and responsibilities as well as the role of any advisory / executive board members in decision making of final awardees.
- Human resources: The personnel at the SGC have the skills sets that allows for efficiencies and effectiveness in the pre-award and post-award grants management processes.
- Systems and processes: The SGC has a defined, documented, tried and tested process on the call for applications and grant management process that staff are aware of; which should be flexible enough to allow for innovation and changes as necessary. All changes should be documented and dated.
- The call is publicly announced and marketed on multiple appropriate channels e.g. online, newspapers, roadshows etc.
- The call, including the review process is automated or if it is manual, the steps are clearly identified with roles and responsibilities including timelines.
- Enquiries by potential applicants is allowed and working contact details of someone to answer enquiries are provided.



- Contact person is well equipped to give relevant information to applicant enquiries.
- The call for applications includes frequently asked questions (FAQs).
- A register of applications is maintained by the SGC of all applications received in response to the various calls for applications.

### 1.3 Applicant Eligibility

- The target audience is defined (e.g. postgrad student, postdocs, lecturers to professors, private institutions, public institutions, employed fulltime/part time, citizenship etc)
- The eligibility criteria are clearly formulated and consider gender and diversity aspects, depending on the aim of the call

### 1.4 Clarity of the Call

- The aim/purpose, focus and scope, budget of the call and expected outcomes are clearly formulated
- The application and submission process is explained and additional/supporting documents are clearly listed. There is consistency, fairness and transparency with regards to the submission procedure
- Rejected applications are allowed to resubmit in future rounds
- Application templates are provided or guidance is provided on how to structure the proposal
- Budget guidelines are clear and specify permissible and non-permissible expenditure and the duration of funding/project is stated. No ambiguous terminology e.g. the word "OTHER" is used when providing budget guidelines.
- Guidance on ethical clearance (where relevant) is provided
- Application timelines are provided and adhered to and there is consistency, fairness and transparency with regards to the call deadlines
- Application requires applicants to think about cross-cutting considerations such as the impact (scientific, social, environment, human capital development), potential for promoting equity and redress, intellectual property and commercialisation

## Box 2: Peer Review and Assessment

### 2. PEER REVIEW AND ASSESSMENT – *the following should be considered*

- The review process is fair, impartial, credible and transparent
- Applicants are given an opportunity to suggest reviewers and to indicate which reviewers should not be approached



- The reviewers are given adequate time to go through the proposals
- All individuals involved with the review process are bound to confidentiality
- There is an option for reviewers' comments to be provided to an applicant on a confidential and anonymous basis to allow successful applicants to respond to issues raised as part of the review process in an attempt to benefit the research programme and to improve future applications for unsuccessful applicants
- A register / database of peer reviewers is available for scientists or experts who can be approached to become members of the Peer Review Panels, or to act as specialist review experts.
- The application review process is clearly described
- The review criteria are provided to the reviewers
- The peer review process is guided by the type of funding instrument. It may be blind or open review.
- There are clear guidelines on how to handle conflicts of interest
- Review outcomes are communicated in line with the timelines provided
- Unsuccessful applicants are provided with detailed feedback
- A process for appeal against the outcome has been considered and is clearly described
- If the resubmission of proposals is permissible, this is clear in the call and a motivation/justification from the panel has been provided
- Peer-reviewers or panellists are selected based on principles of no-bias, gender equality, discipline balance, relevant expertise, number of reviewers per proposal
- Rigour of the peer review process: scientific excellence is a core determining factor (award based on scientific and technical merit)
- It is clear who makes the funding decisions and if it requires approval from external sources e.g. the board, the ministry, etc and there are processes in place in case they do not agree with the recommendations?
- The outcomes are either announced directly to the applicants or publicly, on the website or through the media

### **Box 3: Awarding of the Grant**

#### **3. AWARDING OF THE GRANT – *the following should be considered***

- Revising and finalisation of the project budget and the implementation plan
- Identification of clear performance indicators linked to the research competition
- Signing of the project letter and grant agreement that indicates the roles and responsibilities of the successful applicant and the SGCs



- The grant agreements, disbursement of grants and reporting including timelines are managed effectively

#### **Box 4: Monitoring, Evaluation and Learning**

##### **4. MONITORING, EVALUATION AND LEARNING – *the following should be considered***

- Project activities are regularly monitored and linked to the indicators identified at project and research competition level
- Projects include dissemination plans to scholarly and non-scholarly audiences
- Systems and processes to deal with the management of changes during the project life cycle, requests for extensions and cancellations of grants

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