

Summary Report of the Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa, 2018 Annual Regional Meeting (ARM); 4th – 6th July 2018, Accra, Ghana

Theme: RESEARCH AND INNOVATION FOR JOB CREATION

Prepared by the African Technology Policy Studies Network (ATPS) and the Scinnovent Centre



INTRODUCTION

This report highlights the key issues and messages from the 2018 Annual Regional Meeting (ARM) on “Research and Innovation for Job Creation” under the Science Granting Councils Initiative (SGCI) held from 4th to 6th July 2018 in Accra, Ghana. The meeting brought together 120 delegates from 20 countries mainly within Africa, including Science Granting Council (SGC) coordinators, researchers, policymakers, private sector actors and civil society representatives. It was held alongside the launching of the “Ghana Innovation and Research Commercialization Centre” (GIRC), and co-hosted by the Ministry of Environment, Science, Technology and Innovation (MESTI) and the African Technology Policy Studies Network (ATPS) in partnership with the Scinnovent Centre.

The expected outputs from the ARM were to:

- Identify key Science, Technology and Innovation (STI) priority actions in the Economic Community of West African States (ECOWAS) region for potential application by the relevant Ministries, Councils and Agencies;
- Identify pathways for improved engagements and collaborations by the STI Ministries, Councils and Agencies with ECOWAS and AUC bodies;
- Increase the knowledge and application of Monitoring, Evaluation & Learning (MEL) actions to the SGCI activities by the Councils and Collaborating Technical Agencies (CTAs);
- Provide inputs to the draft framework for GIRC and explore strategic collaborations and funding for programmes and activities of the Centre; and
- Increase the awareness of SGCI among governments, private sector actors, science community and other relevant stakeholders in Ghana and other ECOWAS countries.

The three-day meeting began with a pre-conference workshop on the 4th of July organised by the South African Research & Innovation Management Association (SARIMA), in conjunction with other CTAs. The meeting sought to engage the Councils on two broad areas of research and grants management, specifically Grants Management Operation Manual and the Professionalisation of Research Management.

The Annual Regional Meeting of the SGCI took place on the 5th of July 2018 at the Alisa Hotel, Ghana with a keynote address presented by Dr. Ibrahim Mohammed Awal, Honourable Minister for Business Development, Ghana on behalf of the Minister of Environment, Science Technology and Innovation (MESTI), Ghana. Dr. Awal informed delegates of the government of Ghana's intention to raise the level of funding for research and development to the recommended 1% of their GDP and aim further to progressively increase it to 3%. He cited a positive correlation that exists between investment in research and development and socio-economic productivity and urged other countries in the region to emulate this good practice.

On the 6th of July, the SGCI Monitoring, Evaluation and Learning (MEL) session was held and attended by the Collaborating Technical Agencies (CTAs), Initiative's Management Team (IMT) and the Councils, where the CTAs presented the current status of their activities. Presentations and deliberations through stories of significant change on how the Councils were acquiring, adapting and applying knowledge from technical support provided by the CTAs were made jointly by the CTAs and Councils.

KEY MESSAGES AND RESOLUTIONS FROM THE MEETINGS

Key messages and resolutions from the SGCI 2018 ARM can be summarized into four categories: Research Management; Insights from the Ghana Innovation & Research Commercialisation Centre; Key Science, Technology and Innovation (STI) Priority Actions in the Economic Community of West African States (ECOWAS); and Significant stories of change from the implementation of the SGCI in Africa.

1. Research Management

Through the insights provided by SARIMA on the development of a professional competency framework, the professionalisation of research management and the development of a generic operation manual, the SGCs expressed willingness to continue updating their processes and procedures to accommodate processes and lessons learnt so as to improve research management. The proposed Generic Operations Manual was presented, of which the critical elements considered are as follows:

- **Scope and Purpose of the Manual:** The operations manual is a comprehensive documentation of how the Councils should function effectively. If written correctly, it should guide through the day-to-day procedures for operating the entity. The manual should provide details of the standards and procedures to be followed in the Council to ensure efficient management of resources. It might be called an operations manual, standard operating procedures (SOP) or best-practices manual. It is taken that the operation procedures contained within the manual are designed to: provide detailed guidance on operational processes; provide standardized procedures; ensure transparency and accountability in all operations; improve the efficiency and effectiveness of operations; promote the consistent application of best practices and international standards; as well as reduce risks.
- **Overview of the Council:** An overview of the council is proposed covering the historical background, vision, mission and core values of the organisation and its strategic objectives.
- **Governance and Management Structure:** The organisational structure will contain the organogram and functions of the organisation, etc.

- **How to develop operating procedures:** Basic steps in the development of the operations manual will be described here and advising that: the best way to start on developing a manual is to bring staff together to create the table of contents of all major responsibilities; the SGCs should use job descriptions and annual calendar to determine every procedure and responsibility that should be documented; the SGCs should document processes or steps as they occur in the office in a consistent format (using a template) for adding to the manual; and that the operating manual will take shape over months and serve as the most valued document for the Council's sustainability.
- **Council's Operations:** Having described the preliminary stages, the delivery procedures of some critical elements will be made explicit including: Setting the research strategy and developing funding programmes / Setting the research agenda and priorities; Collaborations and Partnerships; Outreach and Science Engagement; Knowledge Management; Finance Systems; Risk Management; Monitoring, Evaluation and Learning; and Ethics and Integrity.

2. SGCI Supports the Establishment of Ghana Innovation and Research Commercialization Centre

Background

Ghana's Minister for Environment, Science, Technology and Innovation (MESTI) requested the SGCI (through Theme 3) to support the establishment of the Ghana Innovation and Research Commercialization Centre (GIRCC) as the primary government agency that coordinates all scientific research collaboration projects and public-private-partnerships (PPPs) related to Science, Technology and Innovation. In his request, the Minister noted that GIRC would spearhead uptake and use of research results as well as act as a link between the government, academia, private sector and other actors within Ghana's innovation ecosystem. Besides financial support through the PPP grants, the SGCI is providing continuous technical support, mentorship and coaching towards the establishment of Ghana's first Research and Innovation Agency. In this regard, the SGCI is a key member of a technical working group established during the July ARM.

Ghana has taken steps to support the establishment of offices for private sector R&D collaborations and technology transfer, some of which are resulting in entrepreneurial activities. However, despite these efforts and limited successes, the linkages between the public research institutions, the academia and the private sector have remained weak and the transformation of research outputs into economic and social use have been limited. Similarly, there has been very limited support from the private sector in knowledge generation, innovations in technology and application of same towards business growth and expansion.

MESTI has noted the urgent need for collaboration among government, public research institutions, academia and the private sector to foster knowledge exchange, technology transfer and transformation of research outputs into commercial products and services as a new arrangement that will facilitate the creation of industries and jobs, grow the economy and hasten the pace of Ghana's socio-economic development.

It is in pursuit of this, that MESTI sought the support of the SGCI towards the establishment of GIRCC as the new partnership between government, public research institutions, academia and the private sector.

Demand and private sector interests

For the SGCI, private sector demand and interests are key considerations for support under Theme 3. Interviews and document reviews conducted as part of the Ministers's evaluation process revealed that there exists a strong demand from the private sector for collaborations with public research institutions in Ghana. In addition to the numerous requests for PPPs on technology-related projects and research collaborations, there are also various requests for policy support interventions

from Ghanaian innovators and start-up businesses. These are evidenced by MoU's between some of the key public and private sector players:

- The Council for Scientific and Industrial Research (CSIR), has signed an MOU with the Private Enterprise Federation (PEF) to form a strategic partnership for collaboration on the promotion, growth and development of the private sector in Ghana. PEF is the association of private businesses and trade associations in Ghana, whose mandate is to promote the activities and resources of the private sector.
- The Technology Development and Transfer Centre's (TDTCs) is one of the outcomes of a World Bank Project involving a collaboration with five (5) Ghanaian universities and research institutes in Ghana. Other institutions involved with the project include: Ghana Atomic Energy Commission; University of Ghana; Ghana Technology University College; and Kumasi Technical University

Broader STI activities on-going in Ghana and opportunities for SGCI

It is important that the SGCI support to MESTI is viewed within the broader STI context in Ghana. Following are aspirations/plans and activities which the SGCI support could contribute to:

- i. There are on-going plans to establish a **Presidential Advisory Council on Science, Technology and Innovation (PACSTI)**, as an independent advisory body, to provide confidential advice to the President of the Republic of Ghana on STI issues. PACSTI is meant to assist the President in the formulation of government policy and decision-making, and to ensure that STI remain the primary vehicle for the nation's socio-economic development.
- ii. In order to ensure that there is coordination of all sectoral activities involving Science, Technology and Innovation, an **Inter-Ministerial Coordinating Council on STI** is being set up to be chaired by the Minister of Environment, Science, Technology and Innovation. The Council's mandate will coordinate to ensure close collaboration among all Government sectors and all sector Ministers will be members of the Council.
- iii. In order to ensure that there is adequate funding for Research and Development (R&D), **the National STI (NSTI) Fund** is being established to support the development of the nation's STI system. The fund will be established as an autonomous body with oversight from the Ministry responsible for Science, Technology and Innovation.

Establishment of the technical working group to develop the GIRCC Masterplan and Framework

The assignment is expected to take approximately 6 months. The Technical Team consists of the following members: MESTI, Ghana; Technology Innovation Agency (TIA), South Africa; The Scinnovent Centre/SGCI; Manufacturing Technology Centre, UK; Ghana Climate Innovation Centre and ATPS.

3. Key Science, Technology And Innovation (STI) Priority Actions in the Economic Community of West African States (ECOWAS)

Background

In line with the ARM's specific objective to discuss key Science, Technology and Innovation (STI) priority issues in the ECOWAS sub-region and exchange knowledge and information among the Councils and other science system actors in Africa, the Economic Community of West African States (ECOWAS), represented by Dr. Roland Koakou from the Division for Science, Technology and Innovation Commission of ECOWAS, made a presentation on the key priorities and strategic programmes of the Division that aligns with the SGCI objectives and the ARM theme on 'Research and Innovation for Job Creation' in particular.

The ECOWAS Science, Technology and Innovation Report and Agenda

The vision of the ECOWAS sub-region's STI agenda has been well articulated in the current ECOWAS Policy on Science, Technology and Innovation (ECOPOST) Action Plan. ECOPOST is an integral part of the sub-region's development blueprint to 2020 that proposes a road map for improving governance, accelerating economic and monetary integration and fostering public-private partnerships. It endorses the planned harmonization of investment laws in West Africa and suggests pursuing 'with vigour' the creation of a regional investment promotion agency. Countries are urged to promote efficient, viable small and medium-sized enterprises (SMEs) and to expose traditional agriculture to modern technology, entrepreneurship and innovation, in order to improve productivity. ECOPOST provides a framework for member states wishing to improve – or elaborate for the first time – their own national policies and action plans for science, technology and innovation. Importantly, ECOPOST includes a mechanism for monitoring and evaluating the policy's implementation, an aspect often overlooked. It proposes creating a solidarity fund which would be managed by a Directorate within ECOWAS to help countries fund investment in key institutions and improve education and training; the fund would also be used to attract foreign direct investment. The regional policy also advocates the development of a science culture in all sectors of society, including through science popularization, the dissemination of research results in local and international journals, the commercialization of research results, greater technology transfer, intellectual property protection, stronger university-industry ties and the enhancement of traditional knowledge. These initiatives align properly with the focus of the SGCI and therefore will benefit from each other if properly synergized to leverage on each other. Countries in the sub-region (especially the Anglophone) will need to be sensitized on the SGCI to enable them leverage and participate in the programme that will see them address most of the investment challenges in R&D being faced in the ECOWAS sub-region.

The ECOWAS division for STI is made up of five strategic programmes. These programmes present opportunities for collaboration and partnerships for SGCs within the region. They include:

1. **Valorisation of Research Products:** Aims to stimulate scientific creativity and research through the establishment of a favourable environment necessary to increase the technical, human and scientific capacities in the region; to increase and strengthen the understanding of Science, Technology, Engineering and Mathematics (STEM) through a citizen and participatory approach of the public and decision-makers; to build the capacity of the researchers in the region; to popularize STI; and to recognize scientific excellence.
2. **Strengthening the Governance of Research Institutions:** Aims to support all initiatives which develop institutional frameworks for STEM Coordination at the regional level. ECOWAS works as a facilitator, for instance, they supported the signing of a MoU with the African Development Bank (AfDB) under a grant to support the development of the African University of Science and Technology (AUST), Abuja and the International Institute for Water and Environmental Engineering (2iE) Project in Ouagadougou.
3. **Support to Research and Innovation:** Aims among other things to facilitate collaboration between researchers from Anglophone, Lusophone and Francophone counties in line with its role of integration. It has a budget of US\$200,000 per year towards this project to equip laboratories, initiate youth research etc.
4. **STEM information System in West:** Aims to provide scientific data for the continuous evaluation of the current state of the STEM (monitoring of natural resources, infrastructures, disasters, security, mobility of populations, bibliometrics, R&D, Innovation, Space Science) in the sub-region.
5. **Development of international cooperation in science and technology:** Aims among other things to improve and promote regional and international technical cooperation in science, technology and technological innovations through the exchange of good practices; and

mobilise the participation of the private sector in the development of STI through a framework of financing and creation of technological clusters and business incubators.

4. SGCI Significant Stories of Change)

Background

The *Results, Reviews and Reflections* (R³) workshops are an important part of the SGCI's monitoring and learning process. With a "Joined-up SGCI" as its overarching theme, the goal of this year's workshop was to learn together about how our collective efforts are making a difference and explore the interconnections between the SGCI Theory of change (TOC) log frame indicators and the Evaluative Learning Framework (ELF). The specific objectives were to:

- Share specific "stories of change" in the context of the relevant SGCI log frame indicators and ELF system of "acquire", "adapt" and "apply";
- Provide opportunity for the Councils to engage in the monitoring and learning process by providing inputs to emerging stories of change and identifying any gaps that have been missed by the Significant Instance Report (SiR);
- Share and reflect on emerging lessons - what's working well and what we should improve on; and
- Present plans for case studies.

A 'Joined-up' Science Granting Councils Initiative

The MEL session echoed the concept of a "joined-up" SGCI which is based on the four themes of the Initiative. The outcome and impact of the CTA activities lead to a single overall outcome, as expressed in the SGCI log frame. The outputs produced by implementers and beneficiaries of the initiative are marked to indicators reflected in the SGCI log frame.

Stories of Significant Change

From the discussions and deliberations under this session, it was clear that the SGCI through its participating Councils and collaborating technical agencies have lots of stories of change to share. This is both within the context of their internal organisations but also with other science system actors. Throughout the workshop, there was an overarching focus on the practicality of the work being done: the knowledge products generated had to be practical, combining normative knowledge and systems knowledge to facilitate transformation and strengthening of the SGCs. Key messages from the CTA Presentations on Stories of Significant Change are as follows:

1. **Theme 1- Research Management:** The Southern African Research and Innovation Management Association (SARIMA) had their story of change based on the output indicator "to help the SGCs put up high-quality research competitions". They aim to perform an assessment of current competencies of the NRF Kenya that are important, as well as desired competencies. They also assessed important knowledge areas for capacity building and training. Personnel from the NRF were identified and nominated for training in different knowledge areas.

Through the actions of SARIMA, The National Research Fund (NRF) Kenya **Adapted** and **Applied** knowledge and skills for conducting high-quality research competitions in the country. They then revised their research calls based on the knowledge acquired from the onsite training programmes and review processes. In addition, the NRF, Kenya is in the process of revising its guideline document based on the training received and sample documentations received from their counterpart from the NRF-South Africa.

2. **Theme 2-Use of Science, Technology and Innovation Indicators:** In the context of the SGCI log frame Indicator 1.2 and to enhance their impact, NEPAD has been involved in the multidimensional categorisation of impacts consisting of: capacity building and research

targeting as measured by the number of graduated PhD/MSc or the number of joint activities with the research organisations; advancing knowledge as measured by the publication counts and citation data; dissemination to non-academic audiences as measured by participation in seminars, meetings etc., media coverage, project website visits, download documents, external links etc.; informing decisions as measured by the quality-adjusted life years or patient-reported outcome measures; as well as, broad economic and social impacts as measured by public behaviour change or number of spin-off companies created.

Some of their significant instance reports include the SiR 11 (Abidjan) and SiR 15 (Addis Ababa) where Ethiopia, Uganda, Rwanda, Ghana, Ivory Coast, Burkina Faso and Senegal have disaggregated their high-level economic structures into their lowest form of economic activities using ISICRev4 guidelines. This permits and policy analysts to understand actual, rather than average effects.

3. **Theme 3- Partnerships and Private Sector Engagement:** Through the SCGI, the ACTS Consortium seeks to strengthen the ability of SGCs in sub-Saharan Africa to design and manage collaborative agreements with each other. The overarching principle of engagement with SGCs in the SGCI is one of co-design, co-production and co-ownership. This way, the SGCI provides an opportunity for SGCs to form bilateral, trilateral or regional scientific cooperation partnerships to fund competitive research projects in mutually agreed thematic areas. These are processes that they have gone through with all the SGCs.

The story of change from the ACTS Consortium focused on the East African collaboration, with EASTECO, UNCST Uganda, COSTECH Tanzania, NRF-Kenya and NCST Rwanda. On “**acquire**”, Theme 3 has enabled the SGCs to identify who they want to collaborate with and in what areas. On “**adapt**”, they had a match making exercise in Pretoria, from 2-7 July 2017 where EAC countries identified manufacturing as a regional research priority for joint research grants. This was linked to their national and regional development agendas. They also shared some of SGCI documents including the strategy, draft MoU etc. They had regular meetings and email exchange with collaborating SGCs as it was a long negotiating process. On “**apply**”, an agreement was reached by EAC countries to collaborate between and among them. They agreed to set up a technical committee to spearhead such initiative.

Other significant instance included the development and finalization of EAC Concept note on Manufacturing, development and signing of MoUs (All SGCs), development and adoption of operations Manual (EASTECO), as well as the development and advertisement of competitive research call (NRF & EASTECO).

4. **Theme 4-Networking the Science Granting Councils:** The African Technology Policy Studies Network (ATPS) in partnership with the Scinnovent Centre responded on the specific indicator on how the SGCI is generating knowledge products and promoting their uptake. The first story of significant change revolved around the Team’s approach in delivering the 2017 Masterclass Paper tagged “**Public-Private Partnerships in research and innovation**”. The objective of this team approach was to liaise with authors of the Masterclass paper to produce high quality paper for the 2017 Annual Forum, with the participation of the ATPS, Scinnovent Centre, IDRC and NRF –South Africa. Selected SGCs equally contributed in providing useful data and information used in the preparation of the masterclass paper. They also provided perspectives on the paper during the Annual Forum drawing from each country’s case examples on public-private partnerships in

research and innovation. It is expected that the outcome of the paper and the Forum will continually impact on the SGCs in terms of improving their knowledge on modalities and approaches for public-private partnerships in research and innovation. The Forum provided avenues for brokering partnerships between some SGCs (e.g. MoU signed between Zambia and Zimbabwe Councils/Commissions).

The second significant story of change shared was on the organisation of the 2018 ARM which was co-hosted by MESTI and ATPS in partnership with the Scinnovent Centre. Through the collaboration of the team in the preparation of the 2018 ARM, MESTI have been able to better understand the sub-regional STI priorities and how it aligns with the national aspirations as well as the SGCI objectives. MESTI is now better able to key into the various programmes of the ECOWAS aimed at fostering research and innovation in the sub-region.

The need to find a way to capture the stories being told by the SGCs was strongly articulated, as this would influence the kinds of actions being taken as the SGCs work with the CTAs. Through the deliberations, it was made clear that it is the responsibility of the CTAs to capture the stories of change in close liaison with the SGCs. This is especially important since case studies are a critical tool that would be used in the monitoring process of the initiative. The stories of change told by the SGCs and recorded by the CTAs would be built upon to get case studies of which the initiative is looking to get eight (8) of these at its end. The value of the monitoring processes was also demonstrated as a critical component of the Initiative which will enable the recording of the significant instances from the participating SGCs. It is expected that the CTAs and SGCs will integrate the existing knowledge outputs including the Research Excellence Paper, Political Economy Studies Report, and Public-Private Partnerships in research and innovation paper, etc. into their organizational work. This key decision was taken during the SGCI-CTA meeting on *Engaging Collaborating Technical Agencies: SGCI Implementation in Partnership*, held in Pretoria on the 28–29 May 2018 and reiterated during this year's MEL Session. It is important that monitoring tools are enhanced to ensure the institutionalisation of knowledge products from this initiative. Hopefully during the subsequent meetings, more positive reports will be shared on how the impact of this initiative was felt by the beneficiaries and implementers alike.

CONCLUSION

The 2018 Annual Regional Meeting was largely successful and the majority of the delegates were highly satisfied with the arrangements and outcomes of the forum. Key stakeholders from various countries in Africa and other non-African countries attended the Meeting and shared various experiences on issues relating to STI and R&D. Delegates were able to network and explore various opportunities for collaboration and partnerships in various activities.

One of the key messages from the Meeting as delivered in the keynote address by the Minister of Environment, Science Technology and Innovation, Ghana was the MESTI's resolution on the urgent need for collaboration among governments, public science institutions, academia and the private sector to foster knowledge usage, technology transfer and transformation of research output into commercial products and services. There is no doubt that the new arrangement (GIRC Centre) which is linked directly to the third objective of the SGCI will facilitate the creation of industries and jobs, good economy, and quicken rate of Ghana's economic development." Ghana's pronouncement and resolve to contribute 1% of their GDP to R&D and progressively increase it to 3% is very remarkable and should be emulated by other countries within the region.

The involvement of ECOWAS in this year's ARM was due first of all to the close working relationship between MESTI and ECOWAS. It provided the opportunity for ECOWAS to tap into the SGCI to leverage on the implementation of their programmes that revolve around improving the socioeconomic statuses of West African States through STI development. One of the key challenges

for the region that came out was with respect to data collection and the use of robust indicators for the STI decision-making. For instance, as reported, it was difficult to compile the 2017 MESTI Annual Report due to lack of relevant information. The SGCI continues to serve as a platform through its annual meetings to identify and collectively address sub-regional topics, through the SGCs. The stories of change, SiRs, and other reports from the CTAs continues to provide avenues to prove the added value in knowledge, skills, and actions that aim to strengthen capacities of the Science Granting Councils (SGCs) in Africa in order to support research and evidence-based policies that will contribute to economic and social development in the region. It is expected that a close working relationship between the Councils and CTAs will lead to a proper documentation of these stories of change, SiRs and other valuable reports from the Initiative. Overall, the deliberations throughout the three-day ARM were intense, where science system actors shared insights with each other to enable the strengthening of their own structures and systems.