# FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL FINAL TECHNICAL REPORT 108349-001

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IDRC Grant / Subvention du CRDI: 108349-001-Strengthening partnerships among Africa's science granting councils and with the private sector



## SCIENCE GRANTING COUNCILS INITIATIVE IN SUB-SAHARAN AFRICA

### THEME 3: STRENGTHENING PARTNERSHIPS AMONG AFRICA'S SCIENCE GRANTING COUNCILS AND THE PRIVATE SECTOR

#### FINAL PROJECT TECHNICAL REPORT

IDRC GRANT NUMBER: 108349-001 and 108349-003

IMPLEMENTING AGENCY (IES): AFRICAN CENTRE FOR TECHNOLOGY STUDIES (ACTS) AND PARTNERS NAME(S) OF PROJECT TEAM:

ACTS: Rebecca Hanlin, Aschalew Tigabu, Winnie Khaemba, Tom Ogada

Scinnovent Centre: Maurice Bolo, Victor Awino

African Association of Universities: Jonathan Mba, Nodumo Dhlamini, Ruth Dickinson

STIPRO: Bitrina Diyamett, Gussai Sheikheldin, Heric Tomas

PROJECT DURATION: FROM MARCH 2017 TO FEBRUARY 2020

DATE OF SUBMISSION: FEBRUARY 2020









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#### **EXECUTIVE SUMMARY**

African countries continue to face a number of development challenges. These include the pursuit of food and nutrition security, sustainable access to energy, water security, industrialization and improvements in public health. Public policy across the continent increasingly recognizes the role of science, technology and innovation in addressing these challenges. Through regional and national science and technology policies, the continent seeks to enhance the quality of its scientific research and the translation of research results into material products and services. This calls for increased exchange of knowledge and greater interaction, coordination and collaboration between and among universities and other research organizations, private sector, Science Granting Councils (SGCs), and the broader society.

The overall objective of this project is to strengthen the capacity of science granting councils in 15 Sub-Saharan African countries to establish partnerships with each other, and to foster public-private research collaboration and exchange of knowledge for accelerated socio-economic development.

Theme 3 was based on a co-design and co-implementation approach whereby the Theme 3 consortium actors would work with the SGCs to create and deliver enhanced collaborative agreements between themselves and with the private sector. This collaboration was expected to result in a series of grant funded research projects, a series of knowledge outputs and training activities. Anticipated outcomes at the start of the project were (a) increased collaboration between councils and subsequent closing of knowledge gaps in regional level research priorities and (b) enhanced engagement by the private sector in research through increased interaction by SGCs with the private sector (either directly or indirectly through universities).

Over the period March 2017 to February 2020, the Theme 3 consortium – lead by the African Centre for Technology Studies (ACTS) collaborating with the Scinnovent Centre in Kenya, the Science Technology Policy Research Organisation (STIPRO) in Tanzania and the African Association of Universities (AAU) in Ghana – has worked with SGCs to achieve:

- 1. Seven signed collaborative agreements between SGCs in different countries plus 2 more trilateral collaborative agreements being discussed (for signing by mid-2020). These resulted in five research funding calls for cross-country research projects and seven projects being funded.
- 2. Three SGCs were involved in exchange visit programmes instead of joint research project funding calls.
- 3. 10 countries committed to developing PPPs in their countries while 6 countries managed to achieve this with 13 resulting research projects funded involving private sector participation.
- 4. Multiple training courses and associated training manuals and toolkits were developed especially in the areas of science, technology and innovation (STI) policy, intellectual policy and technology transfer, research communication and organisational level monitoring, evaluation and learning. The project culminated in a 2.5 day lessons learning workshop that bought together the SGCs and the researchers who were funded to share knowledge and learning.
- 5. The development of a raft of different template documents to assist SGCs in developing collaborative and PPP arrangements including template memoranda of understanding, collaborative research agreements, flowcharts etc.
- 6. The publication of 15 policy briefs, 3 journal papers, a series of short impact videos of the PPP research projects and an edited book entitled 'Building Science Systems in Africa: Opportunities and challenges for science councils'.

The project resulted in many lessons learnt and recommendations. The summary of these are as follows:

Lessons learnt	Recommendations
<ul> <li>Considerable synergy between SGCs and countries in terms of research gaps and capacity building need of SGCs</li> </ul>	- Don't rush into promoting research calls at country level if a joint research call would enable better sharing of scarce resources (e.g.

- Cross country collaborations require significant time and effort
- SGCs benefit from face to face exchange visits
- Different types of PPP can be promoted but research project level PPPs are the low hanging fruit
- It is common to give grants to the most established researchers (because they have the strongest grant applications) but this promotes the best rather than growing the middle.
- There are two sets of tradeoffs that need consideration:
- The tradeoff between size of project (in terms of money given) and what can be achieved vs. the administration required to manage small funding amounts
- The tradeoff between the time required for monitoring visits and their ability to act as validation exercises for SGCs and researchers alike.
- CTAs and SGCs benefit from joined up work plans that are developed at the start of any activities through consultation and are targeted to SGC needs.

- reviewers) and enhance knowledge sharing and learning opportunities
- the Theme 3 consortium in Phase 1 but don't underestimate the time needed for activities. That said, research projects need to have 1.5 years, preferably 2 years of life to get any tangible results. Alternatively, consider promoting more researcher exchange visits and alternative collaborative activities if timing doesn't allow for a full research project grant call.
- Increase the opportunities for SGCs to conduct face-to-face exchange visits between each other. Consider even funding short term staff exchanges of 2-3 months (even up to 6 months) as a means of building capacity and enhancing lesson learning.
- It is easy to go with low hanging fruit on PPP projects; however, key to any PPP strategy is the strategy itself. Make sure SGCs have time to develop these strategies and make sure any PPP activities conducted fit with these strategies.
- Ensure joined up work planning is promoted (and all CTAs are bought on board at the same time) in Phase 2.

#### PROJECT BACKGROUND AND JUSTIFICATION

African countries continue to face a number of development challenges. These include the pursuit of food and nutrition security, sustainable access to energy, water security, industrialization and improvements in public health. Public policy across the continent increasingly recognizes the role of science, technology and innovation in addressing these challenges. Through regional and national science and technology policies, the continent seeks to enhance the quality of its scientific research and the translation of research results into material products and services. This calls for increased exchange of knowledge and greater interaction, coordination and collaboration between and among universities and other research organizations, private sector, Science Granting Councils, and the broader society.

#### **GOAL AND KEY OBJECTIVES**

The overall objective of this project is to strengthen the capacity of science granting councils in 15 Sub-Saharan African countries to establish partnerships with each other, and to foster public-private research collaboration and exchange of knowledge for accelerated socio-economic development.

The sub-objectives were revised, in consultation with IDRC, at the start of the project and are outlined below.

To strengthen the ability of Science Granting Councils in sub-Saharan African countries to design and manage collaborative agreements through regional training courses and onsite coaching  To co-fund collaborative projects in areas of mutual interest to the Councils  To strengthen the capacity of Councils to foster knowledge transfer to the private sector by co-funding demand-led research projects in areas aligned with private sector interests  To commission studies on public-private partnerships  To train Councils on specialized topics related to public-private partnerships such as intellectual property rights, knowledge transfer and commercialization	IDRC-ACTS CP grant agreement (number: 108349-001) Objectives (revised August 2017)	IDRC-ACTS PPP grant agreement (number: 108349-003) Objectives (revised August 2017)
	Councils in sub-Saharan African countries to design and manage collaborative agreements through regional training courses and onsite coaching  To co-fund collaborative projects in areas of	transfer to the private sector by co-funding demand-led research projects in areas aligned with private sector interests  To commission studies on public-private partnerships  To train Councils on specialized topics related to public-private partnerships such as intellectual property rights,

#### **Cross cutting sub-objectives**

To facilitate knowledge exchange and learning among participating Councils through the Science Granting Councils Initiative (SGCI) Virtual Hub and meetings; and

To contribute to monitoring, evaluation and learning in the SGCI by collecting data that informs the SGCI results, review and reflection workshops held during SGCI annual regional meetings and forums.

The project objectives are based on the recognition that:

- Enhancing the exchange of knowledge between the private sector and public research organizations in Africa will strengthen the uptake and use of research results and the translation of research results into products and services;
- Universities are a central part of the knowledge production system and responsible for the creation of the next generation of researchers and entrepreneurs;

- Science granting councils play a critical role in research, innovation and knowledge brokerage and help build the absorptive capacities of national systems of innovation;
- In the age of globalization there is no such thing as isolated pockets of knowledge anymore, but rather a need for knowledge and experience to be shared across geographical, sectoral and cultural boundaries

The project was originally designed in the proposal submitted to IDRC in November 2016 as a single project which looked to build the capacity of the 15 science granting councils (SGCs) targeted by the SGC initiative funded by IDRC, DFID and the South African NRF in managing and promoting collaborations. It proposed to do this through a series of capacity building activities. These included more traditional activities such as training workshops, mentoring and coaching. But it also focused on experiential learning through funding initial collaboration projects between SGCs and private sector-researcher collaborations to be run by SGCs.

During contract negotiation with IDRC in early 2017, it was agreed that it would be logistically easier to separate the activities into two separate financial grants. The result of this and subsequent discussions has been that the project is now split into two halves. One half focuses on the building of partnerships between science granting councils. The second is focused on fostering collaboration and knowledge exchange between researchers and the private sectors. These have separate financial reports (108349-001 and 108349-003) but are reported in a combined manner at the technical level.

#### PROJECT METHODOLOGY/ APPROACH

Theme 3 was based on a co-design and co-implementation approach whereby the Theme 3 consortium actors would work with the SGCs to create and deliver enhanced collaborative agreements between themselves and with the private sector. This collaboration was expected to result in a series of grant funded research projects, a series of knowledge outputs and training activities. Anticipated outcomes at the start of the project were (a) increased collaboration between councils and subsequent closing of knowledge gaps in regional level research priorities and (b) enhanced engagement by the private sector in research through increased interaction by SGCs with the private sector (either directly or indirectly through universities).

The project was originally premised in the final approved proposal on four main activity areas:

# 1. Selection of public-private partnerships (PPPs), collaborative projects (CPs) and commissioned studies

This area of work was expected to focus on working with SGCs to develop an overarching call for collaborative and PPP projects as well as commissioned studies that had a regional focus. This activity area was modified over time based on the need by councils to develop more targeted research calls both for collaborative projects and for PPP research projects. The first year of this project was also spent working with councils to sign collaborative agreements.

#### 2. Analysis and synthesis of outputs

This area of work focused on taking the results of all the various different research projects undertaken (by the funded projects, by the Theme 3 consortium and by a series of commissioned studies and consultants) and providing spaces for the SGCs to review and analyse these. It also focused on the production of a series of knowledge products.

This area of work was completed, more or less, as per the original project proposal.

#### 3. Onsite coaching and mentoring

A major element of this project was tailored support for each of the 15 councils, either individually or in group settings as appropriate. This support was envisaged to be required in designing, negotiation

and implementing research projects. It was also envisaged that allied training workshops would also be needed.

These activities occurred as originally proposed although the range of training and support was much broader than originally envisaged; moving into areas such as monitoring and evaluation framework development – based on the demand from the councils themselves.

#### 4. Learning, knowledge exchange and dissemination

The final set of activities in the original proposal focused on the dissemination of results from the Theme 3 activities. These were focused around key knowledge outputs; notably a book. It was also focused on providing space for mutual exchange of knowledge and learning. As a result there was some overlap with activity area 2 above.

As the project evolved between 2017 and 2020, this activity became more focused on dissemination of knowledge outputs including upload on the SGCI Virtual Hub and on a final dissemination workshop held in February 2020 (originally billed as a progress review workshop in the CP budget but which became larger and covered the whole Phase 1 of the Initiative on agreement with IDRC and the Initiative Management Team).

Throughout these activities Theme 3 partners worked as a team with a division of responsibility whereby PPP activities were managed on a day to day basis by Scinnovent Centre supported by the African Association of Universities and the CP activities were managed by ACTS supported by STIPRO. As the project progressed more and more interaction took place between the Theme 3 consortium members and SARIMA, the collaborating technical agency managing Theme 1 on research management support to the councils. Notably, ACTS and SARIMA have conducted joint country visits to Councils together to ensure a joined up mentoring and support approach was provided. ACTS also tried hard to arrange regular catch up calls between all CTAs although these had varying levels of success. Finally ACTS asked all the CTAs to participate in the book project and SARIMA (Theme 2) and ATPS (Theme 4) have actively participated contributing chapters to the book.

#### PROJECT FINDINGS AND OUTPUTS

#### KEY ACHIEVEMENTS AND LESSONS

i. All research grants that were approved across the collaborative projects and public-private partnership (PPP) projects were completed with final technical and financial reports received, reviewed and signed off. Specifically, the ACTS' consortium has supported through the three years the following projects:

CP Projects		
Name of Institution	Title of project	Contract period
Mozambique-Namibia		
IIAM	Processing of under-utilized fruits and plants for	Sep 2018 to Oct 2019
UNAM	enhancing nutritional quality in Mozambique and Namibia	Sep 2018 to Oct 2019
EAC (Kenya, Rwanda, Tanzania and Uganda) 1		
Egerton University	A New Technique for Leguet Mass Culture for Food and	Mar 2017 to Jan 2020
Makerere University	A New Technique for Locust Mass Culture for Food and Feeds Industry in East Africa	Mar 2017 to Jan 2020
Sokoine University of Agriculture	reeus illuusti y ili East Airica	Mar 2017 to Jan 2020

University of Rwanda		Mar 2017 to Jan 2020	
EAC (Kenya, Rwanda, Tanzania and Uganda) 2			
Kenya Medical Research Institute	Bioequivalence studies of locally manufactured	Mar 2017 to Jan 2020	
Gulu Regional Referral Hospital	amoxicillin and captopril solid dosage formulations: a	Mar 2017 to Jan 2020	
Muhimbili University of Health and Allied Sciences	catalyst for introduction of bioequivalence studies to support local pharmaceutical manufacturing sector in	Mar 2017 to Jan 2020	
University of Rwanda	East Africa	Mar 2017 to Jan 2020	
Senegal and Burkina Faso Project 1		Wai 2017 to Jaii 2020	
L'EQUIPE SOCIÉTÉS ET SANTÉ (ESS) DU	Comment améliorer la prise en charge multisectorielle		
CENTRE MURAZ	des maladies chroniques chez les personnes âgrées au	Nov 2018 to Nov2019	
L''ECOLE DOCTORALE ETUDE SUR L'HOMME ET LA SOCIÉTÉ (ETHOS) DEUNIVERSITÉ CHEIKH ANTA DIOP	Burkina Faso et au Sénégal : une recherche action conduite par les détenteurs d'enjeux stratégiques de la prise en charge des maladies chronique	Nov 2018 to Nov2019	
Senegal and Burkina Faso Project 2			
UNIVERSITÉ CHEIKH ANTA DIOP (UCAD)	Mise en valeur des terres salées pour contribuer à	Nov 2018 to Nov2019	
INSTITUT DE L'ENVIRONNEMENT ET DE RECHERCHES AGRICOLES (INERA)	l'amélioration des conditions de vie des populations vulnérables dans le contexte des changements climatiques en Afrique de l'Ouest	Nov 2018 to Nov2019	
Cote D'Ivoire and Uganda Project 1			
National Crops Resources Research		F-1-2010+ F-1-2022	
Institute	Development of a Real-Time Field Pathogen Monitoring	Feb 2019 to Feb 2020	
Laboratoire de Physiologie Végétale – UFR Biosciences Félix Houphouët- Boigny University	System for Devastating Rice Blast Disease in Uganda And Ivory Coast	Feb 2019 to Feb 2020	
Cote D'Ivoire and Uganda Project 2			
Félix Houphouët-Boigny University	Epidemiological study of yam viruses diseases in Côte	Feb 2019 to Feb 2020	
National Crops Resources Research Institute	d'Ivoire and Uganda	Feb 2019 to Feb 2020	
PPP Projects			
Name of Institution	Title of project	Contract period	
Mozambique		'	
Universidade Católica de Moçambique Faculdade de Gestão	Combining indigenous knowledge with ecotourism in Cabo Dalgado Province using virtual reality	Dec 2018 - Dec 2019	
Centro de Estudos para o desenvolvimento da Zambezia	MUSSIKA	Dec 2018 - Dec 2019	
Uganda			
School of Veterinary Medicine and Animal Resources-Research Center for Tropical Diseases and Vector Control (SVAR-RTC) Makerere University	Developing and promoting supplement and beverage product prototypes for improved commercial exploitation of propolis and bee venom in Uganda	Dec 2018 - Dec 2019	
National Coffee Research Institute	Directing cocoa waste to wealth using known yeast strains from Ugandan box fermentation	Dec 2018 - Dec 2019	
Makerere University, Depart of Food Technology and Nutrition	Maize germ and bran as raw materials for high fiber value added bakery and confectionery products	Dec 2018 - Dec 2019	
Malawi			
Energy Resources Department, Malawi University of Science and Technology	Piloting Biogas Production as a Social Enterprise at Tsangano Vegetable Market	Dec 2018 - Dec 2019	
Industrial Research Centre, Malawi	Biomass gasification for decentralized electricity	Dec 2018 - Dec 2019	
University of Science and Technology	generation in Malawi	200 2010 200 2017	
The Agricultural Engineering Department, Lilongwe University of	Introduction of solar powered technologies to the smallholder dairy industry in Malawi	Dec 2018 - Dec 2019	
Agriculture and Natural Resources		l	
Agriculture and Natural Resources  Botswana			
	Private sector engagement strategy for research, science, technology and innovation in Botswana	Jun 2019 to Dec 2019	

UNIVERSITE JEAN LOROUGNON GUEDE	Optimisation de la production du riz dans le périmètre rizicole de nanan (Yamoussoukro-Côte d'Ivoire)	May 2019 to Feb 2020
INSTITUT NATIONAL POLYTECHNIQUE FELIX HOUPHOUËT-BOIGNY (INP-HB)	Réalisation et pilotage d'un prototype mobile de décontamination électrolytique des eaux résiduaires industrielles	Apr 2019 to Feb 2020
Ghana		
Developing the business case for the establishment of eh Ghana innovation and research centre (GIRC-Centre)	Developing the business case for the establishment of eh Ghana innovation and research centre (GIRC-Centre)	Apr 2019 to Jul 2019
Analysis of the Science and Innovation (STI) eco-system in Ghana	Analysis of the Science and Innovation (STI) eco-system in Ghana	Apr 2019 to Jul 2019

ii. These projects and three commissioned studies that were also conducted during this period have resulted in the following knowledge products being produced between March 2019 and February 2020

Policy briefs	15
Draft/ submitted journal papers	3

As projects finalise we expect more journal papers to be completed, especially amongst the CP funded projects. The SGCs will keep these records up to date moving forward; following the completion of this project activities by the ACTS' consortium.

All policy briefs will be available on the SGCI Virtual Hub by end June 2020 and copies of the journal papers will also be forward by ACTS for submission to the Virtual Hub as they are published.

A series of short videos have also been created depicting the process and immediate outputs and outcomes (where applicable) of the PPP projects during this final year of Theme 3 activities. These are available in the public domain for free download at the ACTS website.

In addition, the Theme 3 partners have also developed a training manual on STI policy which has been published in 2019. The manual has been designed to enable those who attended a training in February 2019 to be able to train others. On receipt of this document one stakeholder from Rwanda told the Theme 3 trainer that 'I wished I could have had such a reference document when I was still responsible for Rwanda's SGC 9 years back!' The printed copies that ACTS developed were quickly snapped up and they had to refer people to the online version; the document was in great demand. The ACTS' consortium have since provided all members of the SGCI with an e-version for ease of sharing and re-use.

Finally, on the subject of knowledge products, the ACTS' consortium continued working on a book which will be published (open access with copies posted to SGCs and major universities in each of their countries) after the project completes in 2020. The consortium held a writeshop for the book in December 2019. All CTAs were asked to be involved in writing a book chapter. SARIMA and ATPS are contributing book chapters. Three SGCs (Tanzania, Uganda and Malawi) are co-authoring chapters. The book will outline lessons learnt across the SGCI, but mostly from Theme 3 experiences, of strengthening the capacities of SGCs to build science systems.

Through these projects (PPP but also many CP projects) there has been a significant level of private sector engagement and/or first stages of commercialisation of products through pilot testing. Results were presented at a final close out workshop in Dakar in February 2020 and highlighted that many of these projects have resulted in the development of products that are now ready for

commercialisation. Many of these have been achieved with very small amounts of funding. Therefore value for money has not only been achieved but, also, that there is value in providing small amounts of funds as 'seed funds' or proof of concept funding. For example, a public-private partnership (PPP) project in Uganda between University of Makerere and a local bakery has shown that there is a demand for alternative bread and cake recipes that incorporate wheat bran and germ.

The same is the case in a study between a collaborative project (CP) involving Mozambique and Namibia researchers looking at developing new edible products made from indigenous plants and fruits. The joint project between Namibia and Mozambique has produced several fruit jams and juice products, which include mutete juice; blends of mutete and mango juice; mutete yoghurt, omauni yoghurt, mutete and omauni jams, and mutete muffins. In addition to the products, the project has undertaken nutritional and phytochemical analysis of developed products as well as market testing (willingness to buy), which showed negligible toxicity and very good acceptance for jams and good acceptance for yoghurts, respectively.

Many CP and PPP projects showed great potential to address socio-economic and development challenges, and as such for further continuation. These, for example, include a joint project on processing of under-utilized fruits (implemented by Mozambique and Namibia); a new technique for locust mass culture production (implemented by the East African Community group- Kenya, Uganda, Tanzania and Rwanda). These and other two collaborative projects were recommended by the ACTS consortium to NRF South Africa for further funding opportunity to scale them up.

In fact, anecdotally, it would appear – without formal study – that in both CP and PPP projects funded and across all locations, projects that involve food processing have achieved the most relative to their funding received i.e. have progressed further along the commercialisation pathway. This is likely related to the different levels of regulation and the relative degree of simplicity involved in producing these end products vis a vis some of the other projects funded.

What can be concluded with certainty however is that in all cases – even though some individual project team members may only have received 2-5,000 US dollars as a contribution from the SGCI to a study; the degree of completion of studies – often within a single year of research time – have exceeded expectations.

That being said, there are trade-offs between the size of the small grants given and the administration work needed to manage and, most importantly, report on these grants.

- iii. On review of all the projects, at the end of these research grants, highlights that many of research projects that are working well are those that are based in established research centres and that often these centres are involved in more than one CP and/or PPP project. The history or institutional stability of a research organisation is not a criteria that featured significantly in the research grant call review criteria. However, it is important for SGCs to consider the implications of always rewarding the 'best' and not necessarily promoting 'the middle'. This mirrors findings from the political economy study and deserves consideration by SGCI in the design of Phase II.
- iv. ACTS' consortium members have spent time with the SGCs visiting research projects and/or holding monitoring meetings. These meetings have proven to be highly important for researchers to be able to feedback on issues they have been having e.g. with delays in receipt of funds from university administration. However, they have also proven to be extremely useful for SGCs in validating progress especially in cases where, for example, there have been delays due to regulatory hurdles. That said, they also provide an important validation exercise for both SGCs and the researchers with their project stakeholders private sector and community partners are able to ask questions and engage with the SGCs and understand the importance of the project from a broader policy perspective; as well as receive advice from these policymakers.

- v. That said, monitoring visits take a significant amount of time. In many cases staff within the CTA team and SGC members have had to pencil out more than three days (sometimes even a whole week) in order to conduct the required face-to-face visits to researchers in their locations. While this is a very important way of getting first hand insight into the projects and the environment in which researchers operate; it also takes time and resources that are limited for SGCs. That being said, some SGCs (notably Cote D'Ivoire) decided to arrange a panel interview type arrangement for progress reviews of projects. This is a very different mechanism for progress reporting but one that is more efficient in terms of time and money. It would be useful to consider the pros and cons of different approaches during the implementation planning process of future research calls to ensure the most effective progress reporting process is agreed on.
- vi. In total the ACTS' consortium have worked with SGCs to sign seven collaboration agreements during Phase 1 of the SGCI. In this current year (2019 2020), the final two collaborative agreements became active (Malawi and Mozambique together with Zimbabwe and Mozambique) having been signed in the early stages of Phase 1 with exchange visits being held between the SGCs and with their researchers in the fields of renewable energy and biotechnology respectively.
  - In addition, Malawi and Zimbabwe signed an extension to their collaborative agreement for another 2 years. Furthermore, Malawi, Mozambique and Zambia started talks on a tri-lateral collaborative agreement as did Burkina Faso, Senegal and Uganda at the end of Phase 1.
- vii. A total of 10 SGCs have committed to private sector engagement with co-funding pledges during Phase 1 of the SGCI through the efforts of the ACTS consortium. Six SGCs have engaged in activity to build partnerships with the private sector. Four SGCs (Cote D'Ivoire, Malawi, Mozambique and Uganda) have 10 projects funded through the PPP grants scheme. A further two SGCs (Ghana and Botswana) have contracts with consultants to develop private sector engagement strategies.
- viii. Over the last year, the ACTS' consortium has held several different workshops which were all requested by the SGCs. These were designed with the needs of the SGCs in mind and have all led to various follow up activities (many of them being built in as part of the training process). Namely:

STI Policy workshop (March 2019)

- The development of an STI Handbook which has been enthusiastically greeted by SGCs
- Despite the Handbook being designed to enable training of trainers (ToT); many SGCs have requested assistance to run these ToTs/ regular running of this course to enable their staff to receive this training on a regular basis.

Intellectual Property Rights workshop (June 2019)

- Draft elements of an IP strategy were taken up by all SGCs who participated in the training
- Development and dissemination of an IP/Tech Transfer and Commercialization Toolkit

Various M&E systems Support workshops (across the year in various countries)

- Draft M&E plans developed during the workshops
- Further follow up with SGCs directly (and through dedicated on-site trainings/ coaching) have resulted in:
  - Development of M&E plans (Cote d'Ivoire, Kenya, Botswana)
  - Development of a theory of change (Burkina Faso, Senegal, Malawi)
  - Malawi has also developed a draft data management plan

Close out workshop (February 2020)

- Sharing of lessons learnt across all SGCs and an opportunity for SGCs to see how other countries have utilised funding to build CP and PPP projects as a result of direct interaction with researchers who were involved in funded projects.
- ix. Finally, during this final year, the ACTS' consortium have ramped up engagement with other CTAs, notably SARIMA. ACTS' team members held joint workshops with SARIMA in Ivory Coast, Kenya, Uganda and Botswana during this year. SARIMA has also been an active partner in the book writing process including attending the Theme 3 book writeshop in December in Kenya. ACTS also enabled SARIMA to hold its final workshop back-to-back with the close out workshop that ACTS organised in February 2020.

#### **FINDINGS**

A full list of findings and lessons learnt that have been reported in previous progress reports are provided in Annex 1. Of these, the six key findings are as follows:

# SIGNIFICANT RESEARCH AND CAPACITY BUILDING SYNERGIES BETWEEN SGCS AND BETWEEN COUNTRIES

The formal collaborative arrangements together with the more informal discussions that have taken place during Annual Forums, Regional Meetings and at different workshops highlights that SGCs and their respective countries share a number of research gaps, challenges and capacity building issues. This was anticipated at the beginning of Phase I by ACTS and its consortium members and the project was designed to hold research calls etc. in a more joined up fashion. However, this proved difficult because SGCs wanted to focus on issues that were specific to their own countries and the coordination of joined up activities was difficult due to different levels of bureaucracy. That said, by the end of Theme 3's three years of activity we can see that there was – as originally estimated – a lot of synergy between the research projects that were funded and also between the research capacity building issues SGCs face. While these were dealt with often bilaterally or unilaterally (or multilaterally in the case of the EAC consortium), a stronger focus on joint activities would have been more efficient and led potentially to wider lessons sharing. Specifically, it would have helped with the difficulty a number of countries faced in finding suitable reviewers for research project proposals, reduced duplication of research and enhanced cross country collaboration between a number of set collaborative agreements.

#### CROSS COUNTRY AND PPP COLLABORATIONS REQUIRE SIGNIFICANT COORDINATION AND TIME

The time it took to develop cross country collaborations and to develop a course of action for PPP collaboration at country level took much more time than was initially anticipated. This is because it became clear that the original focus on a more top-down coordinated regional set of activities was not going to be successful. A more bottom-up and country owned initiative was required. However, in moving to this approach it became clear that the specificities of local contexts became more important. As such, some collaborative agreements took almost a year to set up and others had issues during implementation related to a lack of clarity in divisions of responsibility, cofunding agreements, monitoring arrangements, difficulties with ethical approvals for projects; not to mention language barriers between East and West Africa.

The result has been a recognition – on the part of SGCs and the Theme 3 consortium members – of the importance of ensuring clear objectives, divisions of responsibility and regular monitoring schedules being agreed up front. We all also learnt the importance of not underestimating the importance of the first initial set-up activities; getting clear and agreed implementation plans negotiated early on is important but also to recognise that these might take time. This was the same for both collaborative and PPP activities.

That being said, by the end of Phase I, Theme 3 and the SGCs had developed a set of materials including memorandums of understanding, research agreement contracts etc. that can now serve as templates for future collaborations.

#### SGCS BENEFIT FROM FACE TO FACE EXCHANGE VISITS

As noted also by SARIMA, the Theme 3 consortium has found that SGCs benefit greatly from the opportunity to visit each other's offices and see different working practices. Some of the most important learning between SGCs has been with regards the different IT set ups they use for grants management and discussions on how different SGCs interact with different parts of their government apparatus. For example, Malawi, Zimbabwe and Mozambique have been sharing details of their backend formats for their grants management systems

and also held lessons sharing sessions on what works and doesn't work with these systems during their exchange workshops.

In addition, being able to see how big/ small/ isolated/ connected offices are and how office staff interact formally and informally has proven extremely value for the countries of Zimbabwe, Mozambique and Malawi. Unfortunately, we didn't start these types of exchange visits until late in Phase 1. We would definitely recommend that these occur more regularly in Phase 2 and that there is consideration of staff exchange placements of 2-3 months; to really cement knowledge and learning exchange in real time and context.

# THERE ARE DIFFERENT TYPES OF PPP INTERACTION POSSIBLE – RESEARCH PROJECT LEVEL IS LOW HANGING FRUIT

The majority of PPP activities in Phase 1 were focused around enhancing university-industry linkages through the call for research proposals that included a private sector partner. However, two countries (Ghana and Botswana) utilised a different approach, focusing on efforts to enhance private sector engagement in research at a national level; through efforts to develop national technology transfer/ innovation and research offices. The former has resulted in a number of successful collaborations that were not there or not as formalised as before – and more importantly – the development of new product prototypes ready for further market testing. This has also occurred even in some of the collaborative projects (notably Namibia and Mozambique) where this was not a formal aim or requirement. Unfortunately this project had little opportunity to consider (due to the limited time frame of this project) the relative merits of the two approaches (national level vs. project level PPP focus). It would appear, based on the progress made at the research project level that focusing on PPPs at this level is the most effective in the short term; the low hanging fruit so to speak. However, it unclear as to whether SGCs wouldn't benefit from a more strategic reflection on their strategy for private sector engagement and how this fits with national and international development goals and strategies.

# CTAS AND SGCS MUST INTERACT FROM THE VERY BEGINNING OF ACTIVITIES AND BUILD JOINT WORK PLANS

Theme 3 started much later than the other CTAs in their activities with the SGCs. This has meant that it has taken time to build relations between Theme 3 consortium members and the other CTAs. It also took time for us to understand what had been taking place and the rationale for these activities and to understand how the ACTS' consortium fitted in. On the one hand by starting later the Theme 3 consortium members have been able to conduct capacity building and mentoring in areas which were still not filled by others (e.g. in monitoring and evaluation frameworks for SGCs at office level). On the other hand, it has meant that the SGCs have been unnecessarily subjected to continuous interactions with different CTAs and some duplication of activity. It is very clear that SGCs must be able to develop joint coordinated work plans with all CTAs at the beginning of activities. This will also ensure that all parties involved work towards a SGCs' own strategies or theory of change for maximum impact.

#### KNOWLEDGE/ LEARNING OUTPUTS

Theme 3 was extremely optimistic with its knowledge and learning outputs that it stated it would conduct in its proposal. For the most part we have been able to deliver on this list of outputs. The details of these outputs are listed below together with their status and details of their location and accessibility. Other than the book and the journal papers which will be published after the project as officially completed, the majority of the outputs have been widely circulated to all SGCs and stakeholders involved in the SGCI and are available on the SGCI Virtual Hub. A number of research project specific policy briefs are also being developed by the respective project leads and will be available publicly once completed.

Knowledge product outlined in project proposal	Status	Notes
At least six (6) documented cases of uptake or use of research results by either the private or public sector in at least half of the participating countries	N/A	These have been commissioned as part of the MEL and it was agreed they would not be part of Theme 3's activities.
At least 8 peer-reviewed journal articles published on public-private partnerships and scientific cooperation in Africa	In progress	The number of journal papers on lessons learnt from collaboration activities between SGCs and with the private sector were scaled down to three.  It was agreed with IDRC that these three journal papers become outputs from the commissioned studies
At least 3 studies commissioned	Completed	These three studies were completed in December 2019. They each produced an inception report, a final report, a policy brief and a journal paper. The journal papers are still in progress.
At least ten (10) policy briefs published	Completed	15 policy briefs have been developed through Theme 3 activities. These have been developed by the research projects funded and by the commissioned studies. Drafts of these were submitted by the end of the project (end February 2020) and final versions will be made available on the ACTS website and SGCI Virtual Hub by end May 2020.
At least ten (10) working papers	N/A	These have been superseded by the book chapters – see below.
One (1) edited book volume synthesizing critical insights and lessons learned from the project	In progress	A co-edited book will be published by Mkuki ya Nota Press/ ACTS Press in late 2020 entitled 'Building Science Systems in Africa: Opportunities and challenges for science councils'. The book contains 11 chapters and will be available open source to download from the SGCI virtual hub and also the ACTS website either as a whole or as individual chapters. A number of hard copies will all be given to SGCs and universities in their countries.
Additional knowledge products	Status	Notes
Collaborative projects between SGCs strategy paper and recommended flow chart	Completed	Initial draft submitted to IDRC in 2017. Final version has been document uploaded on the SGCI Virtual Hub to provide a template for future collaboration activities. SGCs were given an e-version as part of a final materials package in February 2020.
Public-private partnership projects and SGCs strategy paper and recommended flow chart	Completed	Initial draft submitted to IDRC in 2017. Final version has been document uploaded on the SGCI Virtual Hub to provide a template for future collaboration activities. SGCs were given an e-version as part of a final materials package in February 2020.
Collaboration checklists	Completed	A checklist for SGCs thinking of engaging in a collaborative partnership was developed by the Theme 3 legal consultant in 2018. She also developed a checklist for the development of

		related MOUs. These have been uploaded to the SGCI Virtual Hub space. SGCs were given an eversion as part of a final materials package in Feb. 2020.  An overview report and country specific reports for
Collaboration baseline reports	Completed	all 15 SGCI countries were completed in early 2018 and subsequently uploaded to the SGCI Virtual Hub. SGCs were given an e-version as part of a final materials package in February 2020.
Communication with the private sector products	Completed	A training manual on strategic engagement and communication with the private sector was developed following a training workshop in February 2018. The final manual will be uploaded to the SGCI Virtual Hub in February 2019 and distributed to SGCs in a final materials package in Feb. 2020.
Communication with the private sector action plans	Completed	During and after the February 2018 workshop a number of SGCs developed action plans to develop more detailed communication plans for their Councils.
STI Policy training handbook	Completed	A training handbook for SGC staff was developed and published in 2019 to provide all material needed for SGC staff to learn and/or train others on the STI policy matters. The Handbook was published in English and physical copies provided to every SGC. It is also available for download from the SGCI Virtual Hub and provided to SGCs as an eversion as part of a final materials package in February 2020.
Intellectual property rights and technology transfer materials	Completed	A series of materials were developed in June 2019 and subsequently made available to the SGCs via the SGCI virtual hub and as part of the final materials package given to SGCs in February 2020.
M&E systems checklist and action plans	Completed	Various contextualised documents were developed with individual councils in late 2019 and 2020 including action plans, M&E frameworks and plans. These have been individually disseminated as appropriate.

### MEETING OF PROJECT OBJECTIVES

We have assessed the extent to which Theme 3 has met its objectives using a scale of 1 (not met) to 4 (fully met) below together with an explanation for the scoring given.

Objective	Degree objectives achieved	Explanation
Overall objective		
Strengthen the capacity of science	4	Theme 3 has been able to strengthen collaboration in
granting councils in 15 Sub-Saharan		all 15 countries to some degree or other. Even in
African countries to establish		countries that did not conduct joint research funding

		celle /o = NAcleuri and Zinchahura) their averagion as of
partnerships with each other, and to foster public-private research		calls (e.g. Malawi and Zimbabwe) their experience of collaborative activity was so well received that in
collaboration and exchange of		February 2020 they renewed their collaborative
knowledge for accelerated socio-		agreement for another 2 years.
economic development		agreement for another 2 years.
continue development	Sub o	bjectives
To strengthen the ability of Science	4	Theme 3 consortium members worked in partnership
Granting Councils in sub-Saharan		with SGCs to develop a series of templates and other
African countries to design and		outputs to provide long term support (beyond the life
manage collaborative agreements		of SGCI) for collaborative activities. Across the three
through regional training courses and		years more targeted support has been given by email/
onsite coaching		virtually and onsite to SGCs as they conduct
		collaborative activities. SGCs have valued this support
		and requested additional training from different
		consortium members; some of which we were able to
		provide during SGCI Phase 1.
	4	All SGCs involved in collaborative agreements (and
areas of mutual interest to the		willing to have a third party distribute funds) have
Councils		successfully completed a research call, review of
		proposals and monitored winning research projects through to project close out.
To strengthen the capacity of Councils	4	All SGCs engaging in research calls with private sector
to foster knowledge transfer to the	7	engagement were well supported by Theme 3
private sector by co-funding demand-		consortium members through support in developing
led research projects in areas aligned		the research calls, tailored support during review and
with private sector interests		implementation and during project close out.
		Support was also given in communications and
		dissemination of these projects' outputs and initial
		outcomes.
The second secon	4	Three commissioned studies were conducted and
private partnerships		reports delivered on the PPPs in health systems
		strengthening in East, West and Southern Africa
		respectively. The choice of topic area was based on a gap analysis of where research was not being
		conducted in the SGC/ country level PPP research
		projects.
To train Councils on specialized topics	4	The Theme 3 consortium members have delivered a
related to public-private partnerships		number of training courses to SGCs both in group and
such as intellectual property rights,		at country level in a range of areas including: STI
knowledge transfer and		Policy, intellectual property and technology transfer,
commercialization		research communications, monitoring and evaluation.
	4	The Theme 3 consortium have endeavoured to ensure
learning among participating Councils		all knowledge outputs produced are accessible on the
through the Science Granting Councils		SGCI Virtual Hub and have conducted numerous
Initiative (SGCI) Virtual Hub and		meetings and trainings all of which have built in
meetings		knowledge exchange and learning opportunities. All
		meetings conducted by Theme 3 were developed to be interactive and to ensure individuals left with
		tangible new skills and/or resources that they could
		use later. As noted above with regards the STI Policy
		Handbook, our trainings and their associated
		materials have been highly appreciated by the SGCs.
<del>                                     </del>		5 / 11
To contribute to monitoring,	4	The Theme 3 consortium persevered with using the
To contribute to monitoring, evaluation and learning in the SGCI by	4	The Theme 3 consortium persevered with using the MEL tool (SiR form) but did not find that it provided a

results, review and reflection	consortium members have focused on constant
workshops held during SGCI annual	dialogue and feedback to SGCs directly and utilising
regional meetings and forums.	face-to-face meetings (including but not limited to the
	Annual Forums and Regional meetings) as a way of
	sharing lessons learnt. More importantly, we have
	placed a focus – as outlined in the discussion on
	knowledge exchange above – on providing support to
	SGCs to share knowledge between themselves; during
	collaborative activities and at SGCI meetings. We
	have done this through innovative meeting design
	using interactive learning and knowledge sharing
	practices. The showcase of which was our final close
	out workshop held in Dakar, Senegal in February
	2020.

#### **PROJECT OUTCOMES**

#### CONTRIBUTION TO POSITIVE CHANGE/ FIELD OF STUDY/ RESEARCH AREA

The Theme 3 consortium project was based on a theory of change that ultimately saw better coordinated and networked Science Granting Councils; increased knowledge transfer to the private sector; and increased uptake or use of scientific results. Obviously, over the three year period of the project we are not able to see or measure all of this change as having occurred. However, we have seen direct evidence of new collaborations between SGCs resulting in increased networking between them. We also see that their coordination is now such that the SGCI has agreed that in Phase 2 the SGCs will be able to manage the research funds themselves. This is direct evidence that our work in Phase 1 has led to better coordination mechanisms within SGCs (and to some extent between SGCs also). Because the project has funded research which involved collaborations between researchers and private sector players; we also can argue that some level of increased knowledge transfer between researchers and the private sector has occurred. Unfortunately, given the time constraints on this project we have been unable to measure this formally. Unfortunately, given the time it takes for results uptake, we cannot evidence directly impacting increased uptake of research results.

As a result of the difficulty of measuring long term impact in such a short term project, we outlined a number of intermediate outcomes of the project. These are listed below together with details of the degree to which this outcome has been achieved.

Intermediate outcomes expected	Degree achieved
Better understanding of the role that Science Granting Councils in each participating country plays in public private partnerships research	Additional understanding has been achieved at the individual level by SGCs who have participated in PPP research calls and/or developing innovation and research centres. This is evidenced through the February 2020 close out workshop report and feedback from SGCs during Regional Meetings and Annual Forums together with the formal MEL activities of the SGCI.  We have also written up on the experiences of some of the countries in the footbooming heals. (Building spings gustoms in Africa.)
	forthcoming book, 'Building science systems in Africa'.
Improved understanding of the opportunities and challenges that each SGC faces as they try to foster	The SGCs have outlined their understanding of the challenges faced trying to increase knowledge exchange with the private sector during SGCI events (evidenced in meeting reports).

increased knowledge exchange with the private sector	As many of the SGCs had not engaged in funding university-industry research projects before, then it suggests an increase in understanding has occurred but it has not been measured by the Theme 3 consortium directly.  Again, we have written on the issues of PPP interaction in the forthcoming book, 'Building science systems in Africa' based on the experiences we have heard and seen during the SGCI Phase 1.
Better understanding of factors that hinder or facilitate scientific cooperation between and among Councils and between Councils and other science system actors.	The majority of these findings are the subject of the book 'Building science systems in Africa'. However, SGCs have discussed these at various SGCI meetings, notably the Phase 1 close out meeting in February 2020 – see final workshop report.

### MEETING THE SGCI 2020 LOGICAL FRAMEWORK TARGETS

Please refer to the relevant parts in the attached output targets set for March 2020

Indicators	Milestones (March 2020)*	Cumulative total across project (2017 – 2020)
Output Indicator 1.3		
Documented numbers and examples of strategic partnerships with private sector (ACTS consortium)	At least 5 participating SGCs engage in new partnerships with private sector  (at least 1 new SGC required by March 2020)	Strategy developed in a previous reporting period.  Six SGCs have engaged in activity to build partnerships with the private sector. Four SGCs (Cote D'Ivoire, Malawi, Mozambique and Uganda) have 10 projects funded through the PPP grants scheme.  A further two SGCs (Ghana and Botswana) have contracts with consultants to develop private sector engagement strategies.
		A total of 10 SGCs have committed to private sector engagement with co-funding pledges.
Output Indicator 1.4		
Numbers and examples of increased	At least 5 new cooperation	Strategy developed in a previous reporting period.
coordination activities	agreements for	We have exceeded this output indicator with <b>seven</b>
between science	joint activities	collaborative agreements signed:
granting councils in East Africa, and other participating countries	signed by participating SGCs	<ul> <li>Namibia and Mozambique</li> <li>Uganda and Cote d'Ivoire</li> </ul>
(ACTS consortium)	(at least 1 new	- Senegal and Burkina Faso
	agreement	- Malawi and Zimbabwe
	required by March	- Zimbabwe and Mozambique
	2020)	- A collaboration of East African Countries
		- Malawi and Mozambique
		These collaboration agreements have led to the issuance of five research calls for collaborative research proposals and the

approval of seven cross-country collaborative research projects being undertaken.
Three other countries (across two of the MOUs) have engaged in knowledge exchange events. This includes a new collaboration between Malawi and Mozambique.
Collaboration between Burkina Faso, Senegal and Uganda expected by mid-2020. A trilateral collaboration is also expected between Malawi, Mozambique and Zambia in 2020 due to discussions and support given by Theme 3 in Phase 1.

#### KEY LESSONS/ OBSERVATIONS FROM THE PROJECT

Throughout this report (and in the annex) we have been listing different lessons learnt and recommendations. These are listed briefly again here so that they are recorded in a single location.

#### Lessons

- Considerable synergy between SGCs and countries in terms of research gaps and capacity building need of SGCs
- Cross country collaborations require significant time and effort
- SGCs benefit from face to face exchange visits
- Different types of PPP can be promoted but research project level PPPs are the low hanging fruit
- It is common to give grants to the most established researchers (because they have the strongest grant applications) but this promotes the best rather than growing the middle.
- There are two sets of tradeoffs that need consideration:
  - The tradeoff between size of project (in terms of money given) and what can be achieved vs. the administration required to manage small funding amounts
  - The tradeoff between the time required for monitoring visits and their ability to act as validation exercises for SGCs and researchers alike.
- CTAs and SGCs benefit from joined up work plans that are developed at the start of any activities through consultation and are targeted to SGC needs.

#### Recommendations

- Don't rush into promoting research calls at country level if a joint research call would enable better sharing of scarce resources (e.g. reviewers) and enhance knowledge sharing and learning opportunities
- Utilise the template documents developed by the Theme 3 consortium in Phase 1 but don't
  underestimate the time needed for activities. That said, research projects need to be 2 years
  minimum to get any tangible results. Alternatively, consider promoting more researcher exchange
  visits and alternative collaborative activities if timing doesn't allow for a full research project grant
- Increase the opportunities for SGCs to conduct face-to-face exchange visits between each other.
   Consider even funding short term staff exchanges of 2-3 months (even up to 6 months) as a means of building capacity and enhancing lesson learning.

- It is easy to go with low hanging fruit on PPP projects; however, key to any PPP strategy is the strategy itself. Make sure SGCs have time to develop these strategies and make sure any PPP activities conducted fit with these strategies.
- Ensure joined up work planning is promoted (and all CTAs are bought on board at the same time) in Phase 2.

#### GENDER/ INCLUSIVITY AND ETHICAL CONSIDERATIONS

Gender issues have been considered in three ways during this project.

#### 1. During work on collaboration agreements and resulting research projects.

Several of the SGCs specifically required projects to focus on gender issues as part of their call criteria. In others, the focus was at proposal award stage when trying to ensure that a gender balance was created in terms of the researchers awarded projects.

#### 2. During training workshops with SGCs

The Theme 3 consortium always aimed to try and ensure a 50-50 ratio of male and female participation at workshops. However, this was not always achievable as we couldn't always determine who the SGCs would put forward to attend a training workshop.

#### 3. Within the Theme 3 consortium itself

Our consortium was developed to have a high level of female participation. The second principal investigator of the project was female, Dr. Rebecca Hanlin and one of the collaborating partners', STIPRO, coinvestigator was also female, Dr. Bitrina Diyamett. We also had a further four female staff working on the project making the female to male ratio: 55-45.

No ethical issues arose during the Theme 3 activities within the consortium. However, ethical issues were a subject of discussion and activity in the support of the collaborative projects. Notably the issue of ethical approval for research projects. Specifically, the time it takes to get ethical approval for medical research when the project funding is only available for a short period of time. This issue was eventually resolved however it is important for the SGCI and SGCs in particular to make sure they don't underestimate the set up time required for some research projects.

#### **OVERALL ASSESSMENT AND RECOMMENDATIONS**

The Theme 3 project set out to build capacity of SGCs to collaborate with each other and enhance collaboration with the private sector. In the space of three years, it has successfully done this through supporting the SGCs in running a range of collaborative and PPP research funding calls and the subsequent management of the funded research projects implementation and close out. It has also conducted a significant amount of training (both on-site and off-site in groups) as well as more day-to-day routine mentoring and coaching through email, skype etc. Much of this has resulted in tangible knowledge outputs that we expect the SGCs to utilise long after this project has completed. The pinnacle of our knowledge outputs is a co-edited book to be published by mid-2020 that discusses the opportunities and challenges for SGCs in building African science systems. This will be made freely available in both hard and soft copy to SGCs and major universities.

The project has been a constant learning exercise for the Theme 3 consortium members as well as for the SGCs. We have documented many lessons learnt and recommendations across the various progress reports we have submitted (see Annex 1) and summarised them above. If we had to choose the top single recommendation, it would be to not underestimate the time it takes for collaborative activity whether between SGCs or PPPs to take place and therefore the importance of ensuring sufficient time is given to those implementing these activities in Phase 2. In so doing it is important to consider all elements of the ecosystem in which collaborative activity takes place and which influences said collaborative activity.

Theme 3 activities have shown that African countries have the capacity to build strong science systems that are directed towards meeting the needs of the population in both economic and social terms. However, SGCs often face significant hurdles in trying to develop these systems. It is important for SGCs to remember to consider all elements of these systems and to work further on understanding their place as important boundary managers within this system.

#### APPENDIX 1: FINDINGS/ LESSONS AND RECOMMENDATIONS

#### MARCH 2017 - AUGUST 2017

Lessons on the promotion of collaboration	Practical lessons
SGCs are focused on national interests more often than regional interests around PPP grants	An initial set up period is essential to allow time to sensitize all parties
SGCs are more engaged and demanding even greater engagement	Regular internal team meetings from the start of the project are essential for consortium cohesion
There is a need to consider co-investment beyond financing	Consolidating the management of grants together enables on-time completion
Recognition is needed of slow government processes/bureaucracy and the need for flexibility	Considerable overlap exists between SGCI thematic activities creating opportunities for synergy
Recommendations	

The number, type and timeline of grants distributed needs discussion and potential modification. This discussion must consider the needs of SGCs and balance this with the practical limitations on the project itself.

There are a number of synergies between the SGCI Thematic areas and the activities of their respective CTAs. Discussions have started with the CTAs in charge of Theme 1 and Theme 2 and amendments to the original training schedule are expected.

#### SEPTEMBER 2017 - FEBRUARY 2018

Lessons on the promotion of collaboration	Practical lessons
Clear understanding of the aims, objectives and	The time required to get MOUs in place has been
criteria of the initiative from the very start are needed to manage expectations effectively	hindered by the cumbersome process of multiple MOUs (due to the levels of partnership involved)
Demand is growing fast for this initiative and we must be careful to manage this. Clarity on the	and government mechanisms in SGCs' home countries.
possibility of extra funding would help in this regard.	Notably, two elements of government organisation
The form and type of engagement is different for	have been barriers to success to date: (i) the level of
those who are unlikely to benefit financially from this initiative. It takes a lot of effort to ensure they	autonomy that an SGC has and; (ii) the perceived challenge of current procurement rules
do not feel isolated.	The level of administrative support required for this
The reiteration that funds cannot be channeled	project has been underestimated; particularly with
directly to SGCs may prove to be an important	the developments in the types of grant that will be
catalyst for evidence gathering on capacity to	given out
manage funds in future. However, the potential is	

also there for the exact opposite to happen in one or more cases.

The baseline studies have highlighted that partnerships are often entered into due to the perceived benefits to be accrued e.g. access to resources including skilled personnel for peer review or technology support. Poor policy support is the largest inhibitor.

SiR forms have not been completed regularly and only after prompting. We are instigating a new approach where we have the identification of significant incidences as a separate item in our monthly team meetings

A focus on gender has been identified within two CP projects being pursued.

#### Recommendations

Reconsider the granting of funds to SGCs

Additional funding opportunities

Admin support

Meeting attendance

#### MARCH 2018 - AUGUST 2018

[IDRC recommended report format changed from this reporting period forward]

Lessons on the promotion of collaboration	Practical lessons
Delays are possible even with the most elaborate and well thought out grant management guidelines.  Management of the peer review process requires more consideration; especially the availability of suitable members of a reviewer corp.  Considerations of regional corp vs. national corps have been considered together with payment or otherwise of said reviewers.	The original list of knowledge products from this project are too ambitious. We are re-evaluating the number of knowledge products – notably journal papers – that are possible. This project is ultimately a development intervention project and not a research project.  Internally as a consortium we have recognised the importance of internal record keeping.
Quality of research proposals continues to be a problem.  Face to Face meetings are essential for ensuring effective decision making in collaborative activity between SGCs.  Ownership of the projects in terms of budgets remains a key issue.	Time management is essential in this project and it is difficult to increase the activities, notably engagement with other CTAs, when it wasn't factored into implementation plans from the beginning of the project.

#### Lessons on the promotion of collaboration

Good collaboration between SGCs may be excellent but can be let down by bureaucracies within their respective research institutions.

It is still easier for many SGCs to provide financing that is in-kind in nature than cash contributions to research projects.

SGCs crave support and guidance in a range of areas beyond the three main themes of the SGCI.

Notably, general M&E and digitalisation support.

Even small grants can produce tangible commercialisation results involving the private sector but there are trade-offs with the level of administration that these require.

Strength of established research centres vis a vis less established centres/ connected researchers – requires significant consideration by SGCs on how to address this imbalance.

#### **Practical lessons**

The time to conduct monitoring visits – need to consider innovative ways of monitoring by SGCs.

Difficulty of connecting with other CTAs, despite efforts to this effect; due to the pre-determined programmes that were set up in isolation.

A need to keep balance between focusing on research impacts (now that grants projects are progressing through implementation) and SGC capacity building. The Theme 3 book is helping to keep this balance in check.

The need to realise that projects might overrun/ continue after the formal project ends potentially complicating the reporting process against the contracts signed.