



The Role of Science Granting Councils in Advancing Collaborative STI Systems in Sub-Saharan Africa

Synthesis Report

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Authors

Almamy Konte
Nouhou Diaby



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Executive Summary

The Research and Innovation Management (RIM) project (2023–2025), implemented by a consortium led by the African Centre for Technology Studies (ACTS), is designed to strengthen the capacity of Science Granting Councils (SGCs) across Sub-Saharan Africa to fund and manage research and innovation. Building on the Science Granting Councils Initiative (SGCI), which has supported councils since 2015, the RIM project focuses on enhancing councils' ability to design competitive research calls, adopt robust research and innovation frameworks, mainstream gender and inclusion, ensure ethical standards, and implement monitoring, evaluation, and learning mechanisms. These efforts collectively aim to advance national science, technology, and innovation (STI) systems in support of inclusive economic and social development.

The project currently involves 17 SGCs, with collaborations extending to 12 additional countries across Africa, North America, Europe, Asia, and Oceania. Collaboration is a key feature of the initiative: 8 SGCs engaged in international partnerships, resulting in 18 collaborative projects - 22% of the total 82 projects funded. Côte d'Ivoire and Rwanda emerged as leaders, each partnering with five countries, while Ethiopia, Malawi, Mozambique, Nigeria, and Zimbabwe engaged in two-country collaborations. Ghana and Zambia partnered with one country each. The nature of these collaborations reflects both intra-African and global engagement. Rwanda's RW2 project, for example, partnered with the United Kingdom, the United States, and Kenya, representing the highest level of international engagement. Several other projects involved multi-country partnerships, reinforcing the project's role in fostering knowledge exchange across borders.

In terms of sectoral involvement, 194 research and development partners contributed to the RIM project. Universities and higher education institutions dominated (58%), followed by government research institutions (22%), enterprises (15%), and private non-profits (5%). Public institutions accounted for 82% of participants, underscoring the strong role of the public sector in R&D across Africa. Nonetheless, 30 projects demonstrated multi-sectoral collaboration, with government, higher education, enterprises, and private non-profits working together. The GN1 project in Ghana notably engaged all four sectors, while several others demonstrated three-sector partnerships.

Overall, the synthesis highlights three major outcomes of the RIM project:

1. **Expanded research collaboration** across African countries and internationally, with Rwanda and Côte d'Ivoire at the forefront.
2. **Broad institutional participation**, particularly from higher education and government, with growing – though still limited – private sector engagement.
3. **Strengthened research management capacity** of SGCs, enabling them to align funded projects with national development priorities while embedding gender, inclusivity, and ethical considerations.

Through these achievements, the RIM project is contributing to more effective STI systems in Sub-Saharan Africa, enabling councils to drive impactful research and innovation that supports sustainable and inclusive development.

Acknowledgments

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We extend our sincere appreciation to IDRC and FCDO for their generous financial and technical support. We also acknowledge the Science Granting Councils (SGCI) for their commitment and efforts in implementing projects under the Science Granting Councils Initiative (SGCI), as well as the SGCI team for their valuable technical contributions.

Through SGCI, the IDRC consortium has advanced the pursuit of a more equal and inclusive research and innovation ecosystem in Sub-Saharan Africa under the RIM project – an endeavor of significant importance.

Finally, we express our gratitude to the ACTS and UCAD team – particularly those directly involved in the RIM project – for their dedication and support in its implementation.

Abbreviations

RIM	Research and Innovation Management
ACTS	African Centre for Technology Studies
SGC	Science Granting Council
SGCs	Science Granting Councils
SGCI	Science Granting Councils Initiative
STI	Science, Technology, and Innovation
R&D	Research and Development
PPP	Public-Private Partnership
IDRC	International Development Research Centre (Canada)
FCDO	Foreign, Commonwealth & Development Office (United Kingdom)
NRF	National Research Fund
SIDA	Swedish International Development Agency
DFG	German Research Foundation (Deutsche Forschungsgemeinschaft)
NORAD	Norwegian Agency for Development Cooperation
SSA	Sub-Saharan Africa
HEI	Higher Education Institution

1. Background and Context

Science Granting Councils (SGCs) have a key role to play in their national STI systems. Among their multiple mandates, Councils are responsible for management and disbursement of funds for research and development (R&D) and STI activities. As such, the Science Granting Council Initiative for Sub-Saharan Africa (SGCI) brought together several funders including Foreign, Commonwealth and Development Office (FCDO), International Development Research Centre (IDRC), National Research Fund (NRF), Swedish International Development Agency (SIDA), German Research Foundation (DFG) and Norwegian Agency for Development Cooperation (NORAD) and Councils from across East, Southern and West Africa. The initiative, which started in 2015, has contributed significantly to the capacity building of the councils.

In this context, a consortium led by ACTS is implementing the Research and Innovation Management (RIM) project, which is supporting councils to fund and manage research and innovation projects (2023 – 2025), aims to support SGCs to fund and manage research and innovation projects in areas aligned with their national development plans and the identified priorities. This project aims to contribute towards building the capacities of Science Granting Councils in Sub-Saharan Africa (SSA) to fund and manage research and innovation management projects. The project focuses on supporting the councils to: a) refine, adapt and use research, and innovation frameworks; b) design and manage high quality research competitions; c) main stream gender equality, inclusivity, and ethical considerations in all the funded projects; d) conduct monitoring, evaluation and learning of the funded projects, synthesize research outputs and develop relevant knowledge products. The implementation of these activities are meant to contribute to strengthening the councils' ability to support research projects that contributes to economic and social development in their countries. This will result in more effective national STI systems which contributes to inclusive development in sub-Saharan Africa. This document, therefore, presents the synthesis report on collaboration in the SGC countries within the RIM project.

2. List of Countries Participating in the RIM Project

The RIM project is working directly with 17 SGCs, some of which have formed partnerships with 12 additional countries, who are not necessarily part of the project. These additional 12 countries include Algeria and South Africa. Other countries are drawn from North America (United States, Canada), Asia (China, India, Thailand, Malaysia), and Oceania (Australia) and Europa (Portugal, Switzerland, United Kingdom). (Figure 1).

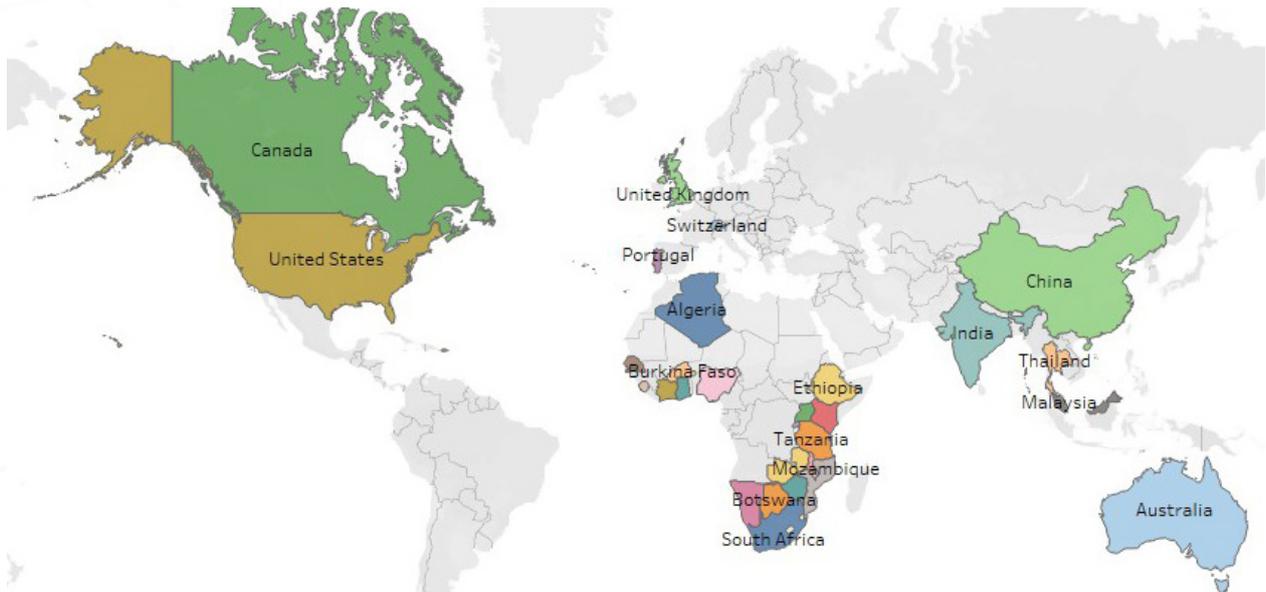


Figure 1. Participating countries

3. Description of Collaborations between SGC and Partner Countries

In the context of the RIM project, 8 SGC countries are implementing some of their research initiatives projects in collaboration with other countries; the remaining 9 did not collaborate with external partners (Table 1). Côte d'Ivoire and Rwanda emerge as the SGC country with the most diverse international collaborations, partnering with five countries each, demonstrating strong global engagement. These countries collaborate with partners from Africa and other continents. Among the 5 partners, Rwanda is working with, 3 of them are from outside Africa (Canada, United Kingdom, and United States) while the other 2 are from Africa (Kenya, and Uganda).

Ethiopia, Malawi, Mozambique, Nigeria, Zimbabwe have each engaged with two partner countries, while Ghana and Zambia have each collaborated with one partner. SGC countries without collaboration includes Botswana, Burkina Faso, Kenya, Namibia, Senegal, Sierra Leone, Tanzania, and Uganda, report no international partnerships in this project.

Table 1. SGC countries with partner countries

SGC countries	Partner country	Researchers from Partner country
Botswana	None*	0
Burkina Faso	None*	0
Côte d'Ivoire		5
	Burkina Faso	1
	Ghana	1
	Mozambique	1
	Switzerland	1
	United States	1
Ethiopia		2
	India	1
	United States	1
Ghana		5
	Zambia	5
Kenya	None	0
Malawi		2
	Algeria	1
	Thailand	1
Mozambique		3
	Botswana	2
	Portugal	1
Namibia	None*	0
Nigeria		2
	Malaysia	1
	South Africa	1
Rwanda		6
	Canada	1
	Kenya	2
	Uganda	1

SGC countries	Partner country	Researchers from Partner country
	United Kingdom	1
	United States	1
Senegal	None*	0
Sierra Leone	None*	0
Tanzania	None*	0
Uganda	None*	0
Zambia		2
	Australia	2
Zimbabwe		2
	China	1
	South Africa	1

* "None" is explained by the absence of researchers from other countries, that is involved in a specific project implemented by the corresponding SGC country under the RIM project.

4. Collaborative Projects

4.1 Number of Collaborations by country

At the project level, 18 out of the 82 projects were implemented with the involvement of other countries (at least one country), representing 22% of the total number of projects. The SGC countries with collaborative projects are Côte d'Ivoire, Ethiopia, Ghana, Malawi, Mozambique, Nigeria, Rwanda, Zambia and Zimbabwe (Figure 2). Of the 18 collaborative projects, Côte d'Ivoire and Rwanda have the highest number with 4 projects each. They are followed by Ethiopia, Mozambique and Zambia with 2 collaborative projects each, while Ghana, Malawi, Nigeria, and Zimbabwe have only one collaborative project each.

ZW5 (Zimbabwe)	China	South Africa	Zimbabwe
ZB4 (Zambia)	Australia	Zambia	
ZB2 (Zambia)	Australia	Zambia	
RW4 (Rwanda)	Canada	Rwanda	
RW3 (Rwanda)	Kenya	Rwanda	
RW2 (Rwanda)	Kenya	Rwanda	United Kingdom United States
RW1 (Rwanda)	Rwanda	Uganda	
NG2 (Nigeria)	Malaysia	Nigeria	South Africa
MZ6 (Mozambique)	Mozambique	Portugal	
MZ2 (Mozambique)	Botswana	Mozambique	
ML5 (Malawi)	Algeria	Malawi	Thailand
GN1 (Ghana)	Ghana	Zambia	
ET3 (Ethiopia)	Ethiopia	United States	
ET2 (Ethiopia)	Ethiopia	China	
CI7 (Côte d'Ivoire)	Côte d'Ivoire	Ghana	
CI5 (Côte d'Ivoire)	China	Côte d'Ivoire	
CI4 (Côte d'Ivoire)	Côte d'Ivoire	Mozambique	
CI3 (Côte d'Ivoire)	Côte d'Ivoire	Switzerland	United States

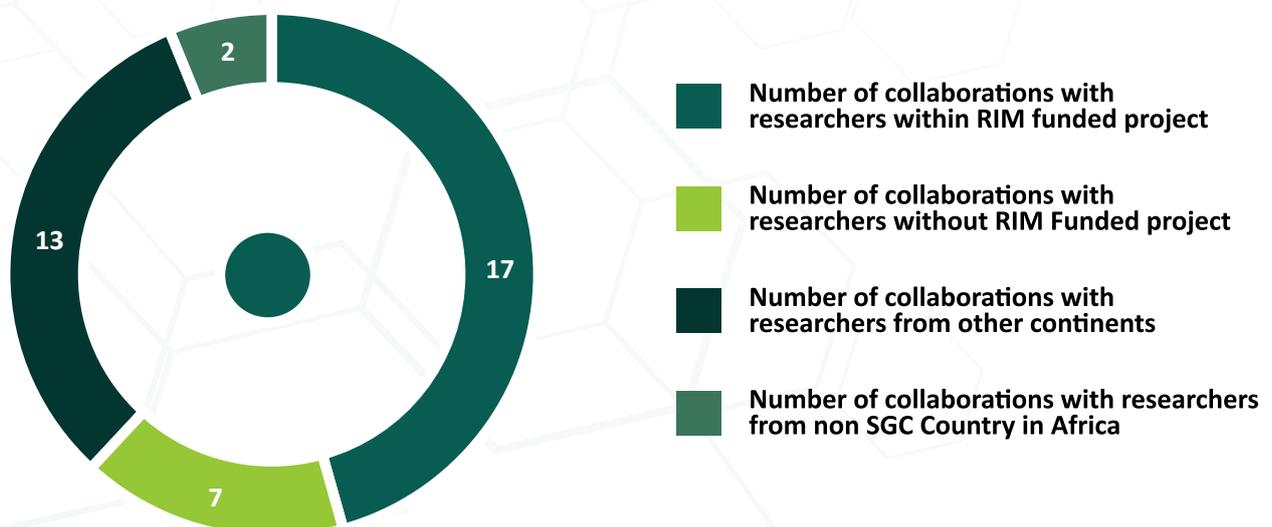
RW2 from Rwanda stands out as the project with the highest number of international partners, collaborating with three countries: the United Kingdom, the United States, and Kenya. Several other projects have engaged with two international partners, demonstrating moderate international collaboration. The CI3 project from Côte d'Ivoire has partners in Switzerland and the United States, while the ML5 project in Malawi collaborates with Algeria and Thailand. Similarly, NG2 from Nigeria has partnerships with Malaysia and South Africa, while the ZW5 from Zimbabwe is working with partners in China and South Africa. These projects highlight varying levels of international engagement, with Rwanda leading in the number of partnerships, while Côte d'Ivoire, Malawi, Nigeria, and Zimbabwe also show strong global research connections.

Note: It is important to understand that some collaborations involved researchers from SGC countries who participated in projects without direct funding from the RIM project. These include researchers from Mozambique (project CI4 in Côte d'Ivoire), Burkina Faso (project CI5 in Côte d'Ivoire), Ghana (project CI7 in Côte d'Ivoire), Zambia (project GN1 in Ghana), Botswana (project MZ2 in Mozambique), Uganda (project RW1 in Rwanda), and Kenya (projects RW2 and RW3 in Rwanda).

4.2 Types of Collaborations (Intra-African and/or International)

Figure 3 highlights the nature and scope of collaborations observed in the 18 projects implemented:

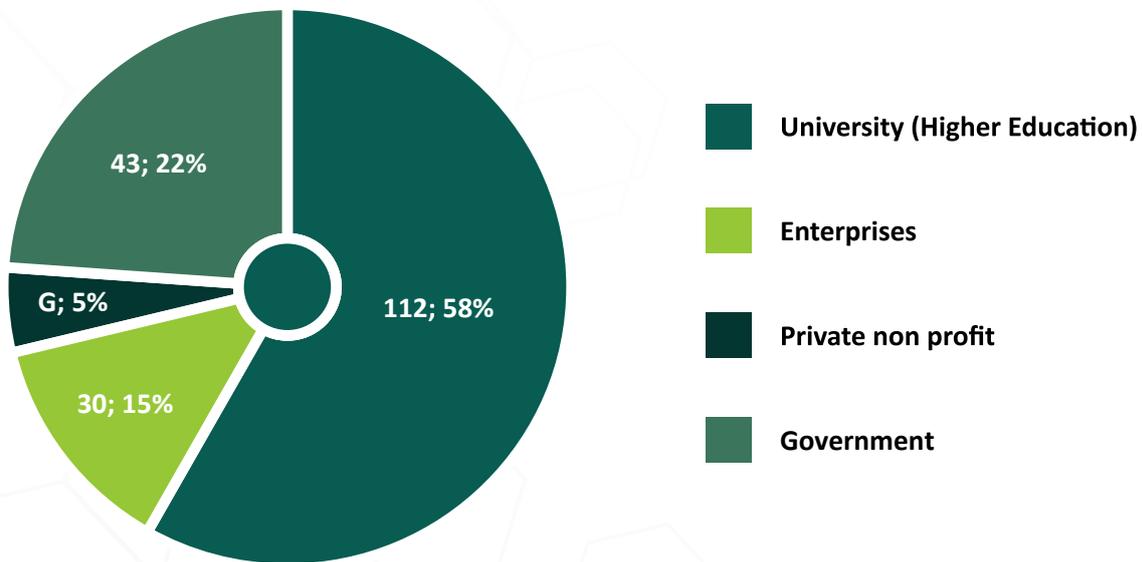
- ▶ **Engagement within RIM-funded projects:** 17 collaborations involved researchers who were directly funded by the RIM project, showcasing the project's role in fostering research partnerships.
- ▶ **Additional collaborations beyond RIM funding:** Despite the primary reliance on RIM funding, 7 collaborations included researchers from SGC countries who participated in projects without direct financial support from the RIM initiative. This indicates the broader integration of researchers beyond the structured funding framework.
- ▶ **International partnerships:** The projects also engaged with researchers from other continents in 13 instances, reflecting a strong global research collaboration component. This suggests that many projects sought international expertise, or knowledge exchange beyond Africa.
- ▶ **Intra-African collaborations beyond SGC countries:** 2 collaborations involved researchers from non-SGC African countries, showing that some projects extended partnerships within the continent beyond the core SGC network.



5. Sectoral and Institutional Engagement

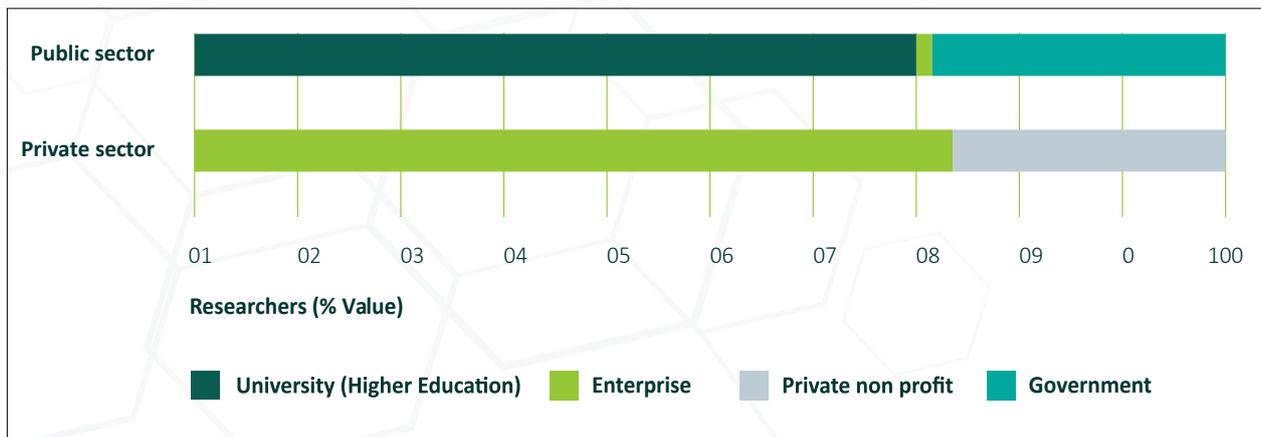
5.1 Performance Sectors involved in the RIM Project

A total of 194 research and development (R&D) partners including universities or higher education institutions, governments (national public research institutions), enterprises, and private non-profit are involved in the RIM project (Figure 4). Universities (higher education institutions) represent the largest share, accounting for 58% of the total, followed by government institutions with 22%. Enterprises contribute 15%, reflecting the relatively low engagement of the private sector in research activities. Private non-profit institutions make up only 5%, suggesting a minor role for independent research organizations.



5.2 Institutional Typologies and Roles

In terms of institutional sectors, the public sector dominates with 159 institutions out of a total 194, representing 82% of all institutions. The dominance of universities and government institutions demonstrates the role of the public sector in R&D. Enterprises, on the other hand, are mostly private (86.7%) and private non-profit institutions accounting for 4.6% of the total. (Figure 5).



5.3 Case Studies of Specific Projects Implemented through Collaborations within Sectors

Among the 82 projects, 30 demonstrated collaboration across diverse sectors (Figure 6). Government entities played a crucial role, participating in 25 projects, which shows the strong engagement of the public sector in research and development. Higher education institutions (HEIs) followed with 22 projects. Enterprises were engaged in 18 projects, reflecting growing private sector participation in research efforts. However, private non-profit organizations had the least involvement, appearing in only 7 projects, suggesting limited representation in cross- sectoral research collaborations.

Among the projects, GN1 (Ghana) stands out as the only project that engaged all four sectors— higher education, enterprise, private non-profit, and government institutions. Additionally, 10 projects engaged three sectors, showcasing a strong multi-sectoral approach. These include BF1 and BF2 (Burkina Faso), CI6 and CI7 (Côte d'Ivoire), ET2 (Ethiopia), KN3 (Kenya), ML5 (Malawi), MZ3 (Mozambique), RW2 and RW4 (Rwanda). These projects brought together a mix of higher education institutions, enterprises, private non-profit organizations, and Government entities, fostering diverse partnerships that enhance knowledge sharing

ZW2 (Zimbabwe)	Higher education		Government
ZB4 (Zambia)	Enterprise		Government
UG2 (Uganda)	Enterprise		Government
UG1 (Uganda)	Higher education		Enterprise
TZ3 (Tanzania)	Higher education		Enterprise
TZ2 (Tanzania)	Higher education		Government
TZ1 (Tanzania)	Higher education		Enterprise
SN6 (Senegal)	Enterprise		Government
SN4 (Senegal)	Enterprise		Government
SN3 (Senegal)	Enterprise		Government
RW5 (Rwanda)	Enterprise		Government
RW4 (Rwanda)	Higher education	Enterprise	Government
RW2 (Rwanda)	Higher education	Private non profit	Government
RW1 (Rwanda)	Enterprise		Government
NG3 (Nigeria)	Higher education		Private non profit
MZ6 (Mozambique)	Enterprise		Government
MZ5 (Mozambique)	Enterprise		Government
MZ3 (Mozambique)	Higher education	Enterprise	Government
ML5 (Malawi)	Higher education	Enterprise	Government
KN3 (Kenya)	Higher education	Enterprise	Government
KN1 (Kenya)	Higher education		Private non profit
GN1 (Ghana)	Higher education	Enterprise	Private non profit Government
ET2 (Ethiopia)	Higher education	Enterprise	Government
C17 (Côte d'Ivoire)	Enterprise	Private non profit	Government
C16 (Côte d'Ivoire)	Higher education	Enterprise	Government
C15 (Côte d'Ivoire)	Higher education		Enterprise
BW2 (Botswana)	Enterprise		Government
BF3 (Burkina Faso)	Enterprise		Government
BF2 (Burkina Faso)	Enterprise	Private non profit	Government
BF1 (Burkina Faso)	Enterprise	Private non profit	Government

6. Conclusion

The RIM project has demonstrated the critical role of Science Granting Councils (SGCs) in advancing research and innovation across Sub-Saharan Africa. The findings show that while collaboration is not universal, the 18 projects implemented with international or regional partners represent an important step toward stronger global and intra-African research linkages. Côte d'Ivoire and Rwanda have emerged as leaders in fostering diverse international partnerships, while other councils such as Ethiopia, Mozambique, Nigeria, Zambia, Malawi, Ghana, and Zimbabwe also show active engagement.

The analysis highlights that universities and government institutions remain the backbone of the research ecosystem, accounting for over 80% of institutional participation. However, private sector and non-profit actors are still underrepresented, limiting opportunities for innovation-driven development. Multi-sectoral collaborations - such as those demonstrated in Ghana, Rwanda, and Burkina Faso—underscore the potential for inclusive and impactful research when multiple stakeholders are engaged.

Overall, the project has made significant strides in strengthening SGC capacities to fund and manage research, foster collaboration, and align research initiatives with national development priorities. Yet, there remains room to deepen partnerships, particularly in the private sector, and to ensure sustainability beyond project funding.

7. Recommendations

1. Based on the analysis of the RIM projects' collaborative initiatives, the following recommendations are proposed
2. Encourage councils without active collaborations to build partnerships with both African and non-African institutions.
3. Facilitate structured platforms for cross-country learning and joint project design.
4. Develop targeted strategies and incentives to attract enterprises into research partnerships.
5. Promote innovation-focused funding calls that encourage industry-academia collaboration.
6. Encourage projects that involve universities, government, enterprises, and non-profits, as these diversify knowledge and increase impact.
7. Replicate successful case studies such as Ghana's GN1 project across other SGCs.
8. Ensure that future collaborations integrate gender equity, ethical standards, and inclusivity in project design and implementation.
9. Support councils in developing strategies for sustaining collaborations and research outcomes beyond RIM project funding.
10. Encourage governments to increase domestic investment in research and innovation to complement external support.
11. Strengthen knowledge-sharing platforms to capture lessons learned from collaborative projects.

African Centre for Technology Studies

2nd Floor, Konza Complex

Nairobi-Mombasa Road

P.O. Box 45917 - 00100

Nairobi, Kenya.

Email: info@acts-net.org

Tel: +254-710 607 210