



SUPPORTING AFRICA’S SCIENCE GRANTING COUNCILS TO FUND AND MANAGE RESEARCH AND INNOVATION PROJECTS (2023-2025)

RIM ANNUAL SYMPOSIUM REPORT



THEME: HARNESSING RESEARCH AND INNOVATION FOR SUSTAINABLE DEVELOPMENT OF AFRICA SPEKE RESORT MUNYONYO, UGANDA

9 - 11 DECEMBER 2024

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ACRONYMS

ACTS	African Centre for Technology Studies
AAU	Association of African Universities
APET	African Union’s High-Level Panel on Emerging Technologies
EARIMA	Eastern Africa Research and Innovations Management Association
IP	Intellectual Property
IPRC	International Professional Recognition Council
MEL	Monitoring, Evaluation, and Learning
PPP	Public-Private Partnership
R&D	Research and Development
RIM	Research and Innovation Management
SARIMA	Southern African Research and Innovation Management Association
SGC	Science Granting Council
SGCI	Science Granting Councils Initiative
STI	Science, Technology, and Innovation
UCAD	University of Cheikh Anta Diop
UNCST	Uganda National Council for Science and Technology

EXECUTIVE SUMMARY

The First Annual Research and Innovation Management (RIM) Project Symposium, held from December 9–11, 2024, at Speke Resort Munyonyo, Uganda, brought together 90 participants, including researchers, policymakers, and industry leaders from across Africa. Organized by the African Centre for Technology Studies (ACTS)-led consortium in collaboration with the Uganda National Council for Science and Technology (UNCST), the symposium focused on synthesizing findings from 35 research projects under RIM project. The theme, **“Harnessing Research and Innovation for Sustainable Development of Africa,”** underscored the role of research in addressing key challenges in agriculture, food security, health, and emerging technologies.

Key Highlights and Sessions

The symposium featured plenary sessions, panel discussions, interactive poster sessions, and capacity-building workshops. The three day symposium was structured as follows:

- ▶ **Day One** focused on research partnerships and innovation, with keynote addresses emphasizing collaboration, research impact, and entrepreneurship. The discussions covered these thematic areas: agricultural value addition, circular economy, and renewable energy solutions.
- ▶ **Day Two** highlighted emerging technologies such as AI, drone applications in agriculture, and advanced biotechnology. Parallel sessions explored advancements in food security, renewable energy, and industrial research applications.
- ▶ **Day Three** addressed research commercialization, intellectual property management, and policy engagement, stressing the importance of linking research to market-ready solutions.

Key Takeaways and Recommendations

- ▶ Strengthening academia-industry partnerships for research commercialization.
- ▶ Encouraging long-term funding models to support innovation uptake.
- ▶ Expanding public-private partnerships (PPPs) for research implementation.
- ▶ Enhancing intellectual property (IP) support and research management training.
- ▶ Improving financial reporting frameworks and budget allocations for commercialization.

Researchers from the SGCs committed to enhance regional collaboration, funding opportunities, and policy engagement to ensure research outputs contribute to Africa’s sustainable development. The second RIM symposium to be held in 2025 will integrate lessons learned to further strengthen Africa’s research and innovation ecosystem.

1. INTRODUCTION AND BACKGROUND

The Science Granting Councils (SGCs) play a crucial role in strengthening national research and innovation ecosystems across Africa. Their primary mandate includes funding research and innovation projects through competitive calls for proposals, alongside data collection and management for monitoring and evaluation. The Science Granting Councils Initiative (SGCI) has been instrumental in enhancing the capacities of SGCs by improving their ability to fund and manage research projects, utilize data for evidence-based policymaking, and advance gender equality and inclusivity.

The **Research and Innovation Management (RIM) Project**, implemented by a consortium comprising of the **African Centre for Technology Studies (ACTS)**, the **Association of African Universities (AAU)**, and the **University of Cheikh Anta Diop (UCAD) in Dakar**, aims to build the capacities of African SGCs in managing and funding research projects effectively. This project supports councils in:

1. Refining and adapting the research and innovation framework.
2. Designing and managing high-quality research competitions.
3. Mainstreaming gender equality, inclusivity, and ethical considerations in funded projects.
4. Conducting monitoring, evaluation, and learning (MEL) activities for research projects.
5. Synthesizing research results and developing knowledge products.

Currently, **82 research projects** are being implemented across **17 participating SGCs** in Africa under the RIM project. These projects address critical areas such as **Science, Technology, and Innovation (STI), Agriculture, Health, Energy, Climate Change, Food Systems, Emerging Technologies, Water and Sanitation, Transport, mining, among others.**

Purpose of the Symposium

The First Annual Research and Innovation Management (RIM) Project Symposium, cohosted by ACTS and the Uganda National Council for Science and Technology (UNCST), took place from December 9-11, 2024, at Speke Resort Munyonyo, Uganda. This symposium provided a platform for knowledge exchange, policy engagement, and capacity building, bringing together a diverse group of stakeholders, including researchers, policymakers, and industry leaders from across Africa and beyond.

The symposium focused on synthesizing research findings from **35 out of 82 funded projects** under the RIM project. The symposium featured plenary presentations, panel discussions, interactive poster sessions, and capacity-building workshops, all geared towards advancing Africa's research and innovation efforts to meet its development needs.

Objectives of the Symposium

The symposium aimed to:

- ▶ Enable researchers to present key findings, successes, challenges, and lessons learned from the funded projects.
- ▶ Synthesize research results to inform policy formulation and decision-making.
- ▶ Foster collaboration, partnerships, and knowledge exchange among research institutions, policymakers, and private sector stakeholders.
- ▶ Provide targeted training sessions on best practices in open science, research communication, and research management.

- ▶ Strengthen academia-industry linkages to support the commercialization and scaling up of innovative solutions.
- ▶ Engage policymakers and stakeholders in discussions on enhancing Africa's research and innovation ecosystem.

Expected Outputs

The symposium was designed to generate the following key outputs:

1. A comprehensive **symposium report** summarizing discussions, findings, and recommendations.
2. An **interactive poster session gallery** showcasing research projects and innovative solutions.
3. A **learning and reflection summary report** highlighting key lessons and best practices.
4. A **synthesis report** consolidating research outcomes to inform policy and decision-making.

2. SUMMARY OF SESSIONS

2.1 Day One: Igniting Innovation in Research

The symposium kicked off with welcoming remarks from **Dr. Martin Patrick Ongol**, Executive Director of UNCST, who emphasized the role of partnerships among Science Granting Councils, research institutions, and private sector actors in addressing Africa’s developmental challenges, including climate change, food security, health, and human capital development.



Dr Martin Ongol, UNCST

Prof. Tom Ogada, the Executive Director of the African Centre for Technology Studies (ACTS), delivered the opening remarks, emphasizing ACTS and its partners’ role in supporting Science Granting Councils (SGCs) to strengthen their research funding functions and enhance data management for evidence-based policy formulation. He underscored the importance of fostering long-lasting partnerships beyond project lifecycles, highlighting the collaborative efforts driving the Research and Innovation Management (RIM) Project. Prof. Ogada congratulated researchers who successfully competed for funding, acknowledging their dedication to addressing socio-economic challenges in Africa. He outlined ACTS’ commitment to science, technology, and innovation (STI) through its five key program areas: agriculture and food security, climate change, STI policy , ACAII , and gender, youth and inclusive development. Many of the funded projects align with these priorities, reinforcing ACTS’ mission to promote research-driven solutions. He commended the strong partnership between ACTS, SGCs, and other stakeholders, which has enabled the implementation of 82 research projects across 17 African countries. Notably, 44% of the researchers involved are women, with 35% of the projects led by female scientists. Prof. Ogada also praised the councils for prioritizing research uptake, citing that 23 of the 82 projects are structured as public-private partnerships—demonstrating a commitment to knowledge utilization for socio-economic transformation. His remarks concluded with a call for sustained collaboration to ensure that research continues to drive Africa’s sustainable development agenda.



Prof Tom Ogada, ACTS

Mrs. Fatmata Kaiwa delivered the welcome remarks on behalf of the Science Granting Councils (SGCs), emphasizing the significance of the First Annual Symposium organized by the ACTS-led consortium. She highlighted the symposium's theme, *Harnessing Research and Innovation for Sustainable Development in Africa*, underscoring the critical role of the ACTS consortium in funding research initiatives across various councils. These initiatives address key national and regional development priorities, including food security, value addition, renewable energy, emerging technologies, and inclusive development. The symposium brought together key stakeholders—council representatives, researchers, funders, and consultants—to facilitate knowledge exchange, share best practices, and strengthen the impact of research.



Mrs Fatmata Kaiwa, representing the SGCs

In her address, Mrs. Kaiwa encouraged participants to actively engage in discussions, learn from one another, and utilize the symposium as a strategic platform for fostering collaboration and building sustainable partnerships. She stressed the importance of networking beyond the event to enhance research efforts and develop solutions to pressing societal challenges. She urged attendees to maximize the opportunities provided over the three-day event to advance their research and contribute meaningfully to Africa's sustainable development agenda. Concluding her remarks, she extended a warm welcome to all participants, reinforcing the symposium's role in promoting knowledge-sharing and impactful collaborations.

Prof. John H. Muyonga from Makerere University's School of Food Technology delivered a keynote address at the First Research and Innovation Management (RIM) Project Annual Symposium, focusing on research impact for socio-economic development. He emphasized that the level of development in a society is closely linked to the quality and quantity of research conducted. He highlighted the distinction between invention—creating new technologies or products—and innovation, which integrates business processes to drive economic growth. He stressed that innovation has a greater development impact and underscored the importance of research dissemination, communication, uptake, and application in shaping policies and programs. Prof. Muyonga advocated for a co-design approach, where research is developed with the intended beneficiaries to enhance uptake and practical application. He also emphasized the need for the quadruple helix model, fostering collaboration between academia, industry, government, and society to ensure impactful research. Prof. Muyonga identified key factors influencing research impact, such as institutional investment, openness to collaboration, long-term financial commitment, and effective commercialization strategies.



Prof John Muyonga, Makerere University

He pointed out obstacles including weak stakeholder engagement, limited funding, regulatory challenges, and resistance to change. To overcome these barriers and enhance research development in Africa, he proposed strengthening research and innovation management functions in institutions, promoting an entrepreneurial culture among researchers, and enhancing research-industry collaborations, particularly in infrastructure development. He further emphasized the importance of fostering international public-private partnerships and ensuring sustainable funding for research and innovation. His presentation reinforced the need for a holistic ecosystem approach to maximize research contributions to economic and societal development

Plenary Session: Agriculture, Food Security, and Value Addition

The plenary session on Day 1 of the symposium focused on *Agriculture, Food Security, and Value Addition* and *Circular Economy and Renewable Energy*. The session featured presentations from researchers addressing key challenges in these sectors.



Plenary presentation by the researchers

Prof. Maida Khan (Mozambique) discussed community empowerment through value addition and agro-processing of indigenous fruits in Mozambique and Botswana. Dr. Geoffrey Ssepuuya (Uganda) presented a pilot project on producing and distributing low-cost, nutrient-rich cricket feed from food waste. Dr. N’Goran Koua Serge Beranger (Côte d’Ivoire) highlighted early detection and management strategies for Coconut Lethal Yellowing disease. The *Circular Economy and Renewable Energy* panel included Prof. Gwiranai Danha (Botswana) on biomass valorization, Dr. Yezbie Kassa (Ethiopia) on transforming water hyacinth into renewable energy, and Dr. Abdoulaye Compaoré (Burkina Faso) on hybrid mango drying technologies. The discussions emphasized on sustainability, value chain improvements, and policy recommendations to scale these innovations.



Participants during the plenary session

The Poster Session showcased research innovations in waste-to-energy conversion, sustainable food processing, and industrial applications. Presenters included Dr. Lesedi Lebogang (Botswana) on bioconversion of waste to energy, Dr. Catherine Mwakosya (Tanzania) on solar drying of marine dagaa for food security, and Dr. Jean Mthethiwa (Malawi) on sustainable urban drainage systems. Other notable presentations included Dr. Cecilia Oluwamodupe (Nigeria) on automated garri frying technology and Dr. James Mulwanda (Zambia) on lithium ore beneficiation. The session provided an interactive platform for knowledge exchange, fostering collaboration among researchers, policymakers, and industry stakeholders.



Poster session presentation

The day concluded with reflections on research impact, commercialization potential, and strategies for scaling up innovations to address Africa’s development challenges.

2.2 Day Two: Innovations in Research and Development

Dr. Ann Kingiri’s presentation focused on the transformative role of research and innovation in Africa’s socio-economic development. She highlighted the “leaky research pipeline”, where 86% of research remains unimplemented, and stressed the importance of shifting from a product-centric approach to process innovation. Dr. Kingiri emphasized the quadruple helix model, advocating for stronger collaboration between academia, industry, policymakers, and civil society to drive impactful research outcomes. She discussed the need for enhanced capacity strengthening, particularly in emerging technologies like AI, renewable energy, and biotechnology, citing the African Union’s High-Level Panel on Emerging Technologies (APET) as a crucial driver of the Fourth Industrial Revolution (4IR) in Africa.

Furthermore, she examined the state of research and innovation in Africa, pointing out low R&D investment (less than 1% of GDP in most countries), weak academia-industry linkages, and the over-reliance on raw material exports. Dr. Kingiri underscored the importance of building inclusive and sustainable innovation systems, integrating social innovation, gender equality, and interdisciplinary research. She advocated for policy reforms to support local technological capabilities, arguing that research must align with societal needs rather than just academic outputs. Her conclusion emphasized rethinking innovation as a social process, promoting inclusive, transformative policies that enhance Africa’s global competitiveness while addressing sustainability and equity challenges.

Plenary Session

The plenary session on Day 2 focused on *Emerging Technologies* and their role in advancing research and development. The session featured insightful presentations from researchers addressing key technological challenges and innovations across various sectors. Dr. Kemoh Rogers (Sierra Leone) demonstrated how drones and AI technologies can be integrated for cost-effective vector control in disease prevention. Dr. Gladness Elibariki Temu (Tanzania) highlighted efforts to scale virus-free yam production using tissue culture technologies to enhance food security. Dr. Abdulsalam Ismaila Gadalima (Nigeria) presented an innovative approach to providing affordable electricity access using vertical axis wind turbines.

Parallel breakout sessions delved into sector-specific research. Dr. Paul Tanui (Kenya) discussed capacity-building initiatives for job creation in the leather goods and footwear manufacturing industry. Dr. Fortune Jomane (Zimbabwe) explored eco-friendly techniques for tanning livestock hides and skins in Zimbabwe and Malawi. Prof. Archileo Kaaya (Uganda) shared insights on scaling up cocoa processing technologies for enhanced value addition. In the emerging technology segment, Prof. Sadouanouan Malo (Burkina Faso) presented an AI-driven system for collecting phytosanitary and yield data on cashew and mango trees. Dr. Kone Epse Yeo Naminata (Ivory Coast) discussed genetic characterization of hybrid tilapia fish, aiming to enhance aquaculture productivity.

The *Poster Session* featured groundbreaking research across diverse disciplines, including agriculture, health, biotechnology, and renewable energy. Dr. Elhadji Malick Leye (Senegal) presented findings on the adoption of improved wheat varieties in Senegal. Dr. Emelin Mwenda (Zambia) showcased smart technologies for minimizing post-harvest losses in fruit value chains. Dr. Nicole Sharon Affrifah (Ghana) highlighted post-harvest loss minimization strategies for pineapple, mango, and tomato value chains. Dr. Girma Debele (Ethiopia) discussed innovative applications of bio and physical feed processing technologies to enhance agricultural by-product utilization. Mrs. Kajuga Nsamira Joelle (Rwanda) presented research on scaling up biological pest control solutions to improve food security and safety. Dr. João Bila (Mozambique) explored gender-based assessments of farmers' knowledge about coconut lethal yellowing disease. Mr. Chrispen Madzokere (Zimbabwe) shared insights on commercializing nano-engineered reagents for mineral froth flotation in the mining industry.



Poster Sessions

The session provided an opportunity for researchers to showcase their work, engage in discussions, and explore collaborations for scaling up innovations. Key takeaways included the need for stronger research-industry linkages, enhanced commercialization strategies, and improved access to funding for emerging technologies that address Africa's most pressing development challenges

2.3 Day Three: Advancing Research in a Dynamic STI Environment

On day three, Prof. Tom Ogada shared reflections on commercialization and technology transfer, emphasizing the shift from a "Think Tank" to a "Think and Do" approach. He discussed various initiatives, including the Research and Innovation Project-PPP, the AI4D Scholarship Project, the Green and Digital Innovation Hub—"Test Before You Invest," and the Community Cooling Hub—"Try Before You Buy." He also highlighted the African Knowledge Transfer Partnership and Moi University Holdings Limited.

In his reflections, Prof. Ogada outlined several key points. First, he noted that interest in commercialization and technology transfer is on the rise. He emphasized that both countries and institutions stand to gain significantly from commercialization and technology transfer. He also pointed out that all 82 projects under the RIM initiative have the potential for commercialization and deployment. However, Prof. Ogada stressed the importance of demystifying Public-Private Partnerships (PPP) in research, noting that while many countries have PPP policies, they often lack specific frameworks for research-related PPPs, and universities frequently do not have mechanisms for linking with the industry.

He further explained the need to clarify the role of the private sector in PPPs and the requirement for long-term, milestone-based funding in research. Prof. Ogada highlighted that most projects are output-oriented and often lack the resources necessary to transition research outputs into business ventures. He also made the case that it is acceptable to use public funds to support private sector innovation, especially given the limited capacity of the private sector to fund research independently. Additionally, he pointed out that successful commercialization requires the active involvement of researchers, who often have a low appetite for commercialization. He also noted that intellectual property rights remain a crucial issue that is not given adequate attention.

Highlighting the need for greater emphasis on the utilization of existing research, Prof. Ogada stated that, "If I were made a Vice Chancellor and given 1 billion for research, I would rather spend that money on funding uptake of research outputs that are lying on the shelves than funding new research projects whose outputs will remain on the shelves".

In terms of how ACTS can support RIM beneficiaries, Prof. Ogada suggested that ACTS can offer several services, including intellectual property (IP) support, technology readiness assessments, responsible AI development and deployment, and joint proposal development. These measures can help address the challenges faced by researchers and improve the commercialization and technology transfer process.

The third day also focused on professionalizing research management and commercializing research outputs. Presentations from SARIMA representatives Dr. Robin Drennan, Ms. Luiza Mazarire, and Ms. Stella Kakeeto underscored strategies for enhancing research management capacities. SARIMA team highlighted the value of Research Management professional recognition. Symposium delegates were inspired to apply through the International Professional Recognition Council (IPRC). Ms. Stella Kakeeto shared invaluable perspectives from the East African Research and Innovation Management Association, offering important local context on the significance of Research Management.



Dr. Robin Drennan, SARIMA

Ms. Stella Kakeeto's presentation on behalf of the Eastern Africa Research and Innovations Management Association (EARIMA) emphasized the need for strengthening research and innovation management across East Africa. She highlighted the challenges faced by African research institutions, including inadequate funding, weak grant management, and the lack of professional recognition for research administrators. EARIMA addresses these gaps through capacity building, advocacy, and fostering partnerships to improve research ecosystems. A key milestone was the successful EARIMA Conference, which brought together over 70 research managers for networking and knowledge exchange. Looking forward, EARIMA aims to expand its membership, enhance certification programs, and strengthen global partnerships to professionalize research management in Africa. Ms. Kakeeto called for collaboration from institutions and individuals to drive sustainable development through improved research management.

Learning and Reflection Session

Ms Nora Ndege from ACTS led an interactive review session, emphasizing research successes, challenges, and best practices. Dr. Nouhou Diaby from UCAD facilitated reflections on lessons learned and future improvements. Participants shared valuable insights and proposals for improvements to be incorporated into the next symposium. One key suggestion was to have more interactive sessions, where researchers not only present their findings but also engage in discussions to address the challenges raised during their presentations. There was a strong call for a greater focus on projects that have tangible impacts, with an emphasis on solutions that drive real-world change.



Dr Nicholas Odongo and Norah Ndege, ACTS

Participants also highlighted the need for time consciousness throughout the event, ensuring that sessions remain concise and impactful. Many also suggested the inclusion of exhibitions where products developed through research can be showcased, providing attendees with a tangible sense of the innovations being discussed. The issue of funding was raised, with a recommendation to include grant opportunities for commercialization, enabling researchers to scale their innovations.

Additionally, participants expressed the desire to invite farmers and other key stakeholders to provide feedback on agricultural projects, ensuring that the research is grounded in the realities of those directly impacted by the innovations. There was a strong call for more knowledge sharing, particularly between researchers from different regions, to foster collaboration and share insights on how similar challenges can be tackled across the continent.

Another key proposal was to dedicate a whole day to discussions and workshops on commercialization, allowing researchers to better understand how to transition from research to market-ready products and services. The need for more time for presentations was also mentioned, as it would allow for deeper dives into research findings and more comprehensive discussions.

The inclusion of the private sector in future symposia was also emphasized, as their perspectives would be invaluable in guiding the commercialization and scaling of research innovations. Finally, participants recommended offering all research presenters the option to choose their preferred presentation format, whether oral or poster, providing flexibility to suit different presentation styles. These proposals reflect a collective desire for the symposium to continue evolving, fostering greater interaction, collaboration, and practical solutions to Africa's challenges.



Figure 2: Word cloud indicating major key takeaway from the symposium

Monitoring, Evaluation, and Learning (MEL) Session

ACTS Head of Finance, Ms. Pheles Ngovo conducted a session on MEL Financial reporting frameworks. She highlighted best practices for monitoring project implementation, tracking outputs, and ensuring research impact. She outlined the following key guidelines:

- ▶ **Financial Reporting Templates and Timelines:** Accurate completion and timely submission of financial templates are crucial for facilitating proper reviews and processing.
- ▶ **Submission of Exchange Rate Slips:** Exchange rate slips documenting currency conversion rates should be submitted to ensure accurate expense conversions.
- ▶ **Overhead Costs Policy:** Only university-withheld overhead costs will be allowed, provided they are supported by relevant documentation. Other overhead costs will be disallowed.
- ▶ **Current Status of Financial Reports:** An update on financial report submissions highlighted the need for timely and accurate reporting.

Key Challenges Identified by the ACTS Finance Team:

- ▶ **Delays in Fund Disbursement:** Significant delays in disbursing funds are affecting project timelines and deliverables.
- ▶ **Inflationary Pressures:** Currency conversion rate fluctuations are impacting budget allocations and project feasibility.
- ▶ **Budget Reallocations:** Strategic budget reallocations are necessary due to evolving project needs and financial constraints.
- ▶ **Procurement Bottlenecks:** Delays in the university's procurement processes are hindering project progress.
- ▶ **Commitment of Funds on Procurements:** Ensuring proper fund allocation for procurement remains a challenge.
- ▶ **Omission of Overhead Costs:** Some beneficiaries/universities have not included the mandated 10% overhead costs, threatening project sustainability.
- ▶ **Budgets for Project Commercialization:** Lack of dedicated budgets for project commercialization limits scaling and sustainability.

Way Forward:

- ▶ **Submission of Financial Reports:** Beneficiaries and councils must submit financial reports and supporting documents by the specified deadlines.
- ▶ **Review of Approved Financial Reports:** ACTS will conduct a thorough review of all approved financial reports to facilitate the release of subsequent disbursements.
- ▶ **Project Timeline Compliance:** Beneficiaries and councils should adhere to project timelines to ensure the timely completion of activities.
- ▶ **Commercialization of Projects:** Consider commercialization potential, including strategies for scaling up projects to the next phase.
- ▶ **Report Updates:** Update the existing technical and financial reports when reporting.
- ▶ **Minimum Expenditure Rate:** A minimum expenditure rate of 80% will qualify for the next disbursement.
- ▶ **Prompt Communication:** Maintain timely communication with councils on specific issues.
- ▶ **Translation of Reporting Templates:** Translate the reporting template from English to enhance accessibility and understanding.

Session on Network of ACTS Beneficiaries

The symposium emphasized the urgent need for strengthened collaborations and networks within the ACTS community. To enhance the review process, it is essential to involve experts from countries beyond the current network. This initiative is timely and critical for the community's growth.

Key recommendations include the following:

- ▶ **Expansion of Collaborations:** Establish a broader network involving international experts and develop collaborations beyond the current funding mechanism to expand the network's reach.
- ▶ **Formation of a Committee:** Each participating council will nominate one Principal Investigator (PI) per country to serve on the committee.
- ▶ **Online Platform Development:** Create the RIM Network platform to centralize all relevant information. Upload virtual abstracts and half-page member profiles for visibility.
- ▶ **Sectoral Teams Formation:** Establish specialized teams within the network based on thematic areas.
- ▶ **Open and Inclusive Network:** Ensure the network remains open to new members and partners.
- ▶ **Fundraising Opportunities:** Share and explore funding opportunities collaboratively within the network.

Implementation Timeline: All recommendations are to be implemented within the next seven months, with progress updates to be presented at the next symposium.

3. KEY TAKEAWAYS FROM THE SYMPOSIUM

- ▶ **Much work is ongoing across the 17 Councils:** The symposium highlighted the dynamic work being undertaken across various councils, showcasing a wide range of research projects and collaborations addressing Africa's challenges.
- ▶ **The value for money is evident in the quality of presentations and projects:** The symposium demonstrated the high value of investments in research, with participants presenting high-quality projects that are making tangible contributions to sustainable development.
- ▶ **A shift from research to research and innovation:** A notable shift was observed across East Africa, West Africa, and Southern Africa, where there is growing emphasis on integrating innovation into the research process. This includes:
 - Contributing to knowledge generation.
 - Developing novel technologies and solutions.
 - Improving existing processes and products.
 - Translating creative ideas into tangible products, services, or business models.
 - Upscaling of products to have broader impact.
- ▶ **Solutions designed to be relevant and responsive to priorities:** The research outputs presented at the symposium were tailored to address the identified national and regional priorities, ensuring they are contextually relevant and impactful.
- ▶ **Researchers factoring in intellectual property rights:** There was a strong emphasis on the importance of considering intellectual property rights during the research journey to protect and leverage innovations.
- ▶ **Gender considerations in team composition and leadership:** Gender balance was recognized in the composition of research teams, including project leads. Countries like Nigeria, Tanzania, Burkina Faso, Malawi, and Zambia presented research solutions that incorporate gender-responsive approaches.
- ▶ **Inclusivity in research participation:** The symposium underscored the importance of inclusivity by engaging:
 - Early career researchers.
 - Undergraduate, master's, and PhD students.
 - The private sector, which is essential for bridging the gap between academia and real-world applications.
- ▶ **Mentorship and coaching from seasoned researchers:** Experienced researchers played a critical role in mentoring and coaching young researchers, helping to guide their projects and ensure they are aligned with best practices.
- ▶ **Collaboration and partnerships:** Strong partnerships across multiple sectors were emphasized, including:
 - **Council-to-Council** collaboration, fostering a united effort towards solving regional challenges.
 - **University-to-University** collaborations, sharing knowledge and resources.
 - **Academia-Private Sector** partnerships, which ensure that research is commercially viable.
 - **Academia-Private Sector-Government** collaboration, ensuring policy alignment and

practical implementation.

- **Funders-CTAs-Councils-Researchers** working together to fund and sustain impactful projects.
- ▶ **Mozambique, Zambia, and Zimbabwe as strong partners:** These countries were highlighted for their significant partnerships across Africa, such as Mozambique's collaboration with Botswana and Côte d'Ivoire, Zambia's collaborations with Ghana, Malawi, and Zimbabwe, and Zimbabwe and Malawi's partnerships within the South-East region.
- ▶ **Councils prioritizing research uptake and funding:** There is increasing recognition across African councils of the need to fund and support the uptake of research, ensuring that innovations and solutions are adopted and scaled for societal impact.
- ▶ **The importance of research communication:** Effective research communication is key for advancing research, securing funding, fostering collaborations, influencing policy, and engaging the public. It was highlighted as an essential tool for ensuring that research reaches its full potential and achieves the desired outcomes.

Future Direction

Looking ahead, several key directions were highlighted for future growth and development.

1. ACTS is ready to provide ongoing support to RIM beneficiaries in several critical areas, including Intellectual Property (IP) support, Technology Readiness Assessment, Responsible AI development and deployment, joint proposal development for the upscaling of innovation, and translating research into policy. These efforts will further strengthen the link between research and practical applications in Africa.
2. Researchers were encouraged to take up the Research Management professional course for certification, enhancing their skills and capabilities in managing complex research projects. Additionally, a WhatsApp group will be created to facilitate ongoing communication and support among beneficiaries.
3. The feedback gathered from the learning and reflections session will play a pivotal role in shaping the next symposium in 2025, ensuring that it remains relevant and responsive to the needs of the research community.
4. Furthermore, the next payment tranche will be sent to deserving teams to support continued innovation and research progress.
5. Finally, participants were informed of several available funding opportunities, encouraging them to explore these resources to scale their innovations and projects.

The symposium concluded with closing remarks by Dr. Martin Ongol, underscoring the need for sustained partnerships and capacity building in Africa's research ecosystem. Overall, the symposium set a strong foundation for continued growth and collaboration in Africa's research and innovation ecosystem, positioning the continent to address its challenges and drive sustainable development

4. APPENDIX: PHOTOS AND YOUTUBE LINKS

4.1 PHOTOS

Day 1: <https://www.flickr.com/gp/197505718@N02/i38NDQSmHi>

Day 2: <https://www.flickr.com/gp/197505718@N02/1D3148As9d>

Day 3: <https://www.flickr.com/gp/197505718@N02/Qe2m4smhz0>

4.2 YOUTUBE LINKS

[Prof. Tom Ogada Opening Remarks](#)

[Dr. Martin Ongol - Uganda National Council for Science and Technology \(UNCST\) Opening Remarks](#)

[Mrs. Fatmata Kaiwa Welcome Remarks on behalf of the SGCs](#)

[Dr. Ann Kingiri - Innovations in Research and Development](#)

[Prof. John H Muyonga - Makerere University Opening Remarks](#)

[Research Commercialization Strategies RIM Annual Symposium](#)

4.3 PROGRAMME

DAY 1: MONDAY, 9 DECEMBER 2024

09:00 –17:30: Igniting Innovation in Research

RIM Annual Symposium Speke Resort Munyonyo – Kampala, Uganda	
08:30 – 09:00	Arrival and Registration
Session 1: Opening Session Moderator: <i>Geoffrey Sempiri (UNCST)</i>	
9:00 - 9:30	<p>Welcome and Opening Remarks</p> <ul style="list-style-type: none"> • ACTS Consortium led by Prof Tom Ogada (ACTS Executive Director) • Prof Rhoda Wanyenze (UNCST Board Chairperson) • Dr Martin Ongol (UNCST)
9:30 - 9:40	<p>Workshop Objectives <i>Presenter: Ruth Dickson (AAU)</i></p> <p>Outline the symposium’s goals, introducing the research themes and key activities over the next three days.</p>
9:40 - 10:20	<p>Official Opening Ceremony: <i>Keynote Speaker: Prof John H. Muyonga (Makerere University)</i></p>
10:20 - 11:00	GROUP PHOTO AND TEA BREAK
Session 2: Agriculture, Food Security and Value Addition	
11:00 - 12:00	<p>Moderator: Dr Catherine Kilelu (ACTS)</p> <p>Presenters:</p> <ul style="list-style-type: none"> • Prof Maida Khan (Mozambique) Community empowerment through value addition and agro-processing of indigenous fruits in Mozambique and Botswana. • Dr Geoffrey Ssepuyya (Uganda) Piloting the production and distribution of low-cost protein and micro-nutrient rich cricket feed from food waste in Kampala. • Dr N’goran Koua Serge Beranger (Côte d’Ivoire) Saving the coconut tree of life from a devastating pathogen: Early detection, Spatial and temporal Pattern Analysis of Coconut Lethal Yellowing, promising strategies for sustainable management of coconut plantations in Côte d’Ivoire and Mozambique.
12:00 - 12:45	Panel Discussion and Q&A
12:45 - 13:45	LUNCH

Circular Economy and Renewable Energy

13:45 - 14:30	<p>Moderator: Ms Neema Tindamanyire (COSTECH)</p> <p>Presenters:</p> <ul style="list-style-type: none"> ● Prof Gwiranai Danha (Botswana) Low cost, intensified torrefaction system for valorisation of encroacher biomass into a clean, renewable energy. ● Dr Yezbie Kassa (Ethiopia) Scaling up of waste to wealth technology: Transforming Waterhyacinth (Eichhorina Crassipes) Biomass into Renewable Energy to Improve Rural Livelihood, Ethiopia. ● Dr Abdoulaye Compaoré (Burkina Faso) Implementation of a hybrid mango dryer powered by solar energy and biogas generated from mango waste.
14:30 - 15:15	Panel Discussion and Q&A
15:15 - 15:30	HEALTH BREAK
15:30- 16:30	POSTER SESSION
	<p>Moderator: Prof Dickson Andala (NRF) Presenters:</p> <ul style="list-style-type: none"> ● Dr Lesedi Lebogang (Botswana) Bioconversion of waste to energy to advance circular bio-economy in Botswana: A sustainable strategy for meeting energy needs. <i>Introduced by Mr Matthews Gaandingwe</i> ● Dr Catherine Mwakosya (Tanzania) Enhancement of marine dagaa drying method for improving food security in Tanzania (Dagaa solar project) Sardine value chain analysis. <i>Introduced by Ms Neema Tindamanyire</i> ● Dr Jean Mthethiwa (Malawi) Sustainable Urban Drainage Systems and Technologies for Adaptation and Infrastructure Needs (SUSTAIN). <i>Introduced by Mr Kondwani Gondwe</i> ● Dr Cecilia Oluwamodupe (Nigeria) Development of Automated Garri Frying Technology (Jollyfryer). <i>Introduced by Mrs Ruth Dicksson</i> ● Dr James Mulwanda (Zambia) Beneficiation of local lithium ore and production of cathode precursor. <i>Introduced by Ms Atridah Mulonga</i>
16:30 - 17:00	Feedback from Poster Presentations and Recap of Day 1- Prof Dickson Andala (NRF)
17:00 -17:20	Close of the day -Dr Nicholas Odongo (ACTS) Reflect on the day's activities

END OF SESSION

DAY 2: TUESDAY, 10 DECEMBER 2024

09:00 –17:50: Innovations in Research and Development

08:30– 09:00	Arrival and registration	
Session 1: Keynote Address Moderator: Mr Kondwani Gondwe (NCST)		
09:00 – 09:20	Theme: Innovations in Research and Development Speaker: Dr Ann Kingiri (ACTS)	
Session 2: Emerging Technologies Presentations and Panel Discussion		
9:20 – 10:30	Moderator: Prof Solomon Belay Tessema (RGC-MInT) Presenters: <ul style="list-style-type: none"> • Dr Kemoh Rogers (Sierra Leone) Incorporating Drone and AI technologies for cost-effective vector controls in Sierra Leone. Introduced by Mrs Fatmata Kaiwa • Dr Gladness Elibariki Temu (Tanzania) Scaling up the Productivity of Yam (Viazi Vikuu) in Tanzania through Virus Indexing, Seed Yam Minisett and Tissue Culture Technologies. Introduced by Ms Neema Tindamanyire • Dr Abdulsalam Ismaila Gadlima (Nigeria) An Affordable Access to Electricity with Vertical Axis Wind Turbines. Introduced by Mrs Ruth Dicksson • Panel Discussion and Q&A 	
10:40 - 11:10	TEA/COFFEE BREAK	
Session 3: Parallel Breakout Sessions		
11:10 - 13:00	Group A: Agriculture, Food Security Addition Moderators: Dr Timothy Marango (RCZ) Presenters: <ul style="list-style-type: none"> • Dr Paul Tanui (Kenya); Capacity Building for the Job Creation and Growth of the Leather Goods and Leather Footwear Manufacturing Enterprises in Kenya. • Dr Fortune Jomane (Zimbabwe); Ecologically friendly tanning of livestock hides and skins in Malawi and Zimbabwe. • Prof Archileo Kaaya (Uganda); Up-scaling the uptake of cocoa innovative technologies for enhanced value addition during primary processing. • Panel Discussion and Q&A 	Group B: Emerging Technology and Value Moderators: Dr Djibril Yonli (FONRID) Presenters: <ul style="list-style-type: none"> • Prof Sadouanou Malo (Burkina Faso); Collection of phytosanitary and yield data on cashew and mango trees using artificial intelligence. • Dr Kone Epse Yeo Naminat (Ivory Coast); Genetic characterisation of hybrids resulting from crossing <i>Tilapia guineensis</i> (Günther, 1862) and <i>Tilapia zillii</i> (Gervais, 1848) in two zones (IV and V) of the Ebrié Lagoon. • Mr Abdul Rahim Jalloh (Sierra Leone); Artificial Intelligence in Education - ABU Sense BOD. • Panel Discussion and Q&A
13:00 - 13:45	LUNCH	

Session 4: Parallel Breakout Sessions

<p>13:45 - 15:30</p>	<p>Group C: Health Research Moderator: Ms Atridah Mulonga (NSTC) Presenters:</p> <ul style="list-style-type: none"> ● Dr Faith Mueni (Kenya); A digital intervention for the prevention and early detection of depression and suicide among the youth in Kenya. 	<p>Group D: Agriculture, Food Security and Value Addition Moderator: Steven Sseabele (UNCST) Presenters:</p> <ul style="list-style-type: none"> ● Mr Munezero Emmanuel (Rwanda); Enhancement of Production Technology, Quality and Competitiveness of Rwanda Banana Beverage Products.
<p>13:45 - 15:30</p>	<ul style="list-style-type: none"> ● Prof Martha Kamanga (Malawi); Developing a Two-Sided Artificial Intelligence Risk Predictive Model for Early Identification of HighRisk Antenatal Mothers: Enhancing Maternal and Neonatal Health Outcomes in Zambia, Malawi and Zimbabwe. ● Dr Gideon Kye-Duodu (Ghana); MedScale App- Scaling-Up Mass Drug Administration for Schistosomiasis Post Covid-19 Pandemic. ● Panel Discussion and Q&A 	<ul style="list-style-type: none"> ● Prof Charles Muyanja (Uganda); Maize germ and bran as raw materials for high fibre value added bakery and confectionery products. ● Dr Mariama Ngom (Senegal); Valorization of neglected and underutilized Tiger Nuts (Cyperus esculentus, L. Ndir) for improved food and nutrition security in Senegal. ● Panel Discussion and Q&A
<p>15:30 - 15: 45</p>	<p>TEA/COFFEE BREAK</p>	
<p>15:45- 16:45</p>	<p>Session 5: Poster Session</p>	
	<p>Moderator: Prof Almamy Konte (UCAD) Presenters:</p> <ul style="list-style-type: none"> ● Dr Elhadji Malick Leye (Senegal); Diffusion De La Culture Ble Dans La Vallee Du Fleuve Senegal: Test De Demonstration Pour L'adoption De Huit Varietes Adaptees. ● Dr Emelin Mwenda (Zambia); Developing smart technologies for minimization of post-harvest losses and value addition in the pineapple, mango and tomato value chains in Ghana and Zambia (SMARTFRUIT). ● Dr Nicole Sharon Affrifah (Ghana); Developing Smart Technologies for Minimization of Post-Harvest Losses and Value Addition in the pineapple, Mango & Tomatoes Value Chains in Ghana and Zambia. ● Dr Girma Debele (Ethiopia); Scaling up of Agricultural By-Product Utilization Efficiency through the Application of Bio and Physical Feed Processing Technologies. ● Mrs Kajuga Nsamira Joelle (Rwanda); Scaling up the production and use of biological control products (entomopathogenic nematodes) for improved food security, safety and nutrition. 	

	<ul style="list-style-type: none"> • Dr João Bila (Mozambique); Gender based assessment of the Knowledge about coconut lethal yellowing disease among farmers in Central Mozambique. • Mr Chrispen Madzokere (Zimbabwe); Commercialization of the development of novel nano-engineered reagents for mineral froth flotation project. Q&A
16:45 – 17:00	Feedback from Poster Presentations and Recap of Day 2 Prof Almamy Konte (UCAD)
17:00 – 17:20	CABI SciDev Dr Charles Wendo
17:20 - 17:30	Close of the day - Dr Kevin Ouko (ACTS) Reflect on the day's learnings and discussions.
END OF SESSION	

DAY 3: WEDNESDAY, 11 DECEMBER 2024

09:00 –16:00: Project Implementation

08:30 – 09:00	Arrival and Registration
Session 1: Advancing Research in a Dynamic STI Environment	
Moderator: Dr Deborah Kasule (UNCST)	
09:00 – 09:30	Research Commercialization Strategies <i>Presenter: Prof Tom Ogada (ACTS)</i>
09:30 -10.45	Research Management Professionalisation <i>Presenter: Southern African Research and Innovation Management Association (SARIMA) Representatives</i> <ul style="list-style-type: none"> • Dr Robin Drennan, Director: Research Development Research and Innovation, University of the Witwatersrand (South Africa)/ SARIMA • Ms Luiza Mazarire – SARIMA/ Research Grants and Contracts Advisor, Namibia University of Science and Technology (Namibia) • Ms Stella Kakeeto, Grants manager – EARIMA / Makerere University School of Public Health (MakSPH), Uganda
10:45 - 11:15	TEA/COFFEE BREAK
Session 2: Learning and Reflection	
11:15 – 12:00	Learning and Reflections Session A: What Has Been Done and Achieved? Q&A session <i>Presenter: Nicholas Odongo (ACTS)</i>
12:00 - 12:45	Learning and reflections session B: Lessons Learnt and Best Practices Q&A session <i>Presenter: Dr Nouhou Diaby (UCAD)</i>
12:45- 13:45	LUNCH
Session 3: Monitoring, Evaluation, and Learning (MEL): Reporting	
<i>Moderator: Prof Tom Ogada (ACTS)</i>	
13:45 – 15:00	Monitoring, Evaluation, and Learning (MEL): Reporting <i>Presenter: Pheles Ngovo and Godwell Kitimo (ACTS)</i>
15:00 – 16:00	Network of ACTS beneficiaries <i>Presenter: Prof Tom Ogada (ACTS)</i>
16:00-16:15	Recap of the Symposium <i>Presenter: Ruth Dickson (AAU)</i> A summary of key discussions, takeaways, and future directions.
16:15 - 16:30	Closing Remarks <i>Speakers: Dr Martin Ongol</i> Conclude the symposium with reflections on the journey and the road ahead.
END OF SESSION COCKTAIL	

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