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Contents

Executive Summary

This report presents outcomes of the "COVID-19 Africa Rapid Grant Fund (CARGF)", a multi-institutional initiative aimed at supporting and promoting COVID-19 research and science engagement in sub-Saharan Africa. The CARGF initiative was established under the auspices of the Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa. The initiative was administered by South Africa's National Research Foundation (NRF) and supported projects in three core themes (i) scientific research, (ii) science journalism and (ii) science advice. Rapid, efficient, and effective implementation of the initiative during the pandemic required strong coordination, trust and coherence among implementing partners.

Select project outputs: A total of 73 projects were funded, with participation of 713 researchers and science engagement practitioners from 224 institutions within and outside the Africa. This initiative resulted in the development of several knowledge and skills development products including publications of 61 journal articles, 17 book chapters and a book; 11 PhD theses, 13 master's theses and 5 Honours projects. In addition, 730 university students, 730 early career researchers, 176 technical, and administrative staff, 810 journalists, 1639 community health care workers, and 85 community leaders were involved at different levels. The capacity development activities, especially of science engagement practitioners, strengthened their ability, skills and knowledge to effectively connect science with policymakers and the community. Many of the projects supported under this initiative have managed to sustain or expanded the initial project activities beyond the initiatives contracting period.

Challenges and learnings: The CARGF initiative presented numerous challenges and opportunities that required resilience, adaptability, and a willingness to embrace change. Some of the challenges included: COVID-19 containment measures; administrative challenges, reluctance of subjects to engage and provide accurate information; delays in transferring funds to grantees; lengthy ethical clearance approval processes; acquisition of research reagents and other project materials; limited access to relevant publications by investigators, among others. Lessons from this initiative could contribute to building more robust and flexible research and science management ecosystems in the future.

Recommendations for Science Granting Councils and other Funders:

- The NRF, SGCs and funders should work closely together to map a pathway to fully and effectively engage the councils to plan for the implementation of similar initiatives in the future.
- SGCs should establish mechanisms for coordinating resource allocation when addressing regional/global challenges to avoid duplication and ensure efficient use of funds. This can involve collaborating on funding priorities, grant distribution, and resource-sharing initiatives
- At an organisational level, it is recommended that SGCs develop a comprehensive strategy document to guide regional responses to future emergencies.

- SGCs should ensure the grant-making processes are streamlined and designed in such a way as to be flexible when required. Streamlining could include: (i) Establishing and maintaining automated grant management systems across all SGCs; and (ii) Ensuring that as many prospective grant recipient institutions in each country (and potentially region) are pre-loaded onto the grant management system of the SGCs.
- Specific recommendation for the SGCs include: (i) Encourage joint proposals that would include submission from SGCI participating and non-SGCI participating countries; (ii) Engage with and leverage existing initiatives within its ambit to identify where research management capacity strengthening is needed; (iii) Earmark capacity strengthening programmes within SGCs; (iii) Use the train-the-trainer approach to transfer research management skills acquired regarding research and grants management to research performers; (iv) Investigate different models of building capacities of research performers (e.g. supporting designated staff at grant recipient universities to interface with the SGCs); and (v) SGCs can advocate for the establishment of research support offices at universities in their respective countries.
- Underpinning all efforts to optimise coordination, ensure clarity of roles and procedures, and enable strong communication and trust, within and between organisations and role-players is the need for ongoing partnership-building and strengthening.

Recommendations for Researchers and Science Engagement Practitioners:

- Leverage the initiatives partnership baseline, institutional and human resources to improve the uptake of outputs and expansion of projects.
- Reach out to other grantees (from different teams and strands) of like minds and explore areas of collaboration.
- Use the project grant as seed funding to leverage additional financial resources to increase the outputs and enhance sustainability potential of the project.
- Improve the researchers' and science engagement practitioners' accessibility to relevant publications (journal articles) by uploading project related outputs in open access platforms.

We would like to thank Canada's International Development Research Centre (IDRC), Swedish International Development Cooperation Agency (Sida), South Africa's Department of Science and Innovation (DSI), the Fonds de Recherché du Québec (FRQ), the United Kingdom's Foreign, Commonwealth and Development Office (FCDO), United Kingdom Research and Innovation (UKRI), the SGCI participating Councils, researchers, journalists and other stakeholders for making this ambitious initiative a success.

1. The Research Problem

In March 2020, Covid-19 was declared a pandemic by the World Health Organisation (WHO). The pandemic had far-reaching implications and affected all spheres of society, including health, geopolitical, socio-economic development, education and research and development. In Africa, the response to the COVID-19 pandemic was led by national governments, the Africa Centres for Disease Control and Prevention, WHO, the African Union, among other institutions. At national level, governments launched several programmes to promote the awareness, prevention, diagnosis and treatment of the pandemic.

Apart from the rapid development of solutions and measures by governments and other sectors, the pandemic exposed deep flaws in health and global socio-economic systems and structures. Some of the measures employed to curb the pandemic had unintended consequences in many spheres of life, including the field of scientific research and development. For example, despite the critical role that public science and innovation systems played during the pandemic, this sector saw reduced funding from governments across the globe. The deviation of resources from research and development adversely affected the generation and dissemination of scientific knowledge that was important in understanding the nature of the pandemic, and informing diagnostics, prevention and treatment of the disease as well as developing and implementing science-based policies. In 2020, the Global Research Council (GRC) made a declaration calling on participating councils to collaborate in the fight against the COVID-19 virus and encouraged open sharing of research findings and data.

Established in mid-2020, the COVID-19 Africa Rapid Grant Fund (CARGF) was one of the first multi-national and multi-institutional public research funding project established in response to the pandemic. The CARGF focused on supporting and promoting COVID-19 research and science engagement in sub-Saharan Africa led by African researchers and science engagement practitioners using resources from the sub-region of the continent. The initiative was established under the auspices of the Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa[1], supported by South Africa's National Research Foundation (NRF), Canada's International Development Research Centre (IDRC), the Swedish International Development Cooperation Agency (Sida), South Africa's Department of Science and Innovation (DSI), the Fonds de Recherché du Québec (FRQ), the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) and

Box 1: SGCI participating countries

Botswana, Kenya, Rwanda, Uganda, Tanzania, Ethiopia, Côte d'Ivoire, Burkina Faso, Senegal, South Africa, Ghana, Nigeria, Mozambique, Malawi, Namibia, Zambia and Zimbabwe.

[1] https://sgciafrica.org/

United Kingdom Research and Innovation (UKRI) through the Newton Fund, and the SGCI participating Councils (see Box 1).

1.1. Objectives

The objectives of the CARGF were to:

- Contribute to the African regional and continental response to the COVID-19 pandemic.
- Support knowledge generation and translation to inform diagnostics, prevention and treatment of COVID-19 on the continent.
- Strengthen African regional and continental science engagement efforts in response to the COVID-19 pandemic.
- Leverage existing, strong multilateral collaborations in support of Africa's consolidated response to the COVID-19 pandemic and attract new collaborations from international partners.

1.2. Focus strands

The funded projects were led by leading African researchers and science engagement practitioners with a focus on the following three main strands:

- *Research*: The strand focused on supporting knowledge generation on a range of research questions linked to the pandemic. The researchers investigated the nature of the coronavirus disease, prevention and control measures, the African health governance system, the socio-cultural dynamics of transmission, and science engagement, mental health and vulnerability;
- *Science and Health Journalism and communication:* The strand focused on supporting science journalists and communicators on the African continent to produce and disseminate coordinated science communication outputs that would allow readers access to factual information and analysis to inform their actions and challenge misinformation.
- *Science Advice:* This strand supported national and continental African science advice engagement practitioners to provide rapid evidence-based science advice to African governments and to develop rapid response material to support responses to COVID-19 with direct engagement with decision-makers at national, regional and continental levels.

2. Project Implementation and Management

The CARGF initiative was administered by the NRF working in close collaboration with key stakeholders. In total, 73 projects[2] focusing on the three strands were funded. The projects

[2] Project abstracts and summaries of all 73 funded projects can be accessed at https://www.nrf.ac.za/core-mandate-business-divisions/risa-directorates/knowledge-advancement-support-kas/kas-documents/

were implemented by 50 institutions from 16 countries (refer to section 2.2). The NRF leveraged its strategic partnership strength, networks, facilities and grant management systems to administer the fund guided by an overarching governance framework.

A number of steps were used to administer the initiative, including leading discussion on partnership modalities; call management; reviews and evaluation; selection of funded projects; due diligence; grants management; and monitoring, evaluation and learning (MEL).

The process of conceptualising the initiative and engaging various partners was co-led by the NRF and IDRC between March and June 2020. Under the auspices of the SGCI and building on long-term partnerships, funding partnerships with Sida, DSI, FRQ, FCDO, UKRI, and the Newton Fund were confirmed. Approximately $ 5.7 million (US) was raised to support research and science engagement projects. A key component of the initiative involved working with SGCI participating councils as co-designers and co-implementers of the initiative.

2.1. Implementation approach

The implementation of the CARGF initiative was divided into five (5) phases, namely, (a) Pre-granting; (b) Project implementation by recipients; (c) Monitoring, evaluation and learning; (d) Financial and technical reporting; and (e) Consolidation of outcomes and achievements.

a. Pre-granting phase

This phase focused on consolidating the projects' governance; finalising various partner agreements and disbursement of partner fund contributions to the NRF; conceptualising the funding call for proposals, and launching and disseminating the call to eligible countries. In addition, this phase was focused on the grant management process (including peer review); due diligence prior to finalising the awarding process; and commencement of awarding and disbursement of funds to successful projects. A significant component of both parts was the direct engagement of SGCI participating councils as key implementing partners of the initiative. A due diligence process (virtual and physical) was undertaken at each recipient institution. All institutions had offices/departments dedicated to receiving and releasing funds, procuring necessary resources and keeping financial records.

b. Project implementation by recipients

The NRF led the management of grants; payment of grant funds (which included the award, release and payment of funds against the agreed budgets and milestones); monitoring of expenditure and adjustments of awarded grants (e.g. changes to budget, implementation plans, outcomes, and team members); and receipt of annual progress reports. Grant recipients were required to deliver on the proposed research and science engagement activities as per the accepted proposal (refer to section 3 for project outputs).

c. *Project monitoring, evaluation and learning (MEL)*

MEL was conducted in subsequent stages based on the objectives contained in the highlighted CARGF call for proposals. The process was utilisation-focused with the intent to provide overall understanding and assessment of the initiative, project management standards and approved project plans, had been adhered to. The MEL process collated information on the outputs from the projects; indicated areas of success and challenges about initiative management, and specific funded projects; communicated the outputs; identified and collated evidence on uptake of research findings, science communication efforts, and science advice recommendations according to the objectives of the initiative; and assessed the overall impact of the initiative aligned to its objectives.

During the grant period, a tool for collecting/documenting impact and lessons based on quantitative and qualitative data obtained from CARGF projects was developed in alignment with the NRF's Technical Audit (TA) framework. The format of the NRF's TA was largely accepted and applied by the review team.

An assessment of the new tool was made and recommendations on how the TA could be modified to improve its effectiveness and efficiency for future use, were made. The overall MEL methodology involved data collection and analysis, stakeholder engagement, data analysis and interpretation, and preparation of the MEL report, support tools and presentations.

d. *Fund financial and technical reporting*

The NRF maintained an appropriate technical and financial management system for the initiative in accordance with partner agreements and in line with South African national legislation, and the Public Finance Management Act (PFMA), as applied to all public entities in South Africa. The financial report indicates the initiatives financial position in its final year. The financials, as of 31 July 2024, comprise of both actuals and commitments emanating from services which were rendered during the implementation of the project of which the NRF has not yet been billed for, however remains liable under the project i.e. workshops, technical evaluation, grants etc.

e. *Database*

Working with the African Open Science Platform (AOSP) hosted by the NRF in partnership with the Ubuntunet Alliance, AfricarXiv and Nelson Mandela University (NMU), the initiative developed a central repository to facilitate archiving and to promote discoverability of CARGF outputs[3]. The project developed both a digital community and collections for the CARGF grant

[3] https://africarxiv.ubuntunet.net/home

recipients in Africa as a springboard/platform for wide dissemination and archiving of the outputs created from the CARGF programme. This was to ensure that the research outputs will appropriately be archived and discoverable for use in policy, research, and teaching, as well as provide visibility and to safeguard the generated information for the long term. By facilitating open access to scholarly work, the portal plays a pivotal role in advancing the principles of open science, enhancing research visibility, and driving innovation across Africa. This included incorporating Persistent Identifiers (PIDs) in the core platform that hosts the CARGF outputs and is accessible to the funders and institutions. This collection is currently hosted in the Ubuntu Open Science Cloud (COVID-19 Africa Rapid-Grant Fund)[4].

2.2. Scope

The initiative had wide coverage across sub-Saharan Africa and partner institutions. It was operationalised by researchers and science engagement practitioners from 16 of the 17 eligible African countries (Figure 1), and within the interest and objectives of the African Research Universities Alliance (ARUA). The skew towards countries in Southern and Eastern Africa is due to the calls eligibility criteria which was aligned with SGCI participating countries.

Figure 1. COVID-19 Africa Rapid Grant Fund participating countries

A total of 73 projects were funded with participation from 713 researchers and science engagement practitioners from 224 institutions within and outside the continent were involved. The highest contributor to and benefactor of this research fund is South Africa

[4] https://africarxiv.ubuntunet.net/home

with 13 projects from 11 institutions, followed by Kenya and Nigeria with 8 projects each and 7 participating institutions.

The distribution of different projects across the three strands is presented in Figure 2. The percentage distribution per strand was also by the design of the initiative where funds were allocated across the three strands as follows: research (70%); science journalism (20%); and science advice (10%). Based on these initial conditions of the call, the initiative supported projects covering the three key strands: Research (41 projects); Science Journalism (27 projects); and Science Advice (5 projects). It was observed that despite the initial design of the call, a higher percentage than initially planned were registered for projects in the Science Journalism strand. The fact that 38% of the projects focused on supporting science journalism and communication was a good indicator that this initiative had the potential to reach out to stakeholders and strengthen strategic communication with different stakeholders and knowledge end users. Apart from involving different countries within and outside the continent, the research teams were composed of members who had a wide spectrum of scientific backgrounds and worked together for the same cause. There was, however, little representation of business management disciplines.

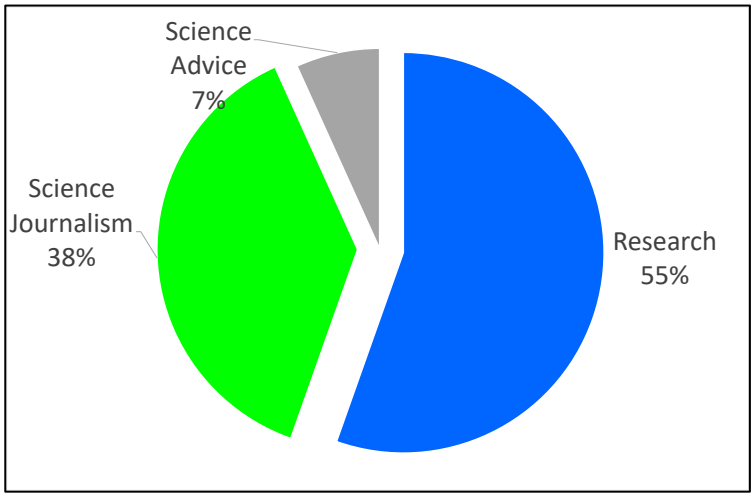

Figure 2. CARGF projects distribution by strands

3. Project Outputs and Dissemination

3.1. Educational support and capacity development

The initiative involved 724 university students who participated at various levels. Apart from supporting students, the capacity-building component of the projects included training of early career researchers (720), technical and administrative staff (176), journalists (810), community health care workers (1639), and community leaders (85). The number of projects involved in capacity development and the respective outputs of the human

resources developed (apart from students) are presented in Table 1. In comparison with the 57 projects that developed capacity among the students, a total of 69 projects were involved in training programmes wherein 2782 individuals benefited from the initiative through several capacity-building activities conducted by different project teams.

Table 1. CARGF projects capacity development outputs

Output Category	Overall		Output per Strand		
	Quantity	Projects	Research	Science Journalism	Science Advice
Early career researchers	72	21	57	14	1
Trainees (technical, administrators, research assistants)	176	19	115	44	17
Journalists	810	13	0	810	0
Community Health care workers	1639	15	109	1530	0
Community leaders	85	5	0	85	0
Sub-Total	2782		281	2483	18

3.2. Publications

The initiative resulted in the publication of 61 journal articles, 17 book chapters and a book (Figure 3); 11 PhD theses, 13 Master's theses and 5 Honours projects. All the strands contributed to journal articles and book chapters that were published, however, most of the publications came from the Research strand.

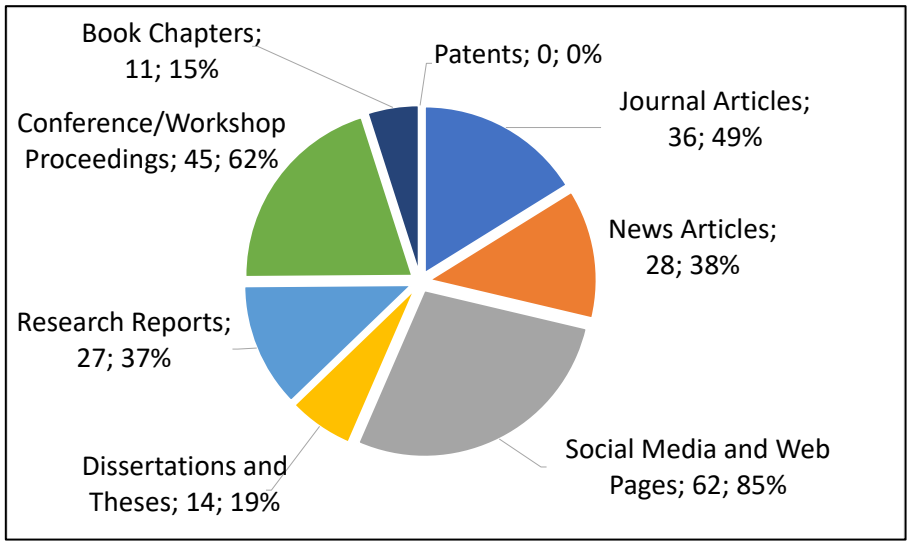

Figure 3. The overall outputs from the CARGF projects

3.3. Science communication and outreach

Besides peer reviewed articles, project results were disseminated through conference/workshop presentations; news articles published in local/national newspapers; airing on local/national television and radio stations and sharing on social media and institutional web pages (Figure 3). All project teams contributed to all these outputs and some channels proved more popular than others. The most preferred communication channel/avenue was dissemination of results through social media and web pages, where 85% (62 of the 73 projects) were in the Science Journalism strand.

3.4. Stakeholder engagement, collaboration and partnerships

Several collaborative initiatives and partnerships were developed between the project teams and local, national and in some cases, international stakeholders. In total, 559 stakeholders were engaged, and these included those from the government (engaged by 68% of the projects), private sector (34%), academic and research institutions (74%), development aid agencies and research funders (33%), civil society and non-governmental organisations (33%), and the media (45%). Each of these key stakeholder categories were engaged but not all of them by all the project teams. Project teams tended to engage and partner with fewer stakeholders at a time. For instance, 54 of the projects (74%) engaged a maximum of 3 stakeholders while only 1 project in the Science Journalism strand engaged all the 6 identified stakeholders. The contributions of each of these collaborations varied by stakeholder, project team and strand. In addition, professional collaboration among organizations was high.

3.5. Peer learning workshops

During the span of the project, several convenings were held to showcase the project outputs and outcomes. For instance, on 23 and 24 October 2023, a reflections and foresight convening was held to celebrate and showcase the work of CARGF and the 73 grant recipients, and to provide other key stakeholder participants an opportunity to engage with grant-holders and their projects; to create a space for peer-learning, networking, and exploring avenues of collaboration among the meeting participants; and to engage participants in distilling the learnings from the CARGF process and for developing of forward-looking policy guidelines to contribute to strengthening the resilience, flexibility and adaptability of African science systems in initiating, designing, implementing, adjusting and evaluating rapid, coordinated, multilateral responses to future global or regional crises.

4. Project Outcomes

4.1. Contribution to the regional response to the COVID-19 pandemic

The thirty-five (35) projects that directly addressed this objective, developed high-level research results that were directly used on regional and continental science engagement in response to COVID-19 and potentially for use in future pandemics. This was achieved through several activities ranging from developing public health campaigns to educate communities about the virus, preventive measures, and on vaccination as well as the combating of misinformation and promoting evidence-based information to dispel myths and reduce vaccine hesitancy. Community leaders and civil society organizations were involved in public health campaigns and interventions at national and regional levels.

Several projects implemented tele-medicine programmes to provide remote healthcare consultations and advice to underserved areas and created digital health solutions for contact tracing, monitoring, and data collection to help control the spread of the virus. In some communities, the research projects created an atmosphere of trust for the design of credible messages tailored to the needs of the relevant groups in their project, especially students and health workers. A number of events (national, regional and continental) were organised to share experiences on the response to COVID-19 in Africa that would inform pandemic interventions and rehabilitate and reintegrate returnees. Training activities were conducted to develop the capacity of journalists to effectively report on COVID-19 and other infectious diseases.

The research teams used publishing houses and multimedia platforms to share their results on COVID-19. These included journal articles, news articles published in the national press and by other media houses, prevention and response guidelines, and made use of social media to maximise impact. Through the different interventions, the researchers and science engagement practitioners improved their ability to communicate their pandemic response efforts better, creating more opportunities for engagement and communication on the COVID-19 pandemic across the continent. Through implemented activities and immediate results during the life of the projects, significant contributions were made to the COVID-19 response in several African countries. Journalists and media personnel who participated in the trainings were empowered to accurately and skilfully further disseminate information to the public through their reporting/programmes.

4.2. Supporting knowledge generation and translation to inform COVID-19 responses

This objective was mostly addressed through forty-one (41) of the projects, and contributions cut across several dimensions, including sharing of information among scholars,

policymakers, practitioners, and the public. The work enhanced the consolidation of accurate and practical public health and policy information about the pandemic through the researchers' and science engagement practitioners' activities and engagement processes with the different stakeholders and the community at large.

The studies contributed to knowledge generation around prevention by fostering exchanges on COVID-19 communication between scientists and health workers. Some projects developed more affordable tools which could be developed further for diagnosing various diseases, models that support creating awareness of the perils of COVID-19 and other infectious diseases, and procedures that assist in the evaluation of the performance of rapid diagnostic tools used to screen for COVID-19, identification and evaluation of potential treatments and therapeutics for COVID-19, among other issues.

The engagement and collaboration of the different research teams with multiple academic and research institutions, private and public sectors, media platforms, funders and civil society organisations enhanced knowledge sharing with key audiences.

The knowledge generated and translated was shared through scientific publications, news articles, social media platforms, policy briefs and guideline notes for information management for decision-makers. Several regional events (physical and virtual) were organised to share information, developing the capacity of the researchers and science engagement practitioners as well as local capacity through the training of health workers and community leaders. These results helped in understanding the highly circulating variants and identifying theory-driven micro-, meso-, and macro-level factors of people's health behaviour.

4.3. Science engagement in response to the COVID-19 pandemic

The strengthening of the continent's science engagement in response to the pandemic was directly addressed by twenty-nine (29) projects. Most activities performed in response to this objective contributed to developing capacity and empowering researchers, science engagement practitioners, policymakers, and the public to collaboratively tackle the adverse effects of the pandemic. Capacity development, especially among science engagement practitioners, strengthened their ability, skills and knowledge to effectively connect science with policymakers and the community. This was crucial in assisting in conducting research and reporting on COVID-19 as well as news reporting on any other future pandemic.

Multi-disciplinary and transboundary collaborations and partnerships established provided an environment that was conducive to strengthening science engagement in response to the pandemic. Through the implementation of the initiative, the project teams showcased the

breadth of scientific expertise and ongoing research efforts on the continent and helped to reinforce the reality that individuals and communities will always have an important role in the control of the pandemic.

The participation of the grantees in the implementation of the initiative significantly boosted the researchers' and science engagement practitioners' experience and confidence to participate as well as engage in other internationally funded research projects – some projects used the grants as seed funding to leverage additional financial resources to complement the grants received.

The extent to which collaborations/partnerships were involved was measured by the number of projects that engaged each stakeholder category. The number of projects and the overall percentage (of the total number of projects) that engaged each stakeholder during the implementation process are presented in Figure 4.

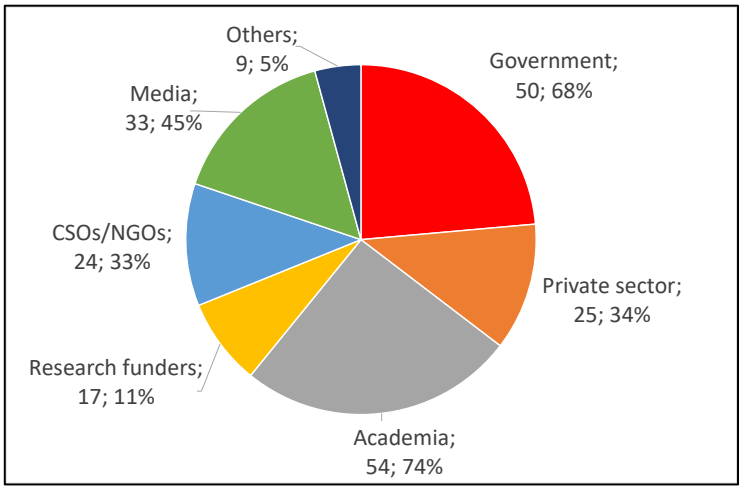

Figure 4: Extent of engagement for each stakeholder category

All projects engaged with at least one of the identified key stakeholders and fostered collaboration/partnership during the implementation process. The engagements varied from stakeholder to stakeholder and from strand to strand. The project teams tended to engage and collaborate with academic institutions and government institutions, which comprised 74% and 68% of the total funded projects, respectively.

4.4. Innovation and/or commercialisation potential

Eighty five percent (85%) of the funded projects have the potential to develop further and scale up practical solutions to address possible future pandemics, other challenges as well as provide potential sustainable entrepreneurial opportunities. Most of these have already put in

place sustainability plans to work on post-CARGF initiatives. These projects will be identified for further future engagement and follow-ups.

5. Gender Equality and Inclusion

Overall, the initiative attracted research and science engagement projects that were led by both male and female researchers and science engagement practitioners. Of the seventy-three (73) funded projects, 63% were led by male researchers and science engagement practitioners while the remaining 37% were led by females. These ratios had changed by mid-term as two of the projects changed Principal Investigators (PIs), with male PIs replacing female PIs.

A total of seven hundred and thirteen (713) researchers and science engagement practitioners were involved in the implementation of the seventy-three (73) projects with a balanced gender of 53.8% males and 46.1% females. The number of implementers in each strand mirrors the initial conditions on the call and was dominated by the projects from the Research strand. In the Research and the Science Advice strands, the male implementers numbered more than their female counterparts. Despite the PIs and the number of team members being male dominated in the Science Journalism strand, the male-to-female ratio of the implementers was even balanced with females having a slight edge over male researchers and science engagement practitioners.

The number of members of the projects varied considerably with most project team sizes having up to 10 members. The most common team size range was 6-10 members in a total of 37 projects. Based on the engagement with some of the project teams, it transpired that the relatively low numbers in a team were due to low budget allocated (per project) by the initiative.

The team sizes per strand reflected that most projects in the Research and Science Journalism strands were composed of relatively smaller teams (up to 10) while all the Science Advice strand project had upwards of 10 members per team.

6. Conclusion and recommendations

6.1. Conclusion

Against the original objectives, the CARGF initiative was largely successful. The initiative played a critical role in developing interventions and response efforts to tackle the COVID-19 pandemic at national, regional and global levels. The initiative enabled robust and timely response by public science and the realisation of wide-ranging and substantive social and economic impacts. Among others:

- Multi-disciplinary and transboundary collaborations: The initiative resulted in the establishment of multi-disciplinary and transboundary collaborations and partnerships that is conducive to strengthening collaborative programming. Through the implementation of the initiative, the project teams showcased the breadth of scientific expertise and ongoing research efforts on the continent and helped to reinforce the reality that individuals and communities have an important role in the control of the pandemic.
- Outputs: With regards knowledge outputs, the initiative resulted in several knowledge and skills development outputs including publications of 61 journal articles, 17 book chapters and a book; 11 PhD theses, 13 master's theses and 5 Honours projects. During the implementation of the project, 724 university students were involved at levels as well as the training of early career researchers (720), technical, and administrative staff (176), journalists (810), community health care workers (1639), and community leaders (85).
- Leveraging funding: The initiative was used as a baseline for leveraging additional funding, through partnerships. Some of the projects supported have managed to sustain project activities beyond the initiative contract period.
- Governance: Through the due diligence process, the initiative resulted in enhanced institutional governance structures and policies.
- Capacity development: The initiatives capacity development activities, especially of science engagement practitioners, strengthened their ability, skills and knowledge to effectively connect science with policymakers and the community.
- Knowledge generation and translation: The initiative contributed to knowledge generation in prevention by fostering communication on COVID-19 communication between scientists and health workers. Some projects developed more affordable tools which could be developed further for diagnosing various diseases, models that support creating awareness of the perils of COVID-19 and other infectious diseases, and procedures that assisted in the evaluation of the performance of rapid diagnostic tools in emergency situations.

6.2. Challenges

Several challenges were faced during the implementation of the initiative. These included: COVID-19 containment measures; reluctance of subjects to engage and provide accurate information; delays in transferring funds to start the work; lengthy ethical clearance approval processes; acquisition of research reagents and other project materials; limited access to relevant publications by investigators, among others. A suite of interventions will be required to minimise these challenges in the future as outlined in the recommendations below.

6.3. Recommendations

Recommendations for Science Granting Councils and other Funders:

- The NRF and the SGCs should work closely together to map a pathway to fully and effectively engage the Councils to plan for the implementation of similar initiatives in the future.
- SGCs working closely with other stakeholders can build resilient systems centred around key organisational in the research ecosystem to be able to respond quickly and effectively to crises situations. Examples include developing and building adaptive management-based approaches on effective and timely internal and external monitoring, communication, feedback, learning, and adjustment, for supporting multi-lateral programmes.
- At an organisational level, it is recommended that SGCs develop a comprehensive strategy document to guide regional responses to future emergencies. For instance, develop an outcome-oriented framework for a rapid call for a science-based response to a crisis should be designed and implemented.
- Promote the use of the centralised online platform for sharing outputs, information and experiences and enhance the visibility of the initiative.
- SGCs should ensure the grant-making processes are streamlined and designed in such a way as to be flexible when required. Streamlining could include: (i) Establishing and maintaining automated grant management systems across all SGCs; and (ii) Ensuring that as many prospective grant recipient institutions in each country (and potentially region) are pre-loaded onto the grant management system of the SGCs.
- Rapid, efficient, and effective implementation of a new funding programme under crisis conditions requires strong coordination and coherence among implementing partners and their key stakeholders. This requires clarity of the process and roles involved. In addition to the mapping exercise outlined above, the following are recommendations for how external coordination can be strengthened:
    - In multilateral research programme contexts (such as the CARGF), bring all participating SGCs on board from the fund conceptualisation stage (including co-creation of calls) to maximise buy-in, alignment, communication channels,

and coordination mechanisms for implementation, and to support SGCs' role in managing research at the national level in their respective countries.

  - Ensure that call documents are as comprehensive as possible, containing all relevant information as well as clear articulation of expectations of the different implementing partners and prospective grant applicants.
  - Establish mechanisms for coordinating resource allocation to avoid duplication and ensure efficient use of funds. This involves collaborating on funding priorities, grant distribution, and resource-sharing initiatives.

- Encourage the exchange of information, collaboration, and learning between organisations.
- Coordinate initiatives for capacity building within and between organisations. This could involve joint training programmes, knowledge exchange, and mentorship opportunities to strengthen the overall scientific community.
- SGCs should establish mechanisms for coordinating resource allocation when addressing regional/global challenges to avoid duplication and ensure efficient use of funds. This can involve collaborating on funding priorities, grant distribution, and resource-sharing initiatives
- Other specific recommendation for the SGCs include: (i) Encourage joint proposals that would include submission from SGCI participating and non-SGCI participating countries; (ii) Engage with and leverage existing initiatives within its ambit to identify where research management capacity strengthening is needed; (iii) Earmark capacity strengthening programmes within SGCs; (iii) Use the train-the-trainer approach to transfer research management skills acquired regarding research and grants management to research performers; (iv) Investigate different models of building capacities of research performers (e.g. supporting designated staff at grant recipient universities to interface with the SGCs); and (v) SGCs can advocate for the establishment of research support offices at universities in their respective countries.

Recommendations for Researchers and Science Engagement Practitioners:

- Leverage the initiatives partnership baseline, institutional and human resources to improve the uptake of outputs and expansion of projects.
- Reach out to other grantees (from different teams and strands) of like minds and explore areas of collaboration.
- Use the project grant as seed funding to leverage additional financial resources to increase the outputs and enhance sustainability potential of the project.
- Improve the researchers' and science engagement practitioners' accessibility to relevant publications (journal articles) by uploading project related outputs in open access platforms.

Annex material to this report will be uploaded on the online portal: https://africarxiv.ubuntunet.net/communities/b8e995e4-beed-4b01-881c-d24908c97b18