Open Science African Perspectives Through Strategic Partnerships & Its Impact on Democratizing Knowledge

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African Funding Landscape

In country funders

- Governments - SGCIs
- Universities and research institutions
- Supranational organizations in academia – AAS, RUFORUM, SFA, AAU
- Funded programs – eg, Academic Centers of excellence (WB),
Trends

1% GDP in STI & Higher Education

16 Countries

Courtesy of the SGCI
## Top 10 In-country funders

<table>
<thead>
<tr>
<th>Organization</th>
<th>Calls in 5 years</th>
</tr>
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<tbody>
<tr>
<td>African Institute for Mathematical Sciences (AIMS)</td>
<td>23</td>
</tr>
<tr>
<td>National Research Foundation (NRF)</td>
<td>21</td>
</tr>
<tr>
<td>University of Cape Town</td>
<td>16</td>
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<tr>
<td>University of the Witwatersrand</td>
<td>10</td>
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<tr>
<td>Rhodes University</td>
<td>9</td>
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<tr>
<td>Africa Women Innovation &amp; Entrepreneurship Forum (AWIEF)</td>
<td>8</td>
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<tr>
<td>Southern Africa Network for Biosciences (SANBio)</td>
<td>8</td>
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<tr>
<td>Africa Health Research Institute (AHRI)</td>
<td>7</td>
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<tr>
<td>South African-German Centre for Development Research (SA-GER CDR)</td>
<td>6</td>
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<tr>
<td>South African Astronomical Observatory (SAAO)</td>
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*Courtesy of Research Beeline*
# Top 10 In-country funders

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<th>Organization</th>
<th>Calls in 5 years</th>
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<tbody>
<tr>
<td>International Livestock Research Institute (ILRI)</td>
<td>63</td>
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<tr>
<td>African Academy of Science (AAS)</td>
<td>44</td>
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<tr>
<td>African Population and Health Research Center (APHRC)</td>
<td>21</td>
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<tr>
<td>African Economic Research Consortium (AERC)</td>
<td>17</td>
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<tr>
<td>British Institute in Eastern Africa (BIEA)</td>
<td>10</td>
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<tr>
<td>Alliance for a Green Revolution in Africa (AGRA)</td>
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<tr>
<td>U.S. Embassy in Kenya</td>
<td>6</td>
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<tr>
<td>BioInnovate Africa</td>
<td>5</td>
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<tr>
<td>Mawazo Institute</td>
<td>5</td>
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<tr>
<td>Kemri-Wellcome Trust</td>
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*Courtesy of Research Beeline*
Trends

African Research Output 2012-2023

1,160,159

OPEN ACCESS

590,830
50.9%

Courtesy of Dimensions.ai
### African Preprint Output 1978 - 2022

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<tbody>
<tr>
<td>Count</td>
<td>8,505</td>
<td>8,813</td>
<td>8,977</td>
<td>3,775</td>
<td>1,447</td>
<td>948</td>
<td>755</td>
<td>735</td>
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**Total Preprint Output:** 38,027

*Courtesy of Dimensions.ai*
Library & Information Literacy Excellence

Upgrade Libraries
Supporting libraries in transitioning to latest Open Science academic publishing technology using FAIR principles.

Adoption of Open Science

Education & Awareness
Educate, facilitate and create partnerships on Open Access to raise the profile of African research.

Journal Selection Strategy

Advance Scholarship
Smart strategies in mitigating predatory publishing. Adoption of use of preprints. Increase global credibility, indexing, ranking & impact on international communities of knowledge, commerce & public policy.

Research Excellence

Maximize Research
Improve the quality, quantity, visibility & impact of institutional research.

Higher Education Leadership Excellence

Increase Ranking
Assess, develop & Implement strategies to improve institutional quality, leading to higher global ranking.

Higher Education Excellence for Sustainable Economic Development

Strengthen Knowledge Economies
Integrate higher education with industry & public policy to increase economic growth & sustainable development.
Strategic Open Science partnerships & interventions

Dimensions

Countries:
- Kenya
- Ghana
- Malawi
- Uganda
- Zambia
- Sudan
- Namibia
- Nigeria
- Lesotho
- Senegal
- Democratic Republic of Congo
- Zimbabwe
- Tanzania
Strategic Open Science partnerships & interventions

PLOS ONE

The effect of data sources on the measurement of open access: A comparison of Dimensions and the Web of Science

Isabel Besson, Marc-André Simard, Zoé Aubin-Guérin, Cassidy R. Sugimoto, Vincent Larivière

Published: March 31, 2022 • https://doi.org/10.1371/journal.pone.0265545

Abstract

With the growing number of open access (OA) mandates, the accurate measurement of OA publishing is an important policy issue. Existing studies have provided estimates of the...
TCC Africa and PLOS are partners in our mission to build and increase Open Science Dialogue at Regional, National & Institutional Level.
Policy Dialogue

Regional Policy

EAST AFRICAN COMMUNITY
EAST AFRICAN SCIENCE AND TECHNOLOGY COMMISSION (EASTECO)

UbuntuNet Alliance
For Research & Education Networking
Policy Dialogue

Institutional Open Science Mandates

Regional Meetings
Tanzania, Egypt

Senate Meetings
Institutional Open Science Mandates

Senate Meetings

Regional Meetings
Select Concerns

“Insufficient engagement on Open Science to leadership in universities (especially when it comes to research, promotions, incentives, competitiveness, using preprints, and matters relating to Intellectual Property Rights as compared to Open Access (publishing and open books))”

“Little awareness on Open science among higher education institute administrators”

“Poor attitude towards Open Science/Open Access”

“The perception that “free” means low quality.”

“Lack of mindset change by open science contributors”
Select Recommendations

“Enact workable and implementable policies to promote open science”

“Investing in developing facilities and technology that promote open science”

“Count for promotion”

“Award and recognition for outstanding researchers”

“The copyright and common license initiatives should be well-developed and spelled out”
Repositories
TCC Africa and Figshare are partners in our mission to support African College and University Libraries to transition to the adoption of the latest Open Science technologies and FAIR principles, in order to increase the profile, locally and internationally, of African science, and its impact on the life of Africans.
Figshare is supporting capacity building by increasing research output, visibility & sovereignty.

- Figshare allows individual researchers to freely and FAIRly, upload, share, access, store and get credit for all their research outputs.
- Working with sister organizations, Altmetric and Dimensions, outputs in Figshare have visible bibliometric information including citations and alternative metrics.
- User-friendly metadata creation, encouraging Findable, Accessible, Interoperable and Reusable (FAIR) research outputs.
AfricArXiv is a community-led digital archive for African research, working towards building an African-owned open scholarly repository; a knowledge commons of African scholarly works.
Interventions

African Digital Research Repositories: Mapping the Landscape

Map includes organizational, governmental and international repositories.

It also maps the interactions between research repositories.

Improve the discoverability of African research and publications.
Conclusion

What are we proposing?

The future of African Science publishing must be more progressive by experimenting with different formats and contents toward a sensitive and inclusive approach. This means popularising region-specific solutions for achieving universal open access and open science via preprints, overlay journals, and novel forms of non-journal publication as quality research outputs, as well as embracing those open journal venues with progressive business models which provide support for local authors.

SGCIs influence the use of progressive academic publishing models and incentivization of Open Science outputs.

Increased Policy Dialogue, especially among HEIs leadership.