



UCT-SPARC Africa
Open Access Symposium 2019



What **role** can **Open Science** play in enabling **global knowledge exchange?**

presented on behalf of the AfricArXiv team and community by
Jo Havemann on December 06, 2019



info.africarxiv.org



Hello! 🙌

I am Justin Sègbédji Ahinon
Software Engineer and AfricArxiv co-founder



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African scientists launch their own preprint server

The free, online outlet is one of a growing number where academics on the continent can share their work

25 June 2018

Smriti Mallapaty




Physicists at the University of Namibia, Windhoek, Namibia

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Nature Index 2018 China
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Nature Index (June 25, 2018)

QUARTZ AFRICA

OPEN SCIENCE

A research platform for African scientists will take papers in local languages

By Kwesi Gyameri-Akoko & Commentary · June 27, 2018



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African languages will have a formal role in the scientific research community with the launch of a repository that encourages and accepts research in indigenous languages including Sesotho, Akan, Zulu, Igbo and more.

QUARTZ Africa (June 27, 2018)





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1 Hybridization in human evolution: insights from other organisms

2
3
4 Rebecca R. Ackermann^{1,2}, Michael L. Arnold³, Marcella D. Baiz⁴, James A. Cahill⁵, Liliana Cortés-Ortiz⁶, Ben J. Evans⁶, B. Rosemary Grant⁷, Peter R. Grant⁷, Benedikt Hallgrímsson⁸, Robyn A. Humphreys^{1,2}, Clifford J. Jolly⁹, Joanna Malukiewicz^{10,11}, Christopher J. Percival^{8,12}, Terrence B. Ritzman^{1,2,13,14}, Christian Roos¹⁵, Charles C. Roseman¹⁶, Lauren Schroeder¹⁷, Fred H. Smith¹⁸, Kerry A. Warren^{1,2}, Robert K. Wayne¹⁹, Dietmar Zinner²⁰

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9
10 *[Article In press in Evolutionary Anthropology]*

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Abstract

During the late Pleistocene, isolated lineages of hominins exchanged genes thus influencing genomic variation in humans in both the past and present. However, the dynamics of this genetic exchange and associated phenotypic consequences through time remain poorly understood. Gene exchange across divergent lineages can result in myriad outcomes ...

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Transforming Research Landscape in Africa using Open Access: The case of Ethiopia

AUTHORS

Solomon Tekle

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Transforming Research Landscape in Africa using Open Access: The case of Ethiopia

UCT-SPARC Africa
Open Access Symposium 2019
Cape Town, South Africa

Solomon Mekonnen(PhD)
National Open Access Coordinator
Addis Ababa University




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Abstract

The presentation will discuss Ethiopia's open access initiatives as a model to transform the research landscape in Africa mainly focusing on the national open access policy of Ethiopia.

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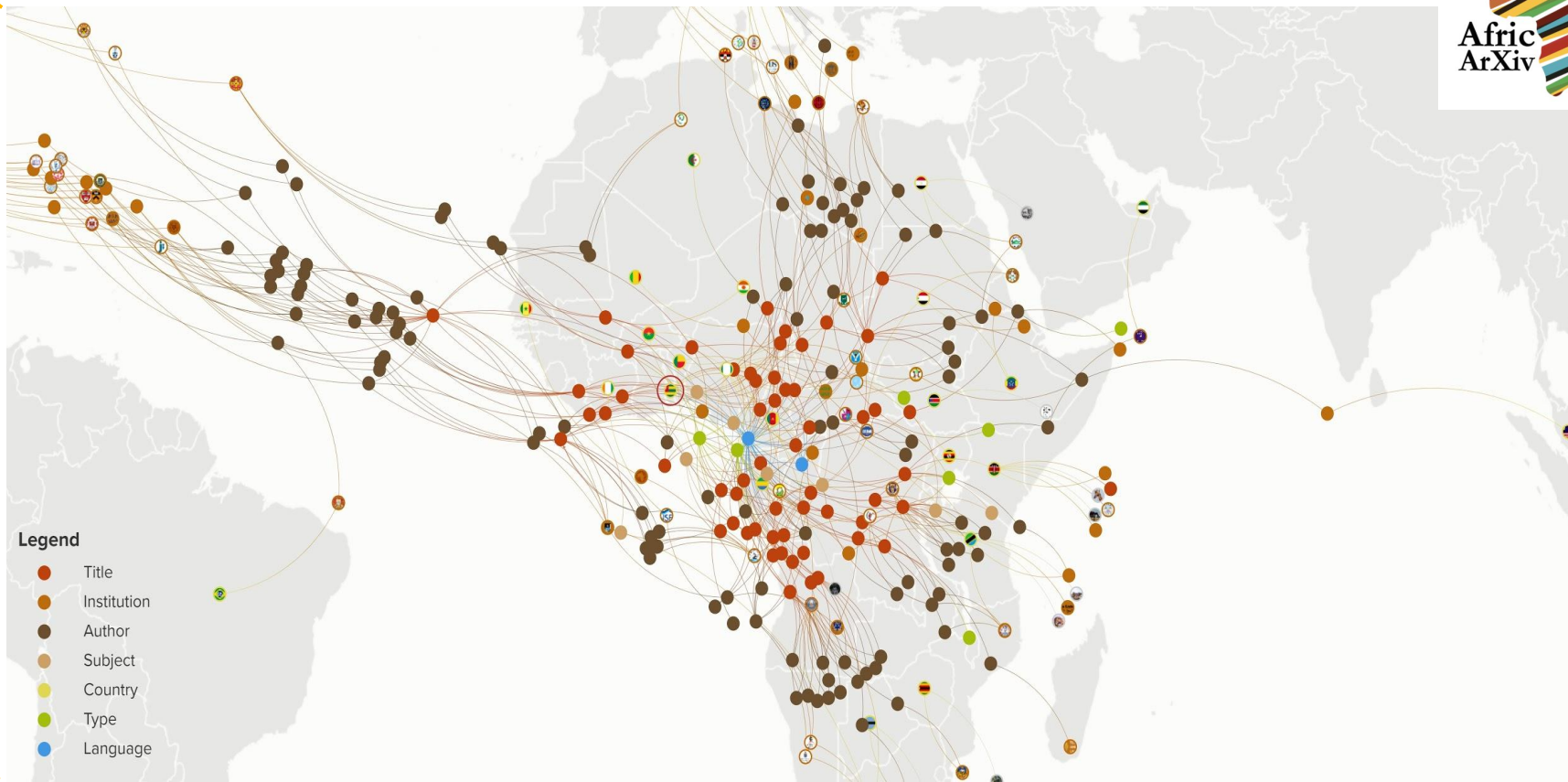
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African Principles for Open Access in Scholarly Communication

We, the undersigned, declare to adhere to the following Principles for Open Access in Scholarly Communication in and about Africa:

- 1) Academic Research and knowledge from and about Africa should be **freely available** to all who wish to access, use or reuse it while at the same time being **protected from misuse and misappropriation**.
- 2) African scientists and scientists working on African topics and/or territory will make their research achievements including underlying datasets available in a **digital Open Access repository or journal** and an explicit **Open Access license** is applied.
- 3) African research output should be made available in the principle common language of the global science community as well as in one or more **local African languages** – at least in summary.



1)

“**Academic Research and knowledge** from and about **Africa** should be **freely available** to all who wish **to access, use or reuse** it while at the same time being **protected from misuse and misappropriation.**”



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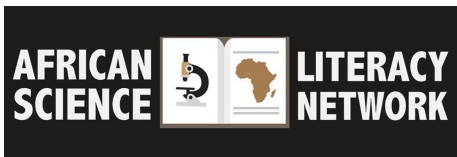
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The African Open Science Landscape

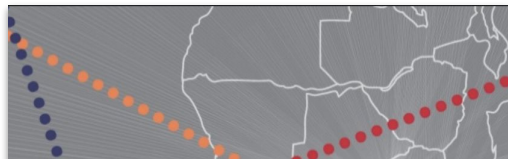


Science Communication Hub Nigeria

Engaging The Public Through Science



AFRICA
OPEN SCIENCE
HARDWARE



African Open Science Platform

African Digital Research
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International African Institute



AAS Open Research



With **AricArXiv**, we want to

promote the use of
local African
languages in
science

bridge the gap
between
anglophone and
francophone
research output

highlight the
relevance of
indigenous and
traditional
knowledge in a
research context



3)

"**African research output**
should be **made available**
in the principle common language
of the global science community
as well as in one or more
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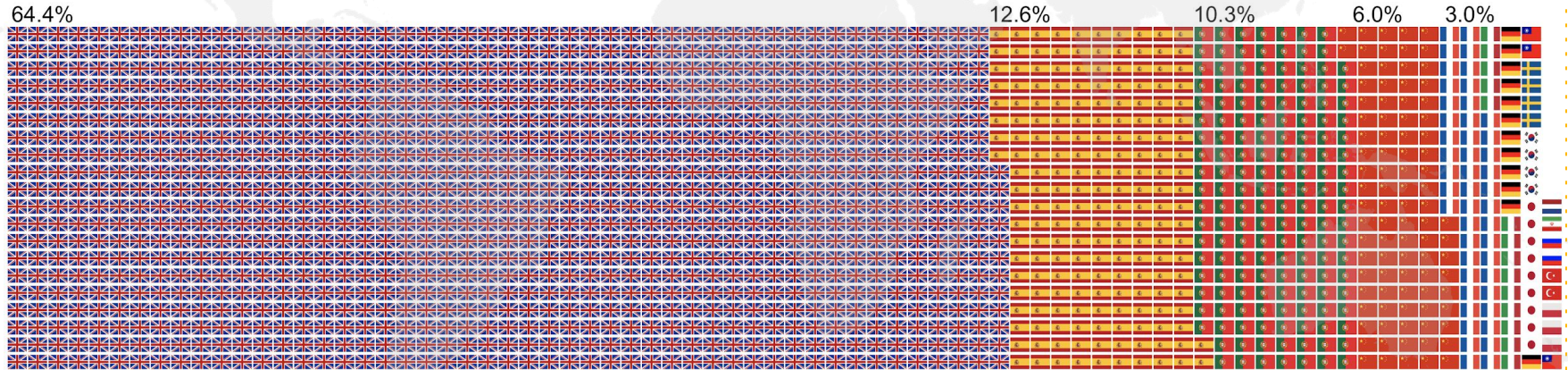


Breaking the **language barrier** for **Global Science in Africa**

- we need language diversity in science.
- we need a common language to connect.
- we suggest a balanced use of both using machine translations combined with manual corrections.

Languages Are Still a Major Barrier to Global Science

Google Scholar search on #biodiversity #conservation in 16 languages



1 square = 50 documents

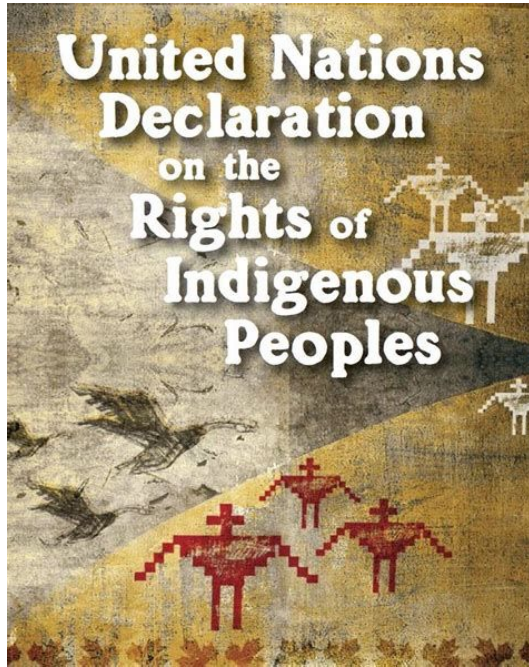
Amano T, González-Varo JP, Sutherland WJ (2016).
PLoS Biol 14(12): e2000933. doi.org/10.1371/journal.pbio.2000933



UN4Indigenous

4)

**“It is important
to take into consideration
in the discussions
indigenous and traditional knowledge
in its various forms.”**



Article 31 1. *Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.*

TIME

'We Know How to Keep the Balance of Nature'. Why Including Indigenous People Is Vital to Solving Climate Change



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Draft manuscript:

Proposing a viable pan-African
Open Science infrastructure

>> tinyurl.com/African-OS-infrastructure



Open Science infrastructure for Africa (Nov 2019) ☆

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Proposing a viable pan-African Open Science infrastructure

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Open Science in Africa (OSA) - workflow - ecosystem - OA articles



REF	Discovery	Analysis			Writing	Publication	Outreach			Assessment	umbrella service providers					
	Reference Management	Methodology	Data repositories	Data visualization	collaborative writing	self-archiving	journals (OA)	publishing platforms	book/monograph/edited collection	scholarly networks	PR & Citizen Science	communities	preprint level	journal article level		
Africa-specific	African Journals Online (AJOL)		https://africaopendata.org/			AfricArXiv	AJOL	http://www.scielo.org/za/	http://www.africanminds.co.za/		https://gisbahana.wordpress.com/	AfricaOSH				
	AfricArXiv		http://dataportal.opendataforafrica.org/			https://internationalafricaninstitute.org/repositories/	AAS Open Research			http://polliv.org	Visquare (Nigeria)					
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global, open source free of charge	Open Knowledge Maps	Zotero	Protocols.io	R-OpenSci	Gephi	Authorea	OSF preprints	DOAJ	PKP's Open Journal System	https://scholaried.org/		GOSH	PreReview	PaperBuzz	https://sos.io/	
	BASE Search	ReFigure		Re3Data	Overleaf	PeerJ		https://academicjournals.org/journal	Coko Foundation product suite	https://radicaloa.distuplvimedia.org.uk/directory/		badgets	PeerCommunityIn			
				Database					https://openpublishingawards.org/					hypothes.is		
				oceanprotocol.com					https://www.openlibhums.org/site/janewhy/	pubpub.org						
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	Web of Science															

>> <https://tinyurl.com/African-OS-workflow>

Open Science in Africa (OSA) - workflow - ecosystem - OA articles



REF	Discovery		Analysis			Writing		Publication			Outreach			Assessment		umbrella service providers
		Reference Management	Methodology	Data repositories	Data visualization	collaborative writing	self-archiving	journals (OA)	publishing platforms	book/monograph/edited collection	scholarly networks	PR & Citizen Science	communities	preprint level	journal article level	
Africa-specific	African Journals Online (AJOL)			https://africaopendata.org/			AfricArXiv	AJOL	http://www.scielo.org.za/	http://www.africanminds.co.za/		https://glabghana.wordpress.com/	AfricaOSH			
	AfricArXiv			http://dataportal.opendataforafrica.org/			https://internationalafricaninstitute.org/repositories	AAS Open Research				http://policy.org	Vilsquare (Nigeria)			
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global, open source free of charge	Open Knowledge Maps	Zotero	Protocols.io	R-OpenSci	Gephi	Authorea	OSF preprints	DOAJ	PKP's Open Journal System	https://scholaried.org/		ORCID	GOSH	PreReview	PaperBuzz	https://icos.io/
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>> <https://tinyurl.com/African-OS-workflow>

Open Science enables Global Knowledge Exchange



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