

## Responsible science communication in Africa: rethinking drivers of policy, Afrocentricity and public engagement

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**Elizabeth Rasekoala**

### Abstract

The EU-funded RETHINK Project has demonstrated the critical need for transformational pathways in how science communicators navigate the increasingly challenging landscape of the field, in an era of growing public distrust, the expansion of online ‘mis-information’ digital platforms, and the resulting disconnection between science communicators and the general public. This Commentary seeks to locate, contextualise, and interrogate the good practice outcomes and recommendations of the RETHINK Project within the African regional scenario, and within the contexts, challenges and opportunities that exist therein. To achieve this, the author argues, African science communicators must actively pursue a radical and explicitly transformational agenda of intellectual Afrocentricity, the decolonisation of their practices and programmes, and address the multiple gaps inherent across the policy, practice, research, resources, and capacity-building divides on the continent. The prospects for the delivery of this agenda are further elaborated in a transformative and re-defined — *SMART* Framework for Science Communication & Public Engagement in Africa.

### Keywords

Public engagement with science and technology; Science communication: theory and models; Social inclusion

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### Commentary introduction and the RETHINK project

The EU-funded RETHINK Project has demonstrated the critical need for transformational pathways in how science communicators navigate the increasingly challenging landscape of the field, in an era of growing public distrust, the expansion of online ‘mis-information’ digital platforms, and the resulting disconnection between science communicators and the general public.

In framing the trajectory of these transformational journeys that science communicators need to undertake, the RETHINK Project has highlighted key good practice elements, such as: enhanced race and gender inclusion in science

communication professionals and audiences; reflective practices, openness, and ‘respectful’ listening; and insightful knowledge of audiences, including collaboration and co-creation with them. These game-changing tools, methodologies and approaches have been recommended as being critical for science communicators in being able to navigate this challenging terrain, and to achieve heightened interaction and engagement with their diverse audiences, and thus, enhance their impact.

This Commentary seeks to locate the outcomes of the RETHINK Project within the African regional scenario, to interrogate what its outcomes mean within this space, and to analyse its transferable good practices within the contexts, challenges and opportunities that exist in the African region, given the historical and contemporary trajectory of the development of the science communication field across the continent.

**Responsible  
science  
communication in  
Africa: mind the  
gaps!**

Science education, research and communication across the African continent take place in highly constrained environments that have not been decolonised — that is, decoupled from the dominance of Eurocentric, western-derived concepts of excellence, language use, traditions and norms, in the policy, practice, epistemic and programme development arenas [See Asante, 2011; Okere, 2011; R’boul, 2021; Seehawer, 2018; Higgs et al., 2000].

In this contested scenario, African science communicators find themselves in addition, having to navigate the profound gaps that exist in the system on many levels, the gaps between policy and practice; the gaps between policy, practice and resources; challenges of capacity-building, particularly for young and emerging scientists; and the gaps between the scientific ‘elite’/holders of scientific knowledge and the general public.

The nature of diversity in multiple contexts within the continent, including at national levels contributes to this challenge. For example, in terms of language diversity, moving from Eurocentric to Afrocentric science communication practice poses many linguistic, cultural, and epistemic barriers. With four main ‘working’ languages (English, French, Portuguese, and Arabic) and hundreds of Indigenous African languages and dialects, spoken across the 54 countries on the African continent, bridging linguistic and cultural divides alone is a gargantuan task. Gender equality issues in science communication and the intersectionality of gender and race as it plays out across the Global North and regions of the Global South have been elaborated in a previous Commentary [Rasekoala, 2019], and will not be amplified here, except suffice to say that issues of gender inequity in science communication in Africa, are a pressing challenge.

Additional critical areas for consideration include:

- The need for better co-ordination, integration and amplification of science communication policies and initiatives, at national, sub-regional and regional levels across the African continent.
- Limited access to science communication programmes for rural and peri-urban communities. In a continent that is still very much largely rural in

spite of the rapid pace of urbanisation, there is a huge and growing divide in terms of access to science communication programmes between an urban elite and the majority rural populations.

- African scientists and researchers need to move from their ‘comfort zone’ within the dominant culture, ideology and socio-economic groups in their societies, and towards increasingly sharing their insights with marginalised communities instead.

Here, the notion of Afrocentricity as a paradigm of transformation is critical. Asante [2007, p. 16] defines Afrocentricity as:

*‘a consciousness, quality of thought, mode of analysis and an actionable perspective where Africans seek, from agency, to assert subject place within the context of African history’.*

Afrocentricity operates within African ways of knowing and existence and results in the implementation of principles, methods, concepts and ideas that are derived from the African cultural experience. Afrocentricity derives from and enhances African agency and exhorts Africans to be agents rather than spectators of their development. Afrocentricity postulates that the African experience must guide and inform all inquiry and that the knowledge generated must be liberating [Asante, 2007, p. 16].

However, the challenges of delivering on the imperatives of Afrocentricity in the realm of the scientific enterprise and its communication are profound and long-standing, even within the post-colonial era. It is therefore a measure of the road less travelled on the African continent that African science communicators only seem to be able to unshackle themselves from the dominance of western-derived approaches, and to wholly take up Afrocentric means, in science communication when there is a crisis. It seems to be during public health crises, when the disjuncture between Eurocentric approaches and the cultural norms, and practices of the general African public are in such profound conflict, that, African science communicators find the impetus and drive to take up Afrocentric science communication practices, tools and methodologies, as a critical means of engaging and enrolling African publics [Finlay et al., 2021].

This crisis-led approach to Afrocentric good practices and culturally-appropriate norms is one which gives much cause for concern, given the developmental challenges on the African continent, and its high disease burden [Rasekoala and African Gong, 2019]. These considerations have led to the ensuing recommendation that for African scientists and researchers, ‘routine’ engagement with society can also create a more critically engaged public, necessary for navigating science advice in a ‘post-normal science’ era [Oni, 2016].

During the SCICOM100 Conference — ‘Science Communication and Democratic South Africa’, held in South Africa, in November 2018 — the author in her Keynote Speech, ‘*Science Communication and Democracy in Africa: Challenges and Prospects for transformation in an age of Globalisation, Populism and Structural Inequalities*’, outlined a transformative and re-defined SMART Framework for Science Communication in Africa, in her presentation. This framework is fully elaborated here, as follows:

**S = Sustainability of science communication policy, practice, programme development, and capacity-building** with medium to long-term time frames, horizons, programmatic impact, vision, mission and definition. This is premised on the rationale of moving away from the short-term, ‘sheep-dip’ syndrome which is demoralising and patronising, as exemplified by the tendency to communicate science only during crises, such as health epidemics/pandemics with limited impact due to lack of public trust. The ‘sheep-dip’ metaphor is apt, given the seemingly short-term, once-off nature of these crises-led public engagement strategies and their somewhat superficial nature as they fail to tackle the underlying systemic challenges of the science and society divide. The alternative sustainable approach should be that of routine science engagement, which would also boost the credibility of science communicators so that, during crises, there is already a foundation of trust with which to engage, empower and upscale public knowledge, enrollment and understanding. This can only happen when science communication routinely features in public discourses, mind-sets, conversations and deliberations on the African continent.

Sustainability also implies institutionalisation and the imperative to institutionalise science communication knowledge, know-how, practices and platforms across the landscape of Science, Technology, Engineering and Mathematics (STEM) education, training and research, in African tertiary and research institutions. Sustainability also shows the way forward as that of moving away from the notion of delivering change through projects, but rather through processes, in a multi-level framework, which requires shared solidarity — in essence, ‘co-operation’ within the field and growing of the science communication agenda and capacity across the African continent. While international solidarity and co-operation is welcome (based on equitable partnerships with African stakeholders), what is particularly urgent here is to prioritise intra-African collaboration, solidarity and partnerships.

**M = Multi-disciplinarity** which enables and facilitates the co-designing and conceptualisation of programmes, knowledge generation and delivery of science communication initiatives by both social scientists and natural scientists in collaboration. There is a growing acknowledgement that multidisciplinary scientific endeavour is critical to enabling societies to overcome multiple development challenges [ISSC, 2012]. The imperative of multi-disciplinarity should thus, also apply in the ways that science is communicated — the what, the how, the where, the tools, the methodologies and so on. Integrating social science and co-framing and co-producing the science communication agenda will stimulate and support innovation, enhance inclusion and the decolonisation of knowledge, which are all highly critical for the navigation of an Afrocentric science communication framework. This translates to the creation of a transformative agenda centred on engendering, enabling and sustaining critical debate and dialogue in a multi-stakeholder, multi-disciplinary paradigm [Rasekoala, 2015].

**A = Arts and Culture inclusion** which are really the bedrock of Afrocentric consciousness, knowledge paradigms and socio-cultural inclusion. Inculcating the Arts would in addition, bring on board, creative, dynamic and interactive tools, methodologies and approaches that would enhance the discourses, platforms, reach and impact of science communication for societal empowerment and democratic citizenship, on the African continent.

**R = Respect for the Public(s).** This entails delivering science communication programmes in a mind-set that is respectful of the publics' and what they bring to the agenda, such as, their indigenous knowledge and ways of knowing and understanding natural phenomena [Seleti, 2013]. It also recognises that African science communicators must move away from the 'deficit modes' that treat the publics like 'empty vessels' which need to be filled by them. Implicit in the principle of respect for the publics is the dimension which directs African science communicators, to address critical engagement needs such as increased language diversity in science communication, especially with regard to local/Indigenous African languages. They also need to make way for new diverse and accessible narratives that speak to a wider knowledge base and resonate with the lived experiences of *all* in society across intersectional boundaries of ethnicity/tribe, race, gender, social class, age, etc.

**T = Transformation.** The conceptualisation and delivery of science communication within a social justice agenda, in order to deliver transformative social inclusion and engender the growth of cohesive democratic societies and active civic citizenship in Africa. This involves tackling the 'how to' challenges of unequal power relations and structural dominance. The transformation of science communication practices, programmes and capacities, would in addition, deliver the much needed 'public trust' dividend that is so lacking, and which greatly impedes the impact of the work that practitioners undertake. It further begs the question, how can science communicators be credible to and trusted by the public(s) in pursuit of transformed democratic citizenship, societal empowerment and the 'common good', when as a field they do not exemplify, practice or represent what they claim to offer to the public?

The above re-defined SMART Framework for Science Communication in Africa does clearly have some points of alignments with the good practice recommendations of the EU-funded RETHINK Project. However, given that the overall objective of the RETHINK Project is to contribute to making the European science communication ecosystem more open, inclusive, reflexive and adaptive, direct correlations or otherwise, cannot and should not be made between its outcomes and the above SMART Framework for Africa, in this short Commentary. What would be helpful instead is to engender a process of trans-cultural learning and dialogue, rooted in insightful contextual-analysis, of both the European and African scenarios. There is a cogent rationale for this approach, given the increasingly multi-cultural and multi-racial diversity of European countries — the legacy of the historical and contemporary connections between Europeans and Africans (and other peoples from regions of the Global South), and the intergenerational nature of the African Diasporas' lived presence in Europe. How can these historical and contemporary connections enable a radically empowered 21<sup>st</sup> century alignment of transformed science communication on both continents, devoid of decolonised and 'globalised' contexts, concepts, values and practices?

## Conclusion

The outcomes and good practice recommendations of the EU-funded RETHINK Project provide very useful signposts for the transformation of the science communication field, its professional cadre and its diverse audiences.

Nonetheless, it is critically important that its findings are interrogated, framed and situated through empowering analysis and discourses, within the contexts, realities and divergent situations that pertain across the Global South, on their own merit, in order to avoid falling into the trap of simply yet again, subjecting the processes within these regions, to Eurocentric narratives, perspectives and its 'globalised' world views.

This Commentary focusing on the African regional scenario posits the recommendations of the RETHINK Project within a holistically decolonised and Afrocentric transformed science communication landscape across the continent, in line with strategies, methodologies, and approaches that radically foreground the agency, cultural sensitivities, Indigenous knowledge and perspectives of African science communicators and African public(s).

It is hoped that this Commentary and the others in the series, in relation to the RETHINK Project will engender a much more heightened rethink and understanding of what inclusive and transformed science communication really means across both the Global North and South regions of the world. This is critical, given this era in which challenges of diversity, equity and inclusion abound for the field, in terms of the make up of its professional cadre, practices and audiences, and its inherent privileging of Eurocentric narratives, in the face of growing contestations of divergent 'globalised' world views.

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## Author

Dr. Elizabeth Rasekoala is the President of African Gong — The Pan African Network for the Popularization of Science and Technology and Science Communication (<https://www.africangong.org>). She has advocated, researched, presented and written widely on public innovation and transformative development through advancing diversity, sociocultural inclusion, race and gender equality issues in science communication and STEM education. Dr. Rasekoala is the first African female scientist to receive an International Award for Science Communication, having been honoured as the 2019 Recipient of the International NAT AWARD for Science Communication, conferred by the Natural Science Museum of Barcelona. E-mail: [lizrasekoala@hotmail.com](mailto:lizrasekoala@hotmail.com). Twitter: @GongAfrican

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