

EDITORIAL

Bridging the science-society-policy interface for transformational knowledge translation in Africa

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Abstract

Science generates solutions for the benefit of the society: creating new knowledge, improving education, and increasing the quality of lives. It is therefore important that African scientists focus on generating inputs for policy and institutional innovations as well as technology-based innovations to catalyse, support, and accelerate systems and systemic transformations. Also, Government decisions and legislations should ideally be guided by latest scientific knowledge. However, science culture; how a society understands and uses scientific knowledge is still at its infancy in most part of Africa.

A country's science culture determines the scope of impact that the scientific enterprise can have in terms of improving lives and advancing development. A study in this edition titled "*approaches to monitoring and evaluation (M&E) of knowledge translation platforms in low- and middle-income Countries*" reported that generally, translating knowledge from research to practice takes a very long time.

To this end, science communities ought to commit to enhanced collaboration among different disciplines of sciences in particular social sciences, natural sciences, and health-related sciences. Also, public understanding and engagement with science, and citizen participation is essential for research evidence uptake. Scientists must endeavour to make their research relevant and comprehensible to society (citizens and policymakers).

Keywords: *Science-policy interface, knowledge translation, systemic transformation, evidence use in policy*

Introduction

Science-policy-society interactions continue to be conceptualized as a linear process. The assumption is that science provides clear, relevant, credible, legitimate, and actionable knowledge on which decision makers will automatically pursue decisions and/or adopted by the populace.

Initiatives exist on the African continent to improve the use of scientific and other knowledge forms in policy decisions. However, many of such initiatives are facing challenges in terms of:

- ***Effective communication:*** Evidence use requires that there should be an alignment of the expectations of evidence creators and evidence users. Science needs champions, such as science journalists, to bridge the gap between scientists and evidence users. However, such a champion must be skilled and trained enough to avoid miscommunication and outrightly false information, which would be more damaging. The greatest concern with digital media is the unchecked proliferation of false information masquerading as science.
- ***Mobilization of diverse knowledge forms:*** this requires the connection between indigenous knowledge, academic research or creative works and organizations, people, and government to improve systems and inform policy change. It involves a process of relationship building and could be initiated either by a researcher or the MDA for whom the research will make a difference. For example, the article *on coconut-based agroecosystem for carbon sequestration* which concluded that carbon sequestration into coconut organic matter is a promising solution that will help to reduce the current increase in carbon dioxide present in the atmosphere will be beneficial to the Ministry of the Environment which might be required to collaborate with the Ministry of Agriculture, among others to derive the benefits of such a research output.
- ***In country Implementation of research findings:*** Knowledge translation requires that a structure exists to function effectively. Countries that have been seen to develop rapidly are those that have prioritized significant investments in scientific research, development, and implementation. Establishment of knowledge translation units within Government ministries, Department, Agencies (MDAs) and other policymaking entities is necessary to mainstream the use of scientific evidence in policy and practice.

Challenges and Opportunities at the Science-Society-Policy Interface in Africa

The African continent faces several unique challenges that continue to affect its growth and development. Poverty, high disease burden, environmental sustainability, food security, adverse weather events, and insurgency are pressing issues facing the continent.

In Africa, over the past two decades, several players, especially science academies, have been playing the role of providing credible science advice to society. Other actors are non-profit think tanks, non-governmental organizations (NGOs), and civil society organizations (CSOs). However, African decision makers have not fully embraced the potential role of science in terms of:

- How the society understands science-related issues and concepts (science literacy)
- How the society can effectively use scientific knowledge (science appropriation)
- The need to establish structures and processes to promote the role of science to the public (science promotion)

The lack of clear connections between knowledge creation and knowledge utilization is a multi-faceted and self-reinforcing problem. African scientists usually focus on scientific

publications usually failing to adequately communicate the importance of their research to the populace and other stakeholders (policy makers, industry, etc.). Also, the quality of research output generated on the continent and the kind of research questions that African researchers seek to address are usually not based on issues significant to the evidence consumers, i.e., policymakers and the public. Misalignment, mistrust and misunderstanding between scientists, policymakers, and society have become the norm. Other challenges include:

- Inadequate national and regional research funding in most parts of Africa, which makes developmental research difficult.
- Limited access to context specific and credible knowledge database and lack of knowledge sharing regionally.
- Lack of capacity and structure to analyse policy recommendations for implementation on the part of policy makers.

The Evidence Use in Environmental Policymaking in Nigeria (EUEPiN) Project (<https://euepin.unilag.edu.ng/>) identified secondment of staff across academia-government as a means of identifying gaps, opportunities and ensuring short to long term potential outcomes of “town-gown “collaboration. Networks across academies, professional societies, involvement of mainstream and social media were also acknowledged as being important in mediating evidence use in policy making.

Evidence synthesis, translation and utilization in decision/policy making must be a continuous initiative. Availability of open access digital platforms and institutionalized structure like the establishment of knowledge translation unit in government MDAs and funding mechanisms to promote knowledge translation will ensure sustainability.

Conclusion

The science-policy-society interface in Africa is very complex, with diverse systems, activities, and actors which come into play at every step. It is important that science-policy-society interfaces are managed as collaborative, non-linear processes.

Scientists, decision makers, and representatives of the general public should be engaged in iterative processes to determine the required information and evidence relevant in every given situation. While this non-linear approach could improve outcome implementation and behavioural change it also creates a space for debate over conflicting beliefs, values, and interests. African scientists need to develop innovative ways of engaging stakeholders to be sure to:

- Engage in societal need driven and credible research.
- Ensure adoption of outcome by the relevant community.
- Collaborate for Policy outcomes.

The media has a role to play in drawing attention to available evidence for policymaking, while NGOs and CSOs could serve as links between evidence producers and evidence users. Structures, processes, and synergies between stakeholders need to be in place for science advice to be effective in Africa. Although capacity building workshops is

indicated to enhance interaction between researchers and policy makers, social events might also be an efficient way of creating avenue for interaction and developing relationship between stakeholders.

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