

National Science Awards as Catalysts for Research Capacity in Sub-Saharan Africa: Lessons from Angola

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Dear Editor,

Angola's National Science and Innovation Prize, now in its second edition, offers a timely case study for strengthening research ecosystems in resource-constrained African settings. While science policy frameworks across Sub-Saharan Africa increasingly emphasise innovation systems, translating policy into operational outcomes remains challenging [1,2]. National recognition mechanisms, when embedded within broader capacity-building strategies, could address critical bottlenecks, such as researcher retention, visibility of scientific excellence, and alignment of research with sustainable development priorities.

The civil war that ended in 2002 devastated higher education infrastructure and research capacity [3]. Two decades later, Angola's research output remains modest compared to regional peers, with persistent gaps in laboratory infrastructure, funding mechanisms, and international collaboration networks [4]. Against this scenery, the Presidential Decree establishing the National Science Prize, which represents more than symbolic recognition, signals institutional commitment to evidence-based development and human capital investment in science, technology, engineering, and mathematics (STEM).

The Prize's design incorporates lessons from successful African science policy interventions. By recognising contributions across multiple knowledge domains, from sustainable natural resource management to clinical diagnostics, it aligns with calls for context-responsive innovation that addresses local challenges [5]. Dedicated categories for women and early-career researchers directly target documented inequities in African STEM participation, where women and first-generation scholars remain underrepresented [6,7]. This approach mirrors broader continental

efforts to democratize science and broaden participation beyond traditional elites.

The Angolan Ministry of Higher Education, Science, Technology and Innovation (MESCTI), the Fund for Scientific and Technological Development (FUNDECIT), and the Scientific and Technological Development Project (PDCT) provide complementary support, financial awards, infrastructure access, and professional development opportunities. This bundling addresses a key insight from African innovation research since isolated interventions rarely succeed without systemic capacity building [8]. For Angolan researchers navigating limited resources and equipment maintenance challenges, integrated support could mean the difference between sustained productivity and brain drain. Early evidence suggests impact beyond individual recognition. Awardees report enhanced confidence, expanded collaboration opportunities, and increased research mobility, outcomes consistent with literature on scientific recognition and career advancement. For families and institutions, visible celebration of scientific achievement might shift cultural perceptions of STEM careers, potentially strengthening the talent pipeline. However, sustained impact requires longitudinal evaluation and continued investment in research infrastructure, open access publishing, and regional collaboration networks [9,10]. As the continent seeks to implement the African Union's Science, Technology and Innovation Strategy for Africa and Agenda 2063, interventions at the national level that combine recognition, capacity building and systemic support offer scalable models. The Prize demonstrates how middle-income countries emerging from conflict can strategically invest in science, not as a luxury, but as a foundation for diversified, knowledge-based economies capable of addressing climate change, health security and the Sustainable Development Goals.

Looking to the future, three priorities deserve attention, such as (1) rigorous impact assessment to document the effects on researcher retention, productivity, and collaboration; (2) integration with regional science funding councils to expand resources and reduce fragmentation; and (3) expansion of support beyond awards, including housing, transportation, and laboratory infrastructure, recognizing that scientific excellence requires both recognition and favorable conditions. Angola's National Science Prize, embedded in a coherent capacity-building strategy, offers a promising path for African nations seeking to transform science policy rhetoric into operational reality.

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