STRATEGIC PATHWAYS FOR TRANSFORMING THE RESEARCH FOR DEVELOPMENT ECOSYSTEM IN WEST AND CENTRAL AFRICA

African Technology Policy Studies Network (ATPS)
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The African Technology Policy Studies Network (ATPS) is a transdisciplinary network of researchers, policymakers, private sector actors and the civil society promoting the generation, dissemination, use and mastery of Science, Technology and Innovations (STI) for African development, environmental sustainability and global inclusion. In collaboration with like-minded institutions, ATPS provides platforms for regional and international research and knowledge sharing in order to build Africa's capabilities in STI policy research, policymaking and implementation for sustainable development.

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About the RISE-WECA Project

Africa's research for development (R4D) landscape is very dynamic, with member nations putting up strategic reforms to ensure a competitive environment. Although with visible transformative potentials, the R4D landscape of West and Central Africa faces critical and unprecedented challenges. The traditional research approaches in these regions have often failed to address the complex, interconnected challenges ranging from systemic inequalities and knowledge production disparities to emerging technological and environmental disruptions. The traditional approaches have therefore fallen short of delivering the comprehensive and sustainable transformative change required to address the developmental challenges faced by the regions. These challenges are particularly acute, necessitating a radical reimagining of how research initiatives are conceptualized, designed, and implemented in order to genuinely address complex societal problems. The R4D ecosystem, therefore, requires that the long-standing unfavorable research approach and systemic inequalities be dismantled, and that a truly equitable, connected, and capable research partnership that is appropriately regulated be created to drive transformative development in the region.

With support from the International Development Research Centre (IDRC), the RISE-WECA project prioritized critical dimensions that have been systematically overlooked, including putting indigenous knowledge at the centre, amplifying grassroots innovations, and creating research partnerships that genuinely reflect the complex realities of the Central and West African communities. Drawing on the ATPS's extensive networks and proven track record of innovative research mobilization, the project brings a unique, contextually grounded perspective to IDRC's transformative R4D ecosystem initiative.

We propose a strategic pathway to reimagine how knowledge is produced, validated, and leveraged to drive meaningful societal change in West and Central Africa. The interest focuses on challenging existing research paradigms, placing local knowledge at the centre, and co- creating collaborative platforms that transcend traditional disciplinary and institutional boundaries. By carefully mapping the research landscape of the region, facilitating strategic dialogues, and surfacing emerging innovations, we aim to co-create a vision for research that is genuinely responsive, equitable, open, capable, connected, and robustly regulated

to address the multifaceted development challenges plaguing the region. This does not only seek to improve existing systems, but also will fundamentally reimagine how knowledge is produced, shared, and utilized to drive impactful societal change and transformation.

About the African Technology Policy Studies Network (ATPS)

The African Technology Policy Studies Network (ATPS) is a transdisciplinary network of researchers, policymakers, private sector actors, and civil society actors that promote the generation, dissemination, use, and mastery of Science, Technology, and Innovation (STI) for African development, environmental sustainability, and global inclusion. The ATPS has over 5,000 members and 5,000 stakeholders across more than 51 countries on 5 continents, with institutional partnerships worldwide. We implement our programs through members in national chapters established in 33 countries (29 in Africa and 4 Diaspora chapters in Australia, the United States of America, Switzerland, and the United Kingdom). In collaboration with like- minded institutions, the ATPS provides platforms for regional and international research and knowledge sharing to build Africa's capabilities in STI policy research, policymaking, and implementation for sustainable development.

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Key Messages

- Across West and Central Africa, research-for-development (R4D) systems are characterized by weak coordination, overlapping mandates, limited regulatory enforcement, and heavy donor dependence. Although Science, Technology, and Innovation (STI) policies exist in many countries, low and unpredictable domestic financing continues to undermine sustainability and policy impact.

- Generally, West African countries have shown comparatively stronger institutional maturity and operational funding mechanisms. Such funding mechanisms include Cote d'Ivoire's Fonds National pour la Science, la Technologie et l'Innovation (F0NSTI), Ghana's National Research Fund, Nigeria's Tertiary Education Trust Fund (TETFund), among others. In contrast, Central Africa, particularly the Democratic Republic of the Congo, remains in a foundational rebuilding phase marked by governance fragmentation and project-based innovations.

- Isolated capacity-building initiatives are proving insufficient to address structural weaknesses in research ecosystems. Coordinated governance reform, institutional alignment, and significant, predictable domestic financing are required to anchor research systems nationally to enhance long-term impact.

- Embedding equitable, open, capable, connected, and regulated research principles offers a coherent structure for strengthening governance and accountability. These pillars help reposition research as a public good aligned with national development priorities rather than narrow academic outputs.

- Sustained regional dialogue and peer learning reduce institutional isolation and promote harmonization of good practices. Institutionalizing Gender Equality and Social Inclusion (GESI), youth participation, civil society engagement, and university- industry linkages strengthen legitimacy and societal relevance.

1. Introduction

West and Central Africa's research ecosystems share a common trajectory shaped by the legacies of colonial-era knowledge structures, post-independence institution building, and the institutional deterioration that accompanied the Structural Adjustment Programmes of the 1980s and 1990s. Since independence, both sub-regions have invested in national universities and public research institutions as instruments of development. Central African countries established institutions such as the University of Kinshasa and Marien Ngouabi University, modelled largely on French and Belgian academic traditions (Universite Marien Ngouabi, 2020), while West African countries, including Ghana, Nigeria, Senegal, and Cote d'Ivoire, built flagship institutions with comparatively more diversified funding and stronger international linkages. Dedicated national research funding agencies emerged only from the 1970s onward, in Ghana (1979), Senegal (1983), and Cameroon (1984), reflecting t he relatively recent institutionalization of organized research across the region (Gaillard et al., 2015).

The findings of this study reveal a region in transition, but at markedly uneven stages of institutional readiness. West African countries, particularly Cote d'Ivoire, Ghana, Nigeria, and Senegal, demonstrate greater policy coherence, with institutionalized funding mechanisms such as FONSTI and PASRES in Cote d'Ivoire, MEST in Ghana, TETFund in Nigeria, and MESRI in Senegal signalling proactive alignment between research policy and national development priorities. Central Africa, while showing pockets of promising innovation, including the DRC's Annual Scientific Engineering Conclave and digital platforms such as the Politoscope and the Peace Observatory (World Bank, 2020; Ministry of Scientific Research and Technological Innovation [SRTI], 2024), remains at a foundational stage, with fragmented governance, weak regulatory enforcement, and heavy reliance on external financing. Across both sub-regions, however, common threads of aspiration are visible: growing civil society engagement, expanding innovation hubs, increasing youth participation, and a shared commitment to more inclusive and locally anchored research.

This brief is intended for policymakers, research funders, regional institutions, and development partners invested in strengthening Africa's knowledge infrastructure. It translates key findings from the Reimagining the Research for Development Landscape of West and Central Africa for Equitable and Transformative Impact (RISE-WECA) project into targeted recommendations to

accelerate transformation, both in countries consolidating institutional progress and in those still building foundational capacity. The evidence makes a clear case: the future of equitable, impactful research in West and Central Africa depends on deliberate policy action, sustained domestic investment, and coordinated regional partnerships.

2. Rationale for Transforming the Research for Development Ecosystem in West and Central Africa

Research systems in West and Central Africa have long operated below their transformative potential. Since independence, both sub-regions have invested in universities and public research institutions as engines of national development, with dedicated research councils emerging only from the late 1970s onward, in Ghana (1979), Senegal (1983), and Cameroon (1984) (Gaillard et al., 2015). However, the Structural Adjustment Programmes of the 1980s and 1990s inflicted severe damage on these nascent systems, collapsing public research funding, decaying infrastructure, and weakening governance, particularly in Central Africa. Today, the consequences of that period persist in the form of chronic underfunding, donor dependency, and weak institutional autonomy. In the DRC, for instance, foundational elements needed to leverage digital applications across key development sectors such as health, education, and agriculture remain either absent or critically underdeveloped (World Bank, 2020), while across both sub-regions, externally driven research agendas continue to undermine local ownership and the relevance of knowledge production to national development priorities.

Compounding these resource constraints are deep-seated governance failures and structural inequities that limit who can participate in and benefit from research. Governance dysfunction, manifested in overlapping ministerial mandates, politicized appointments, and poorly enforced Science, Technology, and Innovation (STI) policies, is the most consistently cited barrier to transformation across the region. In the DRC, ministries operate in silos and research governance is frequently driven by political rather than merit-based criteria (SRTI, 2024); in Cameroon and the Republic of Congo, weak regulatory coordination produces environments in which even well-designed policies fail at implementation. Meanwhile, women, youth, civil society, and marginalised communities remain structurally excluded from formal research governance in both sub-regions.

Despite these challenges, the RISE-WECA study identifies a region in active, but uneven transition, and a genuine window for policy-driven transformation. 0pen science innovations such as the DRC's Politoscope and Peace 0bservatory (SRTI, 2024), growing innovation hubs like CcHub in Nigeria and 0range Fab CI in

Cote d'Ivoire, expanding regional platforms including EC0WAS, PASET, and the African Research Universities Alliance, and the emergence of institutionalized transformation catalysts across both sub-regions all signal a continent- wide shift toward more inclusive, connected, and locally anchored research ecosystems.

West Africa is better positioned to consolidate and deepen these gains; Central Africa must urgently prioritise institutionalizing its fragmented innovations into coherent national frameworks. In both cases, the cost of inaction, in foregone knowledge, missed development opportunities, and deepening inequity, is rising. This policy brief sets out targeted recommendations to accelerate transformation across both sub- regions, grounded in the comparative evidence of the RISE-WECA project.

3. Methodology

This policy brief has been developed based on a rigorous mixed-methods research process conducted across eight (8) countries in West and Central Africa, including Cameroon, Cote d'Ivoire, the Democratic Republic of Congo, Ghana, Nigeria, the Republic of Congo, Senegal, and Sierra Leone. A research landscape study was first conducted using desk reviews, online surveys, key informant interviews, and focus group discussions with stakeholders from government, research institutions, civil society, the private sector, and beneficiary communities. This was complemented by co-creation and validation workshops structured around the five (5) pillars of transformative research (equitable, open, capable, connected, and regulated) using the Three Horizons Framework to analyse current systems, emerging innovations, and the future visions and long-term transformation pathways. A wider stakeholder consultative workshop was held to broaden ownership and regional alignment of findings.

4. Major Findings

4.1 Power and Inf uence of the Research Ecosystem Actors

Government ministries hold the highest power and influence because they set national research agendas, oversee STI policies, and coordinate funding flows. However, effectiveness varies widely. West Africa demonstrates stronger coordination. Ghana's Ministry of Environment, Science, Technology and Innovation (MESTI) and the Ghana Tertiary Education Commission (GTEC) effectively link policy, universities, and development partners, while Senegal's MESRI provides structured national support for research and innovation. Nigeria shows mixed performance, where multiple ministries create overlapping mandates that dilute state influence. Conversely, in Central Africa, institutions such as the DRC Ministry of Scientific Research and Technological Innovation illustrate how weak enforcement, siloed operations, and politicized governance reduce the impact of policies despite formal authority.

Universities, research centres, and think tanks serve as the ecosystem's knowledge engines, but their influence depends on how well they are embedded in national governance systems. In West Africa, universities such as the University of Ghana, Kwame Nkrumah University of Science and Technology (KNUST), the University of Ibadan, and the University of Lagos play stronger policy roles due to diversified funding and closer government engagement. Similarly, Cote d'Ivoire's Felix Houphouet-Boigny National Polytechnic Institute (INP-HB) and the Swiss Centre for Scientific Research in Cote d'Ivoire (CSRS), and Senegal's Universite Cheikh Anta Diop de Dakar (UCAD), demonstrate greater integration into national and global research systems. In Central Africa, institutions such as the University of Kinshasa (UNIKIN) and Marien Ngouabi University conduct research and maintain international partnerships with organizations such as UNESCO and foreign universities, yet remain domestically underfunded and isolated.

Donors and development partners are among the most influential operational actors. Donor engagement in West Africa tends to align more closely with national priorities; for example, development partners in Ghana received the highest influence rating (4.7/5) due to coordinated collaboration with government institutions. In Sierra Leone, UNESCO and Irish Aid play catalytic roles in rebuilding research systems aligned with post-Ebola national recovery strategies.

In fragile systems like the DRC, organizations such as USAID, UNICEF, and the European Union often finance and shape research priorities, sometimes leading to externally driven agendas.

Civil society organizations (CSOs) contribute significantly to equity, transparency, and grassroots inclusion. West Africa shows stronger institutionalization. Ghanaian think tanks such as IMANI Centre for Policy and Education (IMANI) and the African Center for Economic Transformation (ACET) actively influence policy formulation, while Nigerian CSOs are increasingly shaping discussions on gender equity and research ethics. In Central Africa, organizations such as the Network of Human Rights and Civic Education Organizations of Christian Inspiration (RODHECIC) and the Peace Without Borders Consortium promote community-based research and participatory data collection but lack access to formal policymaking spaces.

The private sector remains an underutilized yet promising actor. West Africa demonstrates stronger innovation linkages through platforms such as Nigeria's CcHub (Co-Creation Hub), which connects research with digital entrepreneurship; Côte d'Ivoire's Orange Fab CI; and Ghana's Impact Investing Ghana, which links research outputs to investment opportunities. On the other hand, private engagement in Central Africa is limited and largely project-based, illustrated by isolated initiatives such as Congo Agriculture Partners. Nonetheless, institutionalized public-private research partnerships remain weak across both sub-regions. Media actors and knowledge brokers currently exert limited formal influence but represent an important untapped resource. Ghana and Nigeria show more advanced experimentation with science communication and public engagement, though media-research collaboration remains insufficiently institutionalized. In the DRC, outlets such as Top Congo FM help disseminate research findings but lack specialized scientific communication capacity.

4.2 Ideas and Innovations Enabling Ecosystem Transformation

The research landscape study identifies a range of ideas and innovations driving transformation across West and Central Africa, organised around the five (5) pillars of transformative research - Equitable, Open, Capable, Connected, and Regulated - revealing both shared aspirations and significant structural differences between the two (2) sub-regions in the scope, institutional maturity, and infrastructure underpinning their efforts:

a) **Equitability:** Equity is increasingly recognized as central to research transformation, particularly in expanding participation among women,

youth, persons with disabilities, and marginalized communities. West Africa demonstrates deeper institutionalization of equitable research practices. Senegal employs participatory research approaches that engage farmers and pastoralists in co- creating agricultural knowledge, while Côte d'Ivoire leverages youth and women's networks to disseminate knowledge at the grassroots. Ghana's policy-engaged civil society organizations further embed equity into research governance and evidence generation. In Central Africa, equity initiatives are largely donor-driven and project-based. For example, the Democratic Republic of Congo (DRC) promotes inclusion through the Annual Scientific Engineering Conclave and STEM access programmes coordinated by institutions such as the Center for Research on Anti-Corruption (CERDAS), while the Republic of Congo integrates social inclusion into research through partnerships with UNICEF and the French Development Agency (AFD).

b) **Openness:** West Africa shows broader institutional adoption of openness. Universities in Ghana and Nigeria operate institutional repositories and open-access publishing systems; Innovation hubs promote open data practices, and Côte d'Ivoire's research institutions participate in global data-sharing platforms such as Horizon Europe. Central Africa has introduced promising platforms such as the DRC's Politoscope and Peace Observatory, alongside open-access repositories supported by research organizations and international partners. However, these initiatives remain fragmented and heavily donor-dependent. Thus, open science in West Africa is transitioning toward institutional norms, while Central Africa's efforts remain experimental.

c) **Capability:** Defined as the development of human and institutional capacity, capability is widely viewed as foundational to transformation. West Africa benefits from more coordinated national systems, where science granting councils and universities support postgraduate training, early-career researchers, and regional knowledge exchange. Structured funding mechanisms and collaborative regional initiatives have created a stronger pipeline for developing scientific talent compared to the more fragmented Central African approach. Central Africa relies heavily on externally supported training programmes delivered through partnerships with international universities and organizations. Institutions such as CERDAS and the Laboratory of Contemporary Anthropology and Development (LACDEV) in the DRC provide researcher training, while specialized centres in the Republic of Congo focus on technical health capacity.

d) **Connectivity:** West Africa demonstrates denser regional networks supported by Economic Community of West African States (ECOWAS)-aligned frameworks, joint research initiatives, and innovation hubs that connect researchers to global technology ecosystems. Institutions in Ghana, Senegal, Nigeria, and Côte d'Ivoire participate actively in regional and international collaborations, creating more reciprocal and sustainable research linkages. In Central Africa, connectivity is largely outward-facing, relying on partnerships with European and North American institutions, while intra-regional collaboration remains weak due to political instability, infrastructure constraints, and limited cross-border funding.

e) **Regulation:** This remains the weakest pillar across both sub-regions. Although regulatory and ethical frameworks exist, West Africa has relatively stronger systems, including research ethics committees and quality assurance bodies, particularly in Ghana and Nigeria. However, challenges persist in regulating private-sector research, intellectual property systems, and cross-border harmonization of standards. Central African countries struggle with enforcement due to limited institutional capacity and governance fragility.

4.3 Enablers of Transformative Change

Across both sub-regions, five key enablers are driving momentum toward transformative change in the research ecosystem: inclusion and gender equity, open science, human capacity development, international collaboration, and STI policy commitment, supported by a set of Transformation Catalysts that are translating these enablers into systemic action, with West Africa generally demonstrating greater institutional depth and sustainability than Central Africa:

Inclusion and Gender Equity.

Inclusion is emerging as a strategic priority across both sub-regions, though it varies considerably in structure and institutional depth. In Central Africa, equity efforts are largely project-based; the DRC runs STEM programmes targeting women, youth, and persons with disabilities, and the Republic of Congo implements AFD-supported social research, but these initiatives lack enforcement frameworks and systemic embeddedness. In West Africa, inclusion is more policy- aligned and durable. Senegal actively engages farmers and marginalized groups in participatory research, Ghana and Côte d'Ivoire incorporate CSOs and youth into research priority-setting, and Nigeria supports gender-sensitive grantmaking through TETFund. The fundamental distinction is one of institutionalization: West Africa is embedding inclusion within national systems, while Central Africa continues to operate on donor-driven, ad hoc models.

Open Science and Knowledge Access

0pen science is gaining traction in both sub-regions but remains nascent and unevenly adopted. Central Africa's most notable contributions come from the DRC, where tools such as Politoscope, the Peace 0bservatory, and CRIIC's open-access library represent pioneering efforts in real-time research dissemination. However, these remain donor-driven and have not achieved system-wide uptake, with Cameroon and the Republic of Congo showing only low-to-moderate institutionalization of open science practices. In West Africa, open-access platforms and data repositories are increasingly integrated into university operations. Ghana and Nigeria have developed institutional repositories and support open publishing, Cote d'Ivoire's engagement with Horizon Europe reinforces data-sharing standards, and Senegal and Sierra Leone are prioritizing open access in health and climate research. The contrast is clear: Central Africa's open science infrastructure remains project-specific and fragmented, while West Africa is advancing toward broader, system-level institutional adoption.

Human Capacity Development

Both sub-regions identify human capital as a critical driver of system transformation, but their approaches differ in origin and sustainability. Central Africa leans heavily on external partnerships to deliver training; the DRC's CERDAS and LACDEV run researcher development programmes in collaboration with UCL and other international institutions, the Republic of Congo relies on the Louis Pasteur City and the Professor Toumi Foundation for specialized health-related technical training, and Cameroonian stakeholders rated workforce development as the highest-ranked enabler in their context. In West Africa, human capacity development is more nationally institutionalized. Nigeria's TETFund finances research, training, and infrastructure development at scale. Ghana's universities, particularly KNUST and the University of Ghana, offer postgraduate programmes aligned with national policy needs, and Cote d'Ivoire's integration into global platforms such as PASET RSIF and Erasmus+ helps build a structured researcher pipeline.

International Collaboration

International engagement is an important enabler in both sub-regions, but the nature and strategic depth of these collaborations differ significantly. In Central Africa, partnerships tend to be project-based and donor-dependent rather than institutionally embedded. The DRC collaborates with UNESCO, UCL,

and the University of Maryland; the Republic of Congo works with AFD, WFP, and UNHCR; and Cameroon engages SIDA, USAID, and GTZ. While these partnerships drive innovative practices, they often lack the long-term institutional grounding needed to generate lasting systemic change. In West Africa, international collaboration is more strategic and policy-aligned. Ghana, Cote d'Ivoire, and Senegal are integrated into Horizon Europe, World Bank, and PASET consortia, and in Sierra Leone, UNESC0 and Irish Aid actively support system rebuilding in alignment with government priorities. The difference is one of strategic intent: Central Africa's international linkages are episodic, while West Africa's are structured and oriented toward national STI agendas.

STI Policy Commitment and Regulatory Frameworks
Policy commitment is evident in both sub-regions, but the gap between policy formulation and operationalization is far wider in Central Africa. In the DRC, Cameroon, and the Republic of Congo, STI policies exist on paper but suffer from poor implementation, regulatory fragmentation, and governance driven by political appointments rather than merit-based criteria. In West Africa, STI policies are more functionally embedded in practice. Ghana's STI policy is under active stakeholder-informed review, Cote d'Ivoire and Senegal link their STI policies directly to research funding through agencies like FONSTI and PASRES, and Nigeria has proposed a National Research and Innovation Council (NRIC) to centralize and coordinate governance. West Africa exhibits genuine policy maturity, with active review cycles and enforcement structures, while Central Africa continues to struggle with policy inertia and weak institutional oversight.

Emerging University-Private Sector Partnerships
Beyond the five core pillars, the report identifies emerging partnerships between universities and the private sector as promising pockets of change with significant transformative potential. In Nigeria, the University of Lagos has partnered with Nord Motors to establish an on-campus automobile assembly facility, representing a rare but meaningful example of research-industry integration. In Ghana, Toyota is partnering with the University of Ghana in a similarly novel collaboration. The report also highlights an innovative initiative in Ghana involving the transfer of scientific knowledge to faith-based organizations, an unconventional but strategically significant channel for knowledge dissemination in communities where religious institutions carry considerable social authority. These examples, while still isolated, point to the kinds of cross- sector relationships that will be critical in shaping the future of research in the region.

4.4 Barriers to the Transformation of the Research Ecosystem

Despite genuine progress in both sub-regions, transformative change in the research ecosystems of West and Central Africa continues to be held back by four interconnected structural barriers - all of which are more acute in Central Africa than in the West:

a) **Governance and Institutional Incoherence:** Governance failures represent the most consistently cited barrier across both sub-regions, though their severity character differ. In Central Africa, institutional fragmentation is acute and deeply entrenched. The DRC operates with multiple overlapping ministries, politicized appointments that undermine merit-based decision-making, and regulations that exist on paper but are largely non-functional in practice. Cameroon and the Republic of Congo similarly lack coordination and transparency in research governance, creating environments where policy intent rarely translates into institutional action. In West Africa, governance challenges persist, particularly in Nigeria, where fragmentation remains a significant concern, but countries like Ghana and Senegal demonstrate more iterative and responsive policy cycles, with active stakeholder engagement and regular regulatory updates.

b) **Research Funding Constraints:** Underfunding is a cross-cutting challenge in both sub-regions, but the responses to it differ considerably. In Central Africa, research is largely externally financed, with domestic funding mechanisms that are poorly advertised, difficult to access, and often opaque in their administration. DRC respondents specifically noted that national funding pools are effectively out of reach for many researchers, leavingthe system almost entirely dependent on donor financing. In West Africa, countries like Nigeria, through TETFund, and Cote d'Ivoire, through F0NSTI, have established national research funding institutions that provide at least a structural foundation for domestically financed research. However, significant gaps persist in the equitable disbursement of these funds and in the overall scale of investment relative to need.

c) **Infrastructure and Digital Gaps:** Infrastructure deficits are a shared barrier, but their depth and pervasiveness are considerably more severe in Central Africa. In the DRC, laboratories lack basic tools, digital systems are inadequate, and the foundational elements needed to leverage technology across key sectors such as health, education, and agriculture are either absent or too weak to be functional, a condition documented by the World

Bank. Cameroon and the Republic of Congo report similar deficiencies across both physical and digital infrastructure. In West Africa, the picture is more mixed. Sierra Leone continues to face significant infrastructure challenges, though active rebuilding is underway. Ghana, Nigeria, and Cote d'Ivoire maintain comparatively better infrastructure within their flagship universities, though pronounced regional disparities within these countries mean that institutional averages mask significant inequalities.

d) **Fragmentation and Weak Networks:** Weak coordination among actors is another barrier common to both sub-regions, though again it is more pronounced in Central Africa. Across the DRC, Cameroon, and the Republic of Congo, researchers and institutions largely operate in silos, with little in the way of national research networks to facilitate knowledge exchange, collaborative funding, or shared advocacy. The result is a research ecosystem where individual actors may be capable and committed, but their collective impact is diluted by the absence of connective infrastructure. In West Africa, the situation is more dynamic, with emerging collaborative platforms laying the foundations for a more integrated ecosystem. Ghana's policy-engaged think tanks, Senegal's innovation consortia, and Nigeria's technology hubs represent genuine nodes of connectivity, though the report notes that cohesion across these platforms remains a work in progress.

4.5 Transformation Catalysts (TCs) in the Research Ecosystem

The report identifies a s pecific category of actors in te rms of Transformation Catalysts - institutions, platforms, or actors that drive systemic change by connecting stakeholders, promoting innovation, and championing the five transformative pillars. In Central Africa, the key catalysts identified are CERDAS and the Politoscope/CRIIC platforms in the DRC, which advance capacity development, open science, and digital governance; the Peace Without Borders Consortium, which facilitates inclusive peace research through civil society networks; and the Professor Toumi Foundation in the Republic of Congo, which bridges policy and research in health-related fields. These catalysts are influential but largely project-based, externally financed, a nd n ot yet institutionally mainstreamed.

In West Africa, the transformation catalysts are more embedded and operating at the national scale. TETFund in Nigeria funds infrastructure, training, and research grants systemically. FONSTI and PASRES in Cote d'Ivoire operate as research

funding institutions anchored within STI frameworks. IMANI and ACET in Ghana bridge civil society and government through evidence- based policy influence. UCAD in Senegal champions participatory research and open science. And innovation hubs such as CcHub in Nigeria and 0range Fab CI in Cote d'Ivoire support digital inclusion and knowledge transfer. At the regional level, bodies such as the Association of African Universities (AAU), RUF0RUM, AWARD, ATPS, and CAMES serve as platforms that bring together stakeholders across borders, creating opportunities for regional transformation and collaboration that transcend national constraints.

5. Conclusion

The RISE-WECA study reveals a region at a critical juncture. Both West and Central Africa possess the institutional foundations, civil society energy, and innovation potential to build truly transformative research-for-development ecosystems. However, the region cannot afford the cost of further inaction. West Africa's comparatively stronger governance architecture, domestically anchored funding mechanisms such as TETFund, F0NSTI, and PASRES, and policy-engaged transformation catalysts such as IMANI and ACET demonstrate that systemic progress is achievable. Yet even the most advanced national systems are held back by inequitable participation, infrastructure gaps, and fragmented regional coordination.

Central Africa, where governance dysfunction, donor dependency, and institutional isolation remain acute, faces a more urgent imperative: to consolidate its promising but fragmented innovations, including the DRC's Politoscope, CERDAS, and the Peace 0bservatory, into coherent national frameworks, underpinned by merit-based governance and predictable domestic financing. Across both sub-regions, the path forward is clear and consistent: governments must invest in and enforce STI policy, research funders must prioritize equitable and transparent disbursement, regional institutions must deepen connectivity and peer learning, and development partners must shift from agenda-setting to genuine alignment with national priorities. The five recommendations of this brief, spanning governance reform, inclusive research models, open science, regional connectivity, and strategic financing, offer a coherent, evidence-based roadmap. The question is no longer whether transformation is possible, but whether the political will, institutional commitment, and sustained investment can be mobilized to make it a reality.

6. Policy Recommendations

This policy brief offers five (5) strategic recommendations to accelerate transformative change across the region, spanning governance, funding, inclusion, open science, connectivity, and deepening partnerships among research, government, civil society, and the private sector:

Recommendation 1: Strengthen coordinated national research governance systems

Governments across West and Central Africa should institutionalize coordinated national research governance mechanisms that align ministries, research councils, universities, and development partners under a unified STI framework. By clarifying mandates, improving inter- ministerial collaboration, and strengthening regulatory oversight, national authorities can reduce fragmentation and overlapping responsibilities that currently weaken policy implementation. Such coordinated governance arrangements are expected to improve policy coherence, enhance accountability, and ensure that research agendas are directly linked to national development priorities.

Recommendation 2: Expand predictable and sustainable domestic financing for research and innovation

National governments, working with ministries of finance and legislative bodies, should increase and stabilize domestic investment in research through strengthened national research funds and legally backed financing commitments. Expanding mechanisms similar to existing national funding models will reduce excessive reliance on donor funding and allow research institutions to plan strategically over the long term. The expected outcome is a more autonomous and resilient research ecosystem capable of sustaining locally driven research priorities and delivering consistent developmental impact.

Recommendation 3: Institutionalize inclusive and participatory research systems

Research funders, universities, and policymakers should embed Gender Equality and Social Inclusion (GESI), youth participation, and civil society engagement into

research governance structures, funding criteria, and programme implementation processes. Moving inclusion from isolated projects to institutional practice will ensure that marginalized groups actively participate in knowledge production and decision-making. This approach is expected to enhance the societal relevance, legitimacy, and equity of research systems while strengthening public trust and improving the uptake of research outcomes.

Recommendation 4: Promote structured university-industry partnerships to strengthen innovation uptake

Governments and research institutions should introduce policy incentives and collaborative funding mechanisms that encourage sustained partnerships between universities, private sector actors, and innovation hubs. Supporting co-funded research initiatives, technology transfer platforms, and commercialization pathways will help bridge the gap between academic research and practical application. The anticipated outcome is stronger innovation ecosystems, increased private-sector investment in research, and improved translation of scientific knowledge into economic and social solutions.

Recommendation 5: Deepen regional collaboration and peer learning across research ecosystems

Regional organizations, national research councils, and development partners should institutionalize cross-country collaboration through joint research programmes, shared funding initiatives, and harmonized research standards. Strengthening regional platforms for peer learning and knowledge exchange will reduce institutional isolation and enable countries to replicate successful practices across borders. This action is expected to foster a more connected and resilient regional research ecosystem capable of addressing shared development challenges through collective expertise and coordinated action.

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