### STRENGTHENING COTE D'IVOIRE'S RESEARCH AND INNOVATION FUNDING ECOSYSTEM FOR INCLUSIVE AND SUSTAINABLE DEVELOPMENT

Prof. Nicholas Ozor , Cynthia Nwobodo , Wentland Muhatiah , Alfred Nyambane , Joel Nwakaire

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STRENGTHENING COTE D'IVOIRE'S RESEARCH AND INNOVATION FUNDING ECOSYSTEM FOR INCLUSIVE AND SUSTAINABLE DEVELOPMENT African Technology Policy Studies Network (ATPS) TECHNOPOLICY BRIEF NO. 91

Nicholas Ozor Cynthia Nwobodo Wentland Muhatiah Alfred Nyambane Joel Nwakaire



## Strengthening Cote D'ivoire's Research and Innovation Funding Ecosystem for Inclusive and Sustainable Development

Nicholas Ozor<sup>1</sup> Cynthia Nwobodo<sup>1</sup> Wentland Muhatiah<sup>1</sup> Alfred Nyambane<sup>1</sup> Joel Nwakaire<sup>1</sup>

African Technology Policy Studies Network (ATPS)<sup>1</sup>



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 likeminded 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 SRIFA Project**

The Science Granting Councils (the Councils) play critical and strategic roles in supporting research and innovation that contribute to the social and economic development of any country. As a creation of the law, the Councils are charged with the responsibility of research funding, quality assurance, policy and decision-making, knowledge exchange, and training/capacity building of the science system actors to ensure that outputs from the research and innovation endeavours are used to inform policy and practice. Given this important role, and in view of the dynamic nature of research and innovation developments, their capacity to perform these responsibilities to achieve desired goals needs to be continuously strengthened. In recognition of this need, the Science Granting Councils Initiative (SGCI) in sub-Saharan Africa (SSA) is providing support that will strengthen the national research and innovation funding agencies in West Africa.

Compared to other regions in Africa, only a few countries in West Africa have established agencies responsible for research and innovation funding. There is now a deliberate effort by the SGCI to strengthen the national research and innovation funding agencies where they already exist (Burkina Faso, Senegal and Côte d'Ivoire) to improve their performances as well as support the development of institutional frameworks/mechanisms for the development of new research and innovation funding agencies in countries where they do not currently exist (Ghana, Nigeria and Sierra Leone). It is based on this timely opportunity provided by the SGCI, that the African Technology Policy Studies Network (ATPS) and its partner, the African University of Science and Technology (AUST) proposed to work together in a joined-up approach with other Collaborating Technical Agencies (CTAs) to deliver on the project titled: "Strengthening the National Research and Innovation Funding Agencies in West Africa (SRIFA)". The aim is to provide the requisite training and technical support to strengthen the national research and innovation funding agencies or their equivalents in the six participating West African countries. The project goal is to strengthen the agencies where they already exist to efficiently deliver on their mandates and support the development of institutional frameworks/mechanisms for establishing new research funding agencies where they do not exist. With support from the Science Granting Councils Initiative (SGCI), the UK's Foreign Commonwealth Development Office (FCDO), the South Africa's National Research Foundation (NRF), the Swedish International Development Cooperation Agency (SIDA), the German Research Foundation (DFG), and the Norwegian Agency for

Development Cooperation (Norad), the SRIFA Project, therefore, aims to provide training and technical support to strengthen these national agencies to achieve their mandates, especially in areas such as monitoring research projects; financial reporting; institutional risk assessment; institutional communications capacity; mainstreaming gender in granting, Council internal processes; and using research results to inform government policy and private sector practice.

## About Africa Technology Policy Studies Network (ATPS)

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## Acknowledgement

The African Technology Policy Studies Network (ATPS) and its partner, the African University of Science and Technology (AUST) wish to specially thank the International Development Research Centre (IDRC) for partnering with us in this research project titled: "Strengthening the National Research and Innovation Funding Agencies in West Africa (SRIFA)" under the Science Granting Councils Initiative (SGCI). We are particularly grateful to the Cote d'Ivoire's National Fund for Science, Technology, and Innovation (FONSTI) and other stakeholders for their active participation in the project.

## **Key Messages**

- The creation of a comprehensive Science, Technology, and Innovation (STI) policy is crucial for guiding research and innovation funding in Côte d'Ivoire. This policy should address critical issues such as gender inclusion, stakeholder engagement, and the commercialization of research outputs to support sustainable development.
- Strengthening collaboration among stakeholders in Côte d'Ivoire's research and innovation ecosystem is essential for maximizing resource use and fostering cross-sector knowledge exchange. Building partnerships between public and private sectors will boost research funding and innovation outcomes.
- The involvement of the private sector in funding research and innovation is crucial for socio-economic development. Encouraging more private entities, including SMEs and entrepreneurs, to contribute to innovation funding can drive technological advancements and economic growth.
- Côte d'Ivoire's research institutions face significant capacity challenges, including inadequate infrastructure and resources. Enhancing institutional capacity through targeted training and technical support will enable these institutions to conduct high-quality research and retain top talents.
- Gender equality and social inclusion should be integral to Côte d'Ivoire's research and innovation strategies. Providing training to stakeholders on these issues will help ensure that marginalized groups benefit from innovation efforts and that research outputs are more inclusive.

## 1. Introduction

Côte d'Ivoire, a West African nation with a population of 26.9 million as of 2020 (National Council for Economic Policies [CNPE], 2021), has emerged as a significant economic player in the region. The country boasts the largest economy in the West African Economic and Monetary Union (WAEMU), with a nominal GDP of CFAF 21,438bn (USD 34.4bn) and a GDP per capita of CFAF 882,700 (USD 1,490). Impressively, Côte d'Ivoire has maintained an average growth rate of 9.2% over 2012-2016, making it one of the fastest-growing economies globally (The Republic of Côte d'Ivoire, 2018). Despite these economic strides, Côte d'Ivoire faces significant challenges in its development trajectory. The World Bank Human Capital Index (ICH) published in 2017 rated Côte d'Ivoire at 0.35, placing it below the average for sub-Saharan African countries (0.40).

Furthermore, about 39% of the Ivorian population lives below the poverty line (CNPE, 2021). The country's economy remains heavily reliant on the primary sector, with limited value addition in key exports. For instance, although Côte d'Ivoire is a world leader in cocoa and cashew nut production, it processes only 7% and 6% of these products respectively (CNPE, 2021). The relatively small share of medium and high-tech exports in Côte d'Ivoire is attributed to low levels of research and innovation (UNIDO, 2020). In the context of an increasingly global technology and innovation-driven economy, enhancing research and innovation capabilities is crucial for the country's sustainable economic and social development. Therefore, it is imperative to assess the Ivorian research and innovation funding policy landscape to identify enablers and constraints, and to recommend effective policy strategies for sustainable economic growth and development.

Côte d'Ivoire's commitment to advancing its research and innovation ecosystem is evidenced by the establishment of dedicated agencies, such as the National Fund for Science, Technology, and Innovation (FONSTI), which plays a pivotal role in coordinating research funding. Despite significant strides in fostering innovation, the country faces critical challenges, including weak institutional capacities, limited stakeholder collaboration, and insufficient private sector engagement. These challenges are further compounded by the lack of a comprehensive Science, Technology, and Innovation (STI) policy framework, which hampers the effective allocation and utilization of resources. To address these gaps, it is imperative to enhance stakeholder synergies across the public and private sectors, increase the technical capacity of research institutions, and ensure the integration of gender equality and social inclusion in all facets of the innovation process. By focusing on these strategic areas, Côte d'Ivoire can unlock the full potential of its research and innovation landscape, driving sustainable economic development and positioning itself as a leader in the region's technological advancement. This policy brief outlines key recommendations for strengthening the research and innovation funding ecosystem in Côte d'Ivoire, with a particular emphasis on improving stakeholder collaboration, enhancing institutional capacities, and developing a robust STI policy framework that is inclusive and responsive to the country's socioeconomic needs.

# 2. Rationale for strengthening the national research and innovation funding agency

Côte d'Ivoire is at a critical juncture in its development trajectory, with research and innovation identified as key drivers for socio-economic progress. The creation of dedicated institutions like FONSTI underscores the government's commitment to fostering a robust research and innovation ecosystem. However, despite these efforts, significant challenges remain that threaten to undermine the country's potential to achieve sustainable and inclusive growth. One of the foremost challenges is the inadequate integration of innovation and technology into local businesses, particularly small and medium-sized enterprises (SMEs). This gap is exacerbated by weak institutional capacities, with many research institutions lacking the necessary resources and infrastructure to conduct highguality research. Additionally, the limited involvement of the private sector in innovation funding hinders the scaling of technological advancements and their impact on the broader economy. Furthermore, the absence of a comprehensive Science, Technology, and Innovation (STI) policy has led to fragmented efforts in research funding and innovation activities. This fragmentation is marked by a lack of coordination among stakeholders, which diminishes the effectiveness of research outputs and stifles the potential for cross-sectoral synergies. Without a cohesive policy framework, the opportunities for leveraging research and innovation to drive economic development remain underutilized.

To realize the full potential of Côte d'Ivoire's research and innovation capabilities, it is crucial to address these challenges through a strategic and coordinated approach. This includes fostering stronger collaboration among stakeholders, enhancing the capacity of research institutions, and ensuring that innovation efforts are inclusive of all segments of society, particularly women and marginalized groups. By developing a comprehensive STI policy that addresses these critical issues, Côte d'Ivoire can position itself as a leader in innovation within the region and secure long-term economic and social benefits for its population. This policy advocates for targeted interventions that will strengthen the research and innovation ecosystem in Côte d'Ivoire, ensuring that it is wellequipped to meet the demands of a rapidly evolving global economy.

## 3. Methodology

This policy brief was derived from a study on policy and institutional landscape. stakeholder mapping, and needs assessment of research and innovation funding in Côte d'Ivoire. Both qualitative and quantitative data were collected through desk studies, online surveys, key informant interviews, as well as focus group discussions. The respondents were drawn from five stakeholder categories (Government/Policy makers, Nongovernmental organizations/Civil society, Private sector/industry, Research institutions and universities, the Media). The respondents were selected carefully to foster inclusivity and gender balance to ensure that the voice of women and other marginalised groups were heard.

## 4. Major Findings

The key findings of the study are presented in the following sections highlighting policies and institutional landscape, stakeholder mapping, and needs assessment of research and innovation funding, best practices, challenges and opportunities, as well as policy recommendations for improved research and innovation funding in Côte d'Ivoire.

#### 4.1 Policies and institutions for research and innovation funding

The research and innovation landscape in Côte d'Ivoire operates within a policy framework anchored by the National Development Plan (NDP) and the Côte d'Ivoire 2030 Strategic Plan (CI2030). The NDP, spanning 2016-2020 and 2021-2025, emphasizes industrial development and technological innovation as key drivers of economic growth. Meanwhile, CI2030, launched in 2018, presents a long-term vision for transforming the Ivorian economy through industrialization and poverty reduction. However, a notable gap exists in the policy landscape - the absence of a dedicated Science, Technology, and Innovation (STI) policy, which limits the country's ability to coordinate and optimize its research and innovation efforts effectively.

The institutional architecture for research and innovation funding is led by the Ministry of Higher Education and Scientific Research, which provides overall policy direction through its Directorate-General for Science Research and Innovation. A significant milestone in strengthening this architecture was the establishment of the National Fund for Science, Technology and Innovation (FONSTI) in 2018. FONSTI serves as the primary institution for advancing science, technology, and innovation in the country by funding research projects, facilitating stakeholder collaboration, and providing policy guidance to the government.

Working alongside FONSTI is the Strategic Support Program for Scientific Research (PASRES), which has historically been the main funding agency for scientific research. PASRES, born out of Ivorian-Swiss cooperation, plays a crucial role in supporting research initiatives and building research capacity. The institutional landscape is further enriched by specialized bodies such as the Interprofessional Fund for Agricultural Research and Consulting (FIRCA) and the Institute of Research for Development (IRD), which focus on sector-specific research and development needs.

The country has also established various supporting institutions to promote innovation and protect intellectual property. These include the Ivorian Organization for Intellectual Property, which safeguards research outputs, and the Centre for the Demonstration and Promotion of Technologies, which facilitates the practical application of research findings. Additionally, funding initiatives like the National Agricultural Investments Programme and the Ivorian Fund for the Development of National Enterprises provide targeted support for research and innovation in specific sectors.

Despite this institutional framework, challenges persist in coordinating efforts across these various bodies and ensuring efficient resource allocation. The lack of a comprehensive STI policy particularly affects the ability of these institutions to work in harmony toward common national innovation goals. Furthermore, while FONSTI represents a significant step forward in centralizing research funding, it requires greater autonomy and resources to fully fulfill its mandate as the primary research funding agency.

This institutional and policy landscape reflects Côte d'Ivoire's growing commitment to research and innovation, though there remains considerable room for strengthening the coordination between institutions and developing more comprehensive policy frameworks to guide their operations. The development of a dedicated STI policy and enhanced institutional autonomy, particularly for FONSTI, could significantly strengthen the research and innovation ecosystem in Côte d'Ivoire.

#### 4.2 Stakeholders in the research and innovation funding

In Côte d'Ivoire, the research and innovation funding landscape is shaped by a diverse set of stakeholders, each playing a crucial role in the development and implementation of research initiatives. These stakeholders include government agencies, research institutions, private sector organizations, and international partners, all of which contribute to the strategic direction and financial support of research activities.

The government agencies form the backbone of Côte d'Ivoire's research and innovationfundinglandscape, with several key institutions playing complementary roles. At the center is FONSTI, which serves as the primary governmental body overseeing research funding in the country. FONSTI's mandate extends beyond mere fund distribution - it strategically allocates resources to national research programs, provides crucial support for the rehabilitation of research infrastructure, and actively promotes the commercialization of research outputs.

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The organization's decision-making process is strengthened by its Steering Committee, which brings together representatives from both public and private sectors, ensuring diverse perspectives in funding decisions.

Working in tandem with FONSTI is the Strategic Support Programme for Scientific Research (PASRES), which operates under the joint oversight of the Ministry of Higher Education and Scientific Research (MESRS) and the State Secretariat for Education and Research. PASRES has carved out a distinctive role by focusing on enhancing research quality and building capacity within the scientific community. Its particular emphasis on supporting young researchers through doctoral and postdoctoral programs has been instrumental in developing the next generation of scientific talent in Côte d'Ivoire.

The Ministry of Higher Education and Scientific Research (MESRS) provides the overarching policy framework and regulatory oversight for the country's research activities. Beyond its regulatory role, MESRS actively contributes to the research ecosystem by facilitating international research partnerships and providing vital funding support. The Ministry also plays a crucial role in professional development, offering opportunities for researchers to enhance their skills and expertise through various programs and initiatives.

These government agencies work in a coordinated manner, though there is room for improving their synergies. FONSTI's role as the central funding body complements PASRES's focus on capacity building, while MESRS provides the necessary policy oversight and international connectivity. Together, they form a governmental framework that supports research and innovation across different stages - from initial funding to capacity building and international collaboration. However, their effectiveness could be enhanced through better coordination mechanisms and more streamlined processes for research funding and support.

The collaborative nature of these agencies, particularly through initiatives like FONSTI's Steering Committee, demonstrates a commitment to inclusive decision-making in research funding. Nevertheless, there remains potential for strengthening these institutions through increased autonomy, enhanced funding mechanisms, and more robust coordination frameworks to maximize their impact on Côte d'Ivoire's research and innovation landscape.

Within the sphere of the academic and research institutions, the Higher Institute of Technology of Côte d'Ivoire (ISTCI) stands as a premier science and technology institution, distinguished by its operational autonomy in both

financial and legal matters. ISTCI's impact extends beyond traditional education, as it actively pursues international research partnerships and maintains high standards of scientific inquiry, contributing significantly to the nation's research output. Working alongside ISTCI, specialized research centres like the National Centre for Floristics (CNF) focus on critical environmental research, particularly in botanical studies and natural resource management, demonstrating the diversity of research expertise within the country.

The private sector engagement is primarily channelled through the General Confederation of Enterprises of Côte d'Ivoire (CGECI), which serves as a bridge between industry and research institutions. CGECI plays a vital role in translating research into practical applications by facilitating technology transfer and promoting industry-academia partnerships. Their involvement in FONSTI's Steering Committee helps align research funding with industry needs, while their research awards program incentivizes innovation that addresses market demands. Additional private sector participants include agricultural processing companies, technology firms, and manufacturing enterprises that both contribute to and benefit from research and innovation activities.

International and development partners play a pivotal role in Côte d'Ivoire's research and innovation funding landscape, with the African Development Bank (AfDB) providing significant financial support for research projects that address socio-economic development, while the Institute of Research for Development (IRD) facilitates crucial North-South research collaborations through its multidisciplinary approach. These partnerships are further strengthened by various bilateral and multilateral organizations that provide both technical expertise and financial resources, helping to build capacity and enhance the quality of research outputs in the country.

The media landscape in Côte d'Ivoire, represented by organizations like Ecclesia TV, Life TV, and the New Ivorian Channel, plays a supportive role in the research and innovation ecosystem by raising public awareness through coverage of innovation fairs and exhibitions, though their influence on research and innovation funding decisions remains relatively limited compared to other stakeholders.

#### 4.3 Capacity needs of the research and innovation funding agency

Côte d'Ivoire's research and innovation ecosystem faces significant challenges that necessitate comprehensive training and technical support to enhance the effectiveness of its funding agencies. FONSTI is a central player in this ecosystem,

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and its capacity to manage and disburse research funds effectively is critical for the country's development goals. The capacity needs of Côte d'Ivoire's research and innovation funding agency, particularly FONSTI, center around two critical areas - technical support and training requirements. On the technical side, agencies need support in advocacy for increased funding, enhanced stakeholder engagement mechanisms, policy development expertise (especially for crafting a comprehensive STI policy), and opportunities for learning from successful councils in other regions.

The training needs focus on strengthening core competencies including project and financial management skills, expertise in developing and managing publicprivate partnerships, capabilities in scientific proposal evaluation, and proficiency in mainstreaming gender equality and social inclusion principles. Addressing these capacity gaps is essential for building a more robust and effective research funding framework that can drive sustainable development in Côte d'Ivoire.

#### 4.4 Challenges and Opportunities for research and innovation funding

Côte d'Ivoire research and innovation funding faces many challenges. These challenges collectively hinder the development of a robust research and innovation ecosystem in Côte d'Ivoire, affecting the country's ability to drive technological advancement and economic growth through innovation. The major challenges include:

- Lack of a dedicated policy: Côte d'Ivoire lacks a dedicated science, technology, and innovation (STI) policy. This absence limits the country's capacity to prioritize and effectively manage research and innovation funding.
- Over-dependence on external funding: Due to past civil conflicts and reforms, research in Côte d'Ivoire heavily relies on external funding. This dependency shifts research focus away from national priorities towards donor interests.
- Insufficient human capital: There's a shortage of workers with advanced or intermediate education in Côte d'Ivoire. This lack of skilled human resources hampers technological change and innovation in the country.
- Weak public-private partnership (PPP): The implementation of public-private partnership strategies is weak, leading to poor identification of economic skill demands and a mismatch in skills development.
- Over-reliance on public funding: Research institutions in Côte d'Ivoire depend too heavily on public funding, which limits their financial capacity and hinders collaboration with the private sector. This over-reliance also results in insufficient and fragmented budgetary allocations to research and innovation.

#### 4.5 Best Practices in Research and Innovation Funding in Cote d'Ivoire

Cote d'Ivoire has recorded some best practices in its research and innovation funding ecosystem. These practices demonstrate Côte d'Ivoire's commitment to improving its research and innovation ecosystem through dedicated funding, collaborative approaches, inclusivity, infrastructure development, and promotion of an innovation culture.

Côte d'Ivoire has implemented several best practices to enhance its research and innovation funding ecosystem. A major milestone is the establishment of the National Fund for Science, Technology, and Innovation (FONSTI) in 2018, which serves as a dedicated agency for financing high-quality research and technological innovation projects with significant developmental impacts. The government has also fostered public-private partnerships by involving the private sector in FONSTI's Steering Committee and Scientific Council, ensuring alignment between funded research and industry needs.

Gender equality and social inclusion have been prioritized through targeted initiatives, such as special funding projects for women in STEM, and broader efforts to empower marginalized groups. The development of research infrastructure, including institutions like the Pasteur Institute and the National Centre for Agronomic Research, has bolstered knowledge production and technological capacity. Furthermore, Côte d'Ivoire actively promotes a culture of innovation through events like the annual innovators' fairs, which provide platforms for showcasing inventions, fostering collaboration, and encouraging knowledge exchange. These practices collectively strengthen the research and innovation ecosystem, positioning the country to drive technological advancements and socio-economic development. Table 1: A Summary of Key Policies in the Research and Innovation funding ecosystem

Policies in research and innovation funding	Aims and objectives	Impact on research and innovation funding	Remarks
National Development Plan (NDP) 2016-2020 & 2021- 2025	Strengthen industrial base and promote technological innovation for sustainable development.	Supports the growth of research centers, increases focus on innovation.	Focuses on economic development through research and technology.
Côte d'Ivoire 2030 (CI2030) Strategic Plan	Drive industrialization and reduce poverty by 2030 through technological advancements.	Prioritizes long-term national development through research and innovation.	Lacks a specific dedicated STI policy.
<ul> <li>National Fund for Science Technology and Innovation (FONSTI)</li> </ul>	Fund and promote research and innovation projects to boost national development.	Provides funding for high-impact research and innovation projects.	Needs more autonomy and increased budgetary allocation.
Strategic Support Program for Scientific Research (PASRES)	Support scientific research through capacity building and promoting young researchers. Currently dedicated specifically to gender equality and social inclusion.	Expands research opportunities and increases the number of researchers.	Plays a key role in fostering research talent in Côte d'Ivoire.
Public Administrative Establishment with Scientific and Technological Nature (EPAST).	Transform research institutions into entities capable of engaging in economic activities and creating value from research outputs. Empower these institutions to participate in enterprises, manage research contracts, exploit patents, and commercialize research products, thus fostering economic valorization of research results.	The creation of EPAST allows institutions to generate their own funding by engaging in enterprises, managing contracts, and commercializing patents. This enhances their ability to fund their own research and innovation activities.	Can significantly enhance the research and innovation ecosystem by fostering greater financial independence, promoting commercialization, and linking research outcomes directly with economic growth.

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## 5. Conclusion

Côte d'Ivoire stands at a critical juncture as it strives towards becoming a knowledge-based economy. The establishment of FONSTI and other initiatives demonstrates the country's commitment to fostering research and innovation. However, significant challenges persist, including the lack of a dedicated STI policy, over-reliance on external funding, and weak public-private partnerships. To overcome these obstacles and unlock Côte d'Ivoire's full potential, a multifaceted approach is crucial. This includes developing a comprehensive STI policy, strengthening institutional capacities, fostering robust public-private collaborations, and ensuring gender equality and social inclusion in research and innovation funding. By addressing these challenges head-on, Côte d'Ivoire can create a vibrant ecosystem that nurtures local talent, attracts investment, and drives sustainable economic growth. The path forward requires concerted effort from all stakeholders - government, academia, private sector, and civil society - working in harmony to build a resilient and innovative nation. As Côte d'Ivoire advances its research and innovation agenda, it has the opportunity to not only address its domestic challenges but also to emerge as a regional leader in scientific and technological advancement. The time for bold action is now, to secure a prosperous and innovative future for all citizens of Côte d'Ivoire.

## 6. Policy Recommendations

Côte d'Ivoire can address existing gaps in its research and innovation ecosystem and establish a robust, inclusive, and sustainable foundation for technological and economic advancement. The following recommendations are proffered to address the key challenges identified in Côte d'Ivoire's research and innovation ecosystem, fostering a more robust, inclusive, and sustainable approach to funding and development in the sector.

**Recommendation 1: Develop and implement a comprehensive science, technology, and innovation Policy that is responsive to the needs and priorities of the country:** The government, through the Ministry of Higher Education and Scientific Research (MESRS), should create a national STI policy that clearly defines funding mechanisms, aligns with national development goals, and incorporates strategies for gender equality and social inclusion. This can involve consultations with stakeholders, including researchers, private sector actors, and marginalized groups. A dedicated STI policy will provide a structured framework for coordinating and scaling up research efforts, fostering innovation, and ensuring equitable access to funding and opportunities across sectors. This requires collaborations among MESRS, National Fund for Science, Technology, and Innovation (FONSTI), and other stakeholders like PASRES and CGECI.

**Recommendation 2: Enhance Autonomy and Capacity of FONSTI:** Grant financial and operational autonomy to FONSTI and implement capacity-building programs for its staff in areas such as project management, partnership building, and financial reporting. This can be supported by technical assistance from international organizations. Strengthening FONSTI will improve the efficiency and transparency of research funding allocation, allowing it to respond effectively to national and sectoral needs. The government of Côte d'Ivoire, FONSTI leadership, and development partners such as the African Development Bank (AfDB) can collaborate to achieve this.

**Recommendation 3: Increase and diversify Research and Innovation Funding:** The government should allocate at least 1% of GDP to research, as per African Union recommendations, and introduce innovative funding mechanisms like research taxes, investment funds, and incentives for private sector R&D investments. Diversified funding sources will reduce reliance on external donors, stabilize research financing, and attract greater private sector involvement. Synergy among MESRS, Ministry of Finance, and private sector organizations are critical at this point. **Recommendation 4: Strengthen Public-Private Partnerships (PPPs) to enhance** *collaborations in Research and Innovation:* Establish platforms for regular dialogue between academia and industry, provide tax incentives for private R&D investments, and involve the private sector in policymaking processes. Enhanced PPPs will accelerate the commercialization of research outputs, increase the adoption of technologies by businesses, and improve the economic impact of research efforts. The responsible actors here are MESRS, CGECI, private companies, and research institutions.

**Recommendation 5: Promote Gender Equality and Social Inclusion:** Introduce funding initiatives specifically targeting women and marginalized groups in STEM, provide training programs to build capacity, and ensure transparency in the evaluation of research proposals. These efforts will lead to more inclusive research outputs, improve access to opportunities for underrepresented groups, and foster innovation that addresses diverse societal needs. Responsible actors may include: MESRS, FONSTI, PASRES, and civil society organizations.

**Recommendation 6: Develop Institutional Frameworks for Research and Innovation Commercialization:** Transform key research institutions into Public Administrative Establishments with Scientific and Technological Nature (EPAST), allowing them to commercialize patents, manage research contracts, and establish enterprises. This will enable research institutions to generate independent funding, drive innovation, and contribute directly to economic growth. MESRS, EPAST institutions, and policy advisors.

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African Technology Policy Studies Network (ATPS) Contact Executive Director: executivedirector@atpsnet.org 8th Floor Chancery Building, Valley Road P.O. Box 10081-00100 Nairobi Tel: +254 (020) 2714092



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