BUILDING A ROBUST RESEARCH AND INNOVATION FUNDING ECOSYSTEM IN BURKINA FASO STRENGTHENING POLITICAL WILL AND INCLUSIVE GOVERNANCE

Prof. Nicholas Ozor , Cynthia Nwobodo , Peter Onwualu , Alfred Nyambane , Joel Nwakaire , Wentland Muhatiah , Prisca Onuoha , Chukwuemeka Uwanaka , Nneoma Obimbonu

Prof. Nicholas Ozor , Cynthia Nwobodo , Peter Onwualu , Alfred Nyambane , Joel Nwakaire , Wentland Muhatiah , Prisca Onuoha , Chukwuemeka Uwanaka , Nneoma Obimbonu

GRANT / SUBVENTION: - STRENGTHENING THE NATIONAL RESEARCH AND INNOVATION FUNDING AGENCIES IN WEST AFRICA

SCIENCE GRANTING COUNCILS INITIATIVE SGCI IOSRS INITIATIVE DES ORGANISMES SUBVENTIONNAIRES DE LA RECHERCHE SCIENTIFIQUE

BUILDING A ROBUST RESEARCH AND INNOVATION FUNDING ECOSYSTEM IN BURKINA FASO: STRENGTHENING POLITICAL WILL AND INCLUSIVE GOVERNANCE

African Technology Policy Studies Network (ATPS)
TECHNOPOLICY BRIEF NO. 90

Nicholas Ozor
Cynthia Nwobodo
Peter Onwualu
Alfred Nyambane
Joel Nwakaire
Wentland Muhatiah
Prisca Onuoha
Chukwuemeka Uwanaka
Nneoma Obimbonu

Building a Robust Research and Innovation Funding Ecosystem in Burkina Faso: Strengthening Political Will and Inclusive Governance

Nicholas Ozor[1]
Cynthia Nwobodo[1]
Peter Onwualu[2]
Alfred Nyambane[1]
Joel Nwakaire[1]
Wentland Muhatiah[1]
Prisca Onuoha[2]
Chukwuemeka Uwanaka[2]
Nneoma Obimbonu[2]

African Technology Policy Studies Network (ATPS)[1]
African University of Science and Technology (AUST)[2]

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.

Published by the African Technology Policy Studies Network (ATPS)
P. O. Box 10081, 00100- GPO,
Nairobi, Kenya

ISBN: 978-9966-124-39-5

Table of Contents

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)

The African Technology Policy Studies Network (ATPS) is a transdisciplinary network of researchers, policymakers, private sector actors and civil society promoting the generation, dissemination, use and mastery of Science, Technology and Innovations (STI) for African development, environmental sustainability and global inclusion. The ATPS has over 5,000 members and 3000 stakeholders in over 51 countries in 5 continents with institutional partnerships worldwide. We implement our programs through members in national chapters established in 30 countries (27 in Africa and 3 Diaspora chapters in Australia, the United States of America, and the United Kingdom). In collaboration with like-minded institutions, the 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.

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 Burkina Faso's National Research and Innovation Fund for Development (FONRID) and other stakeholders for their active participation in the project. The Policy Brief benefited from the excellent background studies and technical reports published earlier by SGCI, IDRC, FONRID and other stakeholders.

Key Messages

- Despite significant policy developments since 2012, Burkina Faso's research and innovation funding remains critically low at 0.25% of GDP, severely limiting the country's capacity for scientific advancement and socio-economic development. Increasing funding through diverse sources, including government allocations, private sector investment, and international partnerships, is essential for achieving sustainable development goals.

- The establishment of FONRID (National Fund for Research and Innovation for Development) marks a crucial step in strengthening Burkina Faso's research and innovation ecosystem. However, its effectiveness is hampered by insufficient state subsidies, poor infrastructure, and limited human resources. Enhanced institutional capacity and sustainable funding mechanisms are needed to maximize FONRID's impact.

- Weak linkages between key stakeholders (government, private sector, research institutions, and civil society) are hindering the translation of research into practical innovations. Establishing formal partnerships, improving coordination mechanisms, and developing platforms for regular stakeholder interaction are critical for building a more dynamic and productive research ecosystem.

- There is an urgent need for capacity building among FONRID staff and stakeholders in areas such as resource mobilization, intellectual property management, and research communication. Specialized training programs and technical support are essential for improving the quality and impact of research and innovation activities.

- Burkina Faso requires a robust monitoring, evaluation, and learning (MEL) system to track the impact of research investments and ensure accountability. Data-driven approaches to assess program effectiveness and identify gaps will help maximize outcomes and strengthen advocacy for increased funding support.

1. Introduction

Burkina Faso's research and innovation funding landscape has evolved over the years. It started with the establishment of agricultural and medical research stations in the early 20th century. After independence, research institutions were restructured and a national focus on science emerged. The 1990s saw a rebuilding of the national scientific system with the adoption of a Strategic Research Plan. The creation of the General Delegation for Scientific and Technological Research and the National Policy for Scientific and Technological Research further strengthened the institutionalization of scientific research in Burkina Faso. This was followed by the recent establishment of the National Fund for Research and Innovation for Development (FONRID). FONRID was created to provide a secure funding framework for research and innovation activities throughout the national territory. FONRID supports the development of research results and innovation outputs with the aim of addressing major developmental challenges of the country. The idea is that the results produced by research and innovation are truly vectors of wellbeing for the populations and generators of wealth and prosperity for the entire nation. However, state subsidies for research still remain insufficient. Over the years, FONRID has not been able to provide sustainable R&D funding that can drive socio-economic development due to various challenges. Despite concerted efforts by the government to improve the state of scientific research and innovation, Burkina Faso ranks 129th among the 133 economies featured in the 2024 Global Innovation Index [WIPO], (2024). The research which informed this policy brief, was undertaken with the aim of strengthening FONRID and the entire STI ecosystem in Burkina Faso towards a more sustainable impact on the socio-economic development of the country.

2. Rationale for Strengthening Burkina Faso's National Fund for Research and Innovation for Development

Burkina Faso made significant gains in reducing poverty from 53% to 40.3% for the period 2003-2014 (World Bank Group, 2018). Despite the gains, Burkina Faso remains one of the poorest countries in the World (GIZ, 2023). On the United Nations Human Development Index (HDI), it ranked 182nd out of 189 in 2019. The Oxford Poverty and Human Development Initiative [OPHI], (2020) reported that 83.8% of Burkina Faso's population are multi-dimensionally poor. With R&D expenditure in Burkina Faso amounting to just 0.25 percent of GDP (WIPO, 2024), plus the country's comparative low ranking on the Humanitarian Data Exchange, the rationale therefore exists for strengthening STI funding in the country, as current measures and approaches are not sufficient to support the desired development outcomes in the country. The critical place of research and innovation in the sustainable development of every country have been recognized, especially as it relates to poverty reduction, building stronger economies and societies (OECD, 2021). However, research and innovation efforts have to be properly coordinated if development goals are to be met. The recent political changes in the country and the establishment of the Alliance for Sahel States (AES), provides additional and comprehensive rationale for strengthening the STI ecosystem of the country.

Inherent in the reasons for the major political changes, is the desire for STI that is driven by Burkinabes, away and different from its French colonial and postcolonial history, and with policies such as the National Economic Transformation Plan (Byabasaija 2023; Agboola 2024). This aspiration will be feasibly met, if the STI ecosystem in the country is strengthened. And these factors, cumulatively justify the inclusion of Burkina Faso in the SGCI programme. With a strengthened STI funding agency, researchers and innovators can have more access to funds, and the R&D ecosystem will be able to produce competitive goods and services to support the private sector towards sustainable socio-economic development.

3. Methodology

This policy brief was derived from a study of policy and institutional landscape, stakeholder mapping, and needs assessment of research and innovation funding in Burkina Faso. Both qualitative and quantitative data were collected through desk studies, online surveys, key informant interviews, and focus group discussions (FGD). The participants were drawn from five key stakeholder categories (Government/Policy makers, non-governmental organizations (NGOs)/ 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, persons living with disabilities 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 Burkina Faso.

4.1 Policies and Institutions for Research and Innovation Funding in Burkina Faso

Between 2012 and 2018, Burkina Faso implemented several key policies and frameworks to strengthen its scientific research and innovation ecosystem. The National Policy for Scientific and Technological Research (PNRST 2013-2025) was launched in 2012 to develop research and development capabilities, with a focus on food security and agricultural sciences. This was supported by the Science, Technology and Innovation Act of 2013, which established three funding mechanisms drawing from various sources including tax revenue, mining revenue, and mobile phone license fees. The government also introduced the Priority Action Plan (PAP) to guide research activities and the Oriental Law for Scientific Research and Innovation (LORSI) to set fundamental guidelines for scientific research. Building on these foundations, the country adopted the National Action Plan for the Development of Higher Education (PNADES 2014-2023) to enhance higher education and develop efficient human capital.

This was followed by the Strategic Plan for Scientific Research and Technology (2015-2024), which aimed to create favorable conditions for knowledge production and technological advancement. The most recent addition was the Sectoral Research and Innovation Policy (PSRI 2018-2027), enacted in December 2017, which focuses on strengthening Burkina Faso's productive system through intensive use of research and innovation results. The National Strategy for Valorization of Technologies, Inventions, and Innovations (SNVTII 2020-2024) aims to promote intensive use of technological innovations while ensuring their protection, accessibility, and effective communication. The National Rural Sector Programme (PNSR 2016-2020) focuses on food and nutritional security through developing sustainable agro-sylvo-pastoral, fishery, and wildlife sectors, while providing guidance for research funding and strengthening research capabilities.

The National Economic and Social Development Plan (PNDES 2016-2020), adopted in October 2016, serves as Burkina Faso's national reference for state

interventions, targeting structural transformation of the economy. The PNDES specifically aims to achieve sustainable and inclusive growth while promoting research and innovation as key drivers of economic transformation. These policies collectively form a comprehensive framework designed to coordinate and advance scientific research and innovation in Burkina Faso.

The scientific research infrastructure in Burkina Faso evolved significantly from its colonial roots, beginning with the transformation of IFAN into the Voltaïque Scientific Research Centre (CVRS) in 1965, which later became the National Centre for Scientific and Technological Research (CNRST) in 1978. This evolution included the development of higher education, marked by the creation of the Institute for Teacher Training (CPES) in 1965, which evolved into the Higher Education Training Centre of Ouagadougou (CESup) and eventually gave rise to the University of Ouagadougou in 1972. A significant shift occurred in 1978 with the establishment of CNRST and the Ministry of Higher Education and Scientific Research (MESRS), marking the beginning of national ownership and coordination, culminating in the Strategic Research Plan of 1995. The creation of the National Research and Innovation Fund for Development (FONRID) in 2011 represented a major step forward in research funding, though state subsidies remain insufficient for effective research activities. FONRID, operating under the technical supervision of the Ministry responsible for scientific research and innovation, provides funding for the CNRST and its four research institutes covering applied sciences, environmental and agricultural research, health sciences, and social sciences.

Although FONRID has no formal memoranda of understanding (MOUs) with researchers, universities, and the private sector, it has some level of collaborations and partnerships with these institutions. FONRID provides funding for the National Centre for Scientific Research and Technology (CNRST)- the apex of all research activities in Burkina Faso. The Centre is made up of four research institutes responsible for all national research works in the country through funding from FONRID. These research institutes are Institute for Research in Applied Sciences and Technologies, Institute of Environment and Agricultural Research, Health Sciences Research Institute, and the Institute of Social Sciences. FONRID funds the private sector through the Chamber of Commerce established in 1948 with about 70,000 commercial, industry, education, and general firms in Burkina Faso (Kwesi and Dickson, 2018). The Chamber of Commerce acts as a bridge between the private sector and the research institutes through organizing programmes aimed at bringing the private sector and research together.

4.2 Stakeholders in the Research and Innovation Funding in Burkina Faso

FONRID is the national agency in charge of science and innovation funding in Burkina Faso. FONRID is a national financing fund created by decree n° 2011-828 / PRES / PM /MRSI / MEF signed on October 27, 2011. The Ministry of Higher Education and Scientific Research (MESRS). MESRI provides funding for FUNRID's operation. Burkina Faso receives research and innovation funding from other local and international bodies including non-governmental organizations, development agencies, civil society organizations. Other major organizations funding research and innovation in the country are National Research Fund (NRF), IDRC-CRDI, European Union (EU), the Science Granting Councils Initiative (SGCI), WaterAid, Food Systems and Climate (FOSC), Africa-Japan Collaborative Research (AJCORE), Intervention Fund for the Environment (FIE), Leap- Agri, Long-term EU-AU Research and Innovation Partnership for Food and Nutrition Security and Sustainable Agriculture (LEAP 4 FNSSA), Chamber of Commerce and Industry of Burkina Faso (AFP PME), Network of Shea Butter Producers of Hauts-Bassins and Cascades (RPBHC), and the French Republic.

The government stakeholder with the highest power and influence is the Ministry of Higher Education, Research and Innovation. This is followed by FONRID and the National Agency for the promotion of Research Results. The NGO/CSO stakeholder with the highest power and influence is the African Development Bank (AfDB). The New Partnership for Africa's Development (NEPAD) has the next level of power while the African Export Import Bank (Afreximbank) has the next level of influence. Within the private sector, the stakeholder with the highest power and influence is the Bill and Melinda Gates Foundation. This is followed by Rockefeller Foundation, the Ford Foundation and the Wellcome Trust. The stakeholder with the least power and influence is the Mastercard Foundation. The Health Sciences Research Institute (IRSS) emerged from the study as the research- stakeholder with the highest power, while the Research Institute of Applied Sciences and Technology (IRSAT) has the highest influence. The media stakeholder with the highest power and influence is the Burkina Faso Broadcast Television, while Impact TV and Canal 3 Burkina had the next levels of power and influence in research and innovation funding.

4.3 Capacity Needs of the Research and Innovation Funding Agency in Burkina Faso

The capacity needs for strengthening the research, innovation and STI agencies in Burkina Faso can be broadly categorised into training needs and technical support needs. The findings of the study reveal training needs in the area of mobilisation of resources, negotiation techniques and granting, effective communication of

research findings specifically in the area of strategies for using evidence to inform policy such as skills in writing policy briefing notes, public private partnerships, quality assurance and research ethics, and commercialisation of research results/safeguarding intellectual property rights. These training areas reflect the need for capacity strengthening in the various strategies for fundraising and management, policy engagement as well as procedures for commercialization of research outputs. The technical support required encompasses advocacy for increased R&I funding, stakeholder engagement, knowledge-sharing platform development, policy document drafting, commissioned studies, learning visits to successful councils, and brokering partnerships within the STI ecosystem.

4.4 Challenges and Opportunities for Research and Innovation Funding in Burkina Faso

The challenges facing research and innovation funding in Burkina Faso include: poor access to funds, poor quality of research and innovation infrastructure, lack of appropriately trained human resources, poor linkages among key stakeholders, and poor public-private partnership. These interconnected challenges pose significant barriers to Burkina Faso's scientific and technological advancement, creating a cycle that impedes national development. The poor access to funds fundamentally constrains research activities and infrastructure development, while inadequate infrastructure in turn limits the scope and quality of research that can be conducted. The shortage of well-trained human resources further compounds these issues, as it reduces the capacity to conduct high-quality research and effectively utilize available resources. The weak linkages among stakeholders and limited public-private partnerships particularly hamper the translation of research into practical innovations and commercial products, essentially preventing research outcomes from contributing to economic growth.

This combination of challenges not only affects the current state of research and innovation but also threatens future development by discouraging potential researchers and investors, making it crucial for policymakers to address these issues through a comprehensive and systematic approach that considers both immediate needs and long-term sustainability. Despite the challenges, Burkina Faso's research and innovation landscape presents promising opportunities for transformation through strategic investments in physical infrastructure and human capital. The renovation of existing laboratories and establishment of new research centers will significantly enhance research capabilities, while targeted training programs and support mechanisms for researchers would build the necessary human resource capacity. These efforts, coupled with the promotion of institutional collaboration and public-private partnerships, could

create a more dynamic and productive research ecosystem that better serves the country's development needs.

4.5 Best Practices in Research and Innovation Funding in Burkina Faso

-The establishment of the National Research and Innovation Fund for Development (FONRID): The establishment of FONRID in 2011 represents a significant milestone in Burkina Faso's approach to research and innovation funding, demonstrating a strategic shift towards more structured and sustainable research financing. The fund's creation acknowledges a crucial reality: while the country has a half-century history of scientific research, state funding alone has proven insufficient to drive meaningful research outcomes. FONRID's organizational structure is particularly noteworthy, combining technical oversight from the Ministry of Scientific Research and Innovation with financial supervision from the Ministry of Finance, creating a balanced governance framework that promotes both scientific rigor and fiscal responsibility. The fund's operational model exemplifies best practices through its comprehensive evaluation process, incorporating both technical and financial assessments of projects, along with a robust monitoring system that includes internal reporting and external committee reviews.

- Robust policy and institutional framework for scientific and technological research: The development and implementation of a comprehensive policy framework in Burkina Faso between 2012-2018 exemplifies a best practice in establishing a robust foundation for scientific research and innovation. This systematic approach demonstrates several key strengths worth highlighting. First, the policies show remarkable interconnectedness and progression, beginning with the foundational PNRST 2013-2025 and building through subsequent policies that address specific aspects of the research ecosystem. The establishment of diverse funding mechanisms through the Science, Technology and Innovation Act is particularly noteworthy, as it creates sustainable funding streams through multiple revenue sources, reducing dependence on any single funding channel.

- International stakeholder participation and collaboration: The involvement of multiple international funding partners, from traditional development agencies to private foundations, shows successful diversification of funding sources, reducing dependence on any single donor. Particularly noteworthy is the balanced participation across different sectors - governmental, non-governmental, private sector, research institutions, and media - each playing distinct but complementary roles in the ecosystem.

Table 1: A Summary of Key Policies in the Research and Innovation funding ecosystem in Burkina Faso

Policies in research and innovation funding	Aims and objectives	Impact on research and innovation funding	Remarks
The National Policy for Scientific and Technological Research (PNRST) 2013-2025	The PNRST of 2012 aims to develop research and development, and the application and commercialization of research results. It establishes for the creation of a national research fund to coordinate research activities. The financial support for scientific research and innovation for sustainable development was allocated to the National Research and Innovation Fund for Development (FONRID). The PNRST is the guiding framework for government action in the sector for a ten-year period, allowing for it to contribute to the effective implementation of new aspirations for growth and development.	The policy lacked sufficient funding, resulting in fragmented implementation and minimal technological advancements in key sectors.	Key objectives not fully met; insufficient funding and institutional support remain barriers.
The Priority Action Plan (PAP)2013-2015	The PAP outlines the government's planned research activities for departments. Its implementation aims to contribute to achieving the vision and direction of the science and technology sector by 2015. It provides a framework for institutions and organisations to enable increased efficiency and effectiveness of the Ministry of Scientific Research and innovation's (MRSI's) activities in the context of sectoral policy.	Despite offering a framework, PAP failed to significantly increase efficiency or achieve intended outcomes due to limited resources and weak coordination between government agencies and research institutions.	Objectives unmet; limited efficiency and effectiveness in implementation strategies.

The Science, Technology and Innovation Act (2013)	This Act establishes three mechanisms for funding research and innovation: the National Fund for Education and Research; the National Fund for Research and Innovation for Development; and the Forum of Scientific Research and Technical Innovation. Funding comes from the national budget and various annual subsidies: 0.2% of tax revenue, 1% of mining revenue, and 1% of revenue from operating mobile phone licences, and from royalties on sales from the results of research and the patent licence agreement concerning inventions funded by public funds.	The funding mechanisms introduced under the Act have not yielded the intended results due to weak enforcement, inconsistent revenue collection, and limited private-sector engagement.	Intended sustainable funding mechanisms have not yielded significant outcomes.
The National Action Plan for the Development of Higher Education (PNADES) 2014-2023	Officially adopted in August 2014, the National Action Plan for the Development of Higher Education is aimed at providing the government with a repository of programmes, monitoring and evaluation strategies and actions that will be taken over the period of 2014-3023 for the benefit of higher education to ensure its quantitative and qualitative development. It aims to improve key national indicators in order to provide the country with efficient human capital for socio-economic development.	Higher education and research infrastructure have seen minimal improvements, leading to a persistent lack of skilled human resources to drive innovation. Limited capacity-building programs have further impeded achieving the goal of socio-economic transformation through education.	Limited progress due to inadequate resources and infrastructure challenges.

Strategic Plan for Scientific Research and Technology (2015-2024)	Aims to create favourable conditions to produce knowledge and technologies necessary for sustainable socioeconomic development in Burkina Faso. The plan was elaborated as a response to some identified needs including: i) strengthen coordination, synergy, and coherence of research within the different institutes of the CNRST; ii) greater linkage between the CNRST's research programmes and major national development programmes; and iii) mainstream emerging themes through collaborative research programmes.	Poor coordination and inadequate funding have restricted the effectiveness of this plan. Research outputs remain poorly aligned with national priorities, resulting in limited socio-economic impact and minimal technological breakthroughs across key sectors.	Weak implementation and lack of adequate funding limit its effectiveness.
The Oriental Law for Scientific Research and Innovation (LORSI) 2013	The LORSI sets a legal framework and fundamental guidelines for scientific research and innovations in Burkina Faso. It sets the general rules guiding the implementation of sustainable development in Burkina Faso.	The law has not significantly enhanced scientific research or innovation. Poor enforcement mechanisms and lack of awareness among stakeholders have limited its effectiveness in guiding sustainable development through innovation.	Fundamental goals remain unachieved; weak enforcement and application of guidelines observed.
Sectoral Research and Innovation Policy (PSRI) 2018-2027	Enacted in December 2017, the PSRI is aimed at strengthening the productive system through the generation and intensive use of	The policy has had minimal impact on the productive sector due	Insufficient resources and weak private-sector engagement

	research and innovation results. The policy is set to guide all players in the research and innovation ecosystem of Burkina Faso.	to a lack of technical and financial support for research institutions. Weak linkages with the private sector and insufficient commercialization of research findings further hinder the realization of its objectives.	impede policy impact.
National Strategy for the Valorization of Technologies, Inventions, and Innovations (SNVTII) 2020-2024	The National Strategy for Valorization of Technologies, Inventions, and Innovations (SNVTII) is aimed at promoting the intensive use of technologies, inventions, and innovations. The Objectives of the strategy are to ensure the firm protection of technology of Inventions and Innovations (TII); make technologies, inventions and innovations available and accessible to actors; set up and/or strengthen the valuing structures of TII and ensure their functioning; develop specialised human resources for valuing TII; and ensure effective communication on the valorization of TII.	Few technological innovations have been effectively commercialized or integrated into the national economy. The lack of technical expertise and poor intellectual property enforcement mechanisms have left research outputs underutilized and undervalued.	Goals remain underachieved; limited capacity for effective commercialization of research.
The National Rural Sector Programme (PNSR) 2016-2020	This program is aimed at ensuring food and nutritional security through sustainable development of a productive and resilient agro-sylvo-pastoral, fishery, and wildlife sector	The program struggled to create resilient agro-sylvo-pastoral systems or achieve desired	Achievements constrained by inadequate investment and limited research

	that are more market oriented. It also aims to strengthen the strategic and operational capacities of research structures through the improvement of human resources and management systems.	productivity gains across the rural sector.	infrastructure.
The National Economic and Social Development Plan (PNDES 2016-2020)	The main objective of PNDES 2016-2020 is to achieve the structural transformation of the Burkina Faso economy to attain strong, sustainable, resilient and inclusive growth that creates decent jobs and improves social welfare. It is a national reference for interventions by the State and its partners over the period 2016-2020. It aims at a cumulative growth in per capita income, reducing poverty, strengthening human capacities and satisfying basic needs, within an equitable and sustainable framework. Among its major target areas is to promote research and innovation to ensure structural economic transformation.	The ambitious goals of transforming the economy and reducing poverty have seen little progress due to weak implementation and lack of coordination among stakeholders. Research and innovation have contributed marginally to economic transformation and inclusive growth.	Missed targets due to challenges in coordination and funding, despite its ambitious framework.

5. Conclusion

The government of Burkina has made tremendous efforts towards enhancing research and innovation. The creation of a dedicated funding agency- FONRID as well as a robust policy and institutional framework are significant commitments towards revamping research and research and innovation funding. Despite these efforts, challenges such as insufficient funding, poor infrastructure, limited human capital, and weak stakeholder linkages persist. Addressing these issues requires increased investment in science, technology, and innovation (STI), prioritizing areas of comparative advantage, and ensuring stronger public-private partnerships. Additionally, robust monitoring, evaluation, and learning mechanisms, alongside improved capacity-building initiatives, will ensure better alignment of research outputs with national development goals. By leveraging both domestic resources and international collaborations, Burkina Faso can build a resilient research and innovation funding ecosystem that drives innovation and competitiveness, thereby improving the socio-economic lives of its citizens.

6. Policy Recommendations

Based on the findings of the study, the following policy recommendations are strongly proposed to strengthen the research and innovation funding ecosystem of Burkina Faso:

Recommendation 1: Increase funding for the STI Sector through higher budgetary allocation and other sources of funding: The funding for research and innovation in Burkina Faso is extremely low, amounting to only 0.25% of GDP. This is significantly insufficient to drive impactful research and development. Increasing budgetary allocations for FONRID, encouraging private sector investment, and securing greater support from the donor community are vital. Enhanced funding would enable robust research activities, improved infrastructure, and stronger institutional capacity, paving the way for STI to play a central role in national development.

Recommendation 2: Promote effective linkages among the different stakeholders in the ecosystem: Weak coordination between government agencies, private sector actors, and research institutions hampers the translation of research outputs into practical innovations. Strengthening public-private partnerships and collaboration between stakeholders will enhance resource mobilization, knowledge exchange, and commercialization of research findings. Establishing formal memoranda of understanding (MOUs) and creating platforms for regular stakeholder interaction are recommended actions.

Recommendation 3: Develop and implement robust Monitoring, Evaluation, and Learning (MEL) Systems for R&I to enhance efficiency, transparency and accountability: Burkina Faso needs a robust MEL framework that tracks the impact of research and innovation investments, ensuring transparency and accountability. A data-driven approach can help assess program effectiveness, identify gaps, and refine strategies to maximize outcomes. This will also serve as a tool to advocate for increased funding and support from policymakers.

Recommendation 4: Implement regular capacity building programmes for FONRID Staff and other relevant stakeholders: A critical recommendation for strengthening Burkina Faso's research and innovation ecosystem is the development of specialized training programmes in resource mobilization, intellectual property management, and research communication. Such programmes should focus on diversifying funding sources beyond the current

mechanisms established by the Science, Technology and Innovation Act of 2013. Training of researchers and institutional staff in patent applications, intellectual property rights protection, and commercialization of research outputs would help address the current gap between research production and its translation into marketable innovations that can contribute to economic development.

Recommendation 5: Develop and implement measures for retaining Human Resources in FONRID: High staff turnover and limited technical expertise are major challenges within FONRID and the broader research and innovation ecosystem. To address these, training programmes should adopt a "train-the-trainer" model to ensure knowledge transfer and long-term capacity building.

References

Agboola, O (2024). Burkina Faso Under Ibrahim Traoré: Setting a New Direction for African Leadership https://africanvoiceonline.co.uk/burkina-faso-under-ibrahim-traore-setting-a-new-direction-for-african-leadership/.

Byabasaija, P (2023). Burkina Faso President Champions African Rights, Advocates for Language Shift https://www.africanexponent.com/burkina-faso-president-champions-african-rights-advocates-for-language-shift/.

Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ], (2023). Burkina Faso. https://www.giz.de/en/worldwide/329.html

Organization for Economic Cooperation and Development [OECD], 2021). Investing in Research and Development in Developing Countries. https://www.oecd.org/en/publications/2021/03/development-co-operation-tips-tools-insights-practices_d307b396/investing-in-research-and-innovation-in-developing-countries_240a194a.html

Oxford Poverty and Human Development Initiative [OPHI], (2020). Global MPI Country Briefing 2020: Burkina Faso (Sub Saharan Africa). https://ophi.org.uk/media/38635/download

World Bank (2018). Country Partnership Framework for Burkina Faso. https://documents1.worldbank.org/curated/pt/989871531020679064/pdf/BURKINA-FASO-CPF-06112018.pdf

World Intellectual Property Organization [WIPO] (2024). Burkina Faso ranking in the Global Innovation index 2024. https://www.wipo.int/edocs/gii-ranking/2024/bf.pdf

ATPS TechnoPolicy Briefs Series[1]

- Promoting Digital Literacy Among Farmers: Unlocking The Potential of Artificial Intelligence Enabled Crop Pests/Disease Detection Mobile Application (ATPS TechnoPolicy Brief No. 89).
- Leveraging Artificial Intelligence AI and Earth Observation Data in Early Warning Systems for Pest Control and Management in Kenya (ATPS TechnoPolicy Brief No. 88).
- Artificial Intelligent Tool Worth Scaling for Sustainable Irrigation in Malawi – A Case of Chameleon Sensor Array (ATPS TechnoPolicy Brief No. 87).
- Leveraging Artificial Intelligence for Sustainable Production and Market Access to Nsukka Yellow Pepper in Nigeria ATPS (TechnoPolicy Brief No. 86).
- Decentralised Community-Powered Weather Networks for Hyper-Localised Weather and Climate Information Services in Kenya ATPS (TechnoPolicy Brief No. 85).
- Participation Des Parties Prenantes À La Mise En Oeuvre Des Contributions Déterminées Au Niveau National (CDN) en Côte D'ivoire (ATPS Note D'orientation No. 84).
- Enhancing Climate Action in Zimbabwe Implementing Nationally Determined Contributions (NDCs) (ATPS TechnoPolicy Brief No. 83).
- Unlocking Zambia's Climate Potential Enhancing Stakeholder Roles in The Implementation of Nationally Determined Contributions (NDCs) (ATPS TechnoPolicy Brief No. 82).
- Empowering Local Communities and Enhancing Public Awareness for Sustainable NDCs Implementation in Namibia (ATPS TechnoPolicy Brief No. 81).
- Empowering Stakeholders for Inclusive and Sustainable Nationally Determined Contributions Implementation in Botswana (ATPS TechnoPolicy Brief No. 80).
- Uniting for a Sustainable Future Boosting Stakeholder Engagement in Sierra Leone's Climate Goals (ATPS Technopolicy Brief No. 79).
- Stakeholder Participation in The Implementation of Nigeria's Nationally Determined Contributions (NDCs) Best Practices, Challenges and Opportunities (ATPS TechnoPolicy Brief No. 78).
- StakeholderParticipation in Ghana's NationallyDetermined Contributions(NDCs) Implementation Challenging Issues and Opportunities (ATPS TechnoPolicy Brief No. 77).
- Stakeholder Participation in The Implementation of Nationally Determined Contributions (NDCs) In Côte D'ivoire (ATPS TechnoPolicy Brief No. 76).
- Collaborative Climate Action for Sustainable Development the Case of NDCs Implementation in Uganda (ATPS TechnoPolicy Brief No. 75).

- Advancing Tanzania's Nationally Determined Contribution (NDCs) Goals Through Inclusive Stakeholder Engagement (ATPS TechnoPolicy Brief No. 74).
- Enhancing Stakeholder Participation in The Implementation of the Nationally Determined Contributions (NDCs) In Ethiopia (ATPS TechnoPolicy Brief No. 73).
- Paving The Way for Climate Action Kenya's Journey Towards Implementing the Nationally Determined Contributions (NDCs) (ATPS TechnoPolicy Brief No. 72).
- Quelle Est La Place De La Science, De La Technologie Et De L'innovation Dans L'emploi Des Jeunes Au Sénégal? (ATPS TechnoPolicy Brief No. 71).
- Using Science, Technology, and Innovation to Enhance Skills Development, Job Creation, and Entrepreneurship in Zimbabwe (ATPS TechnoPolicy Brief No. 70).
- Fostering the Future and Livelihood of Young People in Uganda Through Science, Technology, and Innovation (ATPS TechnoPolicy Brief No. 69).
- What is the Place of Science, Technology, and Innovation in Youth Employment in Senegal? (ATPS TechnoPolicy Brief No. 68).
- Understanding Rwanda's Science, Technology, and Innovation Landscape in Youth Employment Creation (ATPS TechnoPolicy Brief No. 67).
- Leveraging Science, Technology, and Innovation for Enhanced Youth Employment in Nigeria (ATPS TechnoPolicy Brief No. 66).
- Unlocking the Potential of Education and Skills for Supporting Youth Employment in Kenya (ATPS TechnoPolicy Brief No. 65).
- Harnessing Science and Technological Innovation for Youth Employment and Skill Acquisition in Ghana (ATPS TechnoPolicy Brief No. 64).
- Is Ethiopia's Science, Technology, and Innovation Policy Landscape Effectively Creating Jobs and Fostering Skills for the Youth? (ATPS TechnoPolicy Brief No. 63).
- University-led ecosystems for sustained innovation and entrepreneurship development in Kenya (ATPS Technopolicy Brief No. 62).
- Eco-innovation Policies for Sustainable Development in Africa (ATPS TechnoPolicy Brief No. 61).
- Institutional Landscape for Eco-innovation Development in Africa (ATPS TechnoPolicy Brief No. 60).
- Policy and Institutional Landscape for Ecological Organic Agriculture in Benin (ATPS TechnoPolicy Brief No. 59).
- Institutional Framework for Ecological Organic Agriculture Development in Kenya (ATPS TechnoPolicy Brief No.58).
- Policy and Institutional Landscape for Ecological Organic Agriculture in Senegal (ATPS TechnoPolicy Brief No. 57).
- Advancing Ecological Organic Agriculture in Nigeria (ATPS TechnoPolicy Brief No. 56).

- Policy and Institutional Landscape of Ecological Organic Agriculture in Rwanda (ATPS TechnoPolicy Brief No. 55).
- Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision (ATPS TechnoPolicy Brief No. 54).
- Embracing Open Contracting in Africa (ATPS TechnoPolicy Brief No. 53).
- The Digital Revolution, Open Science, and Innovation for Open Science Development in sub-Saharan Africa (ATPS TechnoPolicy Brief No. 52).
- New Approaches for Funding Research and Innovation in Africa (ATPS TechnoPolicy Brief No. 50).
- Towards effective PPP in research and innovation A perspective for SGCs in Africa (ATPS TechnoPolicy Brief No. 49).
- Innovative Practices and Policies for Promoting Biodiversity Informatics in Sub Saharan Africa (ATPS TechnoPolicy Brief No. 48).
- Improving the Relevance of University Training to Labour Market Demands in Africa (ATPS TechnoPolicy Brief No. 47).
- Developing Policies for Biodiversity Informatics in Sub-Saharan Africa (ATPS TechnoPolicy Brief No. 46).
- Using the Land Potential Knowledge System (LandPKS) Mobile Technology for Agricultural Productivity and Resilience (ATPS TechnoPolicy Brief No. 45).
- Mainstreaming Gender in the National Science, Technology and Innovation (STI) Policy of Kenya (ATPS TechnoPolicy Brief No. 44).
- Social Innovation: An Untapped Resource for Inclusive Growth in Africa (ATPS TechnoPolicy Brief No. 43).
- Policy Axes that can uphold Agricultural Innovations for Climate Change Adaptation & Food Security in Central Africa: Case of Cameroon, Equatorial Guinea and Central African Republic (ATPS TechnoPolicy Brief No. 42).
- Frameworks for Intellectual Property Protection of Traditional Knowledge in Tanzania (ATPS Technopolicy Brief No. 41).
- Assessment of Possible Intellectual Property Protection Options of Traditional Knowledge System in Ethiopia (ATPS TechnoPolicy Brief No. 40).
- Towards Influencing National Legislation, Policies, Strategies and Programmes for Appropriate Protection and Benefit-Sharing of Traditional Knowledge (TK) with and by Traditional Herbalists In Uganda (ATPS TechnoPolicy Brief No.39).
- Traditional Healers and their Provision of Mental Health Services in Cosmopolitan Informal Settlements in Nairobi, Kenya (ATPS TechnoPolicy Brief No. 38).
- Policy Implications for Intellectual Property Systems for Traditional Healers in Lesotho (ATPS TechnoPolicy Brief No. 37).

- Incidence of Indigenous and Innovative Climate Change Adaptation Practices for Smallholder Farmers' Livelihood Security in Chikhwawa District, Southern Malawi (ATPS TechnoPolicy Brief No. 36).
- Machobane Farming System and its Relevance to Climate Change Policy in Lesotho (ATPS Policy Brief Series No. 35).
- Policy Challenges of Climate Change and Adaptation in Northern Nigeria (ATPS Policy Brief Series No. 34).
- Sensitizing and Building the Capacity of Women towards Climate Change Consequences in Northern Lakes of Egypt (ATPS Policy Brief Series No. 33).
- Agricultural Innovations for Climate Change Adaption and Food Security in Ghana and The Gambia: Policy Options (ATPS TechnoPolicy Brief No. 32).
- Tracking Effective Indigenous Adaptation Strategies on Impacts of Climate Variability on Food Security and Health of Subsistence Farmers in Tanzania (ATPS TechnoPolicy Brief No. 31).
- Harnessing Wind Energy for Climate Change Adaptation and Food Security in Coastal Regions of Ghana: A Policy Perspective (ATPS TechnoPolicy Brief No. 30).
- What Policy Options can Promote Agricultural Innovations for Climate Change Adaptation and Food Security in the West African Sub-region? (ATPS TechnoPolicy Brief No.29).
- What Policy Options can Promote Climate Change Awareness and Adaptation in the Niger Delta Region of Nigeria? (ATPS TechnoPolicy Brief No. 28).
- Emerging and Indigenous Technologies for Climate Change Adaptation in the Farming Systems of Southwest Nigeria: Issues for Policy Action (ATPS TechnoPolicy Brief No. 27).
- Goals of Sustainable Agriculture in Sierra Leone: Can they be achieved in the Absence of Climate Change Capacity Building of Small-holder Farmers? (ATPS TechnoPolicy Brief No. 26).
- Indigenous Agricultural Adaptation to Climate Change: Study of Southeast Nigeria (ATPS technoPolicy Brief No.25).
- Technological Challenges of Climate Change Adaptation in Nigeria: Insights from Enugu State (ATPS TechnoPolicy Brief No. 24).
- Towards An Integrated Trans-Boundary River Management Policy Development (INTREPID) In Semi-Arid River Basins (ATPS TechnoPolicy Brief No.23).
- How to Write an Effective Science Story (ATPS Technopolicy Brief Series No. 20).
- What are the Policy Gaps Hindering Full Implementation of Community Water and Sanitation Programs in Ghana? (ATPS TechnoPolicy Brief Series No.18).
- Is EcoSan an Appropriate Water and Environment Technology Option for Slum Communities of Kampala? (ATPS TechnoPolicy Brief Series No. 17).
- What are the Policy Implications for Industrial Water Pollution in Lesotho? (ATPS TechnoPolicy Brief Series No. 16).

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.

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
www.atpsnet.org

Science, Technology and Innovation for African Development

ISBN: 978-9966-124-39-5