

NEWSLETTER <<< >>> TECHNOPOLICY AFRICA

The Official Newsletter of the African Technology Policy Studies Network (ATPS)



ADVANCING SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT

HIGHLIGHTS

Building Ghana’s Future: Sustainable Development through Green Financing and SMEs

This article examines Ghana’s sustainable development progress, focusing on SMEs, green financing, and national policies. It reviews Ghana’s Long-Term Development Plan and clean energy projects, highlighting government commitment and SME potential, while identifying challenges like data gaps and funding limits. Through a SWOT analysis, key recommendations include aligning policies...pg 4



Unlocking the Power of Data Engineering to Transform Industries with Quality Insights

Data engineering forms the backbone of organizations that rely on data-driven decision-making. It involves creating and optimizing data pipelines that make raw information accessible for analysis. The quality of data directly impacts an organization’s ability to make informed decisions, forecast trends, and automate complex processes effectively. According to Harvard Business Review, companies leveraging data-driven decisions ...pg 8





CONTENTS

Editor in Chief:
Prof. Nicholas Ozor

Editor:
Susan Aquila Mburu

Contributors:
Sam Rex Babo

Rose Akuffo

Hakeem Issah

Angela Adomoko

Dr. Tesfa Belachew

Dr. Eric Bienvenu TRA BI

Amina K. Nyangala

Minta Fredrick Kwame

Design & Layout:
Susan Aquila Mburu
& Ian Njuguna

ATPS Vision:

To use Science, Technology, and Innovation (STI) as a means for achieving sustainable development in Africa

ATPS Mission :

To improve the quality of Science, Technology, and Innovation (STI) systems research, policy, and practice by strengthening the capacity for STI knowledge generation, dissemination, and use for sustainable development in Africa

Overall Objective:

To build Africa's capability in Science, Technology, and Innovation for sustainable development

ATPS Motto:

Building Africa's capabilities in Science, Technology, and Innovation policy research, policymaking, and policy implementation for sustainable development.

Inside:

Chairman's Message.....	1
Executive Director's Message.....	2
Building Ghana's Future: Sustainable Development through Green Financing and SMEs	4
Unlocking the Power of Data Engineering to Transform Industries with Quality Insights.....	8
Community law, a supranational instrument for sustainable development at the core of the WAEMU area	10
Accelerating African Women's Leadership in Climate Action.....	15
Interview; Minta Fredrick Kwame: The Innovator Behind 'Obia Bedidi,' an Assistive Robot for Children with Disabilities.....	22
News at a Glance.....	23
Photo Gallery.....	32

Chairman's Message

As we reach the end of 2024, I am delighted to connect with you once more in the 25th issue of the Technopolicy Newsletter. This year marks a significant milestone, not just as we close another year of transformative work at the African Technology Policy Studies (ATPS) Network, but also as we celebrate 25 impactful editions of this newsletter.



Prof. Crispus Kiamba

Chairman, ATPS Board of Directors

Reflecting on this year, I am immensely proud of the strides we have made in advancing science, technology, and innovation (STI) for Africa's sustainable development. These accomplishments have only been possible through the resilience and commitment of our dedicated team, under the exemplary leadership of our Executive Director, Prof. Nicholas Ozor. Our shared vision has empowered us to deliver high-impact programs, produce relevant and high-impact research, and actively engage in policy dialogues that are critical for shaping Africa's future through effective decision-making.

I want to extend my heartfelt gratitude to all our members, partners, and stakeholders. Your involvement; whether participating in our events, contributing to ground breaking research, or advocating for our initiatives, has been the driving force behind our success. Together, we have fostered an environment where innovation thrives, and evidence-based policies are crafted to support Africa's growth and development.

As we prepare to embark on a new year, our dedication to leveraging STI for sustainable development remains unwavering. We are acutely aware of the challenges ahead, from addressing climate change to fostering inclusive economic growth, reducing poverty, strengthening entrepreneurial skills especially among young people, and the deployment of emerging technologies to address critical societal challenges in Africa. Yet, we remain optimistic, strengthened by our collaborations and the belief that our collective efforts will pave the way for a more sustainable and technologically advanced continent.

In this spirit, I urge all of you to remain engaged and to continue contributing your expertise and support towards the vision, mission, and goal of the ATPS. The impact of our work reaches far and wide, touching lives and shaping futures across Africa.

Thank you for your steadfast support and commitment to this journey. Here's to a prosperous new year filled with progress, innovation, and lasting impact for Africa.

Executive Director's Message

As 2024 draws to a close, I am proud to reflect on the incredible strides we have made together at the African Technology Policy Studies (ATPS) Network. This year has been a journey of impactful engagements, strategic partnerships, and unwavering dedication to advancing science, technology, and innovation (STI) for Africa's sustainable development.

One of our most exciting developments is the progress made under the project on *"Building the Capacity of Selected sub-Sahara African Countries to Effectively Measure Progress in their Nationally Determined Contributions' Implementation Using Tracking Tools and Indexes"*.



Prof. Nicholas Oxor

Executive Director, ATPS

We are pleased to announce that data collection is being completed in the 12 participating African countries, paving the way for the creation of an online Nationally Determined Contributions' (NDC) Index for the countries. This innovative tool will provide a comprehensive framework to track the implementation of climate commitments from the participating countries, offering crucial insights for policymakers, researchers, and development partners to use the tool for effective decision-making with respect to achieving emission targets in the respective countries. The NDC Index will enhance transparency, accountability, and informed policy decisions, solidifying Africa's commitment to effective climate action and resilience.

Another highlight of the year was our participation in the Annual Forum for the Science Granting Councils Initiative (SGCI) in Gaborone, Botswana. This forum offered an invaluable platform to exchange ideas and share experiences with leaders from across the continent.

The discussions were particularly relevant to our work under the project tagged *"Strengthening the National Research and Innovation Funding Agencies in West Africa (SRIFA)"*, where we aim to enhance the operational capacities of science granting councils and establish frameworks for similar entities in countries without them specifically in West Africa.

Participation in this forum reinforced the importance of collaboration and knowledge-sharing in building robust research and innovation ecosystems in Africa. We also celebrated the successful conclusion of tailored training programs to the West African Councils under the SRIFA project. These programs addressed the unique technical and capacity needs of the science granting councils in Burkina Faso, Côte d'Ivoire, Ghana, Senegal, and Sierra Leone, while also laying the foundation for Nigeria to establish its own National Research and Innovation Council (NRIC) and the National Research and Innovation Fund (NRF) through a High-level Policy Dialogue that was attended by the Honourable Minister of Innovation, Science, and Technology, Hon. Uche Nnaji who represented President Bola Ahmed Tinubu during the event. The dialogue set the stage for transformative change in Nigeria's research and innovation landscape.

In line with our project on *“Managing Organization (Hub) for Responsible Artificial Intelligence for Agriculture and Food Systems (AI4AFS) Innovation Research Network in Africa”*, the ATPS team conducted field visits to Ghana, Nigeria, Kenya, and Senegal. These engagements allowed us to make first-hand assessments of the transformative impacts of the AI-driven solutions in agriculture and food systems, exchange knowledge, gather feedback, and refine strategies to meet the needs of the communities we serve.

As we reflect on these accomplishments, it is clear that our work at ATPS is creating tangible, far-reaching impacts. From advancing climate action to strengthening research systems and empowering communities with cutting-edge innovations and technology, our mission to drive Africa’s sustainable development remains at the heart of everything we do.

I extend my heartfelt gratitude to our team, partners, and stakeholders for their unwavering support and collaboration. Together, we are making a real difference. As we look ahead to 2025, let us remain inspired, resilient, and committed to harnessing STI for Africa’s sustainable future.

Thank you for being an integral part of this journey. I also take this opportunity to wish our numerous ATPS Network members Merry Christmas and Prosperous New Year 2025.





Building Ghana's Future: Sustainable Development through Green Financing and SMEs

Contributors



Sam Rex Babo



Rose Akuffo



Hakeem Issah



Angela Adomako

The contributors for the article include Sam Rex Sagoe Babo the Managing Director and Research Lead at Kumasi Hive, Rose Akuffo a detail-oriented Data Analyst, Angela Asantewaa Adomako and Hakeem Issah both Research Associates at Kumasi Hive.

Abstract

This article examines Ghana's sustainable development progress, focusing on SMEs, green financing, and national policies. It reviews Ghana's Long-Term Development Plan and clean energy projects, highlighting government commitment and SME potential, while identifying challenges like data gaps and funding limits. Through a SWOT analysis, key recommendations include aligning policies, improving stakeholder collaboration, and establishing a national data repository to support resilience. Strengthened partnerships and innovative financing are essential for advancing Ghana's green economy.

Introduction

Ghana's sustainable development efforts are aligned with global goals, such as the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063, emphasizing economic growth, environmental protection, and social inclusion (Abubakari et al., 2018). This alignment has fostered a proactive approach to policy frameworks, green financing, and small and medium-sized enterprise (SME) involvement, which are essential for supporting a green economy. With SMEs comprising over 90% of Ghana's businesses, their potential for advancing sustainability is significant, as is the role of green financing in supporting initiatives like the Ghana Sustainable Land and Water Management Project, which demonstrates progress in both economic and environmental areas. This article reviews Ghana's development landscape through a SWOT analysis to identify key strengths, weaknesses, opportunities, and challenges, aiming to provide actionable recommendations for advancing sustainable development in West Africa.



Ghana's Long-Term Development Plan and Green Economy

Ghana's Long-Term Development Plan (LTNDP) emphasizes integration between short-term actions and long-term goals, advocating economic, social, and environmental progress (Abubakari et al., 2018). Key efforts under the green economy include the Nationally Determined Contributions (NDCs) aiming for a 15% reduction in emissions by 2030, and various renewable energy projects like the Ghana Scaling up Renewable Energy Program, which prioritize energy access in rural areas (Nyasapoh et al., 2023). These frameworks underscore Ghana's proactive stance, though challenges remain due to infrastructure limitations and technical expertise gaps.

SMEs as Catalysts in the Green Economy

Comprising over 90% of Ghanaian businesses, SMEs are vital to economic growth and sustainability (Abor & Quartey, 2010). Their potential to support a green economy through eco-friendly practices is significant, yet challenges like limited financing persist. With strategic support, SMEs could advance Ghana's sustainable development goals by adopting green technologies and sustainable practices (Danso et al., 2014).

Green Financing Initiatives

Ghana has successfully secured green financing for numerous sustainability projects, such as the Ghana Sustainable Land and Water Management (GSLWM) project and the Ghana Energy Development and Access Project (GEDAP) (World Bank, 2022). These initiatives support environmental goals while enhancing economic resilience. To maximize impact, more comprehensive data collection and monitoring are essential to assess and replicate successes (Hagan, 2021).

SWOT Analysis Highlights

Ghana's strong policy framework, including initiatives like the Renewable Energy Master Plan (REMP) and clean fuel standards, positions it as a leader in sustainable policy (Matata, 2023). The country has also made strides in improving rural renewable energy access through projects such as the solar expansion program (Trade Commissioner Service, 2022). However, challenges such as limited data collection, resource constraints, and insufficient political will to enforce green policies effectively remain significant obstacles. There are opportunities to further expand green finance models and build international partnerships for resource mobilization and technical expertise exchange (Essel et al., 2022). Yet, climate change impacts, economic dependencies, and inadequate stakeholder engagement threaten the country's sustainability objectives (Ghana Environmental Protection Agency, 2021).



Recommendations

To strengthen Ghana's sustainability trajectory, aligning governmental priorities with the Long-Term National Development Plan (LTNDP) is crucial for policy coherence (Gumede, 2014). Targeted policies to support SMEs would empower these enterprises to adopt sustainable practices, enhancing their role in the green economy. Additionally, establishing a centralized data repository for sustainability metrics would improve transparency and enable effective monitoring (Panford, 2017). Expanding public-private partnerships could foster innovation and improve data collection, facilitating more robust green economy initiatives through collaborative efforts



Engineers pose for a photo after installation of solar panels in Ghana.

Conclusion

Ghana's path to sustainable development demonstrates progress, particularly in green financing and SME contributions. However, achieving long-term sustainability will require enhanced policy coherence, improved SME support, and strengthened partnerships. With these efforts, Ghana can continue its leadership in sustainable development within West Africa.



References

- ▶ Abubakari, M., Asamoah, P.K.B. and Agyemang, F.O. (2018) Ghana and Sustainable Development: The 40-Year National Development Plan in Retrospective. *Journal of Human Resource and Sustainability Studies*, 6, 24-36.
- ▶ Ghana National Development Planning Commission. (2017).
- ▶ Nyasapoh, E., Kyei-Mensah, J., & Osei-Tutu, E. (2023). Policy Frameworks Supporting Renewable Energy Development in Ghana. *Energy Policy*, 162(1), pp. 112-123.
- ▶ Abor, J. and Quartey, P. (2010). Issues in SME Development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(6), 215-228.
- ▶ Danso-Abbeam, G., Ansah, I. and Ehiakpor, D. (2014). Microfinance and Micro-Small-Medium Scale Enterprises (MSME's) in Kasoa Municipality, Ghana. *British Journal of Economics, Management and Trade*, 4(12), 1939-1956.
- ▶ World Bank (2022). Ghana Can Turn Climate Challenges into Opportunities for Resilient and Sustainable Growth.
- ▶ Hagan, E.B. (2021). Renewable Energy Policy Review: Identification of Gaps and Solutions in Ghana. Energy Commission of Ghana.
- ▶ Lisa Matata. (2023). Ghana unveils new green initiatives leading the way in clean transition in West Africa. [Retrieved from: <https://africasustainabilitymatters.com/ghana-unveils-new-green-initiatives-leading-the-way-in-clean-transition-in-west-africa/>]
- ▶ National Development Planning Commission. (2017). Long-Term National Development Plan (LTNDP), https://ndpc.gov.gh/media/Long-term_National_Development_Plan_2018-2057_tdqQ7xU.pdf
- ▶ Ghana Environmental Protection Agency (2021). Status of Ghana's MRV System.
- ▶ Gumede, W. (2014) Comparative Country Long Term Development Planning: Les sons for South Africa. Wits School of Governance, University of the Witwatersrand, Johannesburg.
- ▶ Kwamina, Panford. (2017). Policies for High-Value Contributions of Africa's Resources to Sustainable Development. doi: 10.1057/978-1-137-54072-0_7.
- ▶ Essel, D., Jin, Z., Bowers, J.O., & Abdul-Salam, R. (2023). Green maritime practices in an emerging economy towards the achievement of sustainable development: a Ghanaian context.
- ▶ Trade Commissioner Service. (2022). Energy market in Ghana. Available at: <https://www.tradecommissioner.gc.ca/ghana/market-reports-etudes-demarches/0007424.aspx?lang=eng> [Accessed 10 Nov. 2024].



Unlocking the Power of Data Engineering to Transform Industries with Quality Insights



Dr. Tesfa Belachew

Tesfa Belachew is a Data Engineering Specialist based in Coventry, England. He holds a Master's degree in Environmental Engineering & Project Management from the University of Leeds and a PhD in Mechanical Engineering from The University of Huddersfield. Tesfa specializes in building data pipelines and generating actionable insights that enable organizations to make data-driven decisions, fostering innovation and sustainable growth. His work focuses on leveraging technology to support development, aligning with his dedication to advancing science and innovation for Africa's progress.

The digital revolution has catapulted data engineering into a critical role across diverse industries. In sectors like healthcare, finance, and retail, the ability to efficiently collect, process, and analyse vast amounts of data has become paramount. As a data engineering specialist, I've witnessed first-hand how robust data practices can streamline operations, enhance efficiency, and provide businesses with a significant competitive edge.

The Importance of Data Engineering

Data engineering forms the backbone of organizations that rely on data-driven decision-making. It involves creating and optimizing data pipelines that make raw information accessible for analysis. The quality of data directly impacts an organization's ability to make informed decisions, forecast trends, and automate complex processes effectively. According to *Harvard Business Review*, companies leveraging data-driven decisions are 5% more productive and 6% more profitable than their competitors' era of big data, engineers face the challenge of managing massive and continuously growing data sets, often requiring real-time processing. This has fuelled innovations in data storage and processing technologies, including advancements in cloud computing and distributed systems.

As Across Diverse Industries

- 1 Healthcare:** Data engineering has revolutionized healthcare by enabling personalized medicine and preventive care strategies. Hospitals use data pipelines to analyse patient records and treatment outcomes, which *HealthIT.gov* reports can reduce patient readmission rates by 8% through predictive analytics. Additionally, public health initiatives have been instrumental in identifying and mitigating disease outbreaks.
- 2 Finance:** The fintor has embraced data engineering to improve risk management, fraud detection, and customer service. Real-time transaction analysis has become a standard for detecting fraud, saving banks billions of dollars annually.



- 3 **Retail:** Retailers are using data deeper understanding of consumer behaviour and improve supply chain efficiency. A report by *Deloitte* highlights that predictive analytics in retail can lead to a 15–30% reduction in inventory costs while enhancing customer satisfaction through personalized marketing. Data-driven pricing and inventory strategies are not for maximizing profit margins.



As Across Diverse Industries

Data quality is a fundamental element of effective data engineering. Poor data quality results in flawed analyses and inefficiencies. *Gartner* estimates that poor data quality costs organizations an average of \$12.9 million annually. To combat this, data governance frameworks are essential, policies for data integrity, availability, and security.

In healthcare, for instance, inaccurate patient data can have severe consequences, such as misdiagnoses or harmful treatments. A study in *The Lancet* emphasizes the necessity of reliable data systems to ensure patient safety and effective medical interventions. Thus, investing in data quality strategies is paramount.

The Future of Data Engineering

The future of data engineering is full of promise. The rise of the Internet of Things (IoT) and real-time data analytics is already pushing the boundaries of data engineering capabilities. According to Statista, the number of IoT-connected devices is expected to reach 38.6 billion by 2025, driving the need for real-time data processing and edge computing.

Advancements in artificial intelligence (AI) and machine learning (ML) are revolutionizing the field. AI automates routine tasks and enhances data quality management, allowing engineers to focus on developing sophisticated algorithms that can process unstructured data, like text and images. These advancements are crucial for improving data-driven decision-making in an increasingly complex digital ecosystem.

Conclusion

Data engineering is an ever-evolving field, reshaping industries and driving global innovation. From healthcare to finance, its impact is profound and far-reaching. As a data engineering specialist, I am inspired by the opportunities to harness data with precision and drive meaningful progress. As technologies advance, one thing is clear: data engineering will continue to be a pillar of innovation, transforming how we work and live.



Community law, a supranational instrument for sustainable development at the core of the WAEMU area



Dr Éric Bienvenu TRA BI

Written by Dr Éric Bienvenu TRA BI, a Teacher-Researcher in Public Law and Political Science, Legal Sciences Training and Research Unit, Jean Lorougnon GUÉDÉ University of Daloa (UJLoG), Ivory Coast.

Abstract

West African community law is a supranational instrument for sustainable development at the core of the WAEMU area. Thus, community law is likely to contribute to socially sustainable and equitable, economically efficient and inclusive and ecologically viable and sustainable development. Social sustainability is mainly achieved through two legal mechanisms, freedom of movement and the right of establishment. Environmental sustainability is fostered by the protection and the valuation of the marine and coastal environment against pollution, the preservation of oil and gas resources, the sustainable and integrated management of mangroves and coastal zones, the development of renewable energies and as well as energy poles. Finally, economic sustainability is ensured by the development of economic competition, inter-African trade, transparency in the management of public finances and in the award, execution and settlement of public contracts.

Keywords : *Community law, supranational instrument, sustainable development, WAEMU.*

Introduction

Community law is likely to contribute to the sustainability of development. Economic sustainability is expressed in terms of self-sustaining growth ; environmental sustainability emphasizes the fight against pollution, the preservation of non-renewable natural resources, energy savings and the transmission of natural capital to future generations ; social sustainability refers to the problem of “sustainable social development” but its analysis still remains the subject of little investigation (J. Ballet, J.L. Dubois, F-R. Mahieu, 2004, p. 2).

Hence the interest of this reflection which aims to assess the impact of community law on the social, environmental and economic sustainability of development in the WAEMU area. This is an attempt to theorize the overlap between community law and sustainable development.



From the initial problem, a chain of questions arises: what are the issues and challenges linked to the sustainability of development? What is the impact of this supranational development instrument on the social and environmental sustainability of development on the one hand and economic sustainability on the other?

As part of this reflection on the interactions and overlaps between community law and sustainable development, we will endeavor to evaluate the impact of WAEMU community law on the social and environmental sustainability of development (First part) and to determine its impact on the economic sustainability of development (Part Two).

The impact of community law on the social and environmental sustainability of development in the WAEMU area

The vision of sustainable development considers the three dimensions, social, ecological and economic, in an interlocking order where each dimension finds itself induced by the previous one in a one-to-one and autonomous relationship. The social is thus induced, and therefore absorbed, by the environment, hence this regular absence of its own specification. (J. Ballet, J.L. Dubois, F-R. Mahieu, 2011, p. 89).

This observation justifies the interest of the methodological approach of this reflection which resides in an attempt to specify the social and environmental sustainability of sustainable development in relation to the practical implications of UEMOA community law.

The impact of community law on the social sustainability of development

Socially sustainable development can be defined as “development which guarantees for present and future generations, the continuous and equitable improvement of well-being capacities for all “capacities to do and to be” (J. Ballet, J.L. Dubois, F-R. Mahieu, 2004, p. 5).

Within the WAEMU area, two legal mechanisms contribute to achieving the human and social dimensions of sustainable development. This concerns the freedom of movement of people, services and capital (Article 91 of the WAEMU Treaty of January 10, 1994) and the right of establishment granted to certain liberal professions. Free movement implies the abolition of all discrimination based on nationality, with regard to the search for and exercise of employment, the right to move and stay in the territory of all Member States to benefit opportunities to improve the quality of life and strengthen wellness and productive capacities.

The professionals who benefit from this community regime relating to freedom of movement and the right of establishment in the WAEMU area are Architects, Lawyers, Doctors, Pharmacists, Surgeons-Dentists, Doctors-Veterinarians, Experts-Accountants and Chartered Accountants. Beyond the social sustainability of sustainable development, community law has a significant impact on environmental sustainability.



The impact of community law on the environmental sustainability of development

With a view to ensuring environmental sustainability, principles of conduct have been determined (responsible production and consumption, precautionary principle, polluter pays principle, etc.) as well as management rules (Hartwick's rule for replacement destroyed resources, protection of non-renewable resources, etc).

Indeed, in 2022, the WAEMU Council of Ministers adopted a series of measures (regulations, directives, and decisions) to ensure the environmental sustainability of sustainable development in this community space. In terms of regulations, these are Regulation No. 05/2022/CM/WAEMU relating to the protection and development of the marine and coastal environment against pollution due to land-based sources and activities; Regulation No. 06/2022/CM/WAEMU relating to environmental norms and standards applicable to offshore oil and gas exploration and exploitation; Regulation No. 07/2022/CM/WAEMU relating to the sustainable management of mangroves; Regulation No. 08/2022/CM/WAEMU relating to the integrated management of coastal zones.

In terms of directives, this is Directive No. 02/2022/CM/WAEMU relating to the promotion and development of renewable energies in WAEMU member states.

Regarding the decisions, these are decision n°09/2022/CM/WAEMU relating to the implementation modalities of the Strategy called "Regional Initiative for Sustainable Energy (IREDE)"; of decision No. 10/2022/CM/WAEMU adopting the Energy Pole Development Strategy (SDPE) in the UEMOA area.

Community law also helps ensure the economic sustainability of development within the UEMOA.





The development of economic competition : the creation of a common market

At the economic level, anti-competitive practices such as illicit agreements, abuse of a dominant position, and anti-competitive State aid are prohibited with a view to promoting efficient, inclusive, and sustainable economic development (virtuous and harmonious) of the WAEMU zone

The community standards adopted in this area are as follows: Regulation No. 02/2002/CM/WAEMU relating to anti-competitive practices; Regulation No. 03/2002/CM/WAEMU relating to the procedures applicable to agreements and abuse of dominant position within the WAEMU area; Regulation No. 04/2002/CM/WAEMU area relating to State aid within the WAEMU area.

It is now possible to focus on an important aspect of the economic development of the Union, articulated around transparency in the management of public finances.

Transparency in public finance management

A significant component of good governance, budgetary transparency is essential to optimizing economic growth and controlling debt burdens likely to be passed on to future generations.

Indeed, budgetary transparency contributes to a strong reduction in corruption and leaks in public spending. Transparency in the management of public finances is mainly driven by article 68 of the WAEMU Treaty. This article requires Member States to establish a national Court of Accounts which may, if necessary, call upon an external audit system. This Court will transmit its observations to the Court of Accounts of the Union.

It is therefore by virtue of the aforementioned provision that Directive No. 02/2000/CM/WAEMU of June 29, 2000 adopting the Code of Transparency in the Management of Public Finances within the WAEMU was adopted. Member States have therefore set up Courts of Accounts instead of the Chambers of Accounts incorporated into the Supreme Courts (F.D.Meledje, 2010, p. 5).

Transparency in public finance management

➤ At the end of this reflection, some recommendations can be formulated.

In terms of social sustainability, freedom of movement and the right of establishment should be extended to liberal legal professions other than that of lawyers, notably commissioners of justice (bailiffs and judicial auctioneers) and notaries but also to insurers and auditors to give them the same opportunities for mobility and business and development of their professional activities within WAEMU area.

➤ In terms of environmental sustainability, national legislation relating to the application of the polluter pays principle must be harmonized. In certain legislations, it is conditioned by a transaction, in other legislations, it is a unilateral decision.

➤ In terms of economic sustainability, the reform must tend to consider that the National Competition Commissions have a general obligation to notify the WAEMU Commission of public aid. This notification obligation would be based on the principle of full jurisdiction.



There is reason to hope that this contribution will contribute to improving understanding and the state of knowledge of community law and thereby strengthening the momentum of dissemination and appropriation of this development law in the WAEMU area.

Bibliography

- ▶ BALLETT Jérôme, Jean Luc DUBOIS, François-Régis MAHIEU, 2004, "In search of socially sustainable development : fundamental concepts and basic principles", Sustainable development and territories, File 3, The human and social dimensions of sustainable development, pp . 1-14.
- ▶ BALLETT Jérôme, Jean Luc DUBOIS, François-Régis MAHIEU, 2011, "The social sustainability of sustainable development : from omission to emergence", Developing World, Vol. 39-2011, 4/n°156, pp. 89-110.
- ▶ BRAUD Philippe, 2020, Political sociology, Paris, L.G.D.J., Lextenso, 765 p.
- ▶ MASHINI MWATHA Cléo, 2003, On the emergence of solidarity rights and the need for their constitutional guarantee : condition for sustainable development of a developing country: case of the D.R. Congo, Master's thesis 2, University of Kinshasa.
- ▶ MELEDJE Djedro Francisco, 2010, "The appropriation of community standards by academic circles and the judicial world", Proceedings of the third inter-jurisdictional meeting of the community courts of WAEMU, CEMAC, ECOWAS and the 'OHADA, Senegal, Dakar, May 4, 5, 6, 2010.
- ▶ PELLET Alain, 1987, International development law, Paris, PUF, Collection "Que sais-je ?" », n°1731, 2nd edition, 128 p



Accelerating African Women's Leadership in Climate Action



Amina K. Nyangala

Written by Amina K. Nyangala is an environmental journalist and climate change advocate from Kenya. Amina holds a Master's degree in Environmental Policy and Communication from the University of Nairobi. She has worked with various international and regional organizations to promote gender-responsive climate solutions and has published extensively on topics ranging from sustainable agriculture to renewable energy.

As climate change continues to impact communities across Africa, the need for diverse and inclusive leadership in climate governance has never been more pressing. Women, who are often disproportionately affected by climate-related challenges, have a crucial role to play in crafting and implementing solutions that can drive climate resilience and adaptation across the continent.

Why Women's Leadership in Climate Action Is Essential

Women in Africa are integral to the agricultural sector and are primary managers of household resources, such as water, food, and energy. They are on the front lines of climate change, experiencing first hand the challenges that arise from shifting weather patterns, droughts, floods, and declining agricultural yields. Despite these critical roles, women are still underrepresented in decision-making processes at all levels of climate policy and governance.

Empowering women to become leaders in climate action is not only about achieving gender equality; it is also a strategic approach to creating more effective and equitable climate solutions. Women bring unique perspectives, skills, and knowledge to climate initiatives. Their involvement ensures that climate strategies address the specific needs of all community members, promoting sustainable outcomes that uplift entire populations.

Breaking Down Barriers to Women's Leadership

Several barriers hinder women from taking on leadership roles in climate action, including limited access to education and resources, cultural norms that restrict their participation, and inadequate representation in policymaking spaces. Addressing these barriers requires a multifaceted approach that includes education, mentorship, policy reforms, and the creation of platforms that amplify women's voices.



- ◆◆ **Education and Capacity Building:** Investing in education and specialized training for women in climate science, environmental policy, and sustainable practices can empower them to lead climate adaptation and mitigation efforts. Programs that offer leadership and technical training equip women with the skills they need to influence change effectively.
- ◆◆ **Mentorship and Networking:** Connecting women with mentors and creating networking opportunities are crucial for building confidence and expanding professional networks. Mentorship allows emerging women leaders to learn from seasoned experts, gain insights into climate governance, and develop strategies for overcoming challenges.
- ◆◆ **Policy Reforms for Inclusion:** Governments and organizations must implement policies that prioritize gender equality in climate action. This includes ensuring that women have equal access to resources such as land, credit, and technology and are represented in key decision-making processes. Gender-responsive policies create a framework where women's contributions to climate solutions are recognized and valued.

The Impact of Women in Climate Leadership

Studies show that when women are involved in climate action, there are tangible benefits for communities. Women-led climate initiatives tend to be more inclusive and holistic, addressing the social, economic, and environmental dimensions of climate change. For example, women are often instrumental in promoting sustainable agricultural practices, advocating for water conservation, and leading community-based adaptation projects.

Furthermore, empowering women in climate governance fosters innovation. Women leaders often prioritize solutions that benefit entire communities, such as renewable energy projects that provide safe and affordable power or reforestation efforts that protect ecosystems while creating economic opportunities.

Fostering a Gender-Responsive Approach to Climate Action

A gender-responsive approach to climate action ensures that policies and initiatives are designed with an understanding of the different challenges and needs faced by men and women. For instance, integrating gender analysis into climate programs can help identify specific vulnerabilities and opportunities for women, leading to more targeted and effective interventions.

Climate adaptation and mitigation efforts must also emphasize gender equality in access to resources. This includes promoting women's ownership of land, providing financing for women-led climate projects, and ensuring women's voices are included in local and national climate strategies.



The Way Forward: Collective Action for a Resilient Future

Accelerating women's leadership in climate action requires a collective effort from governments, organizations, communities, and individuals. It is about creating an enabling environment where women's leadership is celebrated and their contributions are recognized as critical to achieving climate resilience.

As Africa continues to face the impacts of climate change, the continent stands to benefit immensely from harnessing the potential of its women leaders. By investing in their growth, breaking down systemic barriers, and promoting gender-inclusive climate policies, Africa can foster a more resilient, sustainable, and equitable future for all.



Amina among African women leaders gathered in Nairobi to discuss empowerment. The event was organized by UN Women and Oxfam and held from August 24 to 25, 2023.



Minta Fredrick Kwame: The Innovator Behind 'Obia Bedidi,' an Assistive Robot for Children with Disabilities



Minta Fredrick Kwame

Interview with Minta Fredrick Kwame from Ghana. He is a research assistant at the Assistive Technology Laboratory at the University of Ghana in Accra, and the innovator behind "Obia Bedidi", an assistive robot for children with disabilities.

Q Could you tell us a bit about yourself?

A My name is Frederick Kwame Minta, and I'm currently a research assistant at the Assistive Technology Laboratory at the University of Ghana in Accra.

I recently completed my undergraduate studies at the University of Mines and Technology, where I earned a degree in Computer Science and Engineering. During my time there, I developed a strong research interest in Assistive Robotics and the Internet of Things. This academic foundation allowed me to explore how robotics and IoT can be used to create impactful solutions, especially in assistive technology for individuals with disabilities.

Q What inspired the concept for your assistive robot for children with disabilities?

A The concept of my assistive robot for children with disabilities was inspired by my participation in the Disability Hackathon during my first year at university. Working with a visually impaired teammate to create a navigation stick showed me the transformative impact of assistive technology. Later, as a mentor at the hackathon, I noticed that innovations for children with upper-limb amputations were largely overlooked. This gap, combined with the high cost and inaccessibility of advanced prosthetics in Ghana, drove me to design a solution that would be affordable, comfortable, and specifically tailored to empower children with upper-limb disabilities, especially for basic activities like feeding.



Q Could you walk us through how your assistive robot works?



Designing this assistive robot, I focused intently on the needs of my end users: children with upper-limb amputations who might otherwise struggle with the simple joy of an independent mealtime. Recognizing that these children may not have the ability to press buttons or operate controls in the traditional sense, I integrated a voice assistance feature that allows them to engage with the robot through spoken commands. By simply saying, 'Hello Robot,' the child activates the system, which is ready to respond to specific commands. For instance, saying 'Feeding Mode' will prompt the robot to begin feeding, while 'Stop Feeding' pauses the process. I also added an 'Entertainment Mode' that opens a selection of cartoons on the display screen, allowing the child to enjoy their favorite shows with a simple voice command.

In addition to voice controls, the robot is equipped with a touchscreen display featuring an intuitive, user-friendly interface. The caregiver can assist by selecting options on the display, or the child can use voice commands for a hands-free experience.

I named the robot Obia Bedidi, which in the local Ghanaian language translates to 'Everyone Will Eat.' The name captures the essence of the project: ensuring that every child, regardless of physical limitations, can experience the joy and dignity of feeding themselves. This robot is more than a tool; it's a companion that empowers children to navigate mealtime with independence and joy, something every child deserves.



Q One unique aspects of your project is the use of locally sourced materials. Could you tell us more about this decision?



One of the guiding principles behind my project was to make the assistive robot not only functional but also accessible and affordable for the average family in an African setting. Given this context, I chose to use locally sourced materials like wood and welded metals for the robot's structure. This decision allowed me to design a sturdy yet cost-effective prototype that doesn't rely on costly imported components.

Ultimately, this decision supports the goal of making the robot accessible to more families, empowering children with disabilities across diverse communities to gain independence at an affordable price. It's a way of ensuring that this technology aligns with local needs and realities, while still delivering a meaningful impact.



Q What challenges did you encounter while developing the robot, and how did you overcome them?

A Developing this assistive robot came with its share of challenges, particularly around adding advanced functionalities to make the system more engaging for children. Initially, I envisioned a range of features that would allow the robot to support various interactive activities, but the cost of certain components made this difficult to realize fully. Some components were readily available, but the capital required to secure them presented a significant obstacle. Fortunately, I had the support of Dr. Millicent and Dr. Agangiba, who helped me acquire many essential parts. However, there were still some components I simply couldn't afford. As a result, I had to get creative with technical workarounds, often substituting with locally sourced materials or designing parts from scratch. While these alternatives worked, they were not always the most efficient solutions, and I spent a great deal of time building elements that could have been more easily integrated with the right resources. Navigating these constraints required a lot of perseverance and adaptability. Although challenging, this process taught me to optimize what I had at hand, emphasizing functionality over complexity, and ultimately led to a more streamlined and accessible design.

Q You mentioned that the robot includes a cartoon streaming feature to bring comfort and fun to mealtime. Could you elaborate on how this impacts the children's experience?

A Research shows that children are naturally drawn to activities they enjoy, and cartoons are a prime example. Knowing this, I realized the importance of integrating an entertainment element to enhance the mealtime experience. By adding a cartoon streaming feature, the robot creates a comforting and enjoyable environment for the child, making mealtime a more positive and engaging activity.

The entertainment aspect isn't just for fun it serves a practical purpose, too. While the child is focused on their favorite cartoons, the robot can efficiently handle the feeding process without the child feeling restless or distracted. This feature helps the child stay comfortably seated in one place, making the experience smoother and more enjoyable for everyone involved. Ultimately, this added engagement transforms mealtime into a moment of comfort and fun, helping children associate eating with positive emotions and reducing stress for both the child and their caregivers.



Q How has the prototype been received in your tests so far?

A Currently, I'm truly overwhelmed by the positive feedback and support I've received from parents, children, and educators who have had the chance to test the prototype. Their reactions have been incredibly encouraging and have confirmed that this system has the potential to make a real impact. Parents, in particular, have expressed gratitude, noting how the robot makes mealtime less stressful and more enjoyable for their children. Watching children interact with the robot and seeing their excitement has been particularly heartwarming, as it reassures me that the design resonates with them.

Beyond immediate users, researchers from across Africa have reached out, offering recommendations and encouragement, which has broadened my perspective on the robot's potential impact. Some have even suggested that the system could also benefit adults who face difficulties with feeding. This feedback has been inspiring, reinforcing my commitment to continue developing and refining the robot to meet the diverse needs of individuals with disabilities.

Q What do you see as the next steps for this project?

A My next steps for this project involve expanding and refining the prototype to make it even more impactful. Right now, I'm focused on advancing the design and producing at least five additional units. These will allow for broader testing across different settings and contexts, providing valuable insights into how the system performs in various environments and how it can be further optimized.

Ultimately, my dream is to bring this system to market, where it can offer hope and practical support to individuals who face daily challenges with feeding. I envision this robot making a positive impact not only for children but also for adults with similar needs. Scaling up production and making the robot accessible to families and institutions are key goals, as I truly believe it has the potential to transform lives and foster greater independence for those it supports.

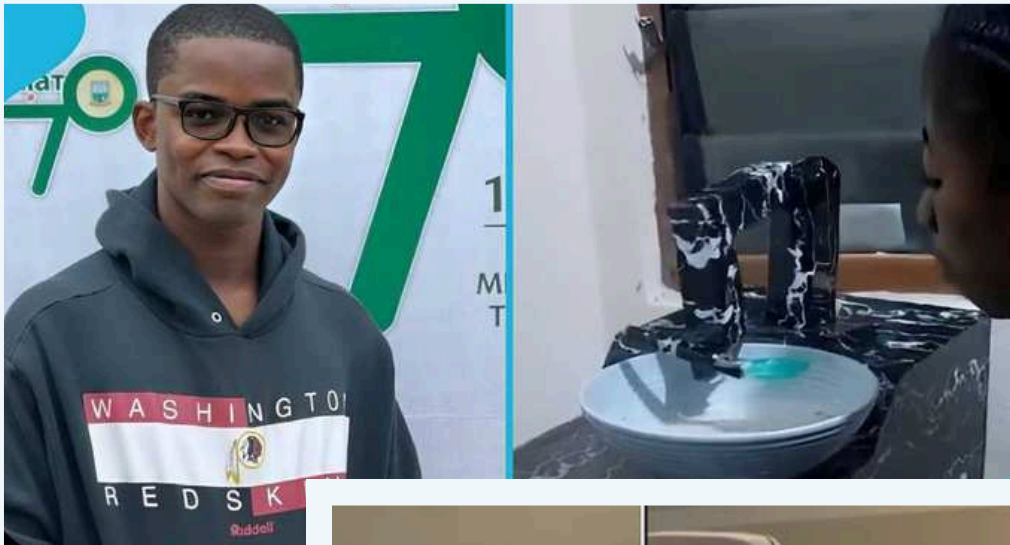
Q What impact do you hope this assistive robot will have on the lives of children with disabilities?

A I hope this assistive robot will make a profound difference in the lives of children with disabilities by fostering a sense of independence and confidence that they might not otherwise experience.



Mealtime is something most of us take for granted, but for children with upper-limb disabilities, it can be a challenging and often frustrating part of the day.

Beyond independence, I hope the robot will enhance their overall well-being by giving them control over a fundamental aspect of their lives. Having the ability to feed themselves or choose entertainment during meals can provide these children with a greater sense of agency, which is crucial for building self-esteem.



Pic 1



Pic 2

Pic 1: Minta Fredrick alongside the Obia Bedidi prototype in action.

Pic 2: A demonstration of the Obia Bedidi assistive robot feeding a child with amputated arms.

ATPS Successfully Concludes Training Under the Strengthening the National Research and Innovation Funding Agencies in West Africa – SRIFA Project

This year, the African Technology Policy Studies Network (ATPS), successfully concluded its Training Programmes under the project on “*Strengthening the National Research and Innovation Funding Agencies in West Africa (SRIFA)*”.

The initiative provided tailored, co-developed training to enhance the operational capabilities of the science granting councils in Burkina Faso, Côte d'Ivoire, Ghana, Senegal, and Sierra Leone. These efforts addressed each council's unique needs, equipping them to better manage and allocate resources for impactful research and innovation.

In addition to these achievements, the ATPS team facilitated a High-level Policy Dialogue in Nigeria, aimed at establishing the country's first-ever National Research and Innovation Council (NRIC) and a National Research and Innovation Fund (NRF). Nigeria remains the only nation among the 17 participating countries in the Science Granting Councils Initiative (SGCI) that is without a Council and a Research Fund. The policy dialogue, attended by key stakeholders and graced by Hon. Uche Nnaji, Nigeria's Minister of Innovation, Science, and Technology who represented His Excellency, President Bola Ahmed Tinubu, sparked critical discussions and aligned efforts towards the creation of these crucial institutions and mechanisms in Nigeria.

The proposed council is expected to significantly enhance Nigeria's standing in the global research and innovation landscape, fostering collaborations and investments in cutting-edge technologies.

These milestones underscore ATPS's commitment to strengthening research and innovation ecosystems across Africa, ensuring that the continent remains competitive and responsive to global challenges.



Participants of SRIFA Validation Training in Côte d'Ivoire held on 28- 30 October, 2024



Participants of SRIFA Validation Training in Senegal held on 2-4 October, 2024



Participants of the High-Level Policy Dialogue held in Nigeria on 5th of November 2024



Seeing is Believing: ATPS’s Supported AI Tools and Innovations in Africa in Action

As part of the “Managing Organization (Hub) for Responsible Artificial Intelligence for Agriculture and Food Systems (AI4AFS) Innovation Research Network in Africa project”, the ATPS team recently conducted field visits to Ghana, Nigeria, Kenya, and Senegal.

These visits provided a first-hand experience on the ground breaking work being carried out by grantees in leveraging AI-driven solutions to revolutionize agriculture and food systems in Africa. By integrating technology into farming systems, these innovations are addressing critical challenges and enhancing productivity across the continent.

The field engagements offered a valuable platform for exchanging knowledge, gathering feedback, and refining strategies to ensure that ATPS initiatives are responsive to the unique needs of local communities. The ATPS team used the opportunity to evaluate the status of development, deployment, and scaling of the 10 AI innovations and tools being supported in some selected African countries to understand what works (success stories), what doesn’t work (failures and challenges), and why (reasons for successes or failures).



Field visit in Machakos County, Kenya, on 4 November 2024, with AI4AFS grantees testing their advanced diagnostic tool, developed using artificial intelligence and geoinformation, for early warning and detection of Tomato Leaf Miner and Whiteflies on a local farm.



Prof. Nicholas Ozor and Engr. Prof. Joel Nwakaire during a field visit on 7 October 2024 to the AI4AFS project site in Enugu, Nigeria, showcasing the use of AI to enhance the production and marketing of Nsukka Yellow Pepper, led by Engr. Prof. Chinenye Anyadike.



ATPS Programme Manager engaging farmers and AI4AFS grantees on 6 February 2024 in Busia County, Kenya, during a field visit for the Low-Cost IoT and AI Tools project.



ATPS Executive Director Delivers Lecture on Science, Technology, and Innovation at the University of Bern

It was another landmark honour in October this year when Prof. Nicholas Ozor, Executive Director, the African Technology Policy Studies (ATPS) Network, was invited to deliver a prestigious lecture at the University of Bern, Switzerland under the University's initiative tagged "**Collegium generale - Afrika, Africa, Afrique**", an Interdisciplinary Lecture Series in the Fall Semester 2024.

In his lecture titled "*Boosting Science, Technology, and Innovation for Shared Prosperity in Africa*," Prof. Ozor underscored the transformative potential of Science, Technology, and Innovation (STI) as a driving force for Africa's sustainable development. He emphasized that Africa's future prosperity, environmental sustainability, and ability to compete in the global economy are inextricably tied to significant investments in STI.

The session sparked vibrant discussions, with participants exploring the pivotal role of STI in addressing challenges such as climate change, poverty, inequality, energy poverty, and underdevelopment among many others. Prof. Ozor highlighted that building the necessary capacity for sustainable development is not only crucial but politically imperative, aligning with findings from past research and global assessments.

This engagement reflects ATPS's ongoing commitment to advancing STI as a cornerstone for Africa's growth and shared prosperity. It also reaffirms the organization's leading role in fostering meaningful dialogues that shape the continent's future in the area of STI as a means for achieving sustainable development on the continent. During the week-long event, Prof Ozor brokered partnerships with the Initiative Afrique under the Vice-Rectorate Research and Innovation at the University of Bern.





Advancing Climate Action by Tracking NDC Implementation: Key Highlights from the NDCs 3.0 Regional Forum for Africa

The vibrant city of Kigali, Rwanda, played host to the NDCs 3.0 Regional Forum for Africa from 7-9 October 2024, a critical gathering of climate experts, policymakers, and stakeholders. Organized by UNEP, UNDP, the NDC Partnership, and the Government of Rwanda, the forum was a pivotal moment for shaping the next generation of Nationally Determined Contributions (NDCs). With a focus on ambitious, implementable, and transparent climate action, the event aimed to align regional strategies with the outcomes of the Global Stocktake (GST) under the Paris Agreement. The event was opened by the Honourable Minister for Environment for Rwanda, Dr. Valentine Uwamariya. The event brought together delegates drawn from over 20 countries mainly from Africa.

Representing the African Technology Policy Studies Network (ATPS) and its partners Pan-African Climate Justice Alliance (PACJA) and West African Green Economics Development Institute (WAGEDI), Alfred Nyambane the ATPS Programme Manager, played a key role in advancing discussions on innovative tools for NDC implementation and tracking. His participation underscored the importance of the ***“Building the Capacity of Selected sub-Saharan African Countries to Effectively Measure Progress in their Nationally Determined Contributions’ Implementation Using Tracking Tools and Indexes project”***, which has developed a cutting-edge tool for monitoring implementation and enhancing achievements of NDC commitments. This tool, shared at the event, promises to strengthen transparency and accountability in Africa’s climate action initiatives.

The forum’s agenda was structured across three transformative days. On the first day, discussions focused on stocktaking and lessons learned from previous NDC cycles. Delegates explored gaps in policy alignment and monitoring systems, with Nyambane contributing insights on leveraging the ATPS tool to address these challenges. Additionally, participants discussed key enablers, such as capacity building and financial support, essential for bridging these gaps and driving impactful climate actions.

Day two delved into sectoral approaches and enablers, identifying agriculture, energy, and transport as priority areas. Discussions highlighted the role of tracking tools in fostering inclusivity and driving investment-ready NDCs. Nyambane emphasized how technology and capacity building are crucial for achieving these goals, sharing success stories from the ATPS’s regional initiatives. The forum also explored innovative financing models to unlock investments and ensure long-term sustainability for climate projects.



The final day centered on accelerating implementation and tracking progress. Participants examined strategies for meeting Biennial Transparency Report (BTR) requirements and enhancing the reliability of greenhouse gas inventories. Nyambane showcased the ATPS tool as a solution for strengthening data collection and reporting, vital for effective climate governance. He also distributed 12 different policy briefs from the NDC project that ATPS and partners are implementing, providing actionable insights and recommendations for participating countries.

The forum underscored that ambitious climate action requires robust data, tools, partnerships, and financing. With its innovative NDC implementation tracking tool, ATPS continues to lead in equipping African nations to achieve their climate commitments. The Kigali gathering was a powerful reminder that collaboration and innovation are indispensable for safeguarding the planet's future.



Mr. Alfred Nyambane, the Programme Manager at the ATPS in attendance at the NDCs 3.0 Regional Forum for Africa on 8 October 2024.



UAE-Africa Dialogue Strengthening Partnerships for Sustainable Development

The UAE-Africa Dialogue, held from October 28 to 29, 2024, at the Anwar Gargash Diplomatic Academy in Abu Dhabi, brought together policymakers, academics, and industry leaders to explore avenues for cooperation between the United Arab Emirates (UAE) and Sub-Saharan Africa (SSA). The dialogue, hosted by the Gulf Africa Programme, focused on leveraging shared opportunities in economic development, security, and environmental sustainability.

The event featured high-profile speakers, including H.E. Sheikh Shakhboot bin Nahyan (UAE Minister of State) and Amb. Martin Kimani (Kenya), who highlighted the strategic importance of UAE-SSA partnerships. Discussions spanned diverse topics such as economic cooperation, climate change, and the transformative potential of disruptive technologies.

On Day 2, ATPS Postdoctoral Research Officer Professor Joel Nwakaire who represented the Executive Director, Prof Nicholas Ozor at the event played a pivotal role, leading a session titled “UAE-SSA Cooperation in Disruptive Technologies.” This session explored how emerging technologies could address societal challenges and drive sustainable development across the continent. Nwakaire’s insights emphasized the need for adaptive regulatory frameworks and collaborative innovation to unlock Africa’s technological potential.



Other key discussions included strategies for addressing climate change and food security, drawing on Gulf nations’ expertise in green transitions and resource efficiency. The concept of *minilateralism*—small coalitions of nations advancing collective goals—emerged as a recurring theme, showcasing how focused partnerships can achieve impactful results.



The dialogue concluded with actionable outcomes, underscoring the importance of sustained collaboration. Lessons learned from the event hold significant implications for ATPS, including the potential for leveraging UAE partnerships to support Africa’s digital transformation and innovation-driven economic growth.

The UAE-Africa Dialogue demonstrated the power of inter-regional cooperation to tackle shared challenges, laying the groundwork for mutually beneficial partnerships in the years to come.



ATPS Executive Director Engages in High-level Discussions at AISESA Conference

Prof. Nicholas Ozor, Executive Director of the African Technology Policy Studies (ATPS) Network, recently participated in the inaugural conference of the African Institute for Sustainable Energy and Systems Analysis (AISESA). The event, hosted by the Power Futures Lab at the University of Cape Town's Graduate School of Business, took place in Cape Town, South Africa, from September 16 to 20, 2024.

The conference brought together leaders in energy, climate, and development to explore innovative solutions for Africa's pressing energy challenges. Prof. Ozor joined other distinguished participants to discuss how evidence-based energy system decisions can drive sustainable and climate-resilient development across the continent.



AISESA aims to address Africa's energy poverty and climate vulnerabilities by fostering African-led, context-specific research and building long-term partnerships. The conference provided a platform for stakeholders to collaborate on designing clean energy pathways, implementing effective policies, and mobilizing financing for sustainable energy solutions.

Prof. Ozor's participation underscored ATPS's commitment to advancing science, technology, and innovation as key drivers for sustainable development in Africa. His contributions to the discussions highlighted the critical role of integrated energy planning in achieving the United Nations Sustainable Development Goals and the African Union's Agenda 2063.

The event concluded with actionable strategies for scaling clean energy systems and building institutional capacity in Africa. This collaboration aligns with ATPS's mission to promote innovation and evidence-based policymaking for a prosperous and sustainable future on the continent.



Empowering Farmers Through Local Knowledge: ATPS Hosts Climate Adaptation Workshop in Nigeria

Abakiliki and Nsukka, Nigeria – Smallholder farmers, extension agents, and researchers are set to benefit from a groundbreaking initiative aimed at bolstering Nigeria's agricultural resilience to climate change. The African Technology Policy Studies Network (ATPS) will host a two-part Validation Workshop on November 27–28 in Ebonyi State and December 5–6 in Enugu State, focusing on strengthening locally led adaptation strategies in agriculture.

A Vital Step Toward Climate Resilience

With Nigeria's agriculture heavily reliant on rain-fed farming, the impacts of climate variability—ranging from erratic weather patterns to reduced yields—have left smallholder farmers increasingly vulnerable. Recognizing this, ATPS Executive Director Prof. Nicholas Ozor emphasized the critical need for capacity building across the agricultural extension system to support adaptation efforts.

Bridging Knowledge and Practice

The workshop seeks to validate findings on key capacity needs and proven local knowledge. "We're focusing on integrating traditional farming wisdom with scientific innovations to foster climate resilience," said Prof. Ozor. "Farmers, extension agents, and researchers will co-create actionable strategies for sustaining agricultural productivity amidst climate challenges."

Key highlights include:

- **Identifying Gaps:** Addressing the lack of digital literacy and inadequate training among extension agents.
- **Empowering Farmers:** Enhancing access to financial resources and practical, hands-on training.
- **Supporting Researchers:** Strengthening transdisciplinary approaches to make climate research accessible and actionable.
- **Scaling Proven Practices:** Leveraging traditional techniques like mixed farming, agroforestry, and organic pesticides to enhance local adaptation efforts.

Interactive Methodology

Participants will engage in group discussions, plenary sessions, and focused workshops to validate findings and develop tailored training programs. The workshops aim to enhance collaboration between stakeholders and ensure that local adaptation strategies are documented and scaled.

Expected Outcomes

The workshops are expected to yield several significant outcomes, including:

- A validated compendium of local knowledge and technologies for climate adaptation.
- Targeted training interventions tailored to stakeholder needs.
- Recommendations for gender-sensitive and inclusive adaptation practices.



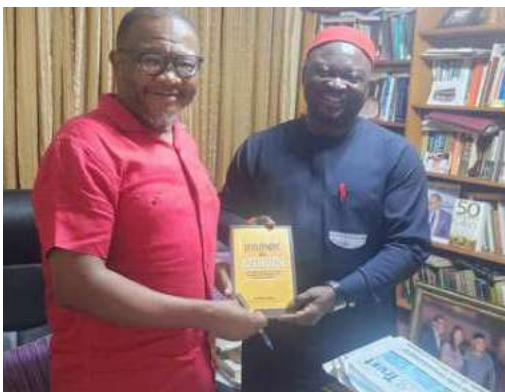
A Call to Action

Through this initiative, ATPS reaffirms its commitment to empowering African communities with the tools and knowledge needed to tackle the pressing challenges of climate change. This workshop will set a precedent for integrating local knowledge with science to create sustainable, locally led adaptation strategies in Africa.



ATPS Leadership Visits Prof. Osita Ogbu in Abuja

Abuja, Nigeria – On November 6, 2024, the African Technology Policy Studies Network (ATPS) team, led by Executive Director Prof. Nicholas Ozor, visited the esteemed inaugural Executive Director of the ATPS, Prof. Osita Ogbu and his wife Dr. Ogugua Osi-Ogbu, at their home in Abuja. The evening was a warm blend of intellectual exchange, reflections, and camaraderie.



Dr. Ogugua Osi-Ogbu graciously welcomed the ATPS team with a home-cooked meal, setting the tone for heartfelt conversations. It was a memorable evening of reminiscing on ATPS's milestones and sharing soulful ideas for the future.

Prof. Osita Ogbu, a distinguished professor of development economics and former Chief Economic Adviser to the President of Nigeria, expressed his admiration for the ATPS team under Prof. Ozor's leadership.

He lauded their relentless commitment to the network's vision of advancing science, technology, and innovation (STI) for sustainable development in Africa.

During the visit, Prof. Osita presented his latest book, *Development as Attitude: How National Progress is Shaped by Leadership Philosophy and Citizens' Orientation*, to Prof. Ozor. This gesture marked a symbolic exchange of knowledge and shared commitment to the principles of leadership and development.

The visit underscored the importance of fostering relationships within the ATPS Network and highlighted the collective dedication to advancing Africa's development agenda.

The African Technology Policy Studies Network (ATPS) is partnering with the International Centre of Insect Physiology and Ecology (icipe) and Kumasi Hive, are pleased to announce a call for proposals under the Advancing Responsible Gender Equality and Inclusive Artificial Intelligence Innovations for Agriculture and Food Systems in Africa (AI4AFS+) aimed at scaling AI innovations that enhance utilization and access to food, as part of broader food security initiatives. This funding opportunity seeks to support projects that responsibly scale AI systems, ensuring they contribute to sustainable development goals, particularly focusing on gender equality, diversity, and inclusion (GEDI). The primary objective of this subgrant is to support innovative projects that leverage AI to improve food security by enhancing the utilization and access to food. Proposals should demonstrate a clear plan for scaling AI solutions that are responsible, equitable, and inclusive.

How to Apply:

Access the full call for proposals and application details here: [Call for Proposal](#)
Don't miss this opportunity to contribute to Africa's food security and drive responsible AI innovation!





From left: Prof. Michael Madukwe, Princess Florence Obiageli, Prof. Nicholas Ozor, Dr. Ogugua Osi-Ogbu, Prof. Osita Ogbu, Mark Kimani, and Susan Mburu during a visit to Prof. Osita Ogbu's home in Abuja, Nigeria, on 6 November 2024.



Hon. Uche Nnaji, Nigeria's Minister of Innovation, Science, and Technology, addressing participants at the High-Level Policy Dialogue held on 5 November 2024 at the Auditorium of the Raw Materials Research and Development Council in Abuja, Nigeria.



From left: President of the African University of Science and Technology (AUST) Prof. Peter Onwualu, Nigeria's Minister of Innovation, Science, and Technology Hon. Uche Nnaji, and the African Technology Policy Studies Network (ATPS) Executive Director Prof. Nicholas Ozor.



Participants during a site visit on 7 October 2024, showcasing groundbreaking work by grantees leveraging AI-driven solutions to revolutionize agricultural practices in Nigeria.



Postdoctoral Research Officer Dr. Cynthia Nwobodo engaging participants during a Validation Workshop held on 27-28 November 2024 in Ebonyi State, Nigeria.



Postdoctoral Research Officer Engr. Prof. Joel Nwakaire and Executive Director Prof. Nicholas Ozor in conversation during the AI4AFS field visit in Nigeria.



Postdoctoral Research Officer Dr. Cynthia Nwobodo and ATPS Consultant Mark Kimani in conversation during a SRIFA training in Accra, Ghana.



Prof. Ozor engaging farmers during a site visit in Machakos, Kenya



Mr. Mark Kimani, an ATPS Consultant conducting a training session in Abuja, Nigeria on 6 November 2024.



Postdoctoral Research Officer Engr. Prof. Joel Nwakaire with Dr. Laure Tall of Initiative Prospective Agricole et Rurale (IPAR) in Dakar, Senegal.



Exit Picture with participants at Ebonyi , Nigeria, after a validation workshop



Male Group at Ebonyi, Enugu State , Nigeria during a Validation Workshop



Group discussion at Eziani Enugu State, Nigeria



Praying with kolanut as part of the opening ceremony at Ebonyi Enugu State, Nigeria



Women group discussing the report at Eziani Nsukka

Australia

Mr. David Doepel
Chair, Africa Research Group,
Murdoch University
90 South Street Murdoch
Western Australia 6150
Tel: +61418912287
Email: d.doepel@murdoch.edu.au

Benin

Dr. Roch L. Mongbo
Senior Lecturer & Researcher Director of
LADyD (Lab for Social Dynamics and
Development Studies)
Universite' d'Abomey-Calavi,
Benin 02 BP 778 Gbe'gamey
Cotonou, Benin
Tel: +229-21360126
Cell : +229-95966446 / 97374797
Email: roch.mongbo@fsa.uac.bj
rochl_mongbo@yahoo.com
roch.mongbo@cebedes.org

Botswana

Mr. Abraham Mathodi
P.O Box 550203, Mogoditshane,
Botswana.
Cell: +26772449035
Email: amathodi@gmail.com

Burkina Faso

Dr. Aminata Kabore
BP 8645 Ouagadougou 04
Burkina Faso
Tel: +226 70 38 56 99/ 78 95 93 89
kab.amina@yahoo.fr

Cameroon

Prof. SylvesterNdeso Atanga Senior
Visiting Lecturer, Epidemiology & Public
Health Faculty of Health Sciences
University of Buea P.O. Box 63 South
West Province Republic of Cameroon
Tel: + 237-653774599/ 243094176

Cell: +237-99841433
Email: silawrence2011@gmail.com or
ndesoatpscarnet@rocketmail.com

Cote d'Ivoire

Dr Eric Tra Bi,
Legal Advisor at the Large
Enterprises Control Service
Directorate of Customs
Investigations and Intelligence
Research Officer at the Strategic
Scientific Research in Côte d'Ivoire
(Swiss Center for Scientific
Research) Research Professor at the
Faculty of Legal Sciences of Jean
Lorougnon Daloa University
Tel : +225 07 44 25 73
E-mail: erictrabi78@yahoo.fr

Egypt

Ms. Manal Moustafa Samra
Mobile: +20 01014467049
Email: mmsamra@gmail.com

Ethiopia

Mr. Wondwossen Belete,
Managing Director,
Society for Technology Studies
P.O.Box 25453, Addis Ababa, Ethiopia
Mobile: (+251)911886709
Email: wondwossenbel@yahoo.com
stsethiopia@gmail.com

Gambia

Vacant

Ghana

Dr. Fred Amu-Mensah
Senior Research Scientist CSIR
Water Research Institute
P.O. Box M.32
Accra, Ghana
Tel: +233-24-4748197
+233-26-4748197
Email: obeyie@gmail.com

Kenya

Vacant

Lesotho

Mr. Denis Sekoja Phakisi
Acting National Coordinator
Manufacturing Manager Loti Brick
P.O. Box 8008, Maseru 100,
Lesotho Tel: +266 5885 3389
Fax: +266 22310071 Email:
ds.phakisi@lycos.com

Liberia

Vacant

Malawi

Dr. Kingdom M. Kwapata
Lecturer,
Molecular Genetics and Biotechnology
for Horticulture and Forest Crops
Lilongwe University of Agriculture and
Natural Resources
Bunda College, P.O. Box 219,
Lilongwe, Malawi
Tel: +265 999195477
E-mail: kwapata@yahoo.com

Mali

Dr. Sidiki Gabriel Dembele
Agrochimie/Agroforesterie et Fertilité des sols
Bureau Ouest-Africain d'Appui Organizational et de Technologies Appropriées
B.P. E 3730, Bamako, Mali Tél. : (223) 226 2012 Fax : (223) 226 2504 Cell : (223) 71 3806

Email: [sidikigabriel@hotmail.com/](mailto:sidikigabriel@hotmail.com)
ousmanenia2000@yahoo.fr

Morocco

Prof. Dr. Saïd Boujraf
National Coordinator
Clinical Neurosciences Laboratory
Faculty of Medicine and Pharmacy,
University of Fez,
BP. 1893; Km 2.200, Sidi Hrazem
Road, Fez 30000, Morocco

Tel: +212 667 780 442

Fax: +212 535 619 321

E-mail: sboujraf@gmail.com

Mozambique

Eng. Lourino Alberto Chemane
ICT and Planning Advisor
Executive Secretariat, ICT Policy
Commission

Bairro da Coop
Rua Particular Dr. Antonio de
Almeida 61 R/C Direito, Maputo
Moçambique

Tel: +258 21 309398

Fax: +258 21 302289

Cell : +258 82 3110700

Email: chemane@infopol.gov.mz

Namibia

Surveyor Uzochukwu Okafor
Surveyor- General
Directorate of Survey and Mapping
Ministry of Land Reform

Tel: +264(0)2965036

Mobile: +264811223311

Email: uzo.okafor@mlr.gov.na

Nigeria

Prof. Michael C. Madukwe
Professor, Department of Agricultural

Extension University of Nigeria

Nsukka, Enugu State Nigeria

Tel: +234 8037006968

Email: [madukwemichael@yahoo.com:](mailto:madukwemichael@yahoo.com)
michael.madukwe@unn.edu.ng

Prof. Femi Olokesusi

Nigerian Institute for Social and Economic Research (NISER)

P.M.B 5 UI Post Office

Oyo Road, Ojoo, Ibadan, Nigeria

Tel: 234-8023322052/ 8073132917

Fax: +234 2 2413121

Email: femioloke@yahoo.com

Rwanda

Vacant

Senegal

Prof. Cheikhou KANE

Department of Chemical Engineering
and Applied Biology

Cheikh Anta Diop University

Mobile: +221 77 148 79 61

Email: cheikhou.kane@ucad-edu.sn

Sierra Leone

Prof. Kelleh Gbawuru Mansaray

Deputy Vice Chancellor

Fourah Bay College – University of

Sierra Leone

Phone: +232 78476527

Email : Kelleh.mansaray@usl.edu.sl
mansaraykg@gmail.com

South Africa

Professor Mark Swilling

Stellenbosch University,

Private Bag X1, Matieland, 7602,

South Africa

Cell: +27(0)83-459 7417

Tel: +27(0)21-881 3196

Fax: +27(0)21- 881 3294

Email: swilling@sun.ac.za

Sudan

Mrs. Nadia Hassan

Economic Studies

Sidahmed Department Industrial

Research & Consultancy Centre

(IRCC), Sudan Tel: +249 911449106

Email: nadiahsh@yahoo.co.uk

Swaziland

Prof. Musa Dube

Senior Lecturer Faculty of Agriculture

University of Swaziland

Luyengo Campus

Tel: +268 527 40 21

Cell: +268 618 15 79

P. O. Luyengo, Swaziland

Email: madube@uniswa.sz

Tanzania

Dr. Amos Nungu

Director General

Tanzania Commission for Science and
Technology

P.O Box 4302, Dar-es-Salaam

Tel: +255222774023

Email: [amos.nungu@costech.or.tz;](mailto:amos.nungu@costech.or.tz)

amos.nungu@gmail.com

Uganda

Dr. Engr. John Okuonzi

National Coordinator

Kyambogo University

Faculty of Engineering, Department

Electrical and Electronic Engineering,

P.O Box 1, Kyambogo, Kampala, Uganda

Tel: +256 782 353034

Email: jokuonzi@kyu.ac.ug

okuonzijohnie@yahoo.com

United Kingdom

Mrs. Martha Ada Ugwu

National Coordinator

Kent, ME5 7SF, UK

Tel: +447909327708

Email: martha.ugwu@nhs.net

United States of America

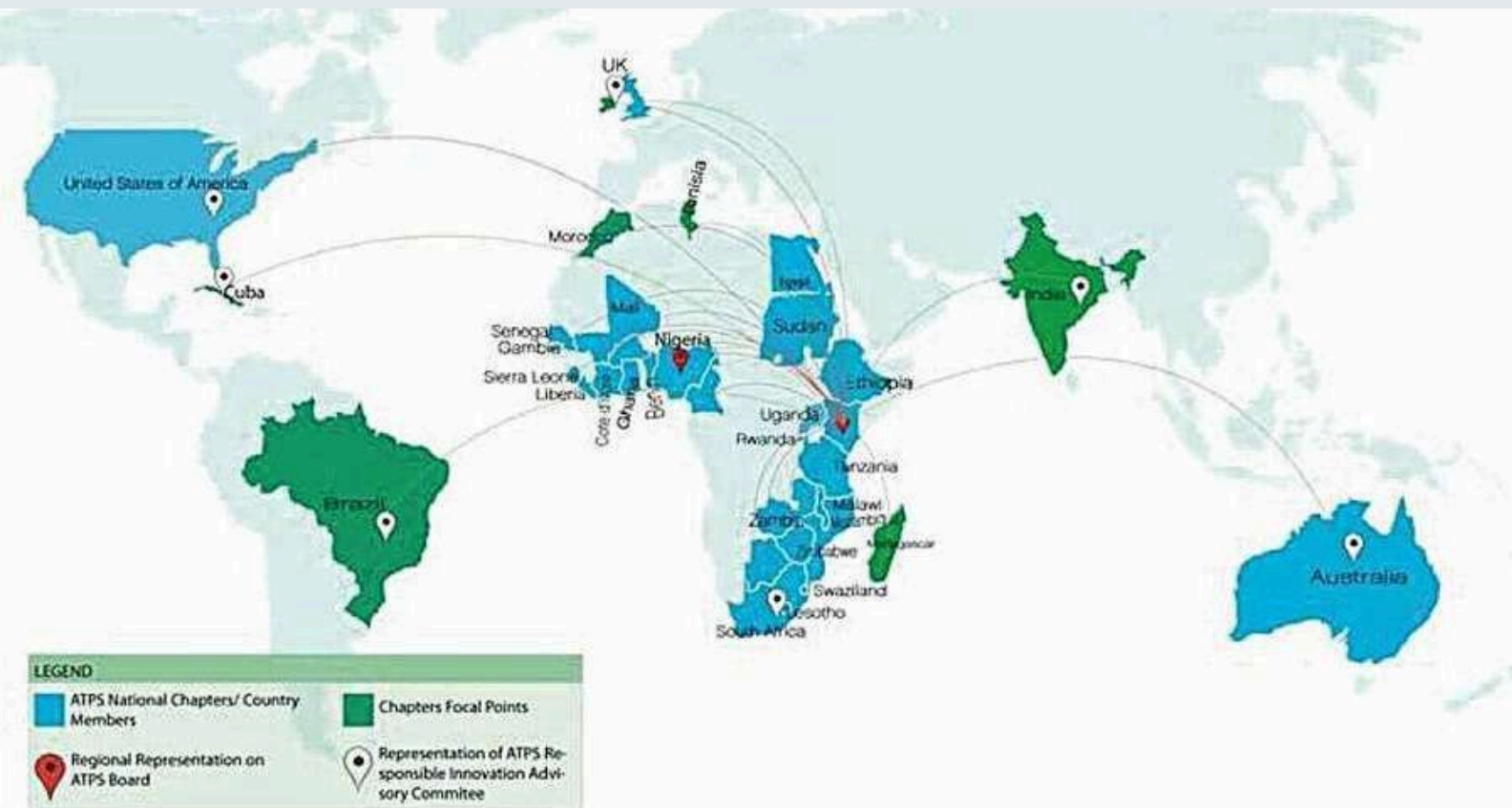
Dr. Anthony C Ikeme National
Coordinator President & CEO Clintriad
Pharma Services 102 Pickering Way,
Suite 200 Exton, PA 19341 Tel:
484.753.3405 Cell: 215.380.9920 Fax:
610.384.5455 **Email:**
aikeme@clintriad.com

Zambia

Prof. Francis Yamba
Centre for Energy Engineering and
Director, Environment
Zambia (CEEEZ) Ltd, 176
Parienyatwa Road Suite B.
Fairview, P/B E721 Lusaka,
Zambia Tel:
+260977856167 **Email:**
ceeez@zamnet.zm
ceeez2015@gmail.com

Zimbabwe

Mr. Benson Zwizwai
Economics Department, University
of Zimbabwe
P. O. Box M.P. 167,
Mount Pleasant, Harare
Tel: +2637772494902
Mobile: +263776413357
Email: bmutzwizwai@yahoo.com





For further information contact:

African Technology Policy Studies Network (ATPS)

8th Floor, Chancery Building, Valley Road

P.O. Box 10081-00100, Nairobi, Kenya

Tel: 254 20 271 4092

Email: info@atpsnet.org

<https://atpsnet.org/>

Merry Christmas
AND A
Happy New Year

