From good will to action: Accelerating the development and implementation of AI governance for sustainable finance

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Abstract

The rapid development of artificial intelligence (AI) and emerging technologies has captivated the world and is impacting economies in complex ways, underscoring the need for urgent policy action, particularly in sub-Saharan Africa. While these technologies offer tremendous benefits in addressing the various development challenges faced by low- and middle-income countries (LMICs), the uneven access and adoption of these technologies by emerging economies has huge negative implications. Emerging economies are, for instance, losing their sovereignty in all critical sectors, including infrastructure, energy, healthcare, trade, logistics, finance and ultimately peace and security. Effective and collaborative regulations that adapt to the rapid evolution of technologies, promote transparency and ensure inclusion are critical to establishing national, regional and continental standards and practices that balance innovation with ethical considerations and security. Policymakers, business leaders and stakeholders must work together to develop such frameworks that ensure the safe and ethical use of these technologies, ultimately enabling developing countries to contribute meaningfully to the global dialogue.

The advent of Artificial Intelligence (AI) and emerging technologies such as Big Data Analytics, Cybersecurity, Cloud Computing, Blockchain, the Internet of Things (IoT), Automatic Programming Interface (API), Biotech, Robotics, and Energy Storage is rapidly reshaping the global economic and social landscape. However, the unbalanced access and adoption of these technologies by emerging economies leads to a loss of sovereignty in critical economic sectors such as banking and finance, infrastructure, energy, healthcare, trade, and logistics. In addition, the rapid adoption of these technologies by developed countries brings significant national and global security implications for Least Developed Countries (LDCs). These risks are diverse and constantly evolving. Cybersecurity threats are escalating in complexity and scale, targeting critical infrastructure, financial systems, and personal data. For instance, generative AI has shown that it is possible to hack in a couple of minutes the government’s digital infrastructure. The misuse of AI in surveillance and data manipulation poses threats to individual freedoms and democratic institutions. The use of AI in autonomous weapons systems raises ethical and strategic concerns. The proliferation of deep fakes, enabled by generative AI, poses a threat to the integrity of information and has significant implications for personal and national security, and democracy.

As conversations on resource mobilization and global taxation accelerate at the international stage, innovative mechanisms to fund sustainable development goals and green industrialization have gained momentum. Two tracks in particular have marked discussions: addressing illicit financial flows and expanding carbon markets. AI has the potential to accelerate the utility of both.

Illicit financial flows (IFFs)

A recent OECD report estimates that Africa loses as much as $60 billion each year in illicit financial flows, while former estimates reach over $100 billion. On the one hand, digital technologies facilitate IFFs at each stage, from the accumulation, transfer and use of funds; but on the other, they also act as a tool to tackle the problem by strengthening transparency and detection, disrupting flows and prosecuting actors. Rapid information collection and automatic exchange combats IFFs by monitoring trends and sharing real-time data on trade and financial transactions. However, technology is not a stand-alone solution, it must be complemented by robust legal frameworks, international cooperation and public-private partnerships for standard-setting and enforcement.

The major challenge for LDCs is pacing challenge where AI technology overtakes the ability to govern the technology, exposing countries to risks. There is an urgent need for robust governing instruments and the modernization of governmental institutions in emerging economies. This is vital to manage these technologies effectively and to ensure that LDCs can leverage their benefits while protecting their sovereignty, security and financial endowments. The development of national digital economies and by extension of national data/AI economies depends to a large extent on implementing a collaborative digital regulatory and policy framework at both national and regional levels in developing countries. The lack of cross-institutional coordination represents a critical barrier to the development of policy coherence and regulatory consistency. In addition, policy harmonization at national and regional levels is a pre-
requisite to the involvement of African nations in international cooperation aiming at addressing new and emerging paradigms in an AI-driven world.

To address these challenges, collaboration, standardization and capacity building are key. Policymakers, business leaders, and stakeholders must work together to develop frameworks that ensure the safe and ethical use of these technologies while leveraging them to efficiently generate and safeguard financial resources. This involves creating regulations that are adaptable to the fast-paced evolution of tech, promoting transparency, and ensuring inclusion. Finally, it is crucial to establish global standards and practices that balance innovation with security and ethical considerations.

**Carbon Markets**

As African countries work towards establishing frameworks for the governance of national and regional carbon markets, the integration of artificial intelligence (AI) holds immense potential in enhancing the effectiveness and efficiency of these initiatives. AI technologies can play a multifaceted role in various aspects of carbon market operations, offering significant benefits to suppliers and buyers, MRV bodies, government authorities, and operators along the carbon market value chain.

The benefits of AI in relation to carbon markets include:

1. Monitoring carbon sequestration potential: AI-powered systems can continuously monitor and analyze carbon sequestration data from various sources, including soils, forests, oceans and waters. By utilizing advanced algorithms, these systems can accurately quantify carbon sequestration and identify opportunities for preserving natural environment with the most carbon sequestration potential. Real-time monitoring capability could ensure greater transparency and accountability in carbon credits transactions, helping to uphold the integrity and quality of credits.

2. Managing carbon credits, including GHG inventories: AI technologies can streamline the management of carbon credits by automating processes such as monitoring, reporting, verification, and trading. Smart contract platforms powered by AI could facilitate secure and transparent transactions, ensuring the traceability and authenticity of carbon credits throughout the value chain. Additionally, AI-driven analytics can assess the quality and validity of carbon offset projects, enabling regulators to uphold rigorous standards for credit issuance and compliance.

3. Analyzing efficacy of projects: AI-based data analytics can evaluate the potential efficacy of carbon offset projects by assessing their environmental impact, cost-effectiveness, and scalability. By analyzing diverse datasets, including satellite imagery, geospatial data, and socioeconomic indicators, AI algorithms can identify high-potential projects that deliver meaningful emissions reductions while generating socio-economic co-benefits. This data-driven approach helps investors and policymakers prioritize investments in projects with the greatest positive impact on climate change mitigation and sustainable development.

By integrating AI technologies into carbon market frameworks, various actors gain access to reliable data and insights that enhance the integrity and effectiveness of carbon markets. This increased transparency and efficiency ultimately boost confidence in carbon markets, attracting greater participation from both public and private sector actors. As African countries navigate the complexities of carbon market governance, AI offers a powerful tool to accelerate progress towards climate goals while unlocking opportunities for the preservation of the natural environment and revenue generation.

**Which countries are leading the pack in Sub-Saharan Africa?**

While AI is being integrated into businesses around the world at a remarkable pace, Africa’s data economy is still in its infancy. According to the International Monetary Fund’s AI Preparedness Index, which measures readiness in digital infrastructure, human capital and labor market policies, innovation and economic integration, and regulation and ethics, the priority should be to lay a strong foundation by investing in digital infrastructure and a digitally literate workforce. Indeed, the readiness of SSA countries for a vibrant AI-driven economy sustained by an enabling data economy remains minimal, despite significant interest in related issues in recent years, spurred by the global discourse on data, analogies to data as oil, currency or water. Concrete efforts remain limited to a few countries in sub-Saharan Africa as summarized below.

The Ghana National Data Strategy was launched in 2023 and constitutes a comprehensive framework for the data economy in line with the country’s priorities in terms of sustainable development, fostering innovation, value creation and, above all, digital sovereignty. In 2023, Senegal launched both an AI and a data strategy. Both strategies were adopted following a wide consultative process with more than 150 national and international actors, more than 80 public, private, international cooperation, civil society, academic start-
ups, and hundreds of experts in the data ecosystem. These strategies focus on key areas such as data governance framework, infrastructure, data use and skills and innovations/start-ups. In 2023, the government of Rwanda approved its National AI Policy⁴, which outlines a comprehensive plan to leverage AI’s transformative potential in key sectors, including healthcare, agriculture, public services, education, finance, and smart cities. The country’s data revolution policy, was already drafted in 2017, emphasizing data protection, skills, innovation, governance and partnership. Sierra Leone’s data strategy 2023⁵ emphasizes data infrastructure, data governance and regulation to advance a trusted, protected, and accessible data ecosystem, institutional framework, data skills, innovation and use of data for an inclusive data economy. Nigeria’s Draft Data Strategy⁶ launched in 2022 emphasizes data literacy and skills, data infrastructure, open government data, data sovereignty, trust in data, harmonization and use. South Africa’s data and cloud policy of 2021 aims to enhance investment opportunities and growth, accelerate access to infrastructure, remove regulatory barriers to data, develop institutional mechanisms to govern data and cloud services support enterprises, promote innovation, leverage the use of data for delivering public services and promote South Africa’s data sovereignty and security. The policy covers data infrastructure, data and cloud services access, data localization and cross-border data transfer, governance and institutional mechanisms, competition issues, capacity and skills, research and innovation. Finally, Uganda’s draft data strategy focuses on data standardization and categorization, data excellence and capacity, coordination and advancements within key sectors.

Support from development partners and regional organizations has been instrumental in catalyzing the development of AI and Data policy/strategy. However, the lead time to policies and strategies remains long. Models AI and data strategies or policies that draw on the experience of the above countries and regions will be useful to ensure that countries draw on a comprehensive guideline to develop their data economy strategies. As a matter of fact, one can see that most strategies or policies have similar building blocks around infrastructure, skills, literacy, etc.

Regarding illicit financial flows (IFFs), financial technology (fintech) emerges as a key mechanism to deliver greater financial inclusion, to enhance the robustness and inclusivity of the financial system as a whole and to drive greater economic growth in markets worldwide. However, with under-regulated environment, fintech runs the risk of exacerbating the above challenge. Because different countries are evolving at different paces leading to an uncertain regulatory environment, economies with more mature financial systems and digital infrastructure are likely to see more innovation in advanced financial services, including business-to-business (B2B) liquidity and regulatory technology such as anti-money laundering and know-your-customer (KYC) compliance.

The state of play on Data Protection and Data/Al regulation laws or policies

The number of countries with a data protection law has more than doubled in the last decade, and a third of these laws were passed in just the last five years. Angola, Botswana, Comoros, Congo, Kenya, Gabon, the Gambia, Niger, Nigeria, Rwanda, Tanzania, Togo, Uganda, Zambia and Zimbabwe are among the countries that have passed data protection laws in recent years. Thirty sub-Saharan African countries that have enacted personal data protection legislation are Angola, Botswana, Burkina Faso, Cape Verde, Chad, Comoros, Republic of Congo, Cote d’Ivoire, Gabon, Ghana, Guinea, Equatorial Guinea, Kenya, Lesotho, Madagascar, Mali, Mauritius, Mauritania, Mozambique, Niger, Nigeria, São Tomé and Princepe, Rwanda, Senegal, South Africa, Tanzania, Seychelles, Uganda, Zambia and Zimbabwe. Of the African countries with a data protection law, 27 have appointed a regulator to enforce it. Of the African countries with a data protection law on the books, 8 have not fully established a regulator to enforce it. Of the 30 African countries with data protection laws, 24 provide some kind of protection for data subjects against certain automated processing, and even this is often minimal.

Policy recommendations / conclusions

Many factors contribute to the low adoption of comprehensive national AI/data policies and strategies and multi-faceted instruments, including sectoral policies/strategies, data protection laws, data use principles, regulations, and policies concerning infrastructure, data security, ethics, and data justice. To accelerate the development and implementation of AI governance for sustainable finance, the following actions must be taken:

- Foster regional cooperation between African countries that are more advanced countries and those in the process of building their strategic, policy and regulatory frameworks
- Avoid the fragmentation and silos of data policy development
• Accelerate the approval of AI and data instruments
• Promote sponsorship or championship for AI and data instruments implementation
• Limited skills in changing AI and data issues
• Encourage governmental reforms to create relevant institutions
• Build capacity of regional institutions
• Foster engagement of the private sector and civil society

References