MINISTÈRE DE L'ÉCONOMIE, DES FINANCES ET DE LA SOUVERAINETÉ INDUSTRIELLE ET NUMÉRIQUE Liberté

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EXECUTIVE SUMMARY ECONOMIC LETTER OF EAST AFRICA AND THE INDIAN OCEAN (EAIO)

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[©] Artificial Intelligence in EAIO

Key facts

- While Artificial Intelligence (AI) is an ambition shared by all the countries surveyed, its adoption remains highly uneven. Mauritius, Rwanda and Kenya stand out as pioneers on the continent, while Comoros, Uganda and Madagascar are among the least advanced countries worldwide.
- Kenya and Rwanda are contributing to international AI governance, including preparations for the **AI Action Summit** from 10 to 11 February 2025.
- Some countries, such as Kenya, are positioning themselves on the (low-cost) moderation of generative AI models and/or wish to use their largely green electricity as a competitive tool in the sector.
- However, many challenges remain for further AI development in EAIO, including the absence of a unified legal framework, lack of actionable data, skills, connectivity, and investment in research.

In summary...

AI in the East African and the Indian Ocean region

Al represents an economic and social development opportunity for the region, but its adoption remains highly uneven across countries. While Mauritius, Rwanda and Kenya are pioneers in AI on the continent, Comoros and Uganda are among the last in the global ranking of governments' readiness for AI. On a regional scale, East African countries support the African Union (AU) AI strategy with the Nairobi Declaration adopted in 2024. Aware of the potential of AI for their economies, all the surveyed countries have strategic plans, the success of which depends on digital infrastructures and a skilled workforce, initiatives often supported by international donors. To date, countries in the region such as Kenya have positioned themselves concretely on the (low-cost) moderation and training of generative AI models and/or wish to use their largely green electricity as a competitive tool in the field. However, many challenges remain for the further development of AI in the region: lack of a unified legal framework, usable data, skills, connectivity, or investment in research.

In detail...

AI: A strategic sector undergoing evolution and regulation, with widely varying levels of development in the region's countries

According to the Oxford Insights 2024 Index, which measures government readiness for AI, countries in the EAIO region top the rankings in sub-Saharan Africa, despite being in the second half of the global rankings (Mauritius, 1st in sub-Saharan Africa; Rwanda, 3rd; Seychelles, 5th; Kenya, 6th), while Ethiopia (119th), Madagascar (141st), Uganda (164th), and Comoros are among the bottom globally. The EAIO region stands out for the "Data and Infrastructure" pillar, while the "Governance" and "Technology Sector" pillars show lower scores.

Some countries in the region are active in global discussions on AI, such as Kenya and Rwanda, which are involved in preparations for the Summit for Action on AI in Paris in February 2025. East African countries adopted the Nairobi Declaration on AI in 2024 in support of the AU AI strategy to strengthen regional cooperation and ethical governance of AI, with the support of UNESCO. No country in the region is a member of the Global Partnership on Artificial Intelligence (GPAI), although Rwanda may join in the coming months. Rwanda, active in promoting AI for developing countries, has published the <u>AI playbook for small States</u> with Singapore and will organize the first *Africa AI Summit* in April 2025 with the *World Economic Forum*. At a local level, all the surveyed countries have national strategies dedicated to AI, but none has a unified legal framework at present. Several countries in the region have governance structures dedicated to AI, as well as data protection laws, although AI is not necessarily explicitly mentioned in them.

The governments of EAIO countries are supporting the development of human capital and digital infrastructure (fiber optics, smart cities, data centers) to foster the adoption of AI, with initiatives such as the Africa Center of Competence for Digital and AI Skilling in Kenya, supported by UNDP and Microsoft, Artificial Intelligence & Robotics Center of Excellence in Ethiopia, and a project underway in Madagascar for an Institute of Applied AI (IIIAA) in partnership with French universities and the French ArkeUp group. The Mauritian government has invested in the Deep Artificial Intelligence Centre at the Data Technology Park, to support start-ups and public institutions. Kenya and Rwanda have ambitious smart city projects (Konza Technology City and Kigali Innovation City), which are well on the way to becoming reality. Most countries in the region benefit from good 4G coverage, which has enabled the introduction of mobile payment systems such as Mpesa in Kenya and Momo in Rwanda, promoting inclusion in banking. Seychelles, with an Internet access rate of 86.7 % by 2022, boasts two data centers, developed by Airtel, Ericsson and Cable, Wireless. Thanks to its strategic position at the crossroads of undersea cables, Djibouti aims to become an AI hub in East Africa, with the first Data Center in the Horn of Africa (DDC) and a new center inaugurated in 2024, both built by Wingu. Madagascar, with a USD 55m loan from China's Exim Bank, set up a data center in 2019, but is yet to be operational.

An AI ecosystem supported by governments, the private sector and donors

While the expansion of AI start-ups remains limited in Ethiopia, Tanzania and Djibouti, AI start-ups are developing in Kenya, Rwanda and Mauritius, with French players positioning themselves on different use cases of AI focused on social impact. In Kenya, Ilara Health uses AI to optimize portable ultrasound scanners and Amini applies AI to climate data, notably for agricultural insurance, while Mauritius start-up le Wagon offers AI training. In the Seychelles, the government is supporting AI in the tourism sector, and has signed a partnership with Swiss company Travizory Border Security SA, which introduced the first biometric corridor for health and security checks in 2021. Rwanda, through the UNDP-backed government initiative Hanga Pitchfest, supports start-ups such as AfyaWave Ltd, which uses AI to improve maternal health, and Irembo, a publicly-owned company pioneering the digitization of public services. Lastly, in Djibouti and Ethiopia, development of the sector is limited to a few initiatives such as Djibouti Code Campus on the model of Ecole 42, and Ethiopian start-ups supported by Google's Africa Accelerator.

International donors, including France via the AFD, support the development of AI in EAIO, mainly indirectly through the creation of favourable conditions (in terms of regulation, skills and connectivity). AFD is financing the Faculty of Engineering and Science at the University of Nairobi, two projects in Kenya and Ethiopia to improve internet access, and I&P Accélération Technologies in Madagascar to support local start-ups in the sector. In Uganda, incubators are supported by France and German cooperation. In Rwanda, German and European cooperation is strengthening the AI ecosystem, while France is contributing indirectly to the development of AI through a project to digitize public services and support for the Rwanda Space Agency on geo-data. The World Bank is funding several AI-related projects, notably in Kenya (Digital Economy Acceleration Project), Tanzania (Digital Tanzania Project), Djibouti (Djibouti Digital Project), Ethiopia (Digital Foundations Project), and Madagascar (PRODIGY), in connection with digital identity. The Bill & Melinda Gates Foundation has funded agricultural and research initiatives in Tanzania, as well as health and education projects in Kenya. In the Seychelles, UNEP is supporting FishGuard, a project to monitor fisheries and marine areas using AI-equipped drones, and the EU is funding a management information system for Victoria Harbour, integrating AI to optimize logistics and protect the environment.

Competitive positioning of the region in AI moderation and "green" data centres, but obstacles hinder further development of AI

Environmental concerns could encourage Google (Alphabet), Apple, Facebook (Meta), Amazon, and Microsoft (GAFAM) to locate their energy data centers in countries like Kenya, where electricity is 90 % renewable. The country also stands out as a competitive hub for Al outsourcing thanks to a low-cost English-speaking workforce, attracting companies like Sama to train ChatGPT, although this sector is criticized for its working conditions. In the medium term, the Kenyan authorities and several private investors intend to position themselves in data centers, with a project announced by the American Ecocloud Data Center at COP28. Rwanda is also pursuing the deployment of renewable energies, in order to attract cutting-edge Al infrastructures while providing green energy.

The adoption of AI in the region, as in other emerging geographies, remains hampered by obstacles such as the lack of a single set of regulations, data, skills, connectivity and investment, and the high cost of electricity, while presenting possible risks for employment, although it could also potentially create opportunities for highly skilled profiles, provided the workforce has the right level of skills. In Kenya, for example, 1 in 4 graduates has studied Science, Technology, Engineering and Mathematics (STEM), and by 2023 only 10 % of the Ugandan population will be using the Internet, far less than in Tanzania (32 %), Rwanda (30 %) and Kenya (29 %). In Madagascar, AI is also seen as potentially presenting a risk of replacing outsourcing by customer relations companies, a sector that currently employs around 25,000 people.

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