



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

Liberté
Égalité
Fraternité

Direction Générale du Trésor

EXECUTIVE SUMMARY

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

A PUBLICATION OF THE REGIONAL ECONOMIC DEPARTMENT – NAIROBI, KENYA

N°44 – Mai 2024



Environmental protection technologies in EAIO: Lack of financial and technical capacities despite international support

In summary...

If all countries have enshrined environmental protection in their constitution and have ambitious strategic plans in this regard, the implementation thereof and the adoption of technologies aimed at ensuring effective and sustainable management of natural resources vary greatly across the region, hindered by a lack of quality and accessible data, financing, and human capacity. Concurrently, coordination is often intricate among ministries and sectoral agencies, whose mandates may overlap at times. The sector receives substantial support from international donors such as France, GIZ, USAID, the World Bank, UNEP, and UNDP. With the strengthening of international environmental standards, such as the European directive against imported deforestation, opportunities arise for French companies, funded by donors, to engage in the collection and coordination of data systems concerning climate change, natural resources, and disasters, and the integration of this information into decision-making processes. Carbon credits, especially voluntary ones, also emerge as a pertinent subject for financing mobilization with relevant French expertise.



In detail...

An institutional and legal framework favoring environmental protection, implemented through the adoption of new technologies, exhibits significant disparities in the region.

While most countries in the region have institutional and legal frameworks for environmental protection, with sectoral agencies capable of utilizing technologies for better natural resource management, their implementation is highly uneven across the region and hampered by a lack of financial, technical, and human capacities. While Seychelles stands as the highest-rated country in Sub-Saharan Africa in terms of environmental performance, ranking 32nd out of 180 countries worldwide, Burundi and Uganda are among the least prepared countries to address climate change, ranking 163rd and 165th out of 181 countries according to the ND-GAIN 2020 resilience indicator. Rwanda, Kenya, and Ethiopia have space agencies collecting data to monitor natural resources and analyze climate change, while Somalia, Burundi, Sudan, and South Sudan, despite attention to environmental protection in their constitutions and legislation, are characterized by economic or political instability hindering goal achievement and technology adoption.

The fragmentation of the institutional framework and the lack of financial and technical capacities impede the adoption of new technologies.

The multitude of ministries and sectoral agencies involved in natural resource management poses a challenge to institutional efficiency. Coordination among the information systems of different agencies regarding climate change, natural resources (forests, water, air), and natural disasters remains largely imperfect, as does the effective integration of this information into decision-making processes.

The lack of accessible and quality data and the deployment of appropriate technologies limit environmental protection in various areas such as water resource management. In Kenya, in 2017, surface and groundwater monitoring stations transmitted only 28% of available data on water quality. In most cities in the EAOI region, **air quality cannot be monitored due to the absence of reliable and long-term data collection systems** that would allow for the assessment of temporal and spatial variations. In 2021, Addis Ababa had a network of 20 sensors, most of which were of poor quality and faced operational challenges, including connectivity issues, while UNEP estimates that fine particulate matter (PM2.5) levels are three times higher than WHO-recommended levels. Despite recent progress, **the lack of human capacities and monitoring equipment hinders efforts to combat poaching and the abusive exploitation of resources** (forests, minerals) in the region. According to FAO, Ethiopia lost nearly 18.5% of its forest cover between 1990 and 2020. The establishment of meteorological information and early warning systems would enable better disaster prevention.

Support from international donors for the development of environmental protection technologies remains crucial.

Multilateral and bilateral donors' support to the sector targets (i) the deployment of data collection technologies and information and alert systems, (ii) the strengthening of capacities and equipment to combat deforestation and poaching, (iv) the fight against air and water pollution.

The French Treasury has financed several loans and feasibility studies in Kenya, Tanzania, Rwanda, and Uganda to improve water and waste management and combat forest fires and poaching. In Kenya, two loans were granted to (i) assist the Kenya Wildlife Service in combating poaching by deploying a secure communication system manufactured by the French company Ellipse, and (ii) provide firefighting equipment to the Kenya Forest Service (including trucks, cameras, and drones), a project led by Tyllium. In Uganda, BRL Engineering conducted a quantitative follow-up study of surface water resources using spatial altimetry. Meanwhile, in Rwanda, FASEP funding enabled the installation of air pollution sensors by Tactis and companies Spalian, Atmotrack, and Streamwide.

AFD (French Agency for Development) supports the development of environmental technologies, notably with the Rwandan Space Agency (RSA) for the creation of a "geospatial hub" aimed at collecting satellite data, particularly for environmental use. In Comoros and Madagascar, AFD strengthens the capacities of public actors by establishing geographic infrastructures that will facilitate data collection to improve the management of water resources, forests, and natural risks. The Seychelles Meteorological Authority benefits from the French-funded Hydromet program to provide reliable weather forecasts through Early Warning Systems (EWS) and make this information available to users.

The European Union, GIZ, the World Bank, USAID, UNEP, and UNDP are other major funders in this sector. In Comoros, a European program managed by the Reunion region finances several projects for the protection of fauna and flora by placing Argos sensors on marine species, collecting position, salinity, and temperature data transmitted to Météo France and civil aviation. GIZ funds a transboundary regional cooperation project in the Nile Basin, which utilizes the regional hydrological monitoring system and exchanges data for water resource management. The World Bank supports several projects in the region in the areas of smart agriculture, sustainable land and water management, and sustainable fisheries. USAID funds data collection projects on natural resources and wildlife monitoring equipment in Madagascar and Tanzania. Meanwhile, UNEP has developed online platforms to map the region's natural resources, as well as early climate warning and ecosystem restoration systems in South Sudan.

Opportunities for French companies on donor financing

The investment and infrastructure needs of countries in the region create opportunities for French companies in the fields of data collection and processing (natural resource monitoring, climate risk anticipation, carbon credits) and meteorological services. French expertise is recognized in these areas, with added value linked to process digitization, the use of innovative technologies (connected sensors), and system integration (integrated platforms and information systems, for example).

Competition is significant in the geodata segment. For instance, China has already established significant partnerships with Ethiopia for the launch of their first observation satellite (2019) and for a ground station development project capable of receiving and processing geosatellite data. Opening up technological solutions and preserving countries' sovereignty regarding data and analysis (including through the strengthening of local capacities) remain major challenges for differentiating the French offer.

CONTACT:

Olive NASIBWONDI KABISA

Sectoral Assistant

olive.nasibwondikabisa@dgtresor.gouv.fr

+254 715 277 789 / 020 207 605 573