AFRICAN FORUM AND NETWORK
ON DEBT AND DEVELOPMENT

Research Paper on Environmental Taxation and its Implications on Domestic Resource Mobilisation

The African Forum and Network on Debt and Development (AFRODAD) was created 27 years ago as a Pan-African organization advocating for accountable and transparent public debt management; debt cancellation; and efficient mechanisms for mobilization and utilization of domestic resources and use of international public finance in Africa. Today AFRODAD remains committed to assisting the long-term development of the continent through its contribution to finding sustainable solutions to Africa's challenges in debt and resources management and financial development.

A. **Introduction**

Environmental taxes[1] can be defined as any tax imposed on a base with a proven negative impact on the environment – examples include import tariffs on plastic material, charges on traffic congestion, or excises on fertilizer, fishing levies, deforestation taxes and carbon taxes. They have been widely promoted to reduce environmental damage while at the same time raising revenue from polluters. Categorically defined into four main dimensions based on field of operation, energy, transport, pollution, and resources, environmental taxes are instrumental in aligning economic activities with sustainability goals. Energy taxes target products, such as the carbon content of fossil fuels, coal, oil, natural gas, and electricity, impacting both stationery and transport purposes. Transport taxes include vehicle registration fees, road usage charges, and congestion-related levies. Pollution taxes, addressing issues such as waste disposal and air and water pollution, aim to incentivize responsible practices. Resource taxes on timber, minerals, water, and fishing activities promote sustainable resource management. Implementation involves legislative frameworks, targeted taxation on specific activities, emission-trading systems, incentives, public awareness, and international cooperation, among others.[2] The basis for environmental taxes is the "Polluter Pays Principle" which stipulates that the polluter ought to pay for the damage caused by the pollution. Arthur Pigou advocates for the imposition of tax on polluters on the basis that the social cost of pollution exceeds the private cost to the polluter, hence these taxes are sometimes also referred to as Pigouvian taxes.3

B. Background

Over the years, the implementation of environmental taxation has varied across countries and regions. Europe for example, has witnessed a dynamic evolution of taxes crucial to shaping environmental policies. From the period 1970s to 2020s, several environmental tax initiatives have prevailed and evolved including user charges (in 1970s), earmarked charges and fiscal environmental taxes (in 1980s) and ecological tax reforms (in 1990) culminating in the European Union's 2020 strategy. This evolution underscores the importance of environmental taxation. Environmental taxes are thus essential for several reasons, including integrating environmental considerations into

economic decisions, contributing to meeting international commitments, correcting market failures, promoting corporate responsibility, and fostering a more sustainable and environmentally conscious approach to economic activities.

The environmental tax which has been discussed the most is undoubtedly the carbon tax, which is levied on the carbon content of different goods, strongly correlated with the amount of fossil fuels required in their production. Carbon taxes are one of the carbon pricing methods which "capture the external costs of greenhouse gas emissions and [tie] them to their sources through a price on the carbon dioxide emitted." The United Nations Tax Committee recommends carbon pricing as a more cost-efficient instrument compared to other policy instruments in dealing with climate change, and recognises that it has other benefits that can support development objectives, such as resource mobilisation.[4] Carbon taxes are seen as an essential tool to reduce greenhouse gases, and there is almost universal support for their introduction across the globe. This includes Sub-Saharan Africa, with the United Nations, the International Monetary Fund, and the OECD all promoting their implementation in various countries in the region at different points in time. The focal point of international debates on environmental taxation predominantly revolves around CO2 emissions as the primary tax base of interest. This is because carbon emissions emanating from activities associated with each of the categories of environmental taxation, have reached unprecedented atmospheric concentration levels. Only 23% of global greenhouse gas (GHG) emissions are covered by 68 explicit carbon pricing instruments. In 44 OECD and G20 countries, 60% of energy-related carbon emissions lack coverage.

Africa is witnessing a growing interest in environmental taxation among its governments. While these taxes are conceived as tools to combat pressing ecological challenges and foster sustainable development, they are also seen to boost state revenues. From carbon levies to vehicle taxes, governments across the continent are adopting innovative tax strategies that have been widely implemented in Asian and Western countries.

South Africa was the first African country to implement a carbon tax through the Carbon Tax Act of2019. This initiative has led to increased transportation and electricity costs, as well as higher fuel prices. However, the carbon tax was designed to ensure that all revenues collected are reinvested into green initiatives. This approach aims to help the country achieve greater environmental sustainability in the long run, create more jobs, and generate sustainable revenue. Following South Africa's lead, other African countries such as Ghana, Mauritius, Kenya, and Nigeria are also exploring this pathway. Recently, Kenya tabled a bill to introduce a vehicle tax based on engine size and fuel consumption, which will require people to pay for carbon their vehicles emit. This measure is intended to encourage the adoption of electric vehicles among the populace, making the country more environmentally sustainable. It is also noteworthy that Malawi and Zambia have some form of carbon taxation in place.

2.2 Problem statement

Africa faces disproportionate burdens and risks arising from climate change related weather events and patterns, which cause massive humanitarian crises with detrimental impacts on agriculture, and food security, education, energy, infrastructure, peace, and security, public health, water resources, and overall socio-economic development. On average, African countries are losing 2–5 percent of Gross Domestic Product (GDP) and many are diverting up to 9 percent of their budgets responding to climate extremes. In sub-Saharan Africa, the cost of adaptation is estimated to be between US$ 30-50 billion annually over the next decade, or 2-3 percent of the region's Gross Domestic Product.[5] African countries contribute less than 5% to global GHG emissions, but are more vulnerable to climate events, along with other nations in the global South. African economies also possess a greater sensitivity to climate events as 95% of global rain-fed agriculture is found in sub-Saharan

Africa, which affects revenues, food sovereignty and the overall ability of the continent to finance itself. By 2030, it is estimated that up to 118 million extremely poor people (living on less than US$ 1.90 per day) will be exposed to drought, floods and extreme heat in Africa, if adequate response measures are not put in place. This will place additional burdens on poverty alleviation efforts and significantly hamper growth.

Apart from climate crisis, African countries are also grappling with a looming debt crisis. It is interesting to note that these two crises are intertwined such that when one worsens, the other follows suit. For instance, over 70% of climate finance is from some sort of debt, and rising debt levels weaken a country's fiscal muscle to respond to climate emergencies. The IMF analysed 11 climate emergencies and reported an increase in debt-to-GDP ratios from 68% in the year of occurrence of the climate emergency to 75% three years later. This fiscal conundrum creates a precarious situation that affects not only the ability to respond to climate events and manage debt levels, but also leaves a fiscal gap which affects a country's ability to finance itself and meet the human rights of its citizens.[6]

Analysis by AFRODAD unravelled that the debt-to-GDP ratios of many countries had reached unsustainable levels. For example, Mozambique had attained 108.8%, Zambia-91.6%, Angola-95%. Additionally, the International Monetary Fund warned that debt vulnerabilities remain elevated in Sub-Saharan Africa, with no fewer than 20 countries in the region either at high risk of debt distress or already in debt distress. Countries such as Zimbabwe and Mozambique have fallen into distress. Worrisome to note is that these are resources rich countries. Four sovereigns in Africa have pursued debt restructuring under the G20's Common Framework, an initiative for countries that were eligible for the 2020-21 Debt Service Suspension Initiative, which was designed to coordinate the approach to debt relief among official and private creditors. Talks for Ethiopia, Ghana and Zambia are ongoing, and Malawi is pursuing a restructure outside the Framework. The introduction of environmental tax could be one of the solutions to reduce on dependency of borrowing by African countries and to boost revenue mobilization internally. As part of policy initiatives, green taxes target the fulfillment of certain environmental goals, such as encouraging the adoption of cleaner and cost-effective energy sources, promoting sustainable industry and greener initiatives and behaviors as well as discouraging the use of certain energy sources. Green taxes can help foster support for sustainable growth and generate more tax revenue for the economy, thus giving relief to other tax heads such as income tax, employment tax, corporate tax and value-added tax. Incomes from other tax heads dwindled due to the reduced economic activity, company closures, and retrenchments as well lockdown restrictions during the COVID-19 pandemic; therefore, green taxes can boost revenue mobilization to fund government expenditure, reboot economies and achieve the SDGs. Additionally, environmental taxes are a way to boost a country's domestic revenue while also ensuring protection of the environment.

These taxes can be put in place to address both environmental concerns and mobilise revenue, but it is often the case that they are implemented without a clear roadmap on how these objectives will be achieved. Environmental taxes possess great versatility in terms of design and application to diverse sectors to achieve diverse environmental objectives. For instance, logging taxes to reduce deforestation, solid waste tax to reduce solid waste pollution, carbon taxes to reduce carbon emissions, among others, while also attaining fiscal objectives. What is vital in their formulation and implementation is clear determination of the environmental and fiscal objectives and setting out a rate that will create a price signal that is sufficient to deter a certain environmentally harmful action. As GHG emissions in Africa are already low, with other pressing environmental concerns such as overfishing, deforestation, congestion, among others, present, it is arguable that from an environmental angle, Africa's approach ought to combine carbon taxation with other forms of environmental taxation.[7]

While a carbon tax is the most popular instrument discussed when dealing with green fiscal reform, it is imperative to note that African countries have implemented other forms of levies, charges, fees

and taxes in various sectors which are environmentally relevant. As African countries struggle to close fiscal gaps and become more environmentally conscious, the adoption and implementation of environmental considerations into fiscal policies has been on the rise. The traditional approach has been to leave climate action under the ambit of ministries of environment, with the exclusion of finance ministries, but this situation is changing with growing cognisance of the environmental and fiscal implications of these taxes. The impact of environmental taxes has seldom been given its due importance in literature, as there exist few studies assessing the environmental and economic objectives of the same. Debate on their efficacy remains unsettled, with some seeing environmental taxes as a beacon of fiscal and environmental hope, while others doubt its financial effectiveness, and some argue that the result will depend on a range of factors. Nonetheless, there are success stories and failures in their implementation in Africa and beyond. Beyond these cases, it is worth considering whether Africa can use them as a revenue mobilisation avenue to reduce fiscal deficits, subsequently reducing debt burdens.[8]Achieving this is however not devoid of obstacles. One of the primary concerns with environmental taxes is the potential impact on low-income households, who may bear a disproportionate burden. Without adequate safeguards and mitigation measures, these taxes could exacerbate inequalities and hinder poverty alleviation efforts. For example, many Africans depend on the motorbike business to provide basic needs for their families. With the introduction of carbon and vehicle taxes, these already struggling individuals will have to dig deeper into their pockets to stay afloat.Environmental taxinclude transport taxes, pollution taxes, carbon taxes energy taxes and natural resources taxes. For example, energy taxes encompass those charged on products used in the transport sector and the generation of electricity such as natural gases and fossil fuels, among others. Other possible challenges that may arise should a tax not be designed, introduced and implemented properly include public backlash (as has been witnessed in France and South Africa), possible discouragement of investment, possibility of regressivity, among others.[9] These highlight that an environmental tax is not devoid of challenges, and ought to be carefully designed and rolled out to avoid negative outcomes – or even modified at the earliest opportunity in cases where negative impacts arise such as a low rate that does not create an effective price signal. Despite the increasing adoption of environmental taxes worldwide, their effectiveness in reducing pollution while maintaining economic growth remains a contentious issue. Some argue that such taxes encourage innovation and green investments, while others claim they disproportionately burden businesses and low- income households. This research seeks to evaluate the effectiveness and economic implications of environmental taxation in different policy settings. The effectiveness and fairness of such taxes remain widely debated, making it an important area of research.

Second, the revenue currently channelled towards fossil fuel subsidies, which predominantly favour richer household, must be redirected to increasing affordable access to modern energy for low-income households – something which might be renownedly hard, but also achievable

3. Rationale of the study

Environmental taxes can generate substantial revenues, even in the medium term, although this is dependent on a range of factors such as their design and roll out approach. They can do so while increasing economic efficiency: they incorporate social costs into product prices, using the power of the private market for reducing these problems. There is also rising evidence that environmental taxes contract output and employment less than conventional ones – especially in developing countries (Schroder, 2022; Burns et al, 2021, Timilsina et al, 2021). Another factor is the interplay with expenditure policy. In many countries, rising environmental problems exacerbate the need for additional government expenditures. Spending on environmental clean-up is important but over-relying on public expenditures in addressing social costs can worsen already strained fiscal space and put further pressure on raising conventional taxes. This is where environmental taxes help mobilize private-sector solutions. Environmental taxes, thus, create a triple win for fiscal policy: the revenue

generated, the efficiency improvements to the tax system, and the reduction in the need for raising conventional taxes to finance public expenditures for addressing the same social costs.

The study will assess the effectiveness of economic implications of environmental taxation policies, identifying best practices and challenges to ensure a fair and efficient implementation-not only to boost DRM but also to discourage environmental practices that leave unduly heavy environmental costs on African countries. As mentioned hereinabove, literature has seldom delved in detail into the fiscal and environmental impact of environmental taxes in Africa, a gap paper aims to address.

The study will also examine environmental tax as an option for African countries to boost DRM without necessarily burdening the citizens. Most of the taxes introduced by governments are punitive and regressive and have an impact on the livelihoods of the people. Environmental taxation is a viable option to raise revenue and target the wealthy at the same time.

4. Scope of the assignment

The study will investigate environment taxes, how they work, how they are implemented in different contexts and will also take a deep dive into African countries and how some countries are implementing the tax. The study will also highlight case studies from countries like Norway that are successfully implementing the environment tax and what African countries can learn from such initiatives. The study will make policy recommendations on implementing environmental tax as a revenue raising avenue.

The consultant is expected to execute the following tasks:

- Give historical context on taxation in Africa and current DRM challenges
- Provide deep dive on environmental taxation; how it works; institutions mandated to undertake the taxation, etc
- Examine case studies of environmental tax; one European country and one African country and draw lessons
- Provide policy recommendations to African governments on introducing environment taxes to boost DRM
- To propose policy recommendations for optimizing environmental taxation while minimizing negative economic and social impacts

Key Outputs

One (1) Comparative Paper (maximum 25 pages excluding references, cover page and annexes pages).

7. Timing

Draft Paper to be submitted on the 10th April 2025 and final submission of the Paper by 30th April 2025.

8. Reporting

The Consultant will report to the Head of Programs and DRM policy analyst diana@afrodad.org.

9. Copyright

All materials/documents arising out of this consultancy work shall remain the property of the publishers.

10. Competences

The Consultant should have skills and experience in the following areas:

- Policy aptitude and experience on environment studies/ public finance management/economics
- Postgraduate degree in Economics, Development studies/ international development economics/ environment /and possess a degree in economics with experience in environment.
- A minimum of 5 years of professional experience in undertaking similar or related task; familiarity with Public Finance Management/ Environment / economics

11. To Apply

All those interested should sent a CV, expression of interest (EoI) with budget (US$) and time frame to **diana@afrodad.org** **by 20th March 2025** with clear indication on the subject line. Only successful applicants will be contacted.