International Journal of Rural Development, Environment and Health Research
[Vol-8, Issue-4, Oct-Dec, 2024]
Issue DOI: https://dx.doi.org/10.22161/ijreh.8.4
Article DOI: https://dx.doi.org/10.22161/ijreh.8.4.1
ISSN: 2456-8678 ©2024 IJREH Journal

A Human Rights-Based Approach to Transport and Climate Change: A Case for Africa

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Received: 21 Oct 2024; Received in revised form: 22 Nov 2024; Accepted: 27 Nov 2024; Available online: 01 Dec 2024

Abstract*— *The transport sector is essential in facilitating economic growth, social cohesion, and individual mobility across Africa. Yet, it also significantly contributes to greenhouse gas emissions, which drive climate change, exacerbating human rights issues for vulnerable populations. This article examines how a human rights-based approach to transport and climate can help African countries address these interlinked challenges. By analyzing climate change's impact on human rights, particularly within marginalized communities, and exploring sustainable transportation solutions, this article highlights pathways for integrating human rights into Africa's sustainable development agenda for climate change.

Keywords*— *Climate Change, Emissions, Human Rights, Transport.

I. INTRODUCTION

Africa's transport sector is a key driver of socio-economic progress, connecting urban and rural areas, fostering trade, and enabling access to essential services such as healthcare, education, and employment. However, the rapid growth of the transport sector has led to an increase in greenhouse gas emissions, air pollution, and unsustainable land use, which contribute to climate change and its adverse effects. Climate change affects human rights by threatening health, food security, access to water, and the right to an adequate standard of living, especially for Africa's vulnerable populations.

Africa contributes only about 4% of global greenhouse gas (GHG) emissions but faces some of the most severe climate impacts, including droughts, floods, and heatwaves. Many African communities are also less resilient due to socioeconomic vulnerabilities, limited infrastructure, and restricted access to climate adaptation resources.

Climate justice advocates argue that Africa should be supported in developing low-emission pathways, including green transportation, without sacrificing economic growth. This calls for an international commitment to provide African nations with the technology, funding, and capacity-building necessary to transform transportation in ways that are both sustainable and just. Williams J. et al (2023), argue that the economic and social conditions in Africa can be addressed through financial and collaborative support for adaptation and localized solutions, and that this can only be achieved if climate justice is prioritized by the decision-makers. There is need for international climate finance to support Africa's transition to sustainable transport. This funding would enable investments in green infrastructure, such as electric buses and pedestrian-friendly streets, while ensuring that these projects are accessible to vulnerable populations and create local jobs.

This article explores the benefits of a human rights-based approach to transport and climate in Africa, using specific country case studies to emphasize the importance of sustainable, inclusive policies.

II. IMPACT OF CLIMATE CHANGE ON HUMAN RIGHTS IN AFRICA

Africa faces disproportionate challenges related to climate change despite contributing minimally to global emissions. Rising temperatures, extreme weather events, shifting rainfall patterns, and sea-level rise impact food production, water availability, and public health. The impacts of these climate-related disruptions are especially severe for African communities reliant on agriculture, fishing, and other natural resources. Climate change threatens the right to food, clean water, health, and adequate housing for millions of Africans.

Furthermore, marginalized groups—including women, children, the elderly, and low-income households are particularly vulnerable to these effects. African urban centers, such as Kampala, Nairobi, Lagos and Johannesburg, also struggle with poor air quality, which disproportionately affects low-income residents in crowded and underserved communities. These health impacts underscore the urgency of addressing transport emissions as a fundamental human rights issue.

2.1 Challenge of Transport and Climate Change in Africa

Reliance on Fossil Fuels:

Fossil fuel-based transportation systems dominate in Africa, with cars, buses, and motorcycles being primary transport modes. Poor road infrastructure further increases fuel inefficiency and emissions. In many urban centers, outdated vehicle fleets contribute to high levels of air pollution, exacerbating health issues and environmental degradation. High reliance on fossil-fuel-powered vehicles and aging public transport fleets lead to air pollution, disproportionately affecting low-income communities. Air pollution in major African cities is a growing health crisis, with significant public health costs and reduced life expectancy in densely populated areas. Africa experiences some of the worst air pollution and some of the most severe health consequences in the world. In 2019, air pollution was the second leading risk factor for death across Africa, a large and dynamic continent that is home to more than 1.2 billion people (Samantha F., et al., 2021).

Transport emissions are a significant factor driving climate change, which in turn exacerbates human rights concerns. Extreme weather events such as droughts, floods, and cyclones often disrupt transportation networks, leaving communities cut off from essential services, including emergency health care and relief supplies. According to *Kristie L. et al,* the numbers and costs of disasters have been increasing for several decades due to increases in exposure, the vulnerability of people and infrastructure, and climate change. The right to mobility, an underlying aspect of human rights, is further compromised as transport infrastructure deteriorates under climate stress, impacting individuals' access to employment, education, and healthcare.

Limited Public Transport

Africa's transport sector is dominated by road transport, which accounts for the majority of intra- and inter urban transportation. Public transport infrastructure, such as buses, trains, and trams, is generally underdeveloped in many African cities. This forces a dependency on private vehicles, including informal services like bodabodas (Uganda) *matatus* (Uganda & Kenya), *danfos* (Nigeria), and *tro-tros* (Ghana), which are often older, less efficient, and less safe. A lack of non-motorized transport infrastructure, and limited access to sustainable transport alternatives aggravates the situation and exacerbates social inequality. *According to* the UN report on Sustainable Transport, Sustainable Development at the Second Sustainable Transport conference, 2021 affordable, safe, and sustainable transportation is a fundamental enabler of economic opportunities and essential services, such as healthcare and education, which are otherwise inaccessible for many marginalized populations.

Limited financial resources and Investment opportunities

African countries lack funds to adapt to the effects of climate change. They concentrate on other pressing development needs. According to *Kristalina et al (2022),* countries that need to adapt often lack the financing and the institutional capacity to implement the needed adaptation programs. *Samuel C et al (2022)* argue that African countries must collaborate with developed countries for sustainable development.

III. THE ROLE OF INTERNATIONAL COOPERATION

Developed countries can support Africa's transition to sustainable transportation by facilitating access to clean transportation technologies and sharing best practices. Programs aimed at capacity building, like technical training for electric vehicle maintenance and manufacture, are essential for enabling Africa to sustain its transportation systems independently. Developed nations have a moral obligation to support African countries with technical assistance and green technology, enabling sustainable and inclusive mobility.

According to a UNEP report on Enabling Measures for an inclusive green economy in Africa (2016), for most developing countries, domestic resources will not be enough to meet all the financing requirements, hence a mixture of domestic and international resources, including public and private finance, will be critical for the green economy transition.

Partnerships with international organizations and neighboring countries can enhance infrastructure investments, streamline regulatory processes, and foster cooperation on cross-border transportation projects, such as regional railways that promote low-emission alternatives for long-distance travel. Sustainable development initiatives, such as urban rail and BRT systems, benefit from partnerships that pool resources from public and private sectors. *Caroline Milano et al (2024)* emphasize the need for African countries to adopt a comprehensive financing strategy and prioritize sustainable mobility to unlock significant economic, social, and environmental benefits.

African Development Bank (AfDB, 2019) highlights the need for targeted subsidies and investments in low-emission transport solutions for underserved communities, framing access to sustainable transport as a public good and right (AfDB, 2019).

IV. A RIGHTS-BASED APPROACH TO TRANSPORT AND CLIMATE

A human rights-based approach to transport and climate in Africa emphasizes protecting and promoting basic rights when developing policies aimed at reducing emissions and increasing climate resilience. This approach requires an emphasis on equity, accountability, and participation of affected communities in decision-making processes, ensuring that marginalized groups are not left behind in Africa's transition toward a low-carbon transport sector.

Communities, particularly those most affected by climate and environmental impacts, should be active participants in shaping transport and climate policies. This includes engagement with local organizations, civil society, and indigenous communities to ensure that their voices are represented. Participatory governance models in transportation projects help to uphold the rights of women, disabled individuals, and low-income communities, ensuring solutions that are accessible and responsive to diverse needs.

Policies should aim to provide equitable access to clean and affordable transport, particularly for low-income and marginalized communities. Sustainable public transport, affordable fares, and investments in infrastructure for non-motorized transport, such as walking and cycling, are crucial for ensuring fair access.

Governments and stakeholders should be accountable for policy implementation, with clear targets for emissions reductions, air quality improvements, and monitoring mechanisms that track progress toward inclusive, sustainable transport goals.

4.1 Case Studies: Implementing a Rights-Based Approach

4.1.1 Uganda

Uganda's National Climate Change Policy and Nationally Determined Contributions (NDC) focus on sustainable transport as a critical area for climate mitigation. Uganda's emphasis on electric mobility solutions, improved fuel standards, and awareness campaigns aims to reduce emissions and prioritize public health. In Kampala, Uganda has also introduced Non-Motorised Transport (NMT) infrastructure with majorly pedestrian walkways. However, Uganda faces challenges in funding and implementing large-scale sustainable transport infrastructure like Bus Rapid Transit, Light Right Transit and infrastructure to sustain electric mobility, highlighting the need for international partnerships to support equitable climate action.

4.1.2 Kenya

Kenya has invested in Non-Motorized Transport (NMT) infrastructure, including pedestrian walkways and cycle paths. These investments have reduced traffic congestion, promoted clean transport, and improved air quality. By focusing on NMT, Nairobi's transport policies aim to protect the rights of urban residents to a clean environment and safe mobility while promoting health and climate resilience.

4.1.3 South Africa

South Africa has made strides toward integrating climate and human rights in its transport policies. The Bus Rapid Transit (BRT) systems in cities like Johannesburg and Cape Town have improved public transport accessibility while reducing congestion and emissions. Despite challenges in affordability and inclusivity, these systems provide a blueprint for sustainable, rights-based transport solutions that prioritize lower-income groups' access to efficient, low-emission mobility options.

V. POLICY RECOMMENDATIONS

A human rights-based approach to transport and climate in Africa requires targeted, context-sensitive policies that consider local realities and prioritize human rights. The following recommendations aim to support African countries in achieving sustainable, inclusive transport systems that uphold human rights:

4.2 Increase Investment in Sustainable Transport Infrastructure

Governments should invest in public transit, electric vehicle infrastructure, and NMT options to reduce emissions and improve air quality. Incentives for green technologies, such as electric buses and rail systems, can help shift away from fossil-fuel dependence.

4.3 Strengthen Public Health Protections

Policies should incorporate air quality monitoring and emission standards, with a focus on urban centers. Public awareness initiatives should educate citizens on the benefits of sustainable transport and the health risks of pollution.

4.4 Enhance Climate Adaptation for Transport Networks

Adaptation strategies, such as flood-resistant transport infrastructure and resilient road networks, should be prioritized to safeguard communities against climate impacts. This is essential for preserving mobility and access to services during extreme weather events.

4.5 Promote Social and Environmental Equity

Transport policies should be designed to ensure equitable access to affordable, sustainable transport options. Subsidies for low-income users, fare reductions, and expanded public transport routes are necessary to promote social inclusion.

4.6 Access to Climate Finance

African countries need access to climate finance to fund green transport initiatives. Global mechanisms, such as the Green Climate Fund (GCF), are designed to provide financial resources to developing nations. However, African countries often face challenges in accessing these funds due to complex application requirements and insufficient technical support.

4.7 Policy Integration and Incentives

National and regional policies must support green transportation through incentives for clean technology adoption, emissions standards, and urban planning that prioritizes sustainability. Integrating climate considerations into existing transportation policies can encourage a gradual shift towards greener solutions while respecting local economic needs.

4.8 Green Urban Planning

There is an urgent need for African cities to incorporate climate-resilient and low-emission urban planning. Strategies include the development of dedicated bus rapid transit (BRT) systems, pedestrian zones, and safe cycling lanes to reduce car dependency. Cities like Lagos, Nairobi, and Cape Town have begun to pilot such programs, indicating the potential for widespread adoption.

4.9 Investment in Public Transport

Expanding public transportation networks can reduce carbon emissions by offering viable, affordable alternatives to private vehicle ownership. Electrification of public transit systems, like electric buses and trains, offers a long-term solution for cities with high-density populations. Investments in Bus Rapid Transit (BRT) systems across Africa, like those in Dakar, Lagos and Johannesburg, are essential for providing equitable, efficient, and low-carbon mobility options. This form of transport reform could alleviate inequality while also addressing emissions.

4.10 Support for Electric Mobility (E-Mobility)

E-mobility, such as electric buses, motorcycles, and bicycles, presents a significant opportunity for reducing GHG emissions. Several African countries are exploring electric vehicle (EV) initiatives; for example, Uganda has introduced EVs to reduce urban pollution. However, establishing widespread EV infrastructure will require substantial investment and commitment from both governments and international partners.

Initiatives to integrate electric vehicles (EVs) and non-motorized transport options into city planning are growing. *Hosam M. and Amal I.* (2024) underscore that a rights-based transport policy should prioritize clean and affordable energy sources, supported by targeted subsidies and infrastructure that expand EV accessibility to low-income populations. Bokolo Anthony Jr (2021) suggests that EVs have environmental benefits as compared to hybrids or even internal combustion engine vehicle as they can help minimize noise levels, pollution, and greenhouse gas emission

4.11 Local Involvement and Job Creation

Ensuring community participation in transport planning promotes solutions tailored to local needs and creates opportunities for employment in emerging green industries. For example, developing bike-share

programs or training programs for electric vehicle mechanics not only aids climate goals but also contributes to poverty reduction and skill development. *Sarkodie and Owusu (2022)* argue that training programs for electric vehicle maintenance and green public transit can empower local communities by creating job opportunities and fostering economic independence (Sarkodie & Owusu, 2022).

4.12 Addressing Social Equity

Climate justice also requires that sustainable transportation be affordable and accessible to all, especially marginalized populations. Programs designed to subsidize public transportation fares or expand public transit to underserved areas help ensure all community members benefit from climate-friendly solutions.

VI. CONCLUSION

The transport sector's role in climate change has profound implications for African human rights. Addressing these interlinked issues through a human rights-based approach can support African countries in mitigating climate impacts, protecting vulnerable populations, and advancing sustainable development. By prioritizing clean, accessible transport solutions and ensuring that all citizens' rights are respected and protected, African nations can foster a just transition to sustainable mobility. This approach not only aligns with Africa's development goals but also strengthens its commitment to global climate action, setting a model for equitable and resilient growth.

Achieving climate justice through transportation reform in Africa is essential for reducing emissions while advancing equity and economic resilience. Through international cooperation, supportive policy, and investment in green infrastructure, African countries can develop transport systems that serve as both climate solutions and drivers of inclusive development. This pathway can enable Africa to confront climate change with strategies prioritising environmental and social well-being, setting a precedent for just and sustainable development worldwide.

REFERENCES

[1] Williams J, Chin-Yee S, Maslin M, Barnsley J, Costello A, Lang J, McGlade J, Mulugetta Y, Taylor R, Winning M,Parikh P. Africa and climate justice at COP27 and beyond: impacts and solutions through an interdisciplinary lens. UCL Open: Environment. 2023;(5):09. Available from: https://doi.org/10.14324/111.444/ucloe.000062.

[2] Samantha F., et al (2021). Air pollution and development in Africa: Impacts on health, the economy, and human capital. Lancet Planet Health 2021; 5: e681–88

[3] Kristie L. et al (2021). Extreme Weather and Climate Change: Population Health and Health System Implications. Annu Rev Public Health. 2021 April 01; 42: 293–315. doi:10.1146/annurev-publhealth-012420-105026.

[4] United Nations. Sustainable transport, sustainable development. Interagency report for second Global Sustainable Transport Conference. 2021.

[5] Kristalina G., et al. (2022). Poor and Vulnerable Countries need support to adapt to climate change. Accessed on https://www.imf.org/en/Blogs/Articles/2022/03/23/blog032322-poor-and-vulnerable-countris-need-support-to-adapt-to-climate-change

[6] Samuel C., et al (2024). Africa's Path to Sustainability: Harnessing Technology, Policy, and Collaboration. Trends in Renewable Energy futureenergysp.com/index.php/tre

[7] United Nations Economic Commission for Africa. Enabling Measures for an Inclusive Green Economy in Africa (2016)

[8] Caroline Mimano, et al (2024). Sustainable cities through transport: Optimising Urban investments in Africa. ITDP, AFDB reports, 2024

[9] African Development Bank (AfDB). (2019). *Transport Sector Policy and Strategy in Africa: Towards Sustainable and Inclusive Mobility*. AfDB Publications.

[10] Olawuyi, D. S. (2022). *Clean Energy for Climate Justice: Transport, Human Rights, and Sustainable Development in Africa*. *Environmental Law Review*, 24(1), 32-45.

[11] Hosam M. et al (2024). The challenges of sustainable energy transition: A focus on renewable energy applied Chemical Engineering (2024) Volume 7 Issue 2 doi: 10.59429/ace.v7i2.2084

[12] Anthony Jnr. B (2021) Integrating Electric Vehicles to Achieve Sustainable Energy as a Service Business Model in Smart Cities.Frontiers in Sustainable Cities | www.frontiersin.org 1 June 2021 | Volume 3 | Article 685716

[13] Sarkodie, S. A., & Owusu, P. A. (2022). *Green Transport Initiatives in Africa: Opportunities and Challenges*. *Sustainable Development Journal*, 30(3), 532-546.