Urban Pathways

KENYA

POLICY ENVIRONMENT AND ADVICE PAPER

Wuppertal Institut

UN@HABITAT
FOR A BETTER URBAN FUTURE

UN
environment
programme

Author: Urban Pathways team. Adriana Marchiori Silva

This publication is part of the Urban Pathways project

Urban Pathways Secretariat

www.urban-pathways.org

KENYA

POLICY ENVIRONMENT AND ADVICE PAPER

Urban Pathways

The Urban Pathways project helps delivering on the Paris Agreement and the NDCs in the context of the New Urban Agenda and the Sustainable Development Goals. It has established a facility in close cooperation with other organisations and networks active in this area to support national and local governments to develop action plans and concrete implementation measures to boost low-carbon urban development. This builds on UN-Habitat's role as "a focal point on sustainable urbanisation and human settlements including in the implementation and follow-up and review of the New Urban Agenda". The project develops national action plans and local implementation concepts in key emerging economies with a high mitigation potential. The local implementation concepts are being developed into bankable projects, focusing on the access to urban basic services to create a direct link between climate change mitigation and sustainable development goals.

Project concept

The project follows a structured approach to boost Low Carbon Plans for urban mobility, energy and waste management services that deliver on the Paris Agreement and the New Urban Agenda. The project works on concrete steps towards a maximum impact with regards to the contribution of urban basic services (mobility, energy and waste management) in cities to global climate change mitigation efforts and sustainable and inclusive urban development. This project makes an active contribution to achieve global climate change targets to a 1.5°C stabilisation pathway by unlocking the global emission reduction potential of urban energy, transport and resource sectors. The project will contribute to a direct emission reduction in the pilot and outreach countries, which will trigger a longer term emission reduction with the aim to replicate this regionally and globally to make a substantial contribution to the overall emission reduction potential.

Project aims

This project implements integrated urban services solutions as proposed in the New Urban Agenda providing access to jobs and public services in urban areas, contributing to equality and social coherence and deliver on the Paris Agreement and the Sustainable Development Goals.This is the first dedicated implementation action oriented project, led by UN-Habitat to deliver on inclusive, low-carbon urban services. Securing sustainability and multiplier effect, the project aims to leverage domestic and international funding for the implementation projects that will follow from this initiative

Urban Pathways

Urban Pathways Project and Replication Cities

NATIONALLY DETERMINED CONTRIBUTION

In December 2020, Kenya submitted its updated NDC to the UNFCCC, setting a new target of reducing GHG emissions by 32% by 2030, relative to the business as usual (BAU) scenario of 153 MtCO2e including LULUCF (143 MtCO2e using IPCC SAR values). This target covers all sectors, and is a small improvement from the previous target of a 30% reduction below BAU. While the previous NDC target was entirely conditional on international support, Kenya now commits to bearing 21% of the mitigation costs, or USD 3.7bn, itself, although the government notes that its financing needs may change with changing circumstances.

While measures to meet emission reduction targets for the electricity supply, transport, and agriculture sectors are underway, it is unclear to what extent other mitigation actions outlined in the National Climate Change Action Plan (NCCAP) are being implemented. The recent National Energy Efficiency and Conservation Strategy and Sustainable Waste Management Act still await corresponding implementation plans, but would result in emissions reductions in the energy demand and waste sectors, respectively.

The updated NDC provides a non-exhaustive list of priority mitigation measures in various sectors. These include increasing the share of renewables in the national energy grid; enhancement of energy efficiency across sectors; achieving a tree cover of at least 10% of Kenya's land area; and climate smart agriculture. The NDC also outlines that the planning processes for mitigation activities are determined by the country's Vision 2030 development programme; the National Climate Change Action Plan; and the National Adaptation Plan.

POLICIES AND STAKHOLDER MAPPING

Kenya Vision 2030

In 2008, the Government launched the Kenya Vision 2030 as a vehicle for accelerating transformation of our country into a rapidly industrialising middle-income nation by the year 2030. Kenya Vision 2030 is the long-term development blueprint for the country and is motivated by a collective aspiration for a better society by the year 2030. The aim of Kenya Vision 2030 is to create "a globally competitive and prosperous country with a high quality of life by 2030". It aims to transform Kenya into "a newly-industrialising, middle income country providing a high quality of life to all its citizens in a clean and secure environment".

The Vision is a product of a highly participatory, consultative and inclusive stakeholders' (international and local experts, ordinary Kenyans and stakeholders from all parts of the country) process carried out between October 2006 and May 2007. Between July and August 2007, the contents of the Vision 2030 were again subjected to open consultations in all provinces in Kenya before the document was finalized.

The Vision is anchored on three key pillars: Economic; Social; and Political Governance (Figure 1).
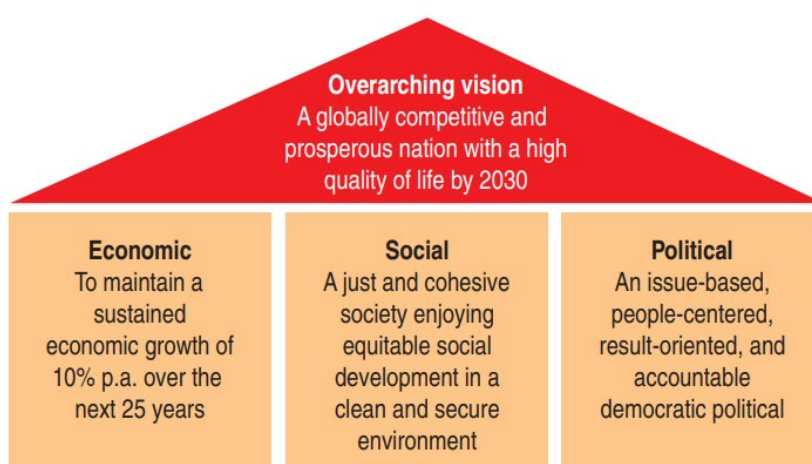

Figure 1. Thematic Overview of Kenya Vision 2030. Source: Vision 2030 Research teams

Kenya National Energy Efficiency and Conservation Strategy

The Kenya National Energy Efficiency and Conservation Strategy (NEECS) was developed to further enhance ongoing efforts, by providing a roadmap towards setting and achieving energy efficiency goals. This strategy is a key framework policy document of the Government to enhance its efforts and the effectiveness of the efforts to improve the national energy efficiency outlook. It is cognizant of existing initiatives and will build on them to achieve its objectives.

The National Energy Efficiency and Conservation Strategy provides a road map in five identified priority sectors – households, buildings, industry and agriculture, transport and power utilities –to realize the goal of sustainably transforming Kenya to an industrialized middle-income nation by the year 2030, as envisioned in Kenya Vision 2030.

National Climate Change Action Plan (NCCAP) 2018-2022

Issued by the Ministry of Forestry and Environment in 2018, the Five-year Plan aims to guide Kenya's climate change actions. It identifies six priority mitigation sectors, which are expected to reduce their GHG emissions, so that Kenya can meet its Nationally Determined Contribution goal of reducing its GHG emissions by 30 per cent by 2030, from the business as usual level.

This plan aims to strengthen the country's path towards sustainable, climate-resilient development while achieving low carbon climate resilient development. It builds on the previous Action Plan spanning the period 2013-2017. The NCCAP consists in three documents, including an Adaptation Technical Analysis Report (volume II), and a Mitigation Technical Analysis Report (volume III). The Plan seeks in particular to:

1) reduce risks to communities and infrastructure resulting from climate-related disasters such as droughts and floods

2) Increase food and nutrition security through enhanced productivity and resilience of the agricultural sector in as low- carbon manner as possible

3) Enhance resilience of the Blue Economy and water sector by ensuring access to and efficient use of water for agriculture, manufacturing, domestic, wildlife and other uses

4) Increase forest cover to 10% of total land area; rehabilitate degraded lands, including rangelands; increase resilience of the wildlife and tourism sector

5) Mainstream climate change adaptation into the health sector; and increase the resilience of human settlements, including improved solid waste management in urban areas

6) Improve energy and resource efficiency in the manufacturing sector

7) Climate-proof energy and transport infrastructure; encourage electricity supply based on renewable energy; encourage the transition to clean cooking; and develop sustainable transport systems.

Green Economy Strategy and Implementation Plan (GESIP)

Issued in 2016 by the Ministry of Environment, Natural Resources), the GESIP is a blueprint for enhancing low-carbon, resource-efficient, equitable, and inclusive socio-economic transformation. Furthermore, it focuses on eliminating the social-economic constraints to attaining Kenya Vision 2030 and is aligned with the outcomes of the United Nations Conference on Sustainable Development (Rio+20).

The plan is to facilitate Kenya's transition to a sustainable path through five thematic areas and strategies, which are promoting sustainable infrastructure, building resilience, sustainable natural resource management, promoting resource efficiency, social inclusion and sustainable livelihoods. The GESIP aims at guiding national and county governments and other stakeholders on the transition to sustainable development pathways to realize Kenya Vision 2030 and calls for a greater focus on green growth, a cleaner environment and higher productivity.

Waste Management Act

In July 2022, it was enacted the Sustainable Waste Management Act. This Act, consisting of 35 articles and divided into ten Parts, provides for the establishment of a legal and institutional framework for the sustainable management of waste; for ensuring the realisation of the constitutional provision on the right to a clean and healthy environment and for connected purposes.

The Act covers: domestic waste, waste electronic equipment, extended producer responsibility, hazardous waste, industrial waste, organic and non-organic waste, payment for environmental service, pollution, private sector entity, producer, public entity, recycle, re-use, recovery, sustainable waste management, waste management facility.

The Act identifies the following objectives: sustainable waste management promotion; improving the health of all Kenyans by ensuring a clean and healthy environment; reduction of air, land, fresh water and marine pollution; ensuring the delivery of waste service; creating an enabling environment for employment in the green economy in waste management, recycling and recovery; circular economy practices promotion; mainstreaming resource efficiency principles in sustainable consumption; improving responsible public behaviour on waste and environment.

POLICY RECOMMENDATIONS

Recommendations for improving the management of solid waste, transport and energy sectors in Kenya are as follows:

- Optimise the utilisation of renewable resources to improve system efficiency, flexibility and security - Additionally, by encouraging the optimal utilisation of renewable resources, leveraging from resources' complementarities, and maximising the value of storage in hydro reservoirs, Kenya can further improve the efficiency, flexibility and security of the system.

- Incorporate forecasting in operational practices - The incorporation of forecast in operational practices would allow to improve predictability of renewable energy availability in the short term, minimising the uncertainty risk and keeping reliability standards while increasing the participation of renewables.

- Re-evaluate the design of the tariff in the context of greater participation - Time-varying tariffs enable customers to adjust their electricity consumption voluntarily (either through automation or manually) to reduce energy expenses. This measure can reduce the peak demand and therefore reduce investments needed in the grid reinforcement. Similarly, to avoid grid defection, the tariff structure should be adapted, reflecting the changing role of the grid infrastructure.

- Deploy smart meters and digitalisation solutions - Wider usage of smart meters and sensors, the application of the Internet of Things and digitalisation have created opportunities to better operate and provide new services to the system. Digital technologies would support Kenya in several ways, including: better monitoring of assets and their performance; more refined operations and control closer to real-time; and the emergence of new business models on the consumer and prosumer side.

- Kenya has made notable progress in deploying renewables in large part because it has successfully attracted the necessary private investment for renewables projects. Further development of these resources would help it meet demand growth.

- Training and technology transfer – to build up local/rural capacity for small scale development which could subsequently be built up and strengthened.

- Establish the causes of gaps in implementation and enforcement of the existing laws in the transport sector and address such gaps to ensure improved compliance with the established laws.

- To improve operating conditions, all buses/matatus should operate under a service contract between the operating cooperative or company and the government. A service contract defines the relationship between government and the bus company. It allows the government to determine the quality of service, and at what price.

- Review and implement the Integrated National Transport Policy (2021).

- Design and offer incentives on public transport such as discounts on urban railway /bus travel

- Promote trial of new vehicle technologies in the market e.g. piloting of electric buses for public transport in cities such as Nairobi, Mombasa and Kisumu.

- Promote deployment of smart mobility Electric Vehicle charging infrastructure.

- For cities such as Nairobi, where a large number of residents use some form of public transport, the focus of transportation policy should be on passenger throughput as opposed to vehicle throughput. One policy option that would require relatively little new infrastructure is dedicated lanes for buses or matatus.

- There is a need for an immediate review of ongoing road projects in urban areas in the country to ensure compatibility with BRT plans. In future, all upcoming projects should consider mass rapid transit.

- Attention should be paid to the regular collection and documentation of reliable data on the amount, sources, types and composition of solid waste (general and hazardous) generated. This information should be freely available and used for, among others things, benchmarking, planning, monitoring and evaluation, and research purposes.

- The public should be educated on the health and environmental impacts of poor waste management via all available means, including school campaigns, radio campaigns, posters and flyers, informal meetings with community leaders, and social media. Environmental clubs in schools should train students to be agents of change in environmentally sound waste management. There should be strong public and stakeholder participation in all steps of waste management projects.

- There is also an urgent need to change people's attitude towards uncontrolled dumping and open burning of waste, the chief precursors of air pollution and chronic respiratory diseases. On the other hand, it is the role of authorities to provide suitable, cost-effective alternatives that meet sound hygienic and environmental codes and requirements.

- Waste management policies with strict law enforcement should be introduced. Moreover, gender should be mainstreamed into waste governance.

- Waste services and infrastructure should be carefully chosen in terms of their sustainability and should be implemented progressively. Municipalities should generally start with low-technology, lowcapital, labour-intensive and culturally acceptable technologies.

- Local governments should put favourable policies and incentives in place for the promotion of waste minimization through the 3Rs (reduce, reuse, recycle). Waste separation-at-source should be promoted to make waste recycling and recovery easier and more affordable, and to ensure collection of clean recyclable waste streams with higher value.

- The informal sector, as major actors in MSW collection and recycling, should be recognized, supported and integrated into the waste management system. Governments should help the informal sector establish links to markets for secondary materials through the creation of regional networks. The informal sector should get appropriate training and safety procedures.

- Health care waste management is of particular importance because of the dire and wider impacts it can have if not managed properly. Kenya should provide and improve health care waste management bodies by introducing legal and institutional frameworks specifically designed for health care waste.

- Regulation of imported end-of-life electrical and electronic equipment - Africa is a major destination for used electrical and electronic equipment. However, the lack of a legislative body for the trade is creating many gaps and logistic flaws, with potential for significant human and environmental impacts. Countries involved in this trade should revisit their regulatory frameworks and assess whether mechanisms need to be put in place to address illegal imports. Frameworks should also embrace special measures and instruments, such as end-of-life measures and take back policies like EPR.

REFERENCES

Gakungu, N.K., Gitau, A.N., Njoroge, B.K., & Kimani, M. (2012). SOLID WASTE MANAGEMENT IN KENYA: A CASE STUDY OF PUBLIC TECHNICAL TRAINING INSTITUTIONS.

Gonzales, E. J, Chavis, C., Li, Y., & Daganzo, C. F. (2009). Multimodal Transport Modeling for Nairobi, Kenya: Insights and Recommendations with an Evidence-Based Model. UC Berkeley.

Government of the Republic of Kenya (2018). National Climate Change Action Plan 2018-2022. Ministry of Environment and Forestry, Nairobi.

International Energy Agency. Africa Energy Outlook. 2019. Available at: https://iea.blob.core.windows.net/assets/44389eb7-6060-4640-91f8-583994972026/AEO2019_KENYA.pdf.

Kenya Power. (2018). Five Year Corporate Strategic Plan 2018-2023.

Ministry of Energy. Kenya National Energy Efficiency and Conservation Strategy. 2020.

Ministry of Environment and Forestry. National Climate Change Action Plan 2018 – 2022.

Mohammed Takase, Rogers Kipkoech, Paul Kwame Essandoh, A comprehensive review of energy scenario and sustainable energy in Kenya, Fuel Communications, Volume 7, 2021, 100015, ISSN 2666-0520, https://doi.org/10.1016/j.jfueco.2021.100015.

Muniafu, Max & Otiato, Everlyne. (2010). Solid Waste Management in Nairobi, Kenya. A Case for Emerging Economies. Journal of Language, Technology & Entrepreneurship in Africa. 2. 10.4314/jolte.v2i1.52009.

New Climate Institute. Kenya Power's Decarbonising the Energy Mix Initiative. Scoping Study. 2021.

University of Nairobi. National Low Carbon Urban Action Plan for Kenya. Urban Living Lab Center, 2022.

World Bank. (2020a). Access to electricity (% of population) - Kenya. World Development Indicators. https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=KE

World Bank. (2020b). Access to electricity (% of population) - Kenya. World Development Indicators.

Inform

Initiate

Inspire

Implement

More information about the
Urban Pathways project can be found at:

WWW.URBAN-PATHWAYS.ORG