



Urban
Pathways

KENYA

POLICY ENVIRONMENT PAPER

BERLIN, 2018



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Urban Pathways Replication Cities

ABSTRACT

The United Nations' New Urban Agenda (NUA) aims to set a new global standard for sustainable urban development, especially focusing on how we rethink our planning, management and living within our cities. The aim of this paper is to briefly review the policy environment in the Republic of Kenya in its development and implementation of the NUA with a specific focus on energy, mobility and resource (waste) management. This paper's analysis conducts a overview of the policy making process and institutional make-up towards climate change adaptation and mitigation.



Urban Pathways



COUNTRY OVERVIEW

Kenya has developed an ambitious climate change strategy, which includes a pledge to reduce its GHG emissions by 30% by 2030 relative to the BAU scenario of 143 million tCO₂eq in line with its sustainable development agenda.. (GoK_ INDC, 2015) p.2.

The Republic of Kenya (Kenya) is situated on the equator on the African continent's east coast, bordering the Indian Ocean between Somalia, Tanzania, South Sudan, Uganda and Ethiopia.

Kenya is home to 49.69 million people living on a total land area size of 582.646 km² consisting of 11,230km² of water surface and 571,416k km² of land area – with an urban population growth rate of 4.3% per year and a growing share of its population living in urban areas. By 2050 about half the population is estimated to be living in cities (World Bank, 2016). The urban population of Kenya is concentrated along the Northern Corridor, which has led to the development of three urban hubs, the central hub (with Nairobi the focus city); the coastal hub (centralised around Mombasa); and the western hub (around the urban centers of Kisumu, Eldoret, Kericho, and Nakuru). The World Bank estimates that Kenya's capital city, Nairobi, will become home to 6 million people by 2030 currently Nairobi is home to 4 million people (World Bank, 2016).

It is the fifth-largest economy in sub-Saharan Africa with a gross domestic product (GDP) of USD 60.9 billion, a GDP per capita of USD 1,246 and gross national income (GNI) per capita of USD 1,280 in 2014 (World Bank, 2016). Approximately 42 per cent of Kenya's national GDP is derived from its natural resource sectors (agriculture, forestry, fishing, water supply and energy). The services sector (which includes transport and communications, wholesale and retail trade, and financial and other services) accounts for about half of GDP. The industrial sector (manufacturing, construction, mining and quarrying) contributes the remaining 10 percent (World Bank, 2014). The employment to population ratio percentage ages 15 and older is 60.9% (UN Human Development Reports, 2016). Kenya's economy was evaluated to have been performing well even though in 2017 it experienced a prolonged election period and a severe drought (IMF, 2018). The IMF has further concluded, during its March 2018 visit, that "Kenya's external current account deficit rose to an estimated 6.4 percent of GDP in 2017 from 5.2 percent in 2016, reflecting higher imports, including fuel. The exchange rate has remained stable and foreign exchange reserves have risen to US\$7.1 billion as of end-January 2018 and are sufficient to withstand any potential near-term external shocks".

In 2013, the total greenhouse gas emission in Kenya amounted to 60.53 MtCO₂e, contributing to 0.13% of total global emissions, and its per capita emissions equating 1.38 tCO₂e (WRI, 2013). Kenya's GHG emissions per sector:

Sector	Total MtCO ₂ e in 2013	tCO ₂ e per capital
Energy	19.46	0.42
Waste	0.88	0.02
Transportation	6.53	0.14

At COP-21 in 2015 in Paris, Kenya has committed to a Nationally Determined Contribution (NDC) of reducing domestic greenhouse gas emissions by 30% in 2030 in comparison to a business-as-usual projection - Kenya's NDCs builds on a baseline projection of 141 MtCO_{2e} in 2030, i.e. a doubling from 2010 values. Addressing climate change holistically, in policy and in societal change, is important for Kenya as the challenges from the negative impact of climate change poses a high risk to its people's livelihoods in particular and its economy in general. Kenya's economy is heavily dependent on agriculture and tourism, and its energy supply is

reliant on hydro-power – making both these economy-contributing industries vulnerable to the adverse effects of global average atmospheric temperature increases. Kenya's impact by climate change is evident in the reduction output of its agricultural production due to changing rainfall patterns – with some season having little to no rainfall.

Policy adjustments and national budget allocation are important for Kenya's NDC commitment to adapt and mitigate climate change – as escalating climate change will directly or indirectly affected food security, economic prosperity, and environmental sustainability.



SUMMARY OF KENYA'S NATIONALLY DETERMINED CONTRIBUTIONS

Kenya is committed to reduce its GHG emissions by 30% by 2030, relative to business-as-usual (BAU) scenario (baseline 2010) of predicated 143 MtCO_{2e} in 2030. Addressing climate change in a holistic manner will benefit Kenya to also address the other socio-economic challenges. By failing to address climate change in a multi-sectoral approach, Kenya will risk a further deterioration of the nation's GDP, resulting in greater unemployment and worsening poverty. Historically Kenya contribution of total global emission per capita is low (less than 1.26 MtCO_{2e}) compared to the global average of 7.58 MtCO_{2e}. Emissions in Kenya are still relatively low in comparison to other countries (73 MtCO_{2e} in 2010). Yet, carbon emissions started to increase from 1995 and this trend is likely to continue by 2030 (Kenya's National Action Plan, 2013). Moreover, Kenya's National Strategy aims to curb greenhouse gases, such as carbon dioxide (CO₂),

methane (CH₄) and nitrous oxide (N₂O) in sectors such as energy, transportation, industrial processes, agriculture, forestry and other land use and waste sector. Their planning process will include a review of the National Climate Change Action Plan (NCCAP) and the National Adaptation Plan (NAP) through the National Climate Change Secretariat (NCCS) every five years. Through the regular review process, the National Strategy also streamlines the climate change mechanism in all relevant ministries and will oversee the Kenyan Climate Fund.

Kenya has committed to achieve its NDC targets based on existing laws and national policies. In recent years, its legislature has developed a National Climate Change Response Strategy (NCCRS, 2010), a National Adaptation Plan (NAP) and a Climate Change Act (2016) to curb the increasing emissions in the country.



POLICIES AND STAKEHOLDER MAPPING

Governance and institutions

Kenya is a unitary state with a multi-party political system and is generally described as a middle-income country due to its comparative wealth yet its societal reality experience displays huge differences between the development of its rural and urban areas and population (Campbell, 2018). Kenya's Constitution (2013) provides for two autonomous but interdependent levels of government; a national and county level administrations. This two-tier government system consists of a national government and 47 autonomous county governments. This system provides of devolution governance structure, giving country governments an integral role in service delivery. Kenya is regarded as East Africa's largest economy with the port city of Mombasa and the capital Nairobi being the economic gateway to East Africa. In 2017, Kenyan marked the 60th anniversary of democratic elections and again went to the polls to elected a new leader.

National Government

The re-drafted and adopted constitution of 2010 also changed the political power structures, infusing more checks and balances within the Kenyan political landscape – decentralising power to county level assemblies, governors, senators and special representatives. The electoral ballot now allows for Kenyans to vote for a president, members of parliament and six officials from the local level up. Moreover, Kenya now has 47 county administrations which have more control over their financial resources at the local level and have impacted on spending in geographical areas that have been neglected in the past.



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Political environment

The political landscape of Kenya has been dominated by numerous factors that affect the policy environment and governance stability – these include, political instability and institutional transparency. In 2010, the Kenyan constitution was amended to try and address some of these negative disruptions. The changes to the 2010 constitution include a devolution of power and resources, reduced power of the executive by altering the structure of government and giving parliament more oversight, the creation of a citizen's Bill of Rights and a land commission (Greste, 2010).

Policy

The Constitution of Kenya stipulates that all citizens are guaranteed a clean and healthy environment and this is a fundamental right within the Bill of Rights. Climate change policy in Kenya is also influenced by its global and regional commitments and obligations such as the UNFCCC, Africa's African Climate Change Strategy and East Africa's Climate Change policy, Strategy and Master Plan. Kenya's Second Medium Term Plan of Vision for 2030 institutionalised the mainstreaming of climate change policy in national planning, particularly by identifying specific actions to address climate change. Kenya's climate change policies are also closely aligned to its priority of achieving food and nutrition security by 2022.

Climate change policy-making process in Kenya Kenya's policy-making process follows a deliberative inclusionary process (is a policy making process that embraces all processes through which a wide variety of, ideally all, interests, perspectives or stakeholders is engaged in a deliberation seeking win/win approach) and aims to actively mainstream climate change policy and action within its national and county governance mechanisms. Kenya climate change policy also follows a horizontal integration approach – with the national governance authorities providing a guidance system that influences the county levels. Vertically, all economic sectors and the government are expected to, or using the DIP method, 'nudged' towards implementing climate change policy. For example, Kenya's Medium Term Expenditure Framework for budget making includes policy guidelines and budgeting items for integrating climate action into the expenditure and action plans. On the county level law requires the preparation of County Integrated Development Plans, through which climate change actions can be mainstreamed (Ministry of Environment and Natural Resources: Kenya, 2016). A Climate Change Act became enforceable during 2016. This legislation establishes a National Climate Change Council that has the responsibility for coordination of climate change actions, including mainstreaming climate change in national and county budgets, plans and programs.



Climate Change Act and the National Climate Change Council

In May 2016, Kenya enacted the national Climate Change Act which will become the primary law that governs the country's climate change adaptation and mitigation obligations and responsibilities. One of the most interesting features of this law is that it allows Kenyan citizens and interested parties to hold the government and corporations accountable for reducing GHG emissions. The Climate Change Act has provisions for citizens to sue private and public entities that frustrate efforts to reduce the impacts of climate change. It also provides for the incentives to pursue low-carbon development and promotion of research and development on clean technologies by the private sector. Although, the Regulations for the Climate Change Act have still to be operationalised. Provisions within the Climate Change Act (2016) allows for social entrepreneur's working in climate change mitigation to:

- have a voice,
- it also makes it easier for prosecution related to climate change offenses to occur, and
- establishes the Environment and Land Court which has the jurisdiction to handle matters relating to climate change.

The National Climate Change Council is headed by the President of Kenya and have powers to impose climate change obligations on public and private entities, including regulations on the nature and procedure for reporting on performance. National Environment Management Authority (NEMA) is tasked with monitoring, investigating and reporting on compliance. Failure to comply may incur a fine of up to

one million Kenyan shillings and five years' imprisonment for officers of an entity. The mandate of the Climate Change Council is to provide policy direction on research and training on all matters relating to climate change.

Some key policy parameters within the Climate Change Act 11 of 2016 include:

- Mainstreaming climate change mitigation and adaptation into development planning, decision making and implementation,
- Design and implement programmes that enhance Kenya's resilience and adaptive capacity of human and ecological systems to their impact of climate change,
- reinforcing climate change disaster risk reduction in strategies and actions of public and private entities,
- mainstreaming intergenerational gender equity in all aspects of climate change responses, and
- Providing incentives and obligations for private sector contributions to achieving low carbon climate resilient development.

The Climate Change Act also institutionalises the overarching national climate change coordination mechanism of the National Climate Change Council chaired by the president of Kenya.

Together with the Climate Change Act Kenya also adopted the UN's Sustainable Development Goals, which have bold and clear targets for climate change mitigation and adaptation.

STATE GOVERNMENT NAIROBI CITY

Kenya's capital city Nairobi situated in the south-central part of the country, evaluated approximately 1680 metres above sea level with access to the Indian Ocean via its north-western city of Mombasa. Nairobi is the government centre of Kenya and attracts a stream of migrants from rural Kenya and also other part of Africa seeking better living situations and access to jobs. Nairobi also serves as Kenya's principle industrial centre, with the railway industry being the largest single industrial employer, and light manufacturing industries that produce beverages, cigarettes, unprocessed foods facilitating other job seekers. Tourism is also important for Nairobi. Nairobi city county is the creation of the Kenyan Constitution of 2010 and operates under the Cities and Urban Areas Act. Nairobi city administration is responsible for civilian services related to physical planning, public health, social services, housing, primary education infrastructure, inspectorate services, public works, environment management, agriculture, livestock development and fisheries, trade, industrialisation, corporate development, tourism and wildlife and public service management.

Nairobi, like most other Kenyan cities, are administratively governed by local authorities which include municipal councils for every municipality, county council for every county, town council for every township, urban councils for every county division as have been established under the Local Government Act (265) of the Laws of Kenya. The Nairobi City

Council is composed of elected and nominated councilors, chief officers, and technical support staff. The administration is divided into components made up of elected and nominates councilors who also serve as policy makers, and an executive arm consisting of a town clerk as employed by the government. The Town Clerk is responsible for the operations and serving as a linkage between policymakers and the executive arm.

Around 50% of residents in Nairobi navigate the city by walking or cycling facing increases in road injury accidents or at times death. Nairobi also faces increases in poor air quality issues, and high traffic congestion both issues caused by limited public transport and a 10% annual increase in vehicle users in the city of Nairobi. Moreover, with increases in population and migrants seeking better lives, Nairobi city is faced with problems related to waste management and waste collection systems. In March 2018, Nairobi country government acknowledged that 2, 475 tons of waste was being produced each day and the city administration was not able to manage this.

Since devolution of power from the central administration to the Nairobi city government has placed emphasis on improving and modernising its energy infrastructure, developing towards renewables and affordable energy sources. Nairobi's city administration has outlined a special focus for energy, transport, water and sanitation and housing – in line with its Vision 2030 and the government's big four agenda.



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ENERGY

Kenya currently relies on biomass (69%), petroleum (22%) and electricity (9%) for its energy supply. The energy system is made up of the country state-owned energy provider (KenGen) and independent power producers. An estimated 83% of Kenya population relies on biomass, in the form of wood fuel and charcoal, used mostly in rural areas by poor houses for cooking and heating – since Kenya has poor rural electrification most poor houses are forced to rely on biomass as a source of energy. Petroleum is 100% imported in Kenya. In 2012, some oil deposits were discovered in Kenya's north-western region beginning the production of small crude oil mining. Kenya has since reviewed the need to develop facilities and infrastructure to support its potential oil industry.

Electricity in Kenya is generated from geothermal (47% of consumption), hydro-power (38%), thermal

(13%) and wind (0.4%). The Kenyan National Environment Management Authority estimates that geothermal energy alone could yield a GHG abatement of as much as 14 MtCO_{2e} in 2030, while wind and solar energy could deliver about 1.4 and 1.0 MtCO_{2e} in emissions reduction, respectively, in that year. The country's installed electricity capacity is estimated at 2.4GW. 1.5GW is grid connected and 500W has come online since mid-2014. Hydropower accounts for a large percentage of this capacity and sometime the unreliable weather condition have a negative generation impact. The cost of electricity in Kenya is expensive costing USD 0.150 per kWh. Kenya also imports electricity from Uganda (95% of power imports) and Ethiopia (Global Legal Insights, 2018). Kenya's vision 2030 and the second medium plan 2013-2017 identified the energy sector as one of its enablers for Kenya's economic transformation.



WASTE MANAGEMENT

With the increases in urban population in Kenya's urban centres the county governments ability to manage the solid waste generated has become a growing problem. This also presents a growing problem for Kenyans 1) less than 40% of Kenya's waste is being collected and 2) most waste that is collected is dumped in open, often informal sites.. Much of Kenya's waste is poorly managed, at times not collected at all, disposal sites are inadequate and waste is also contaminated with hazardous (biomedical) materials – impacting on health and the environment. Nairobi city, for example, experiences a rapidly growing urban area and inability of inadequate infrastructure to meet demand and use. Nairobi produces around 2,400 tons of waste each day and only 38% of this is collected and only 10% is recycled. (Soezer, Owino, & Samuel, 2017).



TRANSPORT

The Transport sub-sector in Kenya is supported in with Kenya's Vision 2030 as a vital sector that plays a role in the economic ambitions of the country. Although most of the road and railway network in Kenya is mostly concentrated in the south-west of the country, due mostly to the colonial setting and interests of foreign powers. The transportation system experiences problematic issues related to lack of administrative responsibility for maintenance, tropical influences overload and carry of unacceptable axle loads. In 2016, this sub-sector grew to 8.8% compared to 7.1% in 2015. Road, rail and air transport is therefore heavily supported as public investment priorities by the government of Kenya (Forture of Africa, 2018). Oil is largely used in the transportation sector of Kenya,

amounting to 70% of usage (Longa & van der Zwaan, 2017). In Kenya's NDCs, a reference is made to its National Climate Change Action Plan which includes a transport sector reduction GHG emission target – although no specific target or action in the NDC is mentioned. Kenya has initiated steps to improve capacity and coordination of its transport sector in line with the UNAID/UNDP low emissions Capacity development project. Kenya's Climate Change Act also tasks each sectoral ministry to set up a climate change unit that will coordinate the NDC implementation and reporting, including the transport sub-sector, one such measure is the ban of old used cars from other parts of the globe into its market. (GIZ, 2017).



City Example: Nairobi

The capital city of Kenya, Nairobi, is situated close to the eastern edge of East Africa's Rift Valley covering an area of 696 km² (United Nations, 2015). As the capital city of Kenya, it is a fast growing metropolitan area with an estimated population of 4 million people living and/or working within the city. The World Bank estimates (2016) that the city will grow to 6 million people by 2030 who will either move from rural Kenyan or those seeking better living and working opportunities from outside the country. Nairobi is one of the largest city in East Africa and serves as Kenya's and the regions financial, diplomatic and communication capital.

Energy

Nairobi City is one of Africa's fastest growing cities – with this grandiose title also come the burden of an increase population and increase strain on public resources. The Kenyan government's Vision 2030 strategy supports strategies to reduce cost of energy as well as generate more renewable and sustainable energy. While Kenya does not have policies that burden a renewable energy sector, the country also does not have a policy apparatus that fosters positive renewable energy sources proliferation. In may 2018, Nairobi City Centre saw an overhaul of the centre network upgrades and reinforcement project that aimed at improving the flexibility of the power distribution system in Nairobi. All energy laws and bylaws by both the national and local level must comply with the New 2010 Constitution, and all energy stakeholders are involved in formulation of energy policy in the city.

Waste Management

Nairobi produces around 2,400 tons of waste each day and only 38% of this collected and only 10% is recycled (Soezer, Owino, & Samuel, 2017). To address some of the growing concerns in Nairobi its city administration has decided to build new landfills and enhance its capacity for timely collection and disposal of waste. In addition to enhancing its services system, Nairobi city administration is aware of the need to address its financial challenges and the money collection system so that adequate services for waste

management can be delivered. Nairobi's Governor in May 2018 entered into a public-private partnership to help manage the waste system in Nairobi. Although, Nairobi city still faces many challenges related to recycling its solid waste and educating its population of the benefits of recycling. The governor of Nairobi in May 2018 also acknowledge the growing solid waste management services problem and has the private sector companies 'cartels' operating regardless to regulations and laws within this space.

Transport

Nairobi city administration has developed plans to decongest the city through the expansion of Outer Ring Road and Mombasa Road section dual carriage way. Nairobi city administration will also fast track the construction of Ngong Road, the improvement of road junctions and construction of missing link road and non-motorised transport facilities. Nairobi's mayor and the city of Nairobi's Regeneration Committee in May 2018 committed the city to have two car free days, Wednesday and Saturdays, in the Central Business District and Westlands of Nairobi. A bus rapid transit (BRT) with a first fleet of 30 busses where deployed in Nairobi during June 2018 – this programme is a government led initiative aimed to implement a functioning public transport system in Nairobi and decongest the overburdened road infrastructure (Karanja, 2018).

Local and national frameworks

Local and national frameworks to enable low-carbon urban energy, mobility and resource management systems

The Constitution (2010) of Kenya sets up a devolved system of governance; hosting one national government and 47 county governments. The two-tiers of government are interdependent and function consultatively – adhering to cooperation and concurrent delivery of their respective and concurrent responsibilities. Kenya’s national government is mandated to make policy on climate change for the country universally. In certain instances there might exist a concurrent duty of performance of climate change related function by the two-levels of government.

Regional Frameworks:

The East African Community Climate Change Policy: Kenya actively participates in regional initiatives to respond to climate change. This has led to the development of the East African Community (EAC) Climate Change Policy Master Plan and Strategy, which contributes to the National Climate Change Framework policy formation of Kenya.

National Frameworks

- Constitution of Kenya: sets of Kenya’s commitment to ecological and sustainable development

and its requirements to adhere to international agreements and ratified international law.

- Climate Change Act, 2016: provides for the legal framework for the mainstreaming of climate change actions into policy, planning, budgeting and implementation at both the national and sub-national levels.

- Sessional Paper No. 10 of 2012 on Kenya Vision 2030: Guides the implementation of the Nationally Determined Contributions. Focusing on adaptation actions as a priority, particularly in view of an increasing frequency and intensity of changing and extreme climate and weather events in Kenya. This strategy is Kenya’s guiding document moving towards a low carbon climate resilient development pathway and its development towards reaching its sustainable national development goals.

- UNFCCC’s Paris Agreement: Kenya ratified the Paris Agreement on 28th December 2016.

- National Climate Change Action Plan (NCCAP: 2013 to 2017): objectives to encourage low carbon climate resilient development through implementation of climate change policies that adequately respond to priorities.

OUTLOOK

Like most African countries, Kenya is forced to confront the hurdles of poverty alleviation and development, while at the same time actively participating in a global economy that is being radically disrupted and evolving. In addition, as a country dependent on agriculture and tourism the changes in climate severely impact on the socio-economic priorities of a developmental state. While Kenya has enacted on some impressive legislation to address climate change the recent flooding reveals that the country has yet to establish policy, institutional and infrastructural safeguards that immediately responds to the negative impacts of climate change. Both the national and county level governance administration

must accelerate low carbon development and enforce a climate change strategy that doubles investments in renewable energy, reforestation and protection of water towers, for example, so that the impact of climate change in both the short term and long term are being addressed. Some of the policy mechanisms are needed to address immediate droughts and devastating floods – especial so that grassroots communities in particular have less of a vulnerability to severe impacts. Kenya's ability to sustain inclusive growth, competitiveness and stability in the long run hinges on robust action on climate change especially in the immediate and short term.

REFERENCES

- Campbell, J. (2018, 02 07). Council on Foreign Relations: Kenya. Retrieved 04 25, 2018, from Council on Foreign Relations : <https://www.cfr.org/blog/kenya-enters-dangerous-territory>
- Diamond, J. (1999). *Guns, Germs, and Steel* . USA, New York, New York: Norton paperback.
- Embassy of the Republic of Kenya in Japan . (2018, 04 25). A brief history of Kenya. Retrieved 04 25, 2018, from Embassy of Kenya: Japan: http://www.kenyarep-jp.com/kenya/history_e.html
- Fortune of Africa. (2018, 04 27). Transport Sector Profile Kenya. Retrieved from Fortune of Africa: <http://fortuneofafrica.com/kenya/transport-sector/>
- GIZ. (2017, April 27). International Climate Change Initiative. Retrieved from GIZ: Transport in NDCs: https://www.international-climate-initiative.com/fileadmin/Dokumente/2017/171115_Publikation_EN_TransportInNDCs.pdf
- Global Legal Insights . (2018, April 25). Kenya Energy 2018. Retrieved from Global Legal Insights: <https://www.globallegalinsights.com/practice-areas/energy-laws-and-regulations/kenya>
- Greste, P. (2010, 08 27). BBC. Retrieved 04 25, 2018, from BBC: Kenya's new constitution: <http://www.bbc.com/news/world-africa-11103008>
- Huffington Post. (2017, 11 11). Huffington Post: Kenya Elections - Key Issues Past and Present . Retrieved 04 25, 2018, from Huffington Post: https://www.huffingtonpost.com/entry/kenya-elections-key-issues-past-and-present_us_5988ba67e4b030f0e267c694
- IMF. (2018, March 07). International Monetary Fund Kenya country viist. Retrieved April 24, 2018, from IMF: <https://www.imf.org/en/News/Articles/2018/03/07/pr1878-imf-staff-concludes-visit-to-kenya>
- Kenyan High Commission UK. (2018, April 23). Kenyan High Commission. Retrieved April 23, 2018, from Kenyan High Commission UK Country Profile : <http://kenyahighcom.org.uk/country-profile/>
- Longa, D., & van der Zwaan, B. (2017). Do Kenya's climate change mitigation ambitions necessitate large-scale renewable energy deployment and dedicated low-carbon energy policy? *Renewable Energy*, 1559-1568.
- Ministry of Environment and Natural Resources: Kenya. (2016, November). Kenya National Climate Change Framework Policy . Retrieved from Ministry of Environment and Natural Resources: Kenya: [http://www.ke.undp.org/content/dam/kenya/docs/energy_and_environment/2016/Climate-Change-Framework-Policy\(31Nov2016\).doc?download](http://www.ke.undp.org/content/dam/kenya/docs/energy_and_environment/2016/Climate-Change-Framework-Policy(31Nov2016).doc?download).
- Soezer, A., Owino, T., & Samuel, A. (2017, May 23). A circular Economy solid waste management approach for urban areas in Kenya. Retrieved from UNDP: <http://journals.sagepub.com/doi/abs/10.1177/0956247817700294>
- UN Human Development Reports. (2016, October 24). UNHDR employment to population ratio. Retrieved April 24, 2018, from UNHDR: <http://hdr.undp.org/en/indicators/148306>
- World Bank. (2016, February). World Bank: Republic of Kenya urbanization review. Retrieved April 23, 2018, from World Bank: <http://documents.worldbank.org/curated/en/639231468043512906/pdf/AUS8099-WP-P148360-PUBLIC-KE-Urbanization-ACS.pdf>
- WRI. (2013, 12 20). World Resource Institute. Retrieved 04 25, 2018, from WRI, kenya: <http://cait.wri.org/profile/Kenya>

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