

Plastic Pollution Policy Country Profile: Kenya

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Key Takeaways*

- Though Kenya's overall waste per capita is low compared to the global average, 92% of waste is mismanaged in the country. This is the result of both a lack of collection services in rural areas and leakage in urban areas.
- In 2018, Kenya implemented what was considered one of the harshest plastic bag bans, with high fees or prison sentences for noncompliance. According to Kenya's government, plastic bag reductions were seen after implementation, more than 2/3 of the population supported the policy, and ownership of reusable bags has tripled on average.
- In 2020, Kenya also banned the use of all single-use plastics (SUPs) in all protected areas and developed a complementary implementation plan, including outreach campaigns and financial disincentives (such as fees) on SUPs. It is too early to tell how effective this policy has been.

* These are based on a review of literature published and policies enacted before December 2021

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INTRODUCTION

This document outlines: 1) the nature of the plastic pollution problem in Kenya, 2) available information about the national, subnational, and to a smaller extent, international policy landscape guiding government approaches to the plastic pollution problem in Kenya, and 3) what, if any, information exists about the effectiveness of these policy approaches. This document is written using a basic literature review process and with support from the [Plastics Policy Inventory](#), as outlined in the Appendix (below), and is not exhaustive. It contains the most up-to-date information at time of publication, but this information may eventually be less relevant as the policy landscape continues to evolve. The authors were not able to get expert review for this case study, to ensure the information gathered aligns closely with what experts and practitioners are observing and experiencing on the ground. If conducting research on the plastic pollution crisis in Kenya, we recommend you use this document as one of many resources available to better understand the problem and its solutions.

PLASTIC POLLUTION IN KENYA

Plastic pollution poses a major global threat to humans and the environment. At the present rate of population growth under a business-as-usual model, plastics production is estimated to double within the next 20 years (Lebreton 2019). Due to high population densities in Asia and Africa, coastal communities in these regions produce a disproportionate amount of plastic waste (Lebreton 2019).

Waste generation is low in Kenya compared to the world average: in 2018, the per capita waste generation rate was 11 kilograms per year, compared to the world average per capita waste generation rate of 29 kilograms per year (Paruta et al. 2020). However, 92% of that waste is mismanaged (Paruta et al. 2020). In fact, there are no collection services in rural areas (Paruta et al. 2020). This leads to leakage into terrestrial and marine ecosystems (Paruta et al. 2020). In terms of plastic, an estimated 37,000 tons of plastic leaks into the ocean every year and 67% of that leakage comes from urban centers (Paruta et al. 2020). The problem is projected to get worse: by 2060, plastic generation will be 1.9 million metric tons per year (Lebreton and Andrady 2019).

The most common polymers leaked into the environment are polypropylene (PP), polyethylene terephthalate (PET), and polyester, mostly coming from bottles, lids/caps, and dairy packaging (Paruta et al. 2020). The industrial sectors that produce the most plastic waste are packaging, textiles, and automotive tires (Paruta et al. 2020). The most important pathways for single-use plastics (SUPs) into the environment are from littering, storm water pathways, wind and water currents, and tides (Ministry of Environment and Forestry [ME&F] 2020), suggesting that a lot of plastic waste in Kenya is not contained within solid waste management.

Kenya's plastic waste management operates primarily on an Informal Recycling Sector (IRS) (Gall et al. 2020). This process entails the collection of recyclable materials by informal waste pickers from open dumpsites that are then passed to informal middlemen for sorting and aggregating of plastic waste (Gall et al. 2020). Although the IRS is an integral part of Kenya's waste management system, it is inadequate because there is a lack of formal integration between the plastic production and solid waste management systems (Gall et al. 2020). Waste pickers, who sell unprocessed plastic waste directly to plastic producers who reuse the materials, make up most of the work force, but they are subject to marginalization and exploitation (Gall et al. 2020; Oyake-Ombis et al. 2015).

POLICIES TO ADDRESS PLASTIC POLLUTION

Kenya has addressed plastic pollution using three major regulatory tools: single use plastic bans, improvements to solid waste management and administrative and budgetary responses.

[Plastic Bag Ban for Secondary Packaging \(2017\)](#)

The Plastic Bag Ban for Secondary Packaging prohibits the manufacture, import, distribution, and use of single-use plastic (SUP) bags for retail or household packaging (Omondi and Asari 2021). The policy document

includes recommendations for alternatives such as plastic based reusable bags, cotton bags, paper bags, jute bags, canvas bags, and 100% biodegradable bags (Omondi and Asari 2021). The ban includes fines between US\$20,000 and US\$40,000 (2 to 4 million Ksh) and/or one to four years in prison for those who are found not compliant (Omondi and Asari 2021).

Plastic Bag Control and Management Regulations (2018)

These regulations ban any manufacture, import, export, use, or offer for sale of plastic bags unless someone has a permit or has paid a fee (Plastics Bags Control and Management Regulations 2018). If a user is approved to sell plastics bags, they must develop and maintain a plan that includes performance measures and public education programs about the collection, recycling, and reuse of plastic bags that must be submitted yearly to the National Environment Management Authority (NEMA) (Plastics Bags Control and Management Regulations 2018). All plastic bags that are approved for production must include at least 30% total recycled content, and manufacturers must print a legible label on the bag (Plastics Bags Control and Management Regulations 2018). There is a two million to four million Ksh (~US\$18,500) fine or a conviction of one to four years if the regulations are not followed (Plastics Bags Control and Management Regulations 2018).

Ban on Single Use Plastics (2020)

The Ban on Single Use Plastics (also known as Gazette Notice 4858 or the Wildlife Conservation and Management Act) and its Action Plan for Implementation issued by the president was created to ban the use and littering of single use plastics in all protected areas including national parks, beaches, forests, world heritage sites, biosphere reserves, Ramsar sites, and conservation areas (ME&F 2020). This is an expansion of the 2017 Plastic Bag Ban on Secondary Packaging (ME&F 2020). The Action Plan is implemented by ME&F, Ministry of Interior and Coordination of National Government, Ministry of Devotion and ASALS (Arid and Semi-Arid Lands), and Ministry of Tourism and Wildlife (ME&F 2020).

The Action Plan includes guidelines for SUP management, mainstreaming plastic issues into curriculum, and running public campaigns to change consumer perceptions on the radio, social media, brochures, and posters (ME&F 2020). The action plan promotes economic incentive schemes such as increasing the fees associated with SUPs. In addition, the Action Plan plans to strengthen management of postconsumer SUPs to eliminate their drifting into protected areas (ME&F 2020).

National Sustainable Waste Management Bill (2019)

The National Sustainable Waste Management Bill assigns waste management duties to national and county governments, public and private entities, and individual citizens (ME&F 2020). The bill is based on eight main principles: the constitutional right to a clean and healthy environment, the polluter-pays principle, the precautionary principle, payment for ecosystem services, access to info on waste management, the zero-waste principle, achieving sustainable development goals, and poverty alleviation and job creation (especially for youth, women, and the disabled) (Sustainable Waste Management Bill 2019).

The bill mandates the closure of open and uncontrolled dumpsites and the expansion of the market for recycled products (Sustainable Waste Management Bill 2019). To implement this, county governments are required to make gate fees at landfills higher to incentivize waste collectors to take waste to mixed recovery facilities rather than depositing it into landfills (Sustainable Waste Management Bill 2019). Likewise, the bill implements deposit-refund take back schemes, where products can be returned after use and reused by the seller, for packaging products to be applied to all producers and importers (Sustainable Waste Management Bill 2019). Littering or irresponsible waste disposal is also prohibited, and people found responsible for contravening the law can be charged with a 200,000 Ksh (approximately US\$1,855) fine and/or one year imprisonment (Sustainable Waste Management Bill 2019). The bill also includes award schemes for reporting illegal littering and for those who have been compliant with the bill (Sustainable Waste Management Bill 2019).

Additionally, this bill includes the formation of a waste management council to identify sustainable waste prevention, reduction, reuse, recycling, and disposal strategies (Sustainable Waste Management Bill 2019). The

council is made up of representatives from the ME&F, National Environment Management Authority, National Environment Complaints Committee, Office of Attorney General, National Treasury, chair of the Environment Committee of the Council of Governors, chair of County Executive Committee Members, a waste recycling industry representative nominated by Kenya Private Sector Alliance, and a nongovernmental organization that works on sustainable waste management. The council plans to develop a national strategy to reduce land-based pollution to the marine environment (Sustainable Waste Management Bill 2019).

[Nairobi City Council Solid Waste Management Act \(2015\)](#)

The Nairobi City Council Solid Waste Management Act provides a county-level framework for solid waste management and a legal basis for implementation of the county's solid waste management plan (The Nairobi City Council Solid Waste Management Act 2015). To target plastics directly, the act prohibits the manufacture of plastic bags with a thickness less than 30 microns, smaller than 8x12 inches, or a color that is not the Kenyan standard (The Nairobi City Council Solid Waste Management Act 2015). Outside of explicitly targeting plastics, the county imposed an environmental levy of no more than 2% of the property rate to be applied to waste management and improve the quality of the environment (The Nairobi City Council Solid Waste Management Act 2015). The act authorizes officers to stop activities such as generation, transportation, storage, and disposal that endanger the environment and requires that before installing any treatment facilities, people must receive a permit (The Nairobi City Council Solid Waste Management Act 2015). Approved disposal methods are controlled tipping (where solid waste is disposed into a dug pit and regularly covered with soil), sanitary land filling, recycling, composting, and incineration at the appropriate standards (The Nairobi City Council Solid Waste Management Act 2015). Any offenses to the act lead to a fine of 300,000 Ksh (approximately US\$2,783) (The Nairobi City Council Solid Waste Management Act 2015).

[Polyethylene Terephthalate \(PET\) Task Force \(2017\)](#)

A PET task force was created between the Ministry of Environment and Forestry (ME&F), Kenya Association Manufacture (KAM), and National Environment Management Authority (NEMA) (ME&F 2020). In 2018, the PET task force created a Framework of Cooperation (FoC) to implement voluntary Take Back and Extended Producer Responsibility Schemes for PET bottles (ME&F 2020). In this framework, KAM is responsible for clean-up of PET bottles that are in the environment and awareness campaigns about recycling and upcycling (ME&F 2020). The ME&F is responsible for coordinating between PET subsectors, and county governments, developing national public education and awareness campaigns, facilitating intergovernmental relations amongst county governments, and forming necessary environmental policy that align with the FoC (ME&F 2020). Additionally, a National PET Management Committee was formed as joint public-private partnership committee to monitor the FoC (ME&F 2020). Progress reports are submitted each quarter to the Cabinet Secretary of Environment and Forestry (ME&F 2020).

[2019/20 Budget: Incentives for Plastic Recycling](#)

The Kenyan government has provided incentives to businesses for plastic recycling. The 2019/20 budget included an exemption from the 16% value-added tax (VAT) for all services offered included in plastic recycling plants and the cost of machinery and equipment to build plastic recycling plants (ME&F 2020). The government also reduced the corporate tax from 30% to 15% for the first five years for any investor operating a plastic recycling plant (ME&F 2020). In 2012, the Environmental Management and Coordination Act banned the use of Excise Duties on plastic shopping bags (ME&F 2020). However, the 2019/20 budget removed that ban, providing a disincentive against plastic shopping bags (ME&F 2020).

POLICY EFFECTIVENESS

Though they have been successful in banning single use plastics, experts suggest stricter implementation and enforcement is needed to prevent illegal plastic importation and waste trade of other plastics (Paruta et al. 2020; ME&F 2020). Though Kenya has many policies and regulations addressing single-use plastics and marine litter,

there are still challenges in the implementation of these bans. For example, some polyethylene bags remained in use under license by the National Environment Management Authority (NEMA) and experts suggest that the lack of an Extended Producer Responsibility (EPR) system targeting all plastics, it is difficult to appropriately manage single use plastic products (Macharia et al. 2021).

According to the cabinet secretary, Kenya has had an 80% success rate in enforcing their 2017 plastic bag ban (ME&F 2020). After the implementation of the ban in 2017, the ministry estimated that 6.2 billion bags were eliminated from the waste stream (Omondi and Asari 2021). In a questionnaire survey on consumer attitudes about the ban, 67% of respondents were in favor of the ban (Omondi and Asari 2021). In this same study, urban consumers were found to be more conscious and aware about cleanliness and plastic bag use and owned more reusable bags than rural residents (Omondi and Asari 2021). This difference could be because of the leading economic system for middle- and low-income residents in rural and residential areas, known as the kadogo economy, is dominated by the sale of small daily items that necessitate the use of SUPs.

While ownership of reusable bags tripled to 12 bags per household on average, consumers were not using reusable bags the necessary amount of time to obtain optimal environmental performance (Omondi and Asari 2021), from a life-cycle perspective. Studies have shown that the more times a product can be used, the lower the environmental impact (Watson et al. 2021). Therefore, it's not enough for consumers to switch to reusable bags, consumers must commit to reusing them and avoid littering (Watson et al. 2021). Policy amendments that provide detailed description of the design of the bag and its durability, create incentives for product reuse, and include more waste management and end-of-life solutions are recommended by experts to improve the effectiveness of this policy (Watson et al. 2021).

The PET task force efforts have led to an increase in plastic recycling: as of 2020, Kenya was recycling 2,000 tons of PET per year (ME&F 2020). In 2019, the task force released a Plastics Action Plan to guide their operations, reiterating the need for mandatory extended producer responsibility scheme to raise required to promote PET waste management (ME&F 2020). As a result, ME&F has developed Extended Producer Responsibility Regulations (published in 2020) that require all producers, converters, importers, and distributors of products to bears responsibility to ensure proper disposal emanating from introduction of their products into market (ME&F 2020).

CONCLUSION

The effectiveness of Kenya's plastic bag policy has been well studied and demonstrates that policy design, implementation, and enforcement can affect compliance with and support for plastics policies, though climate and waste impacts may not be mitigated for when households are disposing of reusable bags prematurely. Effects of emerging policies related to extended producer responsibility and prohibition of single-use plastics in protected areas are not yet well known. Research on the implementation and enforcement of such policies in lower-middle income economies will be important for understanding how many countries can begin and continue to target plastics.

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APPENDIX – METHODS

To start off the search for policy documents, researchers referenced the Nicholas Institute’s Plastics Policy Inventory for any relevant national or subnational policies in Kenya. At the time this case study was initially drafted, there were four national and two subnational policies from Kenya in the Inventory.

In addition to the Kenya plastic pollution policy search, researchers then searched for academic and grey literature relating to plastic pollution and relevant policies in Kenya. This search was mostly done through Google Scholar. Search terms included, but were not limited to, “Kenya plastic,” “Kenya plastic pollution,” “Kenya plastic pollution policies,” “Kenya plastic bag ban,” “Kenya single-use plastic,” and “Kenya plastic use.” Ten total articles were found, and all were screened for inclusion. The inclusion criteria were that the articles described the plastic pollution problem in Kenya, described relevant policies in Kenya, or they described the effectiveness of relevant policies. They were then read through and relevant information that could aid this case study was extracted. When citations referenced additional literature that seemed relevant, those papers were subsequently screened for inclusion as well. This is the primary method in which the background information was collected.

Much of this scholarly literature referenced specific national Kenyan policies. To find the policy documents that were not originally in the Plastics Policy Inventory, the policy names found in the literature were either entered in a Google search or searched for on the Ministry of Environment and Forestry (ME&F) website. This is how the specific language of the policy documents was discovered and analyzed. The policies which demonstrated an intent on behalf of policy makers to address plastic pollution were then entered into the Plastics Policy Inventory.

Once the secondary literature had been exhausted for relevant policies, researchers then moved the search to InforMEA and ECOLEX to see if any more policies could be found that were not referenced in the literature. No new policies were discovered in this round of the search.

Finally, to check if any new policies had been agreed upon or enacted since the publication of the literature referenced above, the same search strings that were used to find the literature were applied in a normal Google search. Here, researchers were looking for recent news articles referencing policies that may have been implemented and not yet included in any literature. Nothing new was discovered, however these news articles did provide a more in-depth understanding of the plastic pollution issue and the effectiveness of existing pollution policies in Kenya from a primary point of view. As a result, tertiary sources were added to the background information section.

To better understand the effectiveness of the policies and to contextualize them in the grand scheme of the Kenya Government, the websites of the ME&F and the National Environment Management Authority (NEMA) were reviewed. As mentioned in the “Policy Effectiveness” section, most of the effectiveness information is about the 2017 Plastic Bag Ban and the PET Task Force, however most sources noted how stricter implementation and enforcement is needed for these policies to have a significant effect on Kenyan plastic pollution. Further, more information is needed on the socioeconomic background of the country, and how the implications of the disparity between urban and rural plastic use is not reflected in current plastic pollution policy.