The Efficacy of the ban on use of plastic bags in Kenya

*By: **John Kariuki Njuguna****

1.0 Introduction

A lot has changed in the in the way business is done in the 21st century. Artificial products have taken over the supermarkets shelves. Almost all home appliances, tools and other consumables have a plastic component in it. From the watches we wear, phones, televisions, fridges and cars, they all have some parts made from plastic material. It would thus be fool hardy to imagine that Kenya, as a nation, can implement a total ban on the use of plastics. So what is this plastic ban that has been publicized a lot in this country? Legal notice number 2356 of 14th March 2017[1] provides;

> *IN EXERCISE of the powers conferred under section 3 and 86 of the Environmental Management and Co-ordination Act, it is notified to the public that the Cabinet Secretary for Environment and Natural Resources has with effect from 6 months from the date of this notice banned the use, manufacture and importation of all plastic bags used for commercial and household packaging defined as follows:*
> *(a) Carrier bag –*
> *bag constructed with handles, and with or without gussets;*
> *(b) Flat bag –*
> *bag constructed without handles, and with or without gussets.*

From the onset, it is important to clarify that it is erroneous to claim that there is a plastic bags ban in the country. What has been outlawed is the use of plastic bags as specified in the gazette notice. This ban is very unique in that while it outlaws the use of the specified plastic bags, the regulator has opened a window for their use through exemptions. By making an application to NEMA, one is allowed the use of the same bags for industrial purpose and for garbage collection. The big factories in Industrial Area, Nairobi, are permitted to wrap bread or sweets with the very bags that the 'sukumawiki'[2] vendor cannot use while serving his/her customers in their groceries business. This is on the face of it discriminatory as the effect on the environment does not discriminate the source of the pollution. The bags that wrap the bread are of the same quality as the ones used to wrap meat at the butchery and thus the effect on the environment is the same. One is left to wonder what guided the Cabinet Secretary in making the distinction.

---

* John Kariuki Njuguna, Advocate of the High Court of Kenya, LLM (Environmental Law-ongoing) Nrb, LLB (Hons) Nrb, CPS(K), Dip. In Law(KSL), Patenting Agent.

[1] NEMA,
https://www.nema.go.ke/images/Docs/Awarness%20Materials/Gazette_legal_Notice_on_carrier_bags.pdf

[2] Swahili word for kales.

Unknown to many people, plastic bags are manufactured using crude oil.[3] During manufacturing, it emits considerable amounts of pollution, and the product is not biodegradable.[4] In other words, it is difficult to produce, and nearly impossible to get rid of plastic bags once produced. It is estimated that 60 to 100 million barrels of oil are required to manufacture a year's worth of plastic bags worldwide, and it takes approximately 400 years at least for a bag to biodegrade.[5] Some of these plastics bags are used for less than 10 minutes before their disposal.

This paper is intended to look at the effects of plastics bags waste on the environment and discuss the various ways that the same can be managed to achieve better results.

1.1 Effects of Plastics on The Environment

There are various ways through which plastics bags are a source of environmental pollution. According to the Northern Territory Environmental Protection Authority (NTEPA), the following are some of the effects of plastic bags on the environment:[6]

a. Danger to animal life

Plastic bags are quite commonly mistaken for food by animals, especially when the bags carry food residues, are brightly coloured or are animated by the movement of water. The risk is spread to all animals including marine ones. The animals can choke to death on bags, experiencing much pain and distress. If swallowed whole, animals may not be able to digest real food and die a slow death from starvation or infection. In Kenya, we have seen the effects when animals are slaughtered and plastics bags are found to occupy large parts of the animal's digestive system.

b. Pacific Trash Vortex

The Pacific Trash Vortex is a 'gyre' or vortex of marine litter in the North Pacific Ocean.[7] The vortex is characterised by exceptionally high concentrations of suspended plastics, such as plastic bags, bottles, containers and other debris, that have been trapped by currents. Its impact on marine ecosystems is catastrophic due to its toxic nature and threat to marine life.[8] It is scary to imagine what humans are doing to marine life as the human race.

c. Litter problem

Plastic bags are a highly visible, ugly component of litter. In Nairobi, plastic bags and bottles have been the most visible litter anywhere in the city. During the rainy season, they often contributed a lot in the blockage of the drainage system. The County Government appears to have been unable to deal with this menace. This is not a problem peculiar to Kenya. The Local and State

---

[3] See Sharma, B.K., Moser, B.R., Vermillion, K.E., Doll, K.M. and Rajagopalan, N., "Production, characterization and fuel properties of alternative diesel fuel from pyrolysis of waste plastic grocery bags," *Fuel Processing Technology*, 122, 2014, pp.79-90.
[4] Ibid.
[5] Maggie New, "Why Are Plastic Bags So Bad for the Environment?" Available online at https://www.livestrong.com/article/156603-advantages-of-paper-bags-vs-plastic-bags/ accessed on 08/03/18
[6] Northern Territory Environmental Protection Authority website at https://ntepa.nt.gov.au/waste-pollution/plastic-bag-ban/environmental-impacts [Accessed on 08/03/18].
[7] Ibid.
[8] Ibid.

Governments around Australia spend more than $200 million per year picking up litter.[9] If plastic bags continue to be used, the number of bags littering the environment will increase over time.

d. Loss of resources

Plastic bags are typically used for a short period of time but take hundreds of years to break down in landfill. While plastic bags can be recycled, only a tiny proportion of plastic bags are collected and reprocessed.

e. Greenhouse gases

According to NEPTA[10], using ten lightweight plastic bags per week over a 2-year period, the resultant greenhouse gas impact has more than three times the greenhouse gas impact of a reusable 'green bag'. A lightweight plastic bag consumes about 4.5 times more energy in its manufacture than reusable 'green bags'. To get the full greenhouse gas benefit from a reusable 'green bag', it must be reused over 100 times. Starch-based biodegradable (or 'compostable') bags consume less than one-third of the energy to produce as plastic alternatives, but emit marginally more carbon dioxide (CO2 - a greenhouse gas) as they decompose. However, unlike single use plastic bags, biodegradable bags will completely breakdown.[11]

2.0 How Are Plastics Disposed off in Kenya?

There are no specific laws or regulations in Kenya that deal specifically with disposal of plastic bags. The regulations provide for disposal of wastes as per the different categories provided therein. The Waste Management Regulations, 2006, for instance, provide the general guidelines on disposal of waste.[12] The Regulations categorise waste according to origin, that is, it has specific provisions dealing with either domestic or industrial waste[13]. They further categorise waste according to whether it is biomedical[14] or radioactive. They Regulations also have a whole Schedule dealing with what is considered hazardous wastes.[15] The definition of 'hazardous waste' is given using scientific terms not easily understood by laymen. It is arguable whether even the NEMA inspectors have sufficient knowledge to interpret the scientific formulas.

This basically means that whether wastes are hazardous or not is not a straight forward issue, but it is subject to a complicated analysis of some scientific formulas. Nevertheless, if the formulas were to be interpreted properly, you will find out that plastic will fit in the category of hazardous wastes by virtue of having elements like carbon, hydrogen, oxygen, nitrogen, chlorine, and sulfur in its composition[16], and also by virtue of being persistent or being carcinogenic[17]. The challenge

[9] Northern Territory Environmental Protection Authority website.
[10] Ibid.
[11] Ibid.
[12] The Environmental Management and Co-Ordination (Waste Management) Regulations 2006, Part II.
[13] The Environmental Management and Co-Ordination (Waste Management) Regulations 2006, Part III.
[14] The Environmental Management and Co-Ordination (Waste Management) Regulations 2006, Part VI.
[15] The Environmental Management And Co-Ordination (Waste Management) Regulations 2006, Fourth Schedule.
[16] American Chemistry Council website available at https://plastics.americanchemistry.com/How-Plastics-Are-Made/ accessed 12/03/18
[17] See generally, Worm, B., Lotze, H.K., Jubinville, I., Wilcox, C. and Jambeck, J., "Plastic as a persistent marine pollutant," *Annual Review of Environment and Resources*, 42, 2017, pp.1-26; see also "Dangerous Health Effects of

then would be that plastic bags are not generally harmful if used to just carrying or wrapping goods but become toxic when not properly used and disposed.
The common way of disposing plastic bags in Kenya is mainly by depositing them into a dumpsite. At the dumpsite, all solid wastes are burned in the open. There are no controls on what to do with the fumes generated at the dumpsite. The regulator does not seem to be concerned by this. This is where plastic is highly poisonous. Other ways where the plastics become a bother is when they are allowed to litter the entire landscape from cities, farms, rivers, forests, game reserves and oceans. In Kenya, the situation has basically been getting out of control.

3.0 How Is It Done Elsewhere?

> *'Newspapers are turned into paper mass, bottles are reused or melted into new items, plastic containers become plastic raw material; food is composted and becomes soil or biogas through a complex chemical process. Rubbish trucks are often run on recycled electricity or biogas. Wasted water is purified to the extent of being potable. Special rubbish trucks go around cities and pick up electronics and hazardous waste such as chemicals. Pharmacists accept leftover medicine. Swedes take their larger waste, such as a used TV or broken furniture, to recycling centers on the outskirts of the cities. Swedes recycle nearly 100 per cent of their household waste. They even have to import waste to have something to burn, to turn waste into energy. A true recycling revolution'.*[18]

The above quote sums up the situation in Sweden. This has made Sweden a role model for other countries to emulate. To imagine that the country has been so successful in waste management to an extent that they are importing wastes to feed to their incinerators is incredible. Such a situation can only be imagined in a dream by the average Nairobi resident. So how has Sweden managed to achieve this?

Swedish waste management is governed by the principle of waste minimization as a top priority in accordance to its Waste Framework Directive. Historically, Sweden has shown strong commitment to environmental protection initiatives and policies, particularly in the area of waste.[19] This has been backed by strict laws. For example, as early as 1969, The Environment Protection Act imposed far-reaching environmental obligations on new waste treatment facilities.[20] These laws have been reviewed regularly to enforce the policies, including the increasing importance of producer responsibility and a concentrated effort on measures to reduce the landfilling of waste. In 1999, the country passed the Environmental Code replacing the previous Environmental Protection Act. The Code integrated 15 previously existing environmental laws and formed an umbrella legislation governing all environmental impacts

---

Home Burning of Plastics and Waste: Fact Sheet", available at http://www.wecf.eu/cms/download/2004-2005/homeburning_plastics.pdf [Accessed 12/05/18].

[18] Jonas Freden, The Swedish Recycling Revolution, available at https://sweden.se/nature/the-swedish-recycling-revolution/

[19] Ibid.

[20] Leonidas Milios, 'Municipal waste management in Sweden' European Environmental Agency report of February 2013.

within the framework of a sound sustainable development for Sweden. In 2005, Sweden's Waste Plan 'A Strategy for Sustainable Waste Management' laid down the future direction of waste management and set distinctive targets to be met by 2010, based on the Swedish Environmental Objectives, which were enacted by the Swedish government in the same year.[21]
The laws alone would not have enabled Sweden to achieve its recycling goals. What has supplemented the good laws is a spirited public awareness campaign that has enabled the government to obtain the cooperation of the citizens in handling of wastes. The Swedish Environmental Protection Agency (EPA) is the umbrella body in charge of environmental protection. It is equivalent to National Environment Management Authority (NEMA) in Kenya. Its mandate include developing standards or regulations pursuant to environmental statutes; enforces those standards, regulations, and statutes; monitors pollutants in the environment; conducts research; and promotes public environmental education.[22]
EPA, together with government agencies and corporations, has developed an action plan for waste prevention, including how to encourage producers to make products that last longer. Many companies have joined in greener production. Companies are accepting back wastes especially plastic bags. Others are manufacturing carrier bags from sugarcane that are biodegradable. Most Swedes separate all recyclable waste in their homes and deposit it in special containers in their block of flats or drop it off at a recycling station.[23] This clearly shows that environmental protection can only be achieved through the participation of all stakeholders and is not something that can be left to the regulator alone.

One thing to note is that while the swedes have managed to recycle most of the waste, the remaining ones are not dumped at a dumpsite. The hazardous and dangerous wastes are deposited in landfills, which attract a very high tax. The rest of the waste are used to generate energy through incineration. To encourage production of electricity from municipal wastes, the energy producer is tax exempt. However, the key focus is in the reduction of waste generation rather than disposal thereof.

In 2011, the Government of Sweden presented a new environmental technology strategy to establish favourable conditions for the growth and development of environmental technology companies. It had three main objectives:[24]

i. Promote the export of Swedish environmental technology and thus contribute to sustainable economic growth in Sweden and globally;
ii. Promote research and innovation in environmental technology and create the conditions required for green technology companies to flourish in Sweden; and
iii. Make it easier to commercialise innovations.

[21] Ibid.
[22] Environmental Protection Agency website available at http://www.swedishepa.se/ accessed on 14.03.18
[23] Supra note 15
[24] Supra note 15

The strategy was backed by SEK 400 million in total funding, with SEK 100 million allocated each year from 2011 to 2014. Sweden's environmental technology sector employs roughly 40,000 people and has revenues of about SEK 120 billion, according to Statistics Sweden and the then Swedish Environmental Technology Council.[25] This is a very big budget compared to what our NEMA receives.

It is clear from the above that the whole process of protecting the environment in Sweden is done in an integrated manner. The government is solidly behind the efforts by providing the policy and legal framework and backing it with adequate funding. The private sectors have also adopted the policies and are implementing them in their production processes and further, in the disposal process. They have also invested heavily in innovations that promote greener production. The citizens have played their part by embracing cleaner consumption methods and actively participating in sorting out garbage and delivering plastics to the designated sites so that the companies can take them back.

4.0 What Does The Ban Aim To Achieve?

When the Gazette Notice no 2356 was published NEMA issued a statement which read in part as follows:

> *"As the implementation of the Gazette Notice No. 2356 takes shape, many Kenyans have applauded the environmental watch dog (NEMA) for taking the bold step to save the country from the plastic bags menace which has resulted in major consequences to our environment and other sectors of our economy including livestock, fisheries, tourism and the built environment. This is compounded by the fact that plastic bags take over 100 years to degrade. It is known that 100 million plastic bags are handed out in Kenya by supermarkets alone. These bags end up clogging the drainage systems leading to flooding in major cities in Kenya. Recent studies have found that more than 50% of cattle in peri-urban had plastic bags in their rumens."*[26]

It is clear that the target was to reduce the amount of plastic bags in circulation but not to ban them totally from our environment. This is because as earlier stated, the same plastic bags are still allowed in industrial packaging. There was no attempt to address the issue of disposal. How are the plastic bags used in industrial packaging supposed to be disposed?

It appears that the NEMA has a very narrow view of the problem. Their only concern is the clogging of drainage and animals eating the plastics. The authority is not addressing the issue of plastics being a poisonous substance when not disposed properly. The plastics bags will end up in dumpsites where they will be burnt and poisonous gases will end up into the atmosphere.

[25] Ibid.
[26] NEMA website https://www.nema.go.ke accessed on 19/03/18

Recently, the ministry in charge of the environment and NEMA were seen to be pulling in different directions on the subject of the ban of plastic bottles.[27] While NEMA supports a ban on plastic bottles, the ministry is against it and would prefer to encourage recycling and re-use.[28] This signifies the absence of constitutional coherence in the management of public affairs in the country.

5.0 Way Forward

The Constitution provides that Kenyans are entitled to a clean and healthy environment.[29] The right includes having the environment preserved for the present and future generations. This right is further discussed in Articles 69 and 70. Under Article 69 the state is obligate to among other things:

a) Encourage public participation in the management, protection and conservation of the environment,
b) Establish systems of environmental impact assessment (EIA), environmental audit and monitoring of the environment,
c) Eliminate processes and activities that are likely to endanger the environment.

The citizens are obligated to cooperate with state organs and other persons to protect and conserve the environment.[30]

The ball is squarely in the hands of the government to encourage the citizens to participate in environmental protection and conservation. This can be done by use of various tools including;

a) **Taxation regimes**: By taxing use of products that are not environmental friendly, the government will reduce their use or eliminate them altogether. On the flip side companies dealing with greener alternatives can be given tax incentives to promote the use of their products.

b) **Take backs**: Companies that manufacture or use plastic bags to wrap their products should be forced via legislation to have a working system of taking them back after the use by consumers. Once they take back they should have a system of re-using them or recycling.

c) **Use of landfills**: When plastics cannot be re-used or recycled for whatever reason they should not be put in an open dumpsite. There should be proper landfills constructed to international standards. There should be a heavy penalty levied on use of the landfills to discourage disposal and encourage re-use or recycling.

d) **Public education and awareness:** All organs of the government and their agencies led by NEMA should carry out a sustained public education and awareness campaign targeting all stakeholders from manufacturers, consumers and young people so as to encourage greener production and consumption methods.

---

[27] East African Standard E-paper available at https://www.standardmedia.co.ke/article/2001268040/environment-ps-differs-with-nema-on-plastic-bottles-ban accessed on 19/03/18
[28] Ibid.
[29] Article 42, Constitution of Kenya.
[30] Article 69(2) of the Constitution of Kenya.

e) **Enforcement:** There are very good laws in our statutes starting with the Constitution and Environmental Management and Coordination Act (EMCA) among others. They provide strict procedures to be followed whenever any project is to be implemented in the country. This includes carrying out an EIA. However, these procedures are not adhered to strictly and where EIA is done, the purpose is not to find out the real impact the project will have on the environment but to overcome a legal technicality. The government should be stricter in enforcing the laws and regulations.

f) **Monitoring:** The government should invest more on monitoring the impact that all human activities have on the environment so that any negative impact is addressed at the earliest opportunity. Plastic bags menace has been with us for a while now. The government has been slow to act and the longer the problem persist the greater the negative effect on the environment.

f) **Encouraging industrial symbiosis**: The bigger problem with the country is poor planning or lack of planning. Development seems to be moving faster than the regulator. The regulator is always playing catch up. With proper planning the regulator can place together industries that can utilize each other's wastes. This will reduce or totally eliminate wastes from these industries. Kenya has in place the National Spatial Plan.[31] Part of its vision is to "Integrate Waste Management and Pollution Control in all policies'.[32] This is a brilliant document that needs to be followed up with proper legislations incorporating both the National and County Governments.

6.0 The Role of the Citizens

The Constitution obligates the citizens to cooperate with the state in conserving and protecting the environment.[33] This obligation assumes that the state would have taken measures and put in place proper policies that the citizens can support. This is not always the case. The state can sleep on the job or be compromised by business interest. The citizens should thus use the right provided under article 70, which provides that:[34]

> *1) If a person alleges that a right to a clean and healthy environment recognised and protected under Article 42 has been, is being or is likely to be, denied, violated, infringed or threatened, the person may apply to a court for redress in addition to any other legal remedies that are available in respect to the same matter.*
> *(2) On application under clause (1), the court may make any order, or give any directions, it considers appropriate –*
> *(a) to prevent, stop or discontinue any act or omission that is harmful to the environment;*
> *(b) to compel any public officer to take measures to prevent or discontinue any act or omission that is harmful to the environment; or*
> *(c) to provide compensation for any victim of a violation of the right to a clean and healthy environment.*

[31] Government of Kenya National Spatial Plan 2015-2045.
[32] Ibid at pg. 33
[33] Article 70 of the constitution of Kenya.
[34] Ibid.

> *(3) For the purposes of this Article, an applicant does not have to demonstrate that any person has incurred loss or suffered injury.*

The courts have been steadfast in enforcing environmental rights in the recent past. The case of **Sam Odera vs Republic**[35] and that of **Peter K. Waweru vs Republic**[36] are good examples of the kind of jurisprudence being employed by our courts. The courts seem to have adopted the use of the Principles of International Environmental Law as backed by a similar requirement under the Environment (Management and Coordination) Act, 1999[37] for courts to be guided by the principles of sustainable development when deciding on environmental matters[38]. The courts have not been shy in ordering the government to implement measures aimed at ensuring citizens enjoy the right to a clean and healthy environment. What is remaining is for the citizens to be more proactive and move the courts more frequently until the government is forced to implement proper sustainable development policies.

Ultimately, the citizens should be conscious of those actions that damage the environment and take initiative to eliminate them at the personal level. Be it cleaner consumption, proper waste disposal or advocacy. The duty to preserve and protect the environment should be a shared responsibility by all human beings.

Kenya can emulate Sweden in ensuring that environmental ethics become part of daily life of every citizen as one of the most viable means of addressing plastics disposal in the country. The fact that there are still some forms of plastics that are still in use means that the country still has to address the issue of disposal of such plastics. As evidenced by the case of Sweden, it is important to ensure that citizens are actively involved in enforcement and compliance with environmental laws aimed at securing clean and healthy environment for all. There should be a call beyond the statutory measures to tap into the concerted efforts of all stakeholders, including the general public, in addressing the plastics bags menace. This is the only way that Kenya, just like Sweden, can record tangible success in eliminating the adverse environmental effects of use of plastic bags in the country.

7.0 Conclusion

Plastics have become part of human daily lives and cannot be wished away. While efforts to minimize their production are commendable, ultimately, the other major goal should be to find ways of dealing with the ones that have already been produced. Whether it is imposing heavy taxes on their manufacture and/or use, investing on technology to produce viable alternatives or forcing manufacturers to re-use and recycle, something needs to be done urgently to control their production, use and disposal.

---

[35] Sam Odera v NEMA and Another, [2006] eKLR Misc. Application No 400 of 2006.
[36] Peter K. Waweru v Republic, [2006] eKLR, Misc. Application No. 118 of 2004.
[37] Act No. 8 of 1999 (2015), Laws of Kenya.
[38] Ibid, sec. 3(5); See also Article 10, Constitution of Kenya 2010.

This can only be achieved if all stakeholders are involved in the formulation of policy and regulations. A lot of public education and awareness need to be carried out and which should be backed by heavy investment in proper technology and strict laws to deal with errant entities. At the end, there is need for concerted efforts from all to ensure that the right to clean and healthy environment is realized as soon as possible.

Bibliography

Books and Articles

1. Barry Sadler, Environmental Assessment in a Changing World: Final Report of the International Study of the Effectiveness of Environmental Assessment (Ottawa: Canadian Environmental Assessment Agency, 1996).
2. Dara O'Rourke, Lloyd Connelly, Catherine Koshland, Industrial Ecology: A Critical Review, International Journal of Environment and Pollution, Vol. 6, Nos. 2/3, pp. 89-112, 1996.

3. International Law Commission, ''Draft Articles on Prevention of Transboundary Harm from Hazardous Activities" in Report of the International Law Commission, Fifty-Third Session, UN GAOR, 56th Sess., Supp. No. 10, UN Doc. A/56/10 (2001) 370, Art. 10.
4. Kariuki Muigua et al. Natural Resources and Environmental Justice in Kenya (2015) Nairobi: Glenwood Publishers Limited.
5. Opaa B, Gamaliel O, "Wastewater Production, Treatment, and Use in Kenya" article presented at the Third Regional Workshop 'Safe Use of Wastewater in Agriculture', 26-28 September 2012, Johannesburg, South Africa.
6. Njoroge B.N.K., et al, (2014) Review of Municipal Solid Waste Management: A case
7. Study of Nairobi, Kenya. Research Inventory: International Journal of Engineering and Science, 4(2), 16-20.
8. Putnam R.D., 2000 Bowling Alone: The Collapse and Revival of American Community. Simon & Schuster, New York Times.
9. Seyfang G., 2004 Consuming Values and Contested Cultures: a critical analysis of the
10. UK strategy for Sustainable Consumption and Production. Rev. Soc.Econ.62.323-338
11. Slade, G. 2006. Cell Phones and E-Waste. Cell Phones and E-Waste. Teoksessa Made to Break. Massachusetts: Harvard University Press, 264.
12. Slater D., 2010. The moral seriousness of consumption.J. Consum.Cult.10, 280-284.
13. Stevens, B. 1960. Planned Obsolescence. The Rotarian (February), 12.

14. Cases

15. Sam Odera v NEMA and Another, [2006] eKLR Misc. Application No 400 of 2006
16. Peter K. Waweru v Republic, [2006] eKLR, Misc. Application No. 118 of 2004

17. Statutes and Policy documents

18. The Constitution of Kenya
19. The Environmental Management and Co-ordination Act, 2006.
20. The Kenyan Vision 2030
21. The National Spatial Plan 2015–2045
22. The Planning Act, 2010
23. The Physical Planning Bill, 2015
24. The Standards Act