

## **Plastic Bags Prohibition Bill: a developing story of crass legalism aiming to reduce plastic marine pollution in Nigeria**

### **Abstract**

Mismanaged plastic land-based waste entering the marine environment is a growing problem globally. Plastic bag reduction policies have been widely adopted in Africa but are mainly punitive outright legislative bans. Limited evidence exists that document effectiveness of these legislative bans on curbing plastic marine pollution in Africa. In May 2019, the Nigerian government passed the Plastic Bags Prohibition Bill (Bill) which proposed to prohibit the use, manufacture and importation of all plastic bags used for commercial and household packaging. The Bill proposed by the Nigerian government mirrors punitive legislation prevalent elsewhere across Africa. Legislative tools used internationally were compared to the proposed Nigerian Bill and limitations identified. We highlight how the Bill can be redrafted to reflect national policy to improve ocean management. Redrafting the Bill should include proactive measures, such as market-based instruments, proper planning, coordination, implementation and enforcement before final enactment into law.

**Keywords:** Marine plastic pollution; Plastic bags; Plastic bag bans; Plastic Bags Prohibition Bill; Market-based instruments; Nigeria.

## Highlights

- Mismanaged plastic land-based waste entering marine environments is a growing problem globally and across Africa.
- Punitive legislation (outright plastic bag bans) to curb plastic marine pollution has been widely adopted in Africa.
- Nigeria's proposed Plastic Bags Prohibition Bill mirrors punitive legislation prevalent in Africa.
- Evidence of effectiveness to curb plastic marine pollution using legislative bans is limited.
- Market-based instruments, proper planning, coordination, implementation and enforcement are recommended.

## **1. Introduction**

Africa has some of the highest population growth rates in the world, particularly in coastal areas [1]. Waste mismanagement, estimated at 4.4 million metric tonnes in 2010, is associated with a lack of infrastructure across the African continent [2]. Like many countries around the world, plastic waste in Africa, particularly in coastal countries, has been increasingly addressed by governments using legislative bans [3, 4]. Most West African countries have embraced legislative plastic reduction policies, particularly lightweight plastic bags [5, 6]. Currently, Nigeria does not have a plastic bags reduction strategy implemented yet, even though it has the highest population (195.9 million) and largest economy in Africa [7]. However, there is an ongoing effort to enact plastic bags prohibition law in Nigeria, the process is still at the level of a Bill and has been passed by the Nigeria Federal House of Representatives (Lower House) [8]. This paper examines this Bill in the light of the widely acknowledged impact of plastics on the Nigerian and global environment by briefly comparing legislation and policies already adopted and implemented in Africa (e.g., Rwanda, Gambia, Morocco, Ghana, South Africa and Kenya), and in the United Kingdom (UK).

Many plastic reduction policies implemented in West Africa to curb marine pollution either outrightly ban the manufacture, sale and use of plastic bags used for commercial and household packaging or discourage plastic use through economic incentives and disincentives (behavioural change) [5, 6]. Socio-culturally, lives of West Africans are intertwined with plastic products [5]. The West African economy is informal with primary and service sectors dominated by small, individually owned businesses [9]. Marine plastic pollution is increasing with widespread use of

plastic drinking water sachets due to lack of available potable water, which compounds the problem of marine plastic pollution across the region [5, 8]. Approximately, 70% of Nigerians consume at least one plastic drinking water sachet per day, equivalent to 60 million plastic sachets used and disposed of daily [10]. Discarded plastic sachets often pollute water bodies, choking storm water drains and pose significant risk to aquatic and marine ecosystems and exacerbate negative impacts of plastic marine pollution in the region [11].

In May 2019, the Nigerian government passed the Plastic Bags Prohibition Bill (Bill), joining other governments that have already implemented bans, to impose some measure of prohibition against the manufacture, sale and use of plastics [5]. The Nigerian effort is embodied in the Plastic Bags (Prohibition) Bill 2018. The Bill prohibits the use, manufacture, import and sale of plastic bags and it is still undergoing the process of becoming an Act (Law) through the Nigeria National Assembly (The Federal Republic of Nigeria Legislative hierarchies). The Bill comprises just two short sections, the first part dealing with prohibitions and the second part with penalties. The entire Bill reads as follows [8, 12, 13, 14]:

***Prohibition of Plastic bag (Section 1)***

*1 (1) the use, manufacturing, importation or sale of plastic bag [sic] is prohibited.*

*(2) A retailer shall offer a plastic bag to the customer at the point of sale.*

*(3) Any –*

*a. retailer [sic] who provides customer [sic] with the plastic bag at a point of sale is guilty of an offence [sic].*

*b. person [sic] who manufacture [sic] plastic bag for the purpose of selling [sic] is guilty of an offence.*

*c. person [sic] who import [sic] plastic bag whether as a carryout bag or for sale is guilty of an offence.*

***Penalties (Section 2)***

*2(1) Any person found guilty of the offences under clause 1 shall be liable on conviction to a fine not exceeding Five Hundred Thousand Naira (₦500,000) (\$1,400 USD or to*

*(2) Imprisonment for a term not exceeding Three years or to both such fine and imprisonment.*

*Any company or organization found guilty of the offence in clause 1 shall on conviction be liable to a fine not exceeding Five Million Naira ₦5,000,000 (\$14,000 USD).*

However, the proposed Bill is an outright ban and mirrors those adopted elsewhere in Africa and like other jurisdictions may have limited effectiveness at reducing plastic pollution from plastic bag use and mismanagement [5]. This paper discusses the limitation of the proposed Bill and offers recommendations to revise the Bill based on comparisons to legislation and policies already adopted and implemented elsewhere in Africa (e.g., Rwanda, Gambia, Morocco, Ghana, South Africa and Kenya), and the UK.

The omission of plastic bag alternatives and market-based instruments (MBIs) like a plastic bag tax is a fundamental flaw in the proposed Bill. MBIs include taxes, charges, fees, fines, penalties, liability and compensation schemes, subsidies and incentives and tradable permit schemes to change consumer behavior of plastic use [5]. Implementing taxes on some exempted film plastics (e.g., exempted single-use plastic bags are allowed for garbage bin liners, medical waste, construction and food packaging) can be effective to generate revenue for government funded

environmental programs. For example, taxes can be redirected into plastic bag reduction strategies, improved education and to improve waste management programs [4]. And this plastic bag tax will also be effective when combined with a total ban on non-exempted plastic bags. Nevertheless, utilizing funds for environmental programs realized from plastic taxes is not without challenges. For example, in Ghana, the Environmental Excise Tax of 10% on plastic waste which has accumulated to over \$163 million USD has not been used for its intended purpose, which is to support recycling of plastic waste in Ghana [15]. Nigeria should make adequate provisions in the Bill for transparency and for proper accounting of revenues realized from imposed taxes on exempted plastics.

Breaking out of the cycle of plastic pollution requires provision of viable alternatives. Alternatives are required to meet specific needs for which different kinds of plastic products are made. This can offer more promising results than blind bans that do not contemplate issues like replaceability and affordability. For instance, after the total ban on plastic bags in Morocco in 2016, the government is still responding to challenges of the plastic bag ban by ensuring that plastic bag alternatives are easily accessible. In other words, the government preparation to provide alternative to plastic bags has helped to cushion the effect of the total ban [16]. Alternatives to single-use plastics include reusable bags, glass and metal straws, and other use of alternative materials to plastics in product manufacturing. In addition to alternative materials, voluntary reduction strategies are used. These entail getting commitments from citizens to reduce use of single-use plastics [4]. Such commitments may come from manufacturers, suppliers, retailers and consumers.

However, the proposed Bill is lacking in many important details, such as providing citizens adequate notice, public consultations, jurisprudence and practicability, such as those used elsewhere where sufficient public consultation was given (e.g., The Bahamas [17]). The Nigeria Plastic Bag Prohibition Bill 2018 is an exercise in legalism to the call for enactment of plastic pollution reduction law in Nigeria. The law may likely resemble the Zimbabwean failed 2010 Plastic Bag ban, which was held to be unpopular and unsuccessful, enacted without warning, and was a sign of the government offloading its waste management responsibilities onto consumers [18].

## **2. Fact-checking plastic pollution in Nigeria**

Plastic pollution has increased dramatically due to growth in plastic production and use globally. Roughly, 80% of global marine debris comprises of plastics [19]. Plastics in the marine environment are a growing global concern because of their persistence and negative impacts on oceans, aquatic biota and humans [20]. Plastic pollution occurs on land (including stranded along coastlines), sea surface and on the subsea floor [21]. At the global level, best estimates suggest that approximately 80% of ocean plastics come from land-based sources, and the remaining 20% from marine source [19, 22]. It has been held that an estimated, 4.8 to 12.7 million metric tonnes of land-based plastic waste leaks into oceans annually [19]. Most plastic pollution emanates from 20 coastal countries, including Nigeria. Nigeria ranks ninth in the world for plastic pollution and plastic waste mismanagement [19]. It is also estimated that Nigeria generates more than 32 million metric tonnes of waste annually, most of which constitutes plastics, with Lagos State alone producing about 10,000 metric tonnes of waste daily [23]. Of the

32 million tons of solid waste generated annually, about >30% consists of plastic waste and this has been collectively generated by all Nigerians at about 7.5 kg per capita [24].

The plastics and packaging sector in Nigeria began in the 1960s with about 50 plastic manufacturing companies and has grown to over 3,000 companies in 2013 with a production capacity of over 100,000 tons per year [25]. This has impacted negatively on the Nigerian marine habitat. It has been reported that every year, countless marine animals are killed by plastics and 83% of tap water is found to contain microplastics [26]. Plastic pollution is of particular concern in coastal areas of Nigeria and the Nigeria littoral States of Lagos, Akwa-Ibom, Bayelsa, Cross River, Delta, Edo, Ogun, Ondo and Rivers. These States have many river tributaries which transport mismanaged plastics into the Atlantic Ocean. Plastic fragments persist in the aquatic environment for decades or centuries, due to their high resistance to natural degradation processes [18, 27].

Plastic waste enters the ocean from land-based sources such as storm water discharges, combined sewer overflows, littering, industrial activities, and solid waste disposal and landfills [28]. Nigeria contributes about 2.7% of mismanaged plastic waste out of the total 9% from Sub-Saharan Africa [2, 19]. Furthermore, the inability of Federal and State governments in Nigeria to provide basic amenities to meet the growth in population forms part of the causes of plastic pollution in the country. During the rainy season, a heavy rainfall will lead to transport of plastic waste materials from overcrowded city centres, slums and carried through drainage canals which had received huge tons of refuse disposed in them from tributaries within Nigeria until it finally enters the ocean [29].



According to the World Health Organisation in 2016, four Nigerian cities (Onitsha, Kaduna, Aba and Umuahia) were ranked amongst the 20 most polluted cities in the world [30]. Ten rivers are responsible for depositing 90% of the plastic that ends up in the sea. Eight of them are in Asia and two in Africa: the river Nile and the river Niger [31]. Three Rivers from Nigeria including the Imo, Cross and Kwa Ibo River (also known as the Qua Ibo River) are among the top 20 polluted rivers accounting for 67% of global plastic inflow into the ocean. The Cross River with 40,300 (range 33,800–65,100) tonnes/year, the Imo River with 21,500 (range: 17,500–35,100) tonnes/year and the Kwa Ibo River with 11,900 (range: 9,300–20,800) tonnes/year [32].

Fig 1. Map of Nigeria showing major cities rivers and tributaries [33].



### **3. Proposed plastic bags prohibition Bill in Nigeria**

On May 21, 2019, the Nigeria Federal House of Representatives passed a bill that can send offenders to jail if they are caught importing, manufacturing or using plastic bags. The Bill states that the prohibition of plastic bags relates to use, manufacture, importation and sale of plastic bags meant for commercial and domestic use [34]. This is done to protect oceans, rivers, lakes, forests, environment, wildlife as well as human beings and also to relieve pressure on landfills and waste management.

First, the Bill is little more than a statement of the prohibition and related penalties that apply to the use and manufacture of plastic bags. It does not provide any robust background and conservational philosophy in relation to which the provisions can be understood and critiqued. This means that the Bill is not situated within any particular policy framework, unlike in the UK where the proposed ban of plastic straws, plastic-stemmed cotton buds and stirrers is situated within the framework of a properly articulated 25-year environmental plan with indicators for measuring effectiveness [35]. Not being linked to a goal-oriented policy framework may explain why the Bill does not articulate any problematic pattern in which plastics are used which would have been a guide in enacting more targeted provisions as well as monitoring the impact of the legislation [36]. The Nigerian Bill could provide opportunities to fill legislative and policy gaps related to plastic pollution. Failure to identify problematic patterns of plastic usage also leads to a failure to bring within legislative thought and enterprise, non-prohibitive means of preventing terrestrial and marine pollution such as recycling and taxation. The Nigerian Plastic bags prohibition Bill can be strengthened by incorporating components like interpretation section,

glossary section, enforcement procedure, waste management techniques section, permissible alternatives section, market base instrument section (e.g., taxation) and monitoring, assessment and continuous public waste management education section. All these will help to identify and define targeted problem plastics, exempted materials and fine-tune the general jurisprudence and policy efficacy of the Bill.

Nigeria and Nigerian indigenous firms are not part of the Global Commitment to eliminate plastic waste and pollution at source, which has been signed by 250+ organizations, representing 20% of all plastic packaging produced globally [37]. Organizations include L’Oreal; MARS; Nestlé; PepsiCo; The Coca-Cola Company; and Unilever; the world’s largest retailer - Wal-Mart; major packaging producers such as Amcor and Berry Global; and two of the largest resource management specialists - Veolia and Suez. Recycling used items into new products is one of the three targets set by the commitment. Corporations joining the commitment must also phase out single-use plastic packaging and ensure it can be reused, recycled, or composted by 2025. Governments that join the commitment are pledging to create policies that help support a circular economy [37]. Nigeria can join and make similar commitments to intensify the fight against plastic bags and other single use plastic pollution.

The Nigerian plastic bags prohibition can be effective if government, undertakings and citizens resort to less environmentally harmful alternatives. Some alternatives bags that are readily available in Nigeria include jute, paper, biodegradable and reusable bags. However, some of these alternatives can also have negative environmental impacts (i.e., unintended consequences such as larger environmental footprint, higher GHG emissions during production or

transportation), and should be assessed for environmental and social impacts across their life cycle before they can be recommended [38]. Table 1 list examples of alternatives to plastic bags which need to be assessed across their entire life cycle to determine their suitability in Nigeria. Whilst all alternatives are potentially recyclable in Nigeria [39], they all have different environmental footprints when energy, water used during manufacturing or end-of-life disposal are considered [40]. Some options are more sustainable than others. For instance, paper bags are reusable and recyclable, but are made from wood fibre pulp or recycled fibres and require more fossil fuels to produce and manufacture than plastic bags [4, 40]. Jute bags, which have been traditionally available in Nigeria, are made from sustainable vegetable fibres and it is known for its durability. However, jute bags may present a higher risk of bacterial contamination due to difficulties associated with cleaning, and when mixed with chemicals to enhance durability, it could increase environmental contamination risk when composted [40].

**Table 1.** Possible alternatives to plastic bags used in Nigeria [41].

<b>Alternatives</b>	<b>Source</b>	<b>Durability</b>	<b>Length of Biodegradation</b>	<b>Recyclability</b>
Paper bags	Tree plants	N/D	2 months	Recyclable
Jute bags	Jute plant	N/D	N/D	
Ecosilk	Parachute Silk	4-5 years	N/D	Recyclable
Bio-Bag	Starch-based polymer and polyesters from vegetable oil, organic waste	N/D	45 days without enhancing chemicals	Recyclable
Thermoplastic starch	Corn starch	N/D	N/D	Recyclable
Aliphatic polyester	Starch	N/D	8 weeks	Recyclable
Organic bags (tote bags)	Cotton, Hemp	N/D	5-6 months	Recyclable
Woolen bags	Wool	N/D	6-14 months	Recyclable

*Note:* N/D – No data available.

#### **4. Comparative plastic bags Policies: a model for Nigeria?**

A comparative analysis of plastic bag policies used in other jurisdictions that have implemented plastic bag prohibition was used to determine strengths and weaknesses. Table 2 shows types of interventions adopted by selected countries and effectiveness of interventions by comparatively analyzing gains and challenges facing plastic bags prohibition in different jurisdictions. The UK was selected because Nigeria is a former commonwealth colony of the UK and has successfully applied laws and policies from the UK into its domestic governance, even though the social, cultural, political and economic structures of the countries are not the same. Nigeria also has a history of copying and pasting laws and policies from other Countries. The United Kingdom Sale of Goods Act of 1893 is still an applicable law in Nigeria, despite the fact that the UK has revised and amended this law in 1979 [42]. Recently, the Nigeria Infectious Disease Bill which like the Nigeria Plastic Bags Prohibition Bill has been approved by the Nigeria House of Representative

has been proven to be copied verbatim from the Singapore Infectious Disease Act of 1977 [43]. Most Nigerian legislation is not developed domestically, which has affected the outcome and impact of laws and policies adopted from elsewhere as they fail to reflect Nigerian social, cultural and economic realities.

Morocco was chosen because their total ban on plastic bags policy was popular and has been found to be effective. Morocco also provides examples where alternatives are widely used and well implemented. Kenya was selected to highlight harsh prohibitive legislation and the challenges of implementation and enforcement. Ghana, like Nigeria, is bedevilled by the same political, economic and social considerations that are hindering prohibition of plastic bags in Nigeria. South Africa was selected to highlight challenges of partial plastic bag prohibition which may not be enough to deter plastic bags use and pollution. Gambia and Rwanda were selected to show the relationship between plastic bags ban and conservation of the environment to create conducive setting for tourism and sustainable development.

**Table 2.** Plastic bags prohibition policies/legislation used in selected countries.

Country	Action	Type of intervention	Penalties	Impact of intervention
Nigeria	Ban	The Plastic Bags Prohibition Bill has been passed by the Federal House of Representatives but has not been considered by the Nigeria Senate or passed into Act (Law). However, The Taraba State Government in 2019 has placed a ban on plastic bags usage, making it the first State in Nigeria to do so. Though this move is yet to receive legal backing from the State House of Assembly [44].	Any person found guilty of the offences under clause 1 shall be liable on conviction to a fine not exceeding Five Hundred Thousand Naira (₦500,000) (\$1,290 USD) or to Imprisonment for a term not exceeding Three years or to both such fine and imprisonment. Any company or organization found guilty of the offence in clause 1 shall on conviction be liable to a fine not exceeding Five Million Naira ₦5,000,000 (\$12,906. USD).	The Bill is moribund, it has not generated any interest or awareness since the bill has not been made popular among the masses or businesses.
Ghana	Tentative ban	Attempted a non-legislative ban on plastics below 20 µm on 30 th July 2015. This was as a result of the flooding and death of 150 people in Accra. However, this directive has not been implemented. Since 2017, there is a national consultation process on a possible ban on plastic bags. The 10% tax (Environmental Excise Tax Act 863) on the ex-factory price on imported semi-finished and raw plastic materials to be paid by the importers and manufacturers has been implemented [5].	There is currently no law banning plastic bags manufacture, usage or trading in Ghana.	Ghana has no law prohibiting the use, production or importation of plastic bag. Kwabena Frimpong-Boateng, Minister of Environment, Science, Technology, and Innovation, said that in spite of the plastic waste menace the country is battling with, banning its use would have regrettable implications on manufacturers who play pivotal roles in the economy. He said instead of banning plastics, government is relentlessly working on managing them. He said wholesale ban will not be in the interest of Ghana, because plastics are used everywhere. In the hospitals, in homes, in industries and agriculture. However, he suggested banning things that may not be needed, for instance, plastic bags, chewing gum, plastic cutlery, straw, and so on [45].
Gambia	Ban	On July 1, 2015, the Gambian ban on single use plastic bags came into force. This is known as Ban on Plastic Bags Order, 2015, made pursuant to powers conferred on the Chairman of the National Environment Management Council of the National Environment Agency by Section 63(1) of the National Environment Management Act. The law provides that A person who manufactures or imports; uses; or sells, plastic bags in The Gambia, commits an offence [46].	A person who contravenes this Order commits an offence and is liable on conviction, in the case of (a) a manufacturer or an importer, to a term of imprisonment of not less than six months but not more than twelve months or a fine not less than two hundred thousand dalasis (\$3,887 USD) but not more than five hundred thousand dalasis (\$9,719.28 USD) or both the fine and imprisonment; (b) An individual who sells plastic bags, to a fine not less than two thousand dalasis (\$3,887 USD) but not more than five thousand dalasis (\$9,719.28 USD); and (c) an individual who uses plastic bags, to a fine not less than one thousand	Although this law is poorly enforced [5] but it essential in trying to restore Gambian tourism ratings. It can be stated that <b>SUCCESS</b> was seen in the first phase after implementation, but there has been reappearance after a political impasse [47].



			dalasis (\$19.4376 USD) but not more than three thousand dalasis (\$58 USD). All persons convicted under this Order shall be dispossessed of any available stock either in the form of raw materials or finished bags and 5 those bags shall be taken to the appropriate store established, identified or recommended by the Agency. In case of repeated offenders, they shall be liable, on conviction to double the penalty provided in the first instance conviction [46].	
Kenya	Ban	In 2017, Kenya implemented a national ban of plastic bags; This ban prohibited the importation, production, distribution and use of single-use bags. Kenya's ban is seen as one of the toughest in the world, and the government has justified this law as necessary to preserve, conserve and protect the environment. The ban became inevitable since plastic bags constitute the biggest challenge to solid waste management in Kenya. This has become Kenyan environmental nightmare [48]	The law provides harsh and significant penalties for defaulters, which include either a four-year jail sentence or a 40,000 KES (\$376 USD) fine for the sale or use of plastic bags [16].	This law has been positively received and enforced in Kenya, but it has been undermined by the activities of smugglers. Plastic bags are still abounding despite the potential exemplary penalties. However, in a country that once used about 100 million plastic bags a year, according to UN estimates, the reduction efforts are generally effective. Geoffrey Wahungu, director general of Kenya's National Environment Management Authority, conceded in an interview that the government failed, at first, to consider what alternative products could be used to replace plastics that were banned [49].
Rwanda	Ban	Rwanda instituted a national ban on non-biodegradable plastic bags in 2008. The ban prohibited the manufacture, use, importation and sale of plastic carrier bags. Travelers into Rwanda face restrictions and are not allowed to bring plastic carrier bags into the country [50].	Offenders or traffickers caught carrying illegal plastic can be fined, jailed or forced to make public confessions. Smugglers can receive up to six months in jail. Company executives that keep or make illegal plastic bags can be imprisoned for up to a year. Stores have been shut down, license suspended and fined for breaching plastic bag law. [51]. The law provides inter alia that a person who manufactures plastic carry bags and single-use plastic items is liable to closure of the activity, dispossession of those plastic carry bags and such items and to an administrative fine of ten million Rwandan francs (\$10 USD)	In the first phase the ban resulted in a black market for plastic bags. Over time, plastic bags were replaced by paper bags [53]. However, plastic bag trafficking has become lucrative and offenders can end up in jail. There are also visible presences of plastic bags even under the ban [54]. Nevertheless, Rwanda has seen an increase in tourism due to reduced plastic bags pollution; About 8 percent (177,000 jobs) in Rwanda are in the tourism sector. And tourism brings in the much-needed revenue for the development of other sectors of Rwandan economy [55].
Morocco	Ban	After a partial ban in 2009, Morocco's lawfully banning plastic bags came into effect in July 2016. In the attempt to make plastic bag pollution nearly impossible, this law does not only cover the distribution of plastic bags, but also the import and production of them.	To effectively enforce the ban, there are fines ranging from \$20,000 USD to over \$100,000 USD placed on manufacturers and distributors who break the law [16].	As a prominent plastic bag consuming country, adhering to the ambitious law has been challenging. The government is responding to the challenges the plastic bag ban poses by ensuring that plastic bag alternatives are easily accessible.

South Africa	Tax/partial ban	South Africa adopted in 2003 the Regulations under section 24 (d) of the environment conservation act (Act No. 73 of 1989) – Plastic carrier bags and plastic flat bags, legislation prohibiting plastic bags less than 30 µm thick and imposing a tax on thicker bags [10].The manufacture, trade and commercial distribution of domestically produced and imported plastic carrier bags and plastic flat bags, for use within the Republic of South Africa, other than those which comply with paragraphs 4 and 5 of the Compulsory Specification, is hereby prohibited. [56]	Ban on plastic bags involves levies. The plastic bag levy on shopping bags at South African retailers will increase from 12 cents to 25 cents at the beginning of April 2020 [57].	According to the 2018/19 tax statistics published by SARS at the end of the year, revenue brought in by the sale of plastic bags via the plastic bags levy increased by R59 million (\$3 million USD) to R300 million (\$17 million USD) for the year. However, Environmental Affairs ministry is looking at the possibility of reviewing legislation with a view of phasing out harmful plastic products including straws and the tax policy on plastic bags needed to be revamped since more people are willing to pay the tax and use plastic bags [58].
United Kingdom	Tax	As of October 2015, stores in the UK began charging five pence (\$0.15-0.20 USD) per single-use plastic carrier bag. Consumers can avoid this charge by bringing a reusable bag to carry their goods. The plastic bag charge applies to any business that has more than 250 employees.	Levy on consumer (£0.05, around \$0.06 USD) for plastic bags to be charged by companies with >250 employees and on a voluntary basis for smaller retailers in England [53].	Since the bag tax introduction in 2015, officials estimate that plastic bag consumption has been reduced by more than 80%. The UK government also predicts significant economic benefits from the ban, including £60 million (\$75 million USD) reduction in litter clean-up costs and £13 million (\$16 million USD) in carbon savings. Figures released in 2018 showed an 86% drop in plastic bag use at the UK’s seven major supermarkets since the scheme was introduced [59].

#### 4.1 Kenya plastic bag ban

Kenya has the strictest plastic bag prohibition law in the world [53, 56]. The law in Kenya recognizes some exceptions; certain kinds of single-use plastic bags are still allowed for garbage bin liners, medical waste, construction and for packaging foods like bread, as well as the use of cling film [60]. This is a more thoughtful legislation after Kenya’s attempt to prohibit plastic bags via legislation in 2007 and 2011 failed to be an enforceable law when manufacturers and retail outlets threatened to pass on the cost of using other materials to consumers. Nigerian Bill is a blanket ban on plastic bags that may suffer the same fate as the previously failed law in Kenya. Nigeria also has history of lax enforcement of prohibition laws and may not be as effective as

Kenya. As of August 2019, Kenya has made more than 500 arrests (mostly traders, small-scale businesses and citizens found with banned bags), and about 300 people have been prosecuted, according to National Environmental Management Authority (NEMA), which is tasked with enforcing the ban. Approximately 80% of the population has stopped using plastic carrier bags since the ban was adopted [61].

#### *4.2 Ghana plastic bag policy*

Ghana has not enacted plastic bag prohibition legislation, despite having one of the fastest growing economies in the world [62]. Ghana is in a similar position as Nigeria in the battle against plastic bags [5]. Ghana and Nigeria have the two biggest economies in West Africa. Both countries fear backlash amongst business leaders and policy makers that may force the government to abandon the plan to ban plastic bags, especially when adequate sanitization and communication are not in place [63].

#### *4.3 Morocco plastic bag ban*

In Morocco, the first attempt to introduce total ban on plastic bags in 2006 failed due to lack of awareness and sensitization of the public. However, Morocco is the second-largest plastic bag consumer after the United States. It was using about three billion plastic bags a year, according to the Moroccan Industry Ministry. That means, on average, that each one of Morocco's 34 million people uses about 900 bags a year, thus a plastic bag ban became inevitable and this has been successfully introduced in 2016 after exhaustive consultations and sufficient provision of alternatives to plastic bags [64]. After the introduction of the ban on plastic bag, the consumption

of raw materials used in the manufacture of bags dropped by 35,000 tons (50%) between 2015 and 2018 [65].

#### *4.4 Gambia plastic bag ban*

Gambia is similar to Nigeria in terms of cultural, social, legal and policy systems. Traditionally, the Gambia has maintained the practice of employing Nigerian jurists to serve in their key judicial and policy positions [66]. The Gambian Ban on Plastic Bags Order, 2015 is more comprehensive than the Nigerian Bill. The enactment of interpretation section where key concepts are defined in the Gambian law is instructive. Also, provisions of section 5 and section 6 of the Gambia Ban on Plastic Order which provide for the authorization for exceptional use of plastic packaging materials may be useful for Nigeria to enact a pragmatic plastic bag law for the longer-term. However, enforcement and compliance has been poor in Gambia, coupled with the fact that there are shortages of alternatives to plastic bags [5].

#### *4.5 Rwanda plastic bag ban*

Rwanda is prominent among African countries to out rightly ban the manufacture, importation and use of plastic bags. In Rwanda, like in Nigeria, plastic bags contribute to flooding and prevent crops from growing because rainwater cannot penetrate soil when covered with plastic. The Rwandan zero tolerance policy toward plastic bags appears to be making positive impact: Streets in the capital, Kigali, and elsewhere across the country are virtually spotless, and tourism is a key part of the economy [51]. Introduction of the ban on plastic bags in Rwanda was slow due to the activities of recalcitrant citizens and businesses, but it has now been streamlined into the Rwandan national philosophy of *umuganda* (National cleanup day) and has transformed the

country into nursing the ambition of being the first country in the world to eliminate all plastic waste [55]. Nigeria with cultural, social and economic resemblance with Rwanda can achieve the same objective by enacting a comprehensive plastic bag ban law and internalizing the spirit and letter of the law into a national philosophy.

#### *4.6 South Africa plastic bag tax*

In South Africa, the impacts of the tax on plastic bags have been poor. Surveys of consumer behavior indicate that more people are ready to pay the plastic bag tax and few are making use of alternatives to plastic bags or reusing the bags to carry shopping; instead, they are being used to carry household waste. In this respect, the new legislation has not been successful. Moreover, data from three of the four retail chains indicated that, despite the charges, bag use increased once consumers had become accustomed to paying for them [58], it is obvious that South Africa failed to emphasize the alternative choices to the use of plastic bags which would have been more effective when combined with market based instrument like plastic tax. Stakeholders are presently fine-tuning initiatives on plastic bag policy assessment to determine a new policy direction and to inform amendments to existing policy instruments governing the production and sale of plastic carrier bags [67].

#### *4.7 UK plastic bag charge*

The plastic bag policy in the UK may not apply in Nigeria due to obvious differences in many development indices, but some laws and policies enacted in the UK have been transplanted into Nigeria. The UK government announced ‘A Green Future: Our 25-Year Plan to Improve the Environment’ [35]. The Plan outlines ways to reduce the use of plastics that contribute to

pollution, and broader steps to encourage recycling and the more thoughtful use of resources. This plan is adding to the success recorded by the introduction of Market based instrument (Tax) on plastic bag. Since 2015, when a five pence (\$0.06 USD) charge was initially levied, the number of plastic bag being used is down by 90% [68]. The average consumer in England now buys just 10 bags a year from the main supermarket retailers, according to the new data from the Department for Environment, Food and Rural Affairs (Defra), down from 140 bags in 2014 before the charge came into force [69].

#### *4.8 Lessons learned for Nigeria*

Nigeria can replicate the positive performance of the plastic bag tax in the UK; although the political, social, economic, cultural and historical settings of both countries are not comparable. While the UK has achieved 99-100% adult literacy level, Nigeria is still struggling at 62% [70]. It will be necessary to implement a widespread environmental literacy program, to both educate and empower Nigerians and make them more receptive to government environmental policies and laws.

More so, the provisions of alternatives to plastic bags in Morocco and the resolute enforcement of the plastic bags prohibition law after it has been widely communicated in Kenya. Nigeria will need to prioritize tourism just like the Gambia and Rwanda, where emphasis on eco-tourism e has been the major driver for the successful enactment and enforcement of plastic bags ban laws.

A decisive action against plastic bags cannot be over emphasised, this is because it has been discovered during recent investigation on the four selected beaches in Lagos state of Nigeria (Alpha, Oniru, Eleko, Lekki) that polyethylene (PE) from single use plastic like Plastic bags and

disposable food containers are the major factor that contributed to microplastic pollution of the ocean in Nigeria as a result of photochemical, mechanical and biological processes [71].

The Nigeria Plastic Prohibition Bill must be incorporated into the Nigeria national environmental policy and there should be provision for public education and dissemination. This is to avoid the Bill resulting in unintended consequences such as extortion by public officers, smuggling and price hikes like the extant National Environmental Standards and Regulations Enforcement Agency (NESREA Act 2007) [72] and the National Oil Spill Detection and Response Agency Act, (NOSDRA Act 2006) [73]. The above have resulted in wide scale corruption of public officers by way of extortion of companies and individuals and subversion of laws [74].

## **5. Conclusions**

While Nigeria's Plastic Bag (Prohibition) Bill focuses on single-use plastic bags, the ban does not properly address the larger issue of plastic pollution, nor does articulate a viable plastic waste and environmental management plan. As a result, the Bill does not consider the wider dynamics of waste generation and management. Since, other measures of managing and reducing plastic waste are not addressed by the Bill; the Bill might be another example of a poorly conceived and likely poorly enforced environmental law which may lead to unwanted outcomes like corruption and increased plastic leakage into the marine environment.

The Bill proposed by the Nigerian government mirrors punitive legislation prevalent elsewhere across Africa. The Bill, as it stands, is nothing but a prohibition and penal statement. The Bill should provide performance indicators against which effectiveness can be measured. It is

recommended, the Bill be redrafted to include more detailed provisions like a plastic reduction target, use of alternatives and voluntary reduction strategies, and plastic taxation. Recommended amendments before final enactment into law would provide a solid measure to help prevent plastic bags from entering the marine environment in Nigeria.



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