

**PRACTICE OF PLASTIC POLLUTION MANAGEMENT  
IN SOME SELECTED JURISDICTIONS: LESSONS FOR NIGERIA\***

**Abstract**

*Plastic pollution is a significant threat to the global environment. The culprit responsible for this menace is plastic waste. The overwhelming population in the world contributes to insurmountable plastic waste generation. These wastes generated persist because of mismanagement and the mismanagement of these wastes results in negative environmental consequences. Plastic wastes dumped at landfills contaminates the soil affecting food production, they clog water drainage systems which results in flooding, they also pose problems to wildlife from ingestion and entanglement, plastic wastes pollute the marine environment affecting marine life and consequently affect humans when consumed and incineration of plastics generates noxious fumes. In addition, plastic waste when dumped can be broken down into micro plastics impacting the ecosystem negatively. Several efforts have been made internationally and at national levels to tackle this menace. The efforts made came in form of imposition of bans, implementation of strict laws and adoption of a circular economy. This article discussed the practice of plastic waste management in some selected jurisdictions. It x-rayed the strategies and legal framework employed by other jurisdictions to tackle this menace. The article analysed the practice of plastic pollution management in some selected jurisdictions and the lessons Nigeria can draw from them. This article employed the doctrinal method of research using an analytic and comparative approach. The article relied on the primary and secondary sources of information. In the course of this article, it was found that the law is a veritable tool when addressing plastic pollution. It also found that the specific law enacted by these countries helped in tackling the plastic pollution menace. The article also found that there is no legal framework on plastic pollution management in Nigeria. Finally, the article recommended that a national law be made to address plastic pollution menace in Nigeria. It also recommended that there should be a strict adoption and implementation of circular economy practices.*

**Keywords:** Plastic Waste, Plastic Pollution, Plastic Waste Management, Plastic Pollution Management

**1. Introduction**

Plastic waste management is one very crucial issue that the world today has been trying to address in order to protect the environment. A lot of efforts have been made to strengthen effective plastic waste management practices. National legislations have been made by some countries to tackle waste; bans have been placed on plastic wastes and taxes have been imposed too. This article studies some countries that have made efforts in tackling this menace. This study addresses Rwanda, Germany, Chile and United States of America's effort while drawing lessons Nigeria can learn from these practices. The choice of the selected countries is based on their laws for the proper management of plastic waste and recycling strategies which have greatly improved the sound environmental structure and reduced pollution of plastic waste in the environment significantly. The legal framework of these countries in relation to plastic pollution management will be discussed. Nigeria can utilize the lessons learnt to reform her plastic pollution management practices by replicating the strategies and legal templates of these case studies and efforts towards addressing Nigeria's plastic waste management problems.

**2. Rwanda**

Rwanda is a small-landlocked country situate in East Africa. The country shares boundary/ borders with Uganda in the North, Tanzania in the East, Burundi in the south and Democratic Republic of Congo in the West with a population of 12, 374,397 and a total area of 26, 338.<sup>1</sup> Rwanda is the first Africa Country to introduce a comprehensive ban on the production, importation, and use of plastic carry bags and single use plastics.<sup>2</sup> Rwanda promoted environmentally friendly alternatives and made a number of policy instruments and regulatory measures such as bans, threat of imprisonment as well as mandatory collection imposition of fines. Companies were also given tax incentives to encourage recycling to produce environmentally friendly

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<sup>1</sup>A Nshimiyimana and I Musor, 'Rwanda: A Global Leader in Plastic Pollution Reduction' (GAIA 2021)1 <<https://www.zerowasteworld.org/rwanda-plastic-ban>> accessed 29 July 2022.

<sup>2</sup> J Xie and J Martin, *Plastic Waste Management in Rwanda: An Ex-post Policy Analysis* (Washington DC: World Bank 2022) 23.

alternatives.<sup>3</sup> There are four national laws that strongly address the plastic waste management in Rwanda. They are<sup>4</sup>;

***Law No. 17/2019 of 10/08/2019 Relating to the Prohibition of Manufacturing, Importation, Use and Sale of Plastic Carry Bags and Single-Use Plastic Items***

This law is applicable in the whole country. The law was gazette on the 23d of September 2019. The law targets plastic manufacture, import and use, waste management, litter and pollution. It gained its strength from the principles of the Law No. 57/2008 by extending prohibition to include all single use plastic items. The law prohibits the manufacturing, importation, use and sale of plastic carry bags and single use plastic items. The law further prohibits and control plastic carry bags and single use plastic items. The banned products are water bottles, packaging of fizzy drink, juice, milk, single use plastic straws, plates and forks and so on.<sup>5</sup> Imported consumer goods packaged in single use plastics are levied.<sup>6</sup> This law repealed the Law No. 57/2008.<sup>7</sup> Article 4 of the law provides for exemptions which may only be granted upon a written application to the competent authority. The Rwanda Environmental Management Authority is the body saddled with this responsibility of granting or declining applications for exemptions and there is a guideline for this exemption process.<sup>8</sup> Exemptions are available to those involved in manufacture, use, import or sale of single use plastic items. Authorization to use single use plastics can only be granted on the following conditions: (i) The product is made in Rwanda, (ii) The product has no alternatives to plastics as a packaging material on the local or internet market; (iii) The quality of the product is negatively and directly impacted by the absence of plastic packaging.

Enforcement: the law is enforced by the Rwanda National Police, the institution in charge of customs, the Rwanda investigation Bureau, REMA, the Rwanda Standards Board Rwanda inspectorate, Competition and consumer protection Agency and Administrative Decentralized entities.<sup>9</sup> These enforcement bodies mentioned monitor and inspect the activities regularly and enforcement is facilitated and enabled via enlightenment campaign programmes. The National Police play a significant role in the realization of the objectives of the law. In 24 December 2020, they reported to have seized over 120, 000pieces of outlawed plastic bag from smugglers. Similarly in 22 January, 2021, they also arrested a trader in Kiziguo sector of Galsibo District in possession of 1200 pieces of non-biodegradable plastic bags.<sup>10</sup>

Fines: the local government officials are saddled with the responsibility of imposing fines on offenders who dump waste in public places to the tune of Rwf 50,000. In addition to the fines imposed defaulters are mandated to remove their waste and repair any damage caused. Manufacturers, retailers, and importers who defaults in the law are made to pay a fine to the tune of Rwf 5, 000,000.<sup>11</sup> Manufacturers were given three months to move towards the production and manufacturing of alternatives to plastic.<sup>12</sup> Confiscation of items is another means adopted to enforce the law.

***Organic Law No. 04/2005 of 08/04/2005 Determining the Modalities of Protection, Conservation and Promotion of the Environment in Rwanda***

This law however, is indirectly related to plastic use, waste management, litter and pollution. It outlines principles for the protection of the environment through the installation of responsible waste collection services to deter people from littering, landfilling and burning of wastes.

***Law No. 53/2007 of 17/11/2007 Establishing Community Works in Rwanda***

It is not directly related to plastic use, waste management, littering and pollution. It provides the structure and promotes nationwide community clean up and engagement programmes. The clean-up exercise is observed every last Saturday of the month from 8:00 am to 11:00am. The participants allowed are those within the ages of

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<sup>3</sup>Greening EU Cooperation, 'Tackling the Plastic Tide: Stories of Transformational Change' <<https://www.europa.eu/downloadPDF.tacklingtheplastictide>> accessed 20 July, 2022.

<sup>4</sup> J Xie and J Martin, *ibid* 24.

<sup>5</sup> A Nshimiyimana and Innocent Musor, 'Rwanda: A Global Leader in Plastic Pollution Reduction' (GAIA, 2021)12 <<https://www.zerowasteworld.org/rwanda-plastic-ban>> accessed 29 July 2022.

<sup>6</sup> Article 5.

<sup>7</sup> Article 19.

<sup>8</sup> REMA Guidelines on the Procedure and Conditions to Grant Exceptional Permission to Manufacture, Use, Import or Sell Single-Use Plastic Items or Pack Goods in Single-Use Plastics made on the 8 December 2019.

<sup>9</sup> Article 8.

<sup>10</sup> J Hakuzimana, 'Break Free from Plastics: Environment Perspectives and Evidence from Rwanda' [2021] (5) (1) *Environmental and Ecosystem Science (EES)*, 31.

<sup>11</sup> A Nshimiyimana and Innocent Musor, 'Rwanda: A Global Leader in Plastic Pollution Reduction' (GAIA, 2021) 12 <<https://www.zerowasteworld.org/rwanda-plastic-ban>> accessed 29 July 2022.

<sup>12</sup> *Ibid*, 13.

18 and 65 years of age. The organizers and coordinators of this programme are the General Directorate in charge of social welfare and community Development in the Ministry of Local Government (MINALOC). Fines are imposed for non-compliance with respect to participation. Rwanda used these strategies to beat the plastic waste problem such as the national environmental week which included community works, beat plastic pollution walks, physical recycling exhibitions and national inspections of the illegal use of plastic bags and organizing national competitions for passing environmental messages to the public through poems, songs, and drawings and so on.<sup>13</sup>

There are three pillars which made Rwanda's efforts in fighting plastic waste problem a success. They are active participation of citizens in community works known as 'Umuganda'. Umuganda means 'coming together to do a job'. Umuganda helped in promoting the spirit of cooperation among the nationals; meticulous plastic related laws enforcement and strong political will and public awareness programmes. Rwanda's experience portrays the fact that bans of plastic bags, restrictions and strict enforcements can significantly make a positive impact in the reduction of plastic waste import and use. The success was not automatic because initially in the first phase of the ban, some citizens switched to black market for plastic bags. However, they were caught, jailed and made to pay administrative fine.<sup>14</sup> The compliance of these laws following the strict enforcement is now obvious as single use plastic alternatives like bamboo straws, non-plastic take away packaging at restaurants, reusable table water are now used.<sup>15</sup> The successes recorded since the 2008 ban are<sup>16</sup>; deaths of animals were reduced, crop yield increased, flooding risk reduced as well as malaria, ecotourism improved, increase in job creation and it saved government the financial stress of paying for clean-up.

The Rwanda success should be a motivation for Nigeria. The legal framework of Rwanda is one worthy of emulation in Nigeria. Rwanda has laws specifically enacted for the purpose of fighting plastic waste crisis and managing plastic waste but Nigeria does not have a law that specifically addresses management of plastic waste. Unlike Nigeria, the police, the customs and several other relevant agencies are actively involved in the fight against plastic waste crisis. In Nigeria, the police do not even understand the implication of improper plastic waste management. In relation to fines, individuals and companies who violate the plastic laws in Rwanda by polluting the environment are made to pay fines and return the environment to status quo by removing the polluting material from the environment. This is commendable. In Nigeria, we have a similar provision in our laws but the question is how many persons have been apprehended for polluting the environment, how many persons or companies have been fined or made to remove the waste material they used in polluting the environment. Nigeria and Rwanda have almost a similar practice with respect to environmental cleaning. It is called Umungada in Rwanda and Environmental Sanitation in Nigeria. The difference is that while that of Rwanda is a national exercise, Nigeria's is a state practice. Rwanda enforces theirs strictly as everyone is made to participate whereas in Nigeria, what is obtainable in practice is just recognition of the said date without participation in the exercise. It is a form of national consciousness for the Rwandans. It is gradually fading in Nigeria. It is this national exercise that has inculcated the spirit of cooperation and oneness in the Rwandans to be able to jointly tackle plastic waste crisis or pollution. This practice by the Rwanda should be adopted in Nigeria as the fight against plastic pollution requires collective efforts.

### 3. Germany

Germany (officially known as the 'Federal Republic of Germany') is the most popular nation in the European Union. Germany has one of the largest economies in the world and has borders with nine nations.<sup>17</sup> The country has a population of 83,092,962 and an area of 357,022 sq. km.<sup>18</sup> Germany is known as the top performer and overall, in plastic management scoring 87 points out of 100.<sup>19</sup> It ranks first for governance and stakeholder engagement and 3<sup>rd</sup> for systemic capacity.<sup>20</sup> The reason for the ranking among other things is its global leadership in plastic management that is coupled with a proactive domestic approach and a diverse approach to stakeholder engagement that feeds into government action and its lifecycle approach including efforts to build a

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<sup>13</sup> J Hakuzimana, 'Break Free from Plastics: Environment Perspectives and Evidence from Rwanda [2021] (5) (1) *Environmental and Ecosystem Science (EES)*, 30.

<sup>14</sup> *Ibid*; p.32.

<sup>15</sup> A Nshimiyimana and I Musor, 'Rwanda: A Global Leader in Plastic Pollution Reduction' (GAIA, 2021)17. <<https://www.zerowasteworld.org/rwanda-plastic-ban>> accessed 29 July 2022.

<sup>16</sup> *Ibid*.31-32.

<sup>17</sup> US News and World Report, 'Overview of Germany' <<https://www.usnews.com/news/best-countries/germany>> accessed 19 July 2022.

<sup>18</sup> *Ibid*.

<sup>19</sup> R Carmichael, 'Plastics Management Index: Evaluating Effective Management and Sustainable Use of Plastics' [2022] *Economist Impact*, 2.

<sup>20</sup> *Ibid*.

circular economy.<sup>21</sup> The strategy adopted by Germany in achieving this feat is a strong government policy and its citizen accepting recycling.<sup>22</sup> Germany also adopted mandatory waste sorting policies as well as deposit refund scheme increasing both waste management and recycling rates. The Germany law on waste management has its roots from the EU Directives. This was reflected when the EU waste hierarchy principles was adopted by Germany.<sup>23</sup> The legal framework for waste management is set by the authorities at the federation<sup>24</sup>, country states and regional and municipal level. The circular economy waste management Act regulates the distribution of competencies between the government levels and public and private waste management authorities and firms. It is important to note that the Federal and State Governments play important roles in actualization of proper waste management. The enviable strategies that made German attain the rank in waste management are;

**The Closed Substance Cycle and Waste Management Act 1996:** It requires producers, marketers and consumers of goods to be responsible in avoiding, reusing, recycling and environmentally compatible disposal of waste that arises. It created an opportunity for a nationwide uniform recycling bin.<sup>25</sup> The law encouraged companies to have solid recycling standards in place. As a result of this law, since 1<sup>st</sup> of June 2005, wastes are now to undergo pretreatment with incineration plants or mechanical-biological treatment plants before they can be landfilled.<sup>26</sup> Also, recoverable substances have to be separated before landfilling and the energy from the waste have to be used. The Act was amended in 2012 when Germany adopted the Circular Economy Act.<sup>27</sup>

**The Packaging Ordinance 1991/German Packaging Act:** This Act was replaced in 2019 by the Packaging Act. The salient innovations in the law are the inclusion of new recycling rates and targets and more transparent and economic competition. Mandatory recycling fees for packaging producers and distributors remain in place. German companies are required to ensure that they are listed in the Central Agency Packaging register where they have to make regular report on their product, masses and materials, failure of which, they will be denied the right to operate. The Act regulates deposit and return obligations for disposable beverage packaging and obligations of last distributors to indicate whether the packaging is disposable or reusable. The law prescribes sanctions for failure to comply with the prescribed obligations set out in the Act; prohibition of distribution and payment of administrative fees of up to EUR 200,000.<sup>28</sup> There has been enormous improvement since this Act was enacted.<sup>29</sup>

**Circular Economy Act 2012:** This Act sets legally binding measures on the part of manufacturers and distributors to promote producer responsibility. It contains general provisions on producer Responsibility.<sup>30</sup> Producer responsibility is an important element of the polluter Pays principle.<sup>31</sup> For Packaging, this PR is specified in the German Packaging Act.<sup>32</sup> The policy has led to increased recycling rates.

**German Ordinance on Single Use Plastics:** This law was adopted and came into force on 3<sup>rd</sup> July 2021. The law promotes ban on products that are from oxo-degradable plastic which are susceptible to breaking down into microplastics as microplastics are difficult to dispose of and do not degrade further. The law made it an offence for anyone to place products of above nature on the market whether negligently or carelessly done.<sup>33</sup> The

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<sup>21</sup> *Ibid* 2, 7.

<sup>22</sup> B Brassaw, 'Germany: A Recycling Program that actually works' <<https://www.earth911.com/business-policy/recycling-in-germany/>> accessed 29 July 2022.

<sup>23</sup> Revised EU Waste Framework Directive (Directive 2008/98/EC)

<sup>24</sup> RA Alabi and Karl Wohlmuth, 'The Case of Sustainable Management of Waste in Germany and (Bremen) and practical Lessons for Nigeria and (Lagos)' (A 2019 Policy Report on Sustainable Waste Management by the Institute for World Economics and International Management) 32.

<sup>25</sup> M Nelles *et al*, 'Waste Management in Germany: Development to a Sustainable Circular Economy' [2016] (6-14) *Procedia Environmental Sciences*, 8.

<sup>26</sup> *Ibid*.

<sup>27</sup> M Igini, 'How Waste Management in Germany is Changing the Game' (Earth.org 18 April 2022) <<https://www.earth.org/waste-management-germany/>> accessed 13 July 2022.

<sup>28</sup> HBlank *et al*, 'Plastics and Packaging Laws in Germany' <<https://www.cms.law/en/int/expert-guides/plastics-and-packaging-laws/germany>> accessed 21 July 2022.

<sup>29</sup> H Imhoff, 'Towards Osaka Blue Ocean Vision. Germany: Actions and Progress on Marine Plastic Litter' <<https://www.g20mpl.org/partners/germany>> accessed 21 July 2022.

<sup>30</sup> Article 23.

<sup>31</sup> N Juch and B Klaus, 'Waste Law Reform: Precaution Against Littering, Food Waste, Single Use Plastics and Plastic Bags' <<https://www.roedl.com/insights/life-sciences-law/waste-law-reform-littering-food-waste-single-use-plastics-plastic-bags>> accessed 21 July 2022.

<sup>32</sup> H Blank *et al*, 'Plastics and Packaging Laws in Germany' <<https://www.cms.law/en/int/expert-guides/plastics-and-packaging-laws/germany>> accessed 21 July 2022.

<sup>33</sup> *Ibid*.

affected products are cotton bud sticks, beverage containers, balloon sticks, beverage cups, cutlery like forks, knives, spoons and chopsticks, plates, straws. However medical devices are not affected.<sup>34</sup>

**The adoption of deposit refund scheme:** Germany adopted this strategy which till date is functional. Consumers who buy plastic bottles are made to pay a deposit which ranges between €0.08 and €0.25. When the empty plastic bottles are returned back to the retail shop, the money deposited is refunded back to them.<sup>35</sup> The deposit for plastic bottle is higher than any other product. Over the years, this strategy has proven to be very much effective reaching almost 98.4% return rate. The benefit of DRS is that it has reduced littering generation, increased bottle recycling and imbibed into citizens the importance of being responsible and has a sustainable mindset with regards to plastic waste management. Mandatory waste sorting policies: where waste bins are kept for trash of similar kinds to be thrown in them such as general waste, paper, plastic, clear glass, coloured glass and composting.<sup>36</sup> Private consumers are given yellow bag for putting their packaging waste for final collection. These bags given are a way of encouraging private consumers and the practice is very good as plastic packaging waste is segregated from residual waste.<sup>37</sup> The collected waste is handed over to contracted company for waste recovery and to the plant for material sorting. Recyclers are paid to return sorted material.<sup>38</sup>

**The Green Dot System 1991:** Manufacturers are compelled to place a green label outside of packaging as an indication that it should be for recycling.<sup>39</sup> Recycling is another strategy adopted. The recycling rate of Germany has been on the increase since the fight against waste including plastics. In 2002, the country's recycling rate was 56% and this percentage has increased since then. The country is populous as the leading recycler of municipal waste in the European Union. Germany set a 65% recycling rate through the Circular Economy Act of 2012.<sup>40</sup> As at 2019, the German recycling rate reached 67%.<sup>41</sup>

Flowing from the above strategies adopted by Germany, the German plastic waste management practices and policy is one that deserves to be emulated. The striking feature about the German practice of waste management is the improvements made on their laws especially if it is established that the existing law is not giving the desired result, where implementation of the intended measures is weak and the institutions fail to implement or enforce. This is one lesson Nigeria should learn from Germany. In addition, Germany ensures a proper plastic waste collection, storage, transportation and disposal. The disposal method adopted is done in an environmentally friendly manner. Recycling is what Germans are known for and have been able to ensure that recycling rate is about 67%. Landfills are very low due to the recycling strategy adopted by them. Sorting and reusing are highly encouraged. The Deposit refund system is another feature of their plastic waste management practice and has recorded successes in reducing plastic waste. All these are possible because this country adopted the circular economy. Above all, due to the zeal to ensure that the fight against plastic waste is successful and proper plastic waste management is secured, Germany made a specific national law banning Single-Use Plastics (SUP) and the law did not just state that it is banned, it defined single use plastic waste for citizens to understand. However, there has already been in place national laws prohibiting plastics but they were not specifically for plastics but included other materials. Those laws were amended from time to time to meet modern day realities.

#### 4. Chile

Chile is located along the west of South America<sup>42</sup> with a land area of 743,532 km<sup>2</sup>.<sup>43</sup> The country has a population of about 19,493 million.<sup>44</sup> Chile is a maritime country<sup>45</sup> and the third largest importer of sea food.

<sup>34</sup> H Moelle *et al*, 'Germany: No Go for Take Away: Ban on (Single-Use) Plastic Products Since July 2021' <<https://www.theworldlawgroup.com/news/germany-no-go-for-take-away-ban-on-single-use-plastic-products-since-july-2021>> accessed 29 July 2022.

<sup>35</sup> M Igini, 'How Waste Management in Germany is Changing the Game' <<https://www.earth.org/waste-management-germany/>> accessed 13 July 2022.

<sup>36</sup> *Ibid*.

<sup>37</sup> BAKS Balachandra and TB Abeysekara, 'Producer Responsibility in Managing Plastic Packaging Waste in Sri Lanka: A Legal Framework Based on Lessons Learned from Germany' [2021] (3) (2) *KJMS*, 6.

<sup>38</sup> *Ibid*.

<sup>39</sup> M Igini, 'How Waste Management in Germany is Changing the Game' <<https://www.earth.org/waste-management-germany/>> accessed 13 July 2022.

<sup>40</sup> *Ibid*.

<sup>41</sup> *Ibid*.

<sup>42</sup> JJ Johnson *et al*, 'Chile' (Britannica) <<https://www.britannica.com/place/chile>> accessed 18 July 2023.

<sup>43</sup> UNCTADstat, 'Maritime Profile: Chile' <[https://unctadstat.unctad.org/country\\_profile/maritimeprofile/engb/152/index.html](https://unctadstat.unctad.org/country_profile/maritimeprofile/engb/152/index.html)> accessed 18 July 2023

<sup>44</sup> *Ibid*

<sup>45</sup> *Ibid*

Chile is one of the countries at the fore front fight against plastic pollution. In 2019, Chile was the first Latin American country to eliminate single-use plastic bags from commerce.<sup>46</sup> Prior to the 2019 legislation, the country produces nearly one million metric tons of plastic trash yearly but only 8.5 are recycled.<sup>47</sup> The country adopted strategies which have been helpful and useful in fighting plastic pollution; they are as follows:

- a) The country adopted a National Marine Litter and Microplastics Management Strategy<sup>48</sup> which objectives are to encourage private sectors to participate in the promotion of investment, trade and market creation in industries and activities that allow prevention and proper management of marine debris; encourage research and innovation for the development of new technologies and solutions for monitoring, prevention, reuse and recovery of marine debris; and identify stakeholders that directly and indirectly generate waste from terrestrial and marine sources.
- b) adoption of EPR Regulation: Chile adopted the extended producer responsibility regulation in 2023 to make producers to be responsible for the entire lifecycle of the products which they manufacture.
- c) Chile enacted Supreme Decree No. 64/2020 which establishes conditions on the treatment and final disposal of waste from marine activities and this law went further to prohibit polystyrene as a flotation element.<sup>49</sup>
- d) Chile made the Chilean pact in April 2019, which fosters the bringing together actors in the fight against plastic pollution such as NGOS, companies and the public.<sup>50</sup>
- e) In furthering the efforts to tackle plastic challenge, Chile has sponsored several scientific activities to developmental research on marine debris and its impact on the environment, fishing and tourism.
- f) The country organized communication campaigns, workshops and webinars on the prevention of plastic marine debris.<sup>51</sup>
- g) Chile also features at the international level as it partners with other countries to develop mechanisms to manage plastic pollution. The country partners with plastic Waste Partnership of the Basel Convention, the Latin America Group on marine litter and microplastics and Nairobi group of friends to combat marine plastic pollution.<sup>52</sup>

Presently, one important law the country recently enacted that has been hailed internationally and has been recognized as one of the countries which have taken the problem of plastic pollution seriously is the law that bans single use products in the food and beverage industry but this law is to take effect in three years time. The law aims at getting rid of all single-use products. The new law will boost the country's recycling rates. The law also states that defaulters will be fined 327,000 Chilean Pesos which is approximately 360 dollars per product for restaurants while supermarkets will be slammed the fine of 1.3 million Chilean Pesos (1435 dollars). This law has now modeled some establishments as they are switching to reusables. The strategies by Chile are quite commendable. The commendable feature of Chile's response to the plastic pollution menace is the enactment of the law banning single use products in the food and beverage industry. The country understood the fact that single use plastics from these industries are the greatest pollutants of the environment because of the frequency of their usage. Nigeria is encouraged to follow these bold footsteps to ensure a cleaner and healthier environment.

## **5. United States of America**

United States of America is a country in North America and a Federal Republic of fifty States.<sup>53</sup> The country is the fourth largest country in the world with a population of 331, 449, 281 and its capital is in Washington.<sup>54</sup> United States is known as a leading producer and consumer of plastics but they remain behind in enacting laws to tackle plastic pollution.<sup>55</sup> In 2018, over 35.7 million tons of plastic waste was produced by US with about

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<sup>46</sup> RT Ruiqi, 'In World First, Chile to Ban Single-Use Food and Beverages Products over Three Years' <<https://www.news.mongabay.com/2022/08/in-world-first-chile-to-ban-single-use-fb-products-over-three-years/>> accessed 18 July 2023.

<sup>47</sup> *Ibid.*

<sup>48</sup> E Paredes-Osses *et al*, 'Microplastics Pollution in Chile: Current Situation and Future Prospects' [2021] 9 *Frontier Environmental Science* <<https://www.frontiersin.org/articles/10.3389/fenvs.2021.796989/full>> accessed 18 July 2023.

<sup>49</sup> BM Cristian, 'Towards Osaka Blue Ocean Vision' <<https://g20mpl.org/partners/chile>> accessed 18 July 2023.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid*

<sup>52</sup> *Ibid*

<sup>53</sup> A Gopnik *et al*, 'United States' (Britannica) <<https://www.britannica.com/place/United-States>> 24 July 2023.

<sup>54</sup> *Ibid.*

<sup>55</sup> H Seo, 'The US is a Plastic Mismanagement Leader' <<https://www.greenbiz.com/article/us-plastic-mismanagement-leader>> accessed 24 July 2023.

90% of the waste either landfilled or burnt.<sup>56</sup> The United States ranks second in the world in total Plastic waste generated per year behind only China.<sup>57</sup> The recycling rate of plastic waste in the United States of America is 10% annually. However, plastic challenge seems to be coming to an end. In 2020, a coalition of over 500 communities and conservation organizations released a presidential plastic action plan urging the administration of Biden to pass a federal law banning the use of single use plastics and limiting plastic production.<sup>58</sup> The coalition led to the emergence of two legislative solutions which are the solution encouraging advanced plastic recycling and limiting and reducing plastic consumption.<sup>59</sup> Despite these two legislative solutions, the federal government has not adopted these solutions<sup>60</sup> but these solutions have gained ground at the state and local levels. Limited action has been taken by the United States and its falling behind many European countries in addressing the negative environmental consequences associated with plastic wastes.<sup>61</sup> The advanced plastic recycling option has about 20 states that has indoctrinated it especially the red states. Ohio and Texas enacted the legislation in 2019 and the law permits advanced plastic recyclers to produce crude oil, diesel, gasoline and home heating oil as well as feedstock to make plastics.<sup>62</sup> With regards to plastic consumption reduction, the blue states are the states making laws to this effect. The laws ban plastic bags, straws, stirrers, foam cups and takeout clamshells. Eight states have banned single use plastic bags. Local governments are also enacting bans. There are also states that combined the two legislative solutions in their laws. That is the law captures advanced plastic recycling and plastic consumption reduction. California is the first state to pass a law encompassing both. 25% of the plastics are reduced and the law requires a 25% drop in single use plastic by 2032 and a reduction in the use of expanded polystyrene by 25% by 2023. With respect to recycling, the law requires 30% of plastic items sold or bought in California to be recyclable by 2028. If the producers are unable to meet the reduction rates, the materials will be banned entirely.<sup>63</sup>

There is a move at the federal level to pass the Break from plastic pollution Bill of 2020. The bill suffered setbacks as it failed being passed in 2020 and 2021 in the face of opposition from chemical and plastic manufacturers.<sup>64</sup> The Act requires producers to be responsible for the entire life cycle of their products.<sup>65</sup> United States of America actually had a late start in plastic bag interventions. There is no federal legislation that tackles the plastic waste menace; the fight is left to states and local governments. The Bill which would have had a federal flavour, ‘The Break from Plastic Pollution Bill’ is yet to be passed into law. The commonly known methods of management of plastic waste in the US are landfill and burning. Recycling is yet to gain much ground. The recycling rate in the US is still at the infancy. The practice in the United States seem to be at the state and local government levels as the federal government is yet to enact a national law that will govern the entire nation’s plastic pollution management practices. However, it is still commendable that the country has recognized the need for environmental protection from plastic pollution by the laws made by states and local governments to secure the environment.

## 6. Conclusion and Recommendations

Plastic pollution management is a global problem. At the international level, the deliberation for a comprehensive global binding legal instrument is underway. Several countries; developing and developed have adopted measures and enacted legislations tackling the plastics waste menace. The selected countries discussed above have shown their seriousness in the fight against plastic pollution through enacting specific laws to address plastic waste menace. Nigeria also affected by this problem has no anti littering law or law on plastic pollution management. There are legislations in Nigeria providing some form of regulations for plastic waste management but none of these have been able to address their impacts throughout their whole life cycle. The legislations are related to the management of plastic wastes, they are indirectly regulating plastic pollution management. There are also policies made in respect of plastic waste management but these policies lack the force of law as they are just guidelines on what the government is going to do and what it can achieve for the

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<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*

<sup>58</sup> D Carfora *et al.*, ‘Reduce, Reuse, Regulate: The Current State of Plastic Waste Legislation in the United States’ <[https://www.morganlewis.com/pubs/2023/03/reduce-reuse-regulate-the-current-state-of-plastic-waste-legislation-in-the-united-states?\\_cf\\_chl\\_tk=rq8DKiVPx98lbpq03kFkao9.BGCDmWl6v2yByYHUEE-/690210510-O-gaNYCG2NDFa](https://www.morganlewis.com/pubs/2023/03/reduce-reuse-regulate-the-current-state-of-plastic-waste-legislation-in-the-united-states?_cf_chl_tk=rq8DKiVPx98lbpq03kFkao9.BGCDmWl6v2yByYHUEE-/690210510-O-gaNYCG2NDFa)> accessed 24 July 2024.

<sup>59</sup> *Ibid.*

<sup>60</sup> *Ibid.*

<sup>61</sup> *Ibid.*

<sup>62</sup> *Ibid.*

<sup>63</sup> *Ibid.*

<sup>64</sup> RS Doughty and LK Boyle, ‘Plastic Pollution Policy: California Leads, But the Crisis requires National and International Action’ <[https://www.americanbar.org/groups/environment-energy\\_resources/publications/trends/2021-2022/march-april-2022/plastic-pollution-policy/](https://www.americanbar.org/groups/environment-energy_resources/publications/trends/2021-2022/march-april-2022/plastic-pollution-policy/)> accessed 24 July 2023.

<sup>65</sup> *Ibid.g.*

nation. The existing legal framework pertaining to plastic waste management in Nigeria is fragmented and ineffective. There is no detailed provision explicitly aimed at preventing leakage of plastic in the ocean in the domestic laws. Some of the laws address part of the problem but a lot of sources of plastic pollution is unregulated. This is because some of the extant laws are limited in scope when it comes to waste management and they do not have measurable targets and timelines, making it difficult to monitor progress at the domestic level. Nigeria made move in 2018 to ban plastic bag through the draft Plastic Bag (Prohibition) Bill 2018 but up till date, the bill has not been passed into law. Nigeria requires an effective and formidable national legislation to tackle the problem of mismanagement of plastic waste. An effective national response to plastic waste problem requires the enactment and implementation of a new national binding instrument. The law should be able to spell out responsibilities for institutions, and make everyone accountable for the plastics found in the environment. The new law should be able to include a clear vision of eliminating the dumping/ littering of plastic waste in the environment. The law should be able to also adopt the EPR system holding manufacturers accountable for their products found in the environment. The adoption of clear and measurable, and time bound national reduction targets to achieve the goals.

In the light of the above, the following recommendations are offered: There should be a comprehensive national law on plastic waste management. The law should have the capacity of encouraging recycling and incentives provided for companies to encourage recycling. The environmental sanitation exercise should be encouraged and made uniform taking a clue from the Rwanda Experience. A particular Saturday in a month should be declared a national environmental sanitation day, this will reawaken the consciousness of people on the need for proper waste management. In addition to this, just like the during the period of Buhari/Idiagbon administration when inspectors were monitoring the exercise, monitoring team should be appointed to monitor the activities on that day and arrest those who flout the order in keeping their surroundings clean. This will promote the spirit of co-operation amongst citizens. Bins should be kept at strategic places and labeled in such a way that wastes are kept according to their kind taking a clue from the Germany waste management practice where yellow containers or bin signify plastics, black for general waste, blue for paper, white for clear glass, green for coloured glass and brown for composting. This will help in sorting plastic wastes from other waste and saves cost for the government. In addition, Recycling should be encouraged and improved so as to reduce the number of plastics going into landfill and ensure a sustainable environment, minimize plastic waste products and encourage resource efficiency and energy efficiency. Deposit refund scheme should be adopted. Prior to this time in Nigeria before the ubiquity of plastics, bottles were used. The deposit refund system was applicable then as those who bought especially bottled soft drinks made deposits for the bottles collected after which their money is refunded upon return. This helped to encourage recycling and protection of the environment from harmful effects of littered bottles. This same pattern should be applied to plastic waste especially plastic bottles to reduce its littering in the environment.