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Governing Single-Use Plastic Bags in Somalia: A Policy Analysis of Regulatory Effectiveness and Implementation Challenges

Policy Analysis Paper
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This paper is an independent policy analysis. The views expressed are solely those of the author and do not necessarily reflect the positions of any government institution, donor agency, or CIRSI Institute. The analysis is intended to contribute to informed policy dialogue and evidence-based decision-making.

Purpose, Scope, and Intended Audience

This paper examines policy options for managing single-use plastic bag pollution in Somalia, with particular attention to environmental degradation, livestock livelihoods, public health risks, and governance feasibility. It is intended to inform federal and state-level policymakers, municipal authorities, environmental regulators, development and resilience partners, and researchers engaged in environmental governance, resilience building, and urban management.

The analysis focuses on Somalia's federal governance structure, recognizing the division of authority between the Federal Government and Federal Member States, especially in relation to port administration, trade regulation, waste management, and enforcement capacity. While Somaliland-specific measures are referenced where relevant, the primary scope of the paper is Somalia's federal system and its member states.

Policy Question

What combination of regulatory, economic, and institutional policy instruments can most effectively reduce the environmental, livelihood, and public health impacts of single-use plastic bags in Somalia, given weak enforcement capacity, market distortions, and political-economy constraints?

Methodological Note

This policy analysis is based on a qualitative review and synthesis of peer-reviewed literature, grey literature, regional comparative policy experiences, and sectoral studies relevant to plastic pollution, livestock health, urban flooding, and environmental governance in Somalia and comparable contexts in Eastern and Southern Africa.

The paper applies a policy-analysis framework grounded in:

- Market failure theory (externalities and information asymmetry),
- Government and institutional failure,
- Political economy analysis (regulatory capture and enforcement constraints),
- Comparative policy learning from African plastic-bag regulation experiences.

Policy options are assessed against four criteria: efficiency, equity, biodiversity impact, and political feasibility.

1. Executive Summary

The proliferation of single-use plastic bags has emerged as a critical environmental and governance challenge in Somalia, with far-reaching consequences for ecosystems, public health, urban infrastructure, and—most acutely—livelihoods dependent on livestock. Although Somalia is not a major global producer of plastics, rising consumption, weak waste management systems, and limited regulatory enforcement have resulted in widespread plastic pollution across both urban and rural landscapes.

Empirical evidence from Somalia and comparable contexts demonstrates that single-use plastic bags contribute directly to livestock morbidity and mortality through ingestion, exacerbate urban flooding by blocking drainage systems, contaminate marine and terrestrial ecosystems, and impose unpriced environmental and health costs on vulnerable populations—particularly pastoralists and low-income urban residents. Despite widespread awareness of these harms, plastic bag consumption continues to rise due to market failures, information asymmetries, and the absence of affordable alternatives.

1. This policy analysis evaluates five broad policy approaches:
2. maintaining the status quo;
3. implementing bans and levies on single-use plastic bags;
4. promoting biodegradable alternatives;
5. community engagement and awareness campaigns; and
6. recycling initiatives.

These options are assessed using four criteria: economic efficiency, equity, biodiversity impact, and political feasibility within Somalia's federal and state governance context.

The analysis finds that isolated interventions—such as blanket bans or stand-alone awareness campaigns—are unlikely to produce sustained impact in the absence of institutional capacity, livelihood protection, and incentive alignment. Instead, the paper recommends a phased and integrated policy approach centered on:

- A targeted levy on single-use plastic bags, applied at importation and wholesale levels, to internalize environmental and livelihood costs while avoiding immediate hardship for vulnerable populations;

- Explicit protection of pastoral livelihoods, including the establishment of plastic-free livestock zones in high-risk grazing, market, and abattoir areas;

- Decentralized enforcement mechanisms, linking federal standards with state- and municipal-level implementation and incentives;

- Livelihood-centered risk communication, reframing plastic pollution as an economic and livestock protection issue rather than an abstract environmental concern;

- Incentive-compatible engagement with the private sector, reducing regulatory capture while encouraging recovery, recycling, and alternative materials.

By situating plastic pollution as a political-economy and resilience challenge, rather than solely an environmental issue, this paper argues that effective plastic bag management in Somalia requires policies that are environmentally sound, socially equitable, and institutionally realistic. The sections that follow provide a detailed examination of the problem, policy options, and implementation pathways, culminating in actionable recommendations for federal and state authorities.

2. Problem Analysis - What Literature Tells Us

Globally, between 1950 and 2015, there has been a substantial increase in manufactured plastics from 2 million tonnes to 380 million tonnes per year (Nyathi & Togo, 2020). Likewise, nearly 5 trillion plastic bags are used per year, which equates to about 160,000 every second (Plastics, 2025) worldwide. As of 2020, anthropogenic mass—including plastic production—had surpassed the total biomass of all terrestrial and marine biodiversity combined (Elhacham et al., 2020). Intriguingly, a large proportion of this plastic is currently being produced in Asia. As of 2019, 51% of the global plastics are produced in Asia, where China was the largest global plastics producer (PlasticsEurope, 2020), where, relatively, Africa only produces 5% and consumes 4% of the global plastic (WHO, 2023). Paradoxically, although Somalia—the context of this policy analysis—does not directly contribute to global plastic production (Economist, 2018), the country is currently facing a looming surge in plastic waste, particularly in urban areas. In addition to the global growing concern of plastic pollution, Somalia finds itself at a critical juncture concerning plastic waste management, particularly in dealing with the burgeoning issue of single-use plastic waste (Mohamed et al., 2023). In Somalia, despite records on the precise volume of single-use plastic daily and annual usage, import volume per annum, and prevailing waste disposal systems and practices remain statistically uncertain, however, the anecdotal evidence shows a soaring prevalence of plastic misuses which signals an imminent surge in plastic waste accumulation within the natural environment.

Furthermore, the available literature on the adverse effects of single-use plastic bags on humans, animals, and the natural environmental indicates striking findings gleaned from various global contexts. Although the literature on the domain of research relevant to the context of Somalia seemingly has been narrowly studied, however, the outcomes of the study with similar contexts which may be generalizable. However, most of the studies reviewed under this paper show a similarity of the problem spanning across human, animal, and the natural environment as delineated by various studies (Lambrechts & Hector, 2016; Daud et al., 2023; Isak, 2021; Abdi et al., 2022).

Furthermore, the adverse effects stemming from plastic deluge transcend mere environmental degradation and health concerns. The accumulation of solid waste, particularly single-use plastic bags, wreaks havoc on diverse ecosystems. Wildlife suffocation, soil contamination, waterway blockages, landscape defacement, and resource depletion comprise a mere fraction of the extensive list of issues precipitated by this waste menace (Bahri, 2005; Wahinya M.K. Paul, 2020). Recent research, notably Isak (2021), underlines the dominance of plastic bags in Somalia's plastic landscape, particularly polythene bags. Surprisingly, despite the populace being acutely aware of the detrimental effects of plastic use, the trajectory of plastic consumption continues its upward climb (Adane & Muleta, 2011). This inclination towards plastic bags finds support in various factors, prominently their accessibility and affordability (Adane & Muleta, 2011; Bahri, 2005). Bahri, in particular, highlights the economic allure of plastic bags, citing streamlined production processes that minimize raw material usage and production costs. Furthermore, the expenses linked to

resource depletion and end-of-life treatment, externalized from production expenses, contribute to their affordability. Additionally, a critical component influencing plastic consumption lies in public awareness. Studies conducted in urban centers like Mogadishu in Somalia and Jimma in Ethiopia establish a direct link between poor surface water quality and the prevalence of bottled water usage, thereby exacerbating plastic consumption (Adane & Muleta, 2011; Isak, 2021). Moreover, the Isak's study also found that majority (167, 72.60%) of the respondents mentioned the death of animal as a major problem of single-use plastic bags. Economically disadvantaged groups such as pastoralists and pre-urban livestock keeping groups were more vulnerable to the effect of single-use plastic bags. Likewise, another compelling study (Omer, 2018) conducted at the Maandeeq abattoir in Hargeisa town of Somaliland meticulously examined 500 livestock specimens, revealing 33% containing foreign substances in their rumen. Alarmingly, plastic bags accounted for nearly 10% of these instances painting a distressing picture of the profound impact on animal life and economic stability. This problem is common across the country and the Eastern African countries such as Kenya and Ethiopia, as a similar study (Shair et al., 2023) conducted in Mogadishu aimed at estimating the prevalence of, and factors associated with, the ingestion of indigestible foreign bodies (IFBs) in slaughtered goats, based on a sample of 250 animals. The study revealed that 36% of the goats had ingested non-digestible materials, the majority of which (79.1%) were identified as single-use plastic bags. In Kenya, a study by Otsyina et al. (2018) evaluated the knowledge, attitudes, and practices of people in Nairobi and Kajiado Counties regarding the use, disposal, and effects of plastic waste on sheep and goats (shoats). The study found that a significant proportion of respondents (44.5%, n = 143) identified livestock death as the ultimate consequence of plastic bag ingestion. Similarly, a retrospective (Sharma, 2011) study carried out in Gondar city of Ethiopia from 2004/05 to 2009/10 to observe the impact of plastic bags usage on environment and cattle health found an alarming outcome. Throughout the study period, out of 711 rumenotomies undertaken, in 111 (15.61%) and 600 (84.39%) cattle, emergency rumenotomy and elective rumenotomy were performed, respectively. The volume of the foreign bodies (FB's) collected from the rumen ranging from 0.75 to 2.0 kg in 28 animals (3.94%); 2.0 to 5.0 kg in 116 cattle (16.32%); 5.0 to 9.0 kg in 217 cattle (30.52%) and above 9.0 kg in 350 cattle (49.23%). In a similar vein, marine biodiversity is also experiencing plastic-induced pollution. A study by Akindele and Alimba (2021), which reviewed 42 research articles to assess the current status and implications for aquatic ecosystem health in Africa, found that polyethylene (commonly used in single-use plastic bags) was among the most prevalent plastic polymers observed in African aquatic environments, as wind and flooding transport plastic debris to distant grazing lands and marine ecosystems.

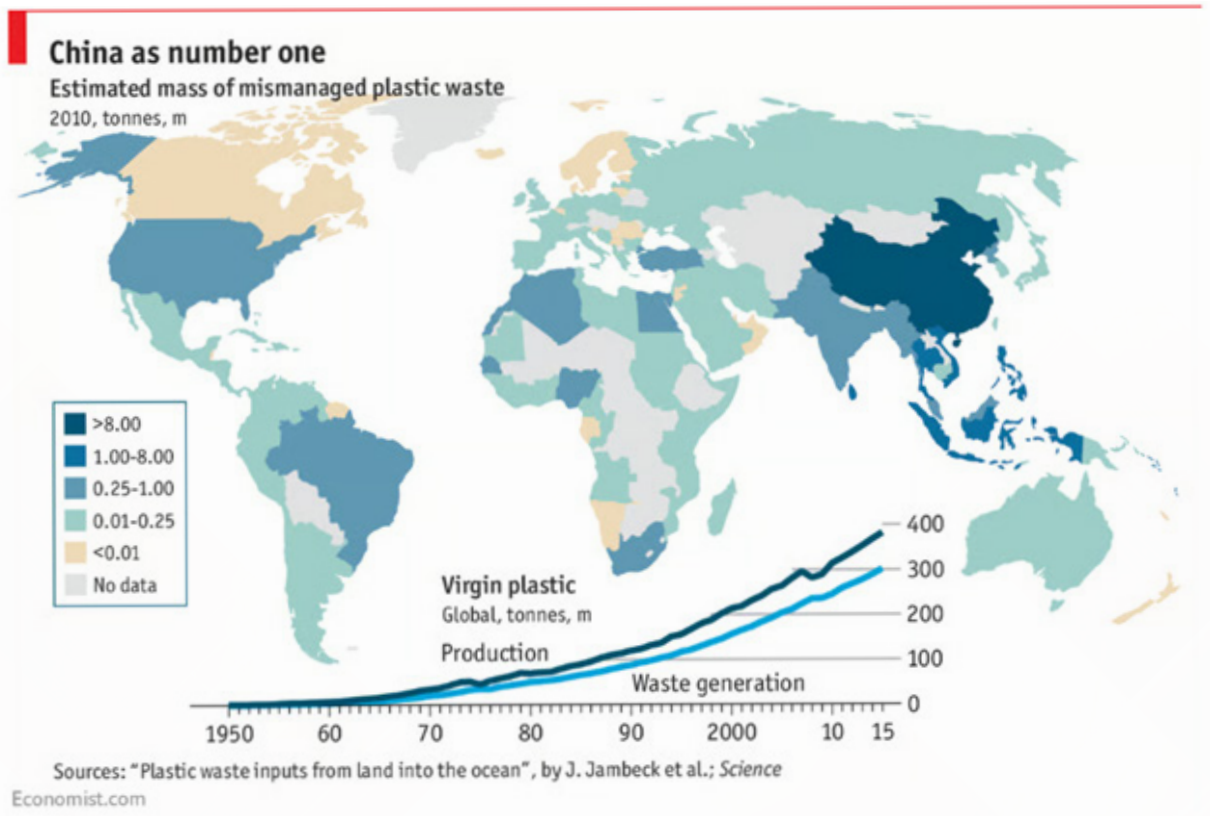
Besides polyethylene's effects on the natural environment and biodiversity ecosystems, its direct and indirect impacts on human beings are evident. Improper plastic waste management practices have also contributed to the loss of human lives due to flash floods caused by blocked drainage systems. This is evidenced by an article published in The Wall Street Journal by Hinshaw (2015), which reports a tragic incident in Accra, Ghana, where 150 people lost their lives during a heavy

downpour as a result of packaging and other plastic bags waste accumulated and clogged drains. However, although explained in detail in the recommendation section, there is an urgent need for a paradigm shift in the manner single-use plastic bags are used and disposed of at Federal and State level administrations.

The table below provides a thematic summary of the adverse effects of single-use plastic bags, supported by corresponding evidence-based sources.

Sector	Type of Impact	Description	Supporting Source
Environment	Land Pollution	Plastic waste litters streets, open dumps, and coastal areas.	(Isak, 2021; Adane & Muleta, 2011; Islam & Khan, 2024)
	Marine Pollution	Contaminates waterways, threatening aquatic life and fisheries.	(Akindele & Alimba, 2021; Ryan, 2015)
Livestock / Pastoralism	Animal Health	Ingestion causes digestive blockages; 36% of goats studied had plastic in their stomachs.	(Shair et al., 2023; Sharma, 2011; Fasil, 2016)
	Economic Loss	Impaired health reduces livestock productivity and herder income.	(Shair et al., 2023; Otsyina et al., 2018; Shair et al., 2023; Sharma, 2011; Isak, 2021)
Urban Infrastructure	Drainage Block-age	Clogging of drains leading to flooding risks at world's poorest nations	(Bahri, 2005; Isak, 2021; McVeigh, 2023; Nyathi & Togo, 2020)
	Waste System Strain	Municipal services overwhelmed by non-biodegradable materials.	(Hussein et al, 2018)

Public Health	Disease and human life-threatening Risks	Blocked drains create stagnant water, breeding grounds for mosquitoes and disease, and loss of human lives due to plastic blocked drains-induced floods.	(Ryan, 2015; Isak, 2021; Nyathi & Togo, 2020)
	Toxic Emissions	Burning plastic waste emits harmful toxins.	(ShabelleMedia, 2024)



3. Problem Framing

According to the available literature, the analysis of the root causes of the problem falls under two main categories, as elaborated in detail below:

a) Market Failure: Hidden Costs and Public Ignorance

The detrimental ramifications of Somalia's rampant plastic usage and inadequate disposal practices reveal a twofold failure—market and governmental—which intricately intertwine to exacerbate the crisis. At the heart of the market failure lies the prevalence of externalities stemming from plastic bags, as expounded by Bahri (2005) and Nyathi & Togo (2020). These seemingly innocuous items carry hidden societal costs unaccounted for in their production and use, unleashing a cascade of environmental degradation, wildlife endangerment, and the persistence of non-biodegradable waste in delicate ecosystems. However, the repercussions of single-use plastic bags in Somalia extend beyond mere environmental degradation; they inflict significant losses within the fabric of livelihoods, notably in the realm of livestock—an issue of paramount concern for both impoverished pastoralists and urban dwellers. The tragic toll manifests in the countless animals that have perished due to inadvertently ingesting plastic bags while scavenging for sustenance as revealed by (Isak, 2021) and (Shair et al., 2023). This grim reality demonstrates an unquantified economic loss, amplifying the gravity of the situation. This is further compounded by the second level of market failure, information asymmetry plaguing plastic bag producers, traders, and consumers. The lack of adequate information about the adverse effects of the single-use plastic bags available to consumers regarding the usage, disposal and recycle perpetuates uninformed and widespread consumption. Without comprehensive knowledge about the implications of their choices, consumers unwittingly contribute to the escalating consumption and disposal of these hazardous materials

b) Government Failure: Enforcement Lapses and Policy Gaps

Another notable contributing factor to the prevalence of trading, and use of single-use plastic bags is government failure as governments at national and state level fail to control dealing and consumption of plastic bags. This is because of the lack of enforcement of frameworks in place and poor disposal of waste. As stated by (Bahri, 2005) this is the second level of government failure, intuitional failure, where local councils fail to collect garbage and dispose in proper systems, like other African nations, poorly enforced frameworks on waste management were noted as one factor hampering sustainable waste management of plastic bags in Africa (Nyathi & Togo, 2020). However, the Federal and State level administrations also failed to provide education to the public on the adverse effects of plastic bags. For instance, a study conducted in Kebriderhar city of the Somali regional state of Ethiopia revealed that 76% of the respondents did not have information on the effect of solid waste on the environment and humans. However, this layer of failure is that lack of alternative biodegradable options that are economically viable to all social groups, politically feasible to implement, ecologically friendly, and politically feasible alternatives to plastic bags—thus entrenching reliance on harmful single-use option.

4. Modelling the Problem

To broadly address the challenges associated with plastic waste precisely bags in Somalia, I outlined various elements contributing to this multifaceted issue.

- Externalities and Unaccounted Costs: The utilization of single time use plastic bags (polyethylene) has resulted in a range of externalities, including wildlife endangerment, environmental degradation, soil erosion, and the persistence of non-biodegradable waste within ecosystems. Of particular concern is the momentous impact on livestock, with a substantial number of animals succumbing to the ingestion of plastic bags while foraging for sustenance. The monetary and intrinsic value to this externality highlights the enormous economic burden borne by communities, particularly impoverished pastoralists and urban poor residents.

- Evidence of Livestock Impact: single-use plastic bag wastes pose a notable threat to the health of livestock in Somalia (WHO, 2011). Many cases of Instances of inadvertent ingestion of plastic materials by animals, predominantly livestock, have been documented (Omer, 2018) (Shair et al., 2023) and (Otsyina et al., 2018). This assimilation occurs because of animals foraging for food in environments littered with single-use plastic bags wastes. The ingestion of single-use plastic bags can lead to unembellished health complications among livestock, triggering digestive issues, blockages, and, in some cases, fatal outcomes like death as documented by Otsyina et al., 2018. This phenomenon has been observed in various studies conducted across Somalia (OCHA, 2005), shedding light on the immediate and direct impact of single-use plastic bags wastes on the health and livelihoods of livestock-keeping communities in Somalia.

- Asymmetric Information in Plastic Consumption: A life-threatening aspect contributing to the tenacity of this problem is the lack of adequate information dissemination among single-use plastic bag producers, traders, and consumers. Notably, consumers, often unaware of the far-reaching implications of single-use plastic bags on the natural environment and both terrestrial and marine ecosystems, continue to engage in uninformed consumption practices, aggravating the issue and perpetuating the cycle of plastic waste generation. Even more troubling, producers of single-use plastic bags—particularly in the context of Somalia—fail to provide any sustainability labeling, let alone information on their environmental impacts

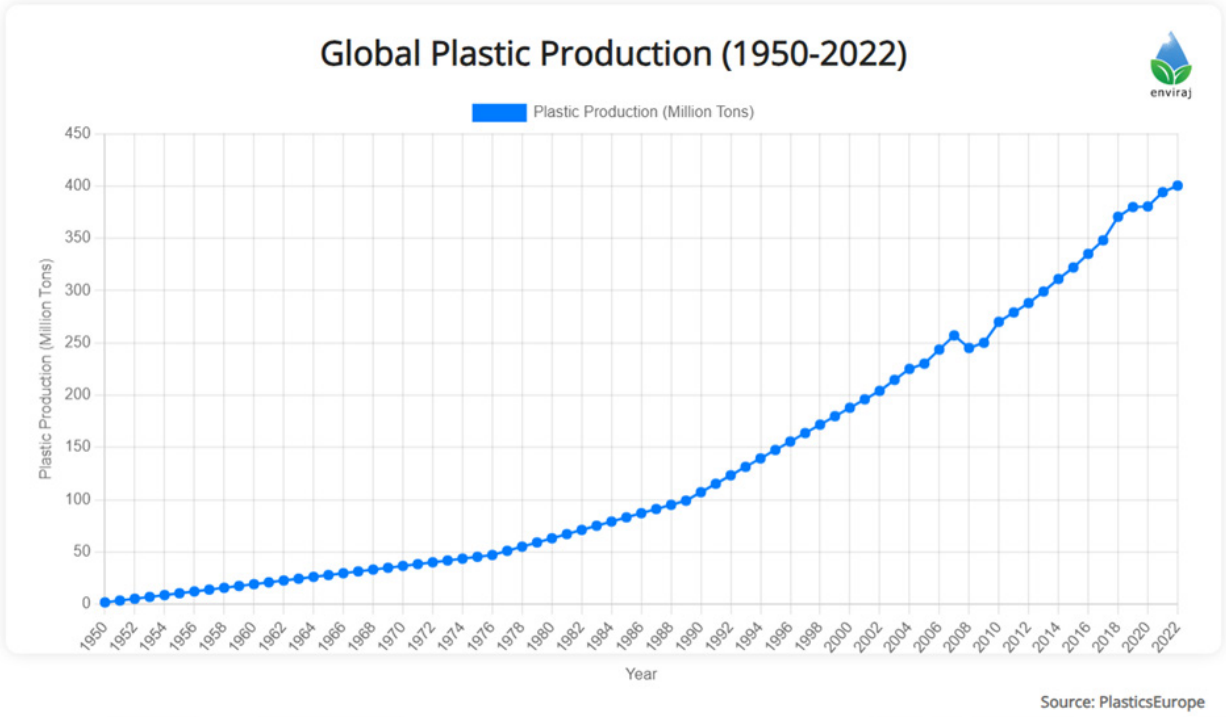
5. Future Trends and Projections:

Considering the escalating global estimates of plastic production—amounting to 6.3 billion tonnes from 1950 to 2018—with only 9% recycled, 12% incinerated, and the remaining 79% discarded in landfills or the natural environment (Economist, 2018). Strikingly, the United Nations Environment Programme's (UNEP) Global Waste Management Outlook 2024 report presents three scenarios.

- Scenario 1 envisions a continuation of current waste management practices, implying that waste production— including plastics —and management efforts will grow at the current pace, with particular concern for countries with fragile waste management systems.

- Scenario 2 predicts that waste will be brought under control, reflecting moderate progress in waste prevention and management.

- Scenario 3 envisions a future in which waste generation is decoupled from economic growth through the adoption of a circular economy, where the global municipal solid waste -MSW- recycling rate reaches or exceeds 60%, with remaining being handled safely. However, given the global plastic waste projections, the current outlook of Somalia's single-use plastic bag management practices, and the consistent rise in plastic consumption trends, Somalia faces an imminent surge in plastic waste accumulation—particularly from single-use plastic bags and related products. In the absence of contextually tailored policies, these trends are likely to exacerbate existing challenges, posing serious threats to natural habitats in both marine and terrestrial environments and undermining the long-term sustainability and integration of these ecosystems.



Modeling these facets of the single-use plastic bag waste problem in Somalia offers insights into the complexity and urgency of addressing this issue. Understanding of the relevant stakeholders towards these elements lays the foundation for formulating effective policies and interventions to mitigate the adverse effects of plastic waste on the nation's environment and communities.

6. Policy Goals & Impact Criteria

Effective policy formulation for curbing the single-use plastic bags in Somalia requires clear delineation of goals and assessment criteria to measure the impact of interventions. In the context of managing single-use plastic bags waste in Somalia, the following goals and impact criteria are pivotal:

Efficiency

This criterion assesses whether the policy delivers maximum societal benefits at the lowest possible cost. An efficient policy would internalize the environmental and health costs associated with plastic bag use—such as pollution, flooding, and livestock loss—while promoting cost-effective alternatives and reducing the burden on public infrastructure. Efficiency also includes minimizing waste in resource allocation and ensuring that interventions deliver measurable outcomes.

Equity

Focuses on the fair distribution of costs and benefits across different social groups. In the Somali context, a policy must address how vulnerable populations—such as pastoralists and low-income urban residents—disproportionately suffer from plastic pollution. An equitable policy ensures inclusive participation, protects at-risk groups, and promotes justice in environmental governance.

Biodiversity Impact

This criterion evaluates the extent to which the policy protects terrestrial and marine biodiversity. A strong policy goal would aim to reduce the harmful effects of plastic bag pollution

Political Feasibility

This criterion measures the likelihood that the policy can be adopted and implemented effectively within the political and institutional context of Somalia. It considers government capacity, stakeholder alignment, public support, legal infrastructure, and resistance from vested interests. Politically feasible policies are those that can secure buy-in from key actors, be realistically enforced, and align with both national priorities and local governance dynamics.

7. Solution Analysis

a. Status Quo

Efficiency: The current approach to single-use plastic bag management in Somalia is highly inefficient. There are no well-established systems for collection, sorting, or recycling of plastics.

Plastic bags are cheap to produce and widely accessible, but their post-consumption externalities—such as environmental degradation, health risks, and livestock deaths—are not internalized into their market price. The absence of a regulatory or economic framework to address these externalities (e.g. producer responsibility schemes, taxes, or bans) leads to unchecked consumption and unmanaged waste, resulting in high long-term costs for public health, livelihoods, and ecosystems.

Moreover, public sector inefficiencies, such as the failure of municipal waste services and absence of landfill management, compound the issue.

Equity: The distributional impacts of plastic bag pollution are highly inequitable. Poorer groups—such as pastoralists, informal workers, and peri-urban residents—bear disproportionate burdens.

Livestock deaths caused by plastic ingestion directly affect pastoralist income and food security. Urban slum dwellers suffer from flooding and blocked drainage caused by accumulated plastics, which can lead to health hazards.

Meanwhile, wealthier consumers and businesses continue to benefit from the low cost and convenience of plastic bags without bearing the environmental costs. Additionally, there are few inclusive education or policy initiatives targeting marginalized groups or offering affordable, accessible alternatives.

Biodiversity Impact : The impact on biodiversity is severely negative. Evidence from Somalia and similar contexts shows that single-use plastic bags significantly harm terrestrial and marine biodiversity. Wildlife ingestion of plastics leads to mortality, particularly among ruminants such as cattle, goats, and camels. Marine ecosystems suffer from microplastic pollution, with plastic bags ranking among the most prevalent pollutants in African aquatic systems. These effects threaten ecological resilience, food chains, and long-term natural resource sustainability, with limited monitoring or conservation efforts in place.

Political Feasibility : Currently, political will and institutional capacity are weak, though not entirely absent. There have been isolated policy statements and some regional-level discussions about banning or reducing plastic use. However, there is no consistent federal or state-level enforcement, legal framework, or budgetary commitment to tackle the problem. Regulatory agencies are under-resourced, and enforcement mechanisms (e.g. fines, bans, public education) are not operational. Moreover, the absence of viable alternatives to plastic bags (and political investment in such alternatives) reduces the feasibility of change. Resistance from traders and producers who benefit economically from the status quo may further undermine policy efforts.

b. Implementation of Single Time Use Plastics Bans and Levying Taxes

Efficiency: This solution aims to drastically reduce the consumption and production of plastic bags by imposing bans or levying taxes. Immediate short-term effects may include a visible decline in single time use plastics including plastic bag usage, leading to reduced waste generation.Moreover, public sector inefficiencies, such as the failure of municipal waste services and absence of landfill management, compound the issue.

Equity: However, this approach might disproportionately affect marginalized communities reliant on inexpensive plastic bags for daily necessities, potentially leading to social equity concerns such as internally displaced populations, and economically marginalized groups.

Biodiversity Impact : While measures to curb plastic pollution are effective in addressing immediate environmental concerns, their long-term impact on biodiversity conservation may be even more profound, as they contribute to the restoration and maintenance of healthier ecosystems in both terrestrial and marine environments

Political Feasibility : The implementation of regulatory instruments such as bans or taxation on single-use plastics may encounter resistance from specific industry actors or community groups, thereby complicating political acceptance and enforcement mechanisms. Although the Federal Government of Somalia and some of its member states, including Puntland and Somaliland, have attempted to ban the import and domestic use of single-use plastic bags, the success of the implementation of such policies still seems minimal. The ban from the Federal Government could also be hampered by the quasi-political autonomy behavior of the member states, since the ports at the state level are administered by the member states, which could affect the implementation of such policies by any member state itself. In a similar case, Kenya, a neighboring nation to Somalia, is also experiencing challenges in the implementation of such policy due to the smuggling of banned single-use plastic bags across the border from neighboring countries, including Somalia (Wahinya & Mironga, 2020). Notably, in the context of Somalia, this challenge could be further aggravated

by the disproportionate influence of private sector actors—particularly business networks involved in the production and trade of plastic products—who often possess greater political leverage than public regulatory institutions. Their capacity to resist or undermine policy measures that align with the broader public interest, such as environmental protection, is undeniable and represents a significant barrier to the effective enforcement of single-use plastic regulations

As summarized by Nyathi & Togo, (2020) the below table is the examples of African countries that have enacted legislation to control the use of single-use plastic bags with slight additional revisions in Somalia cell.

Country	Year
Benin	2017
Botswana	2007 and 2017 (ban reinstated)
Burkina Faso	2014
Cameroon	2014
Cape Verde	2016
Chad	2005
Cote d'Ivoire	2014
Djibouti	2016
Egypt	2017
Eritrea	2005
Ethiopia	2016
Gabon	2010
Gambia	2015
Ghana	2015
Guinea-bissau	2016
Kenya	2007, 2011 and 2017 (ban reinstated)
Madagascar	2015
Malawi	2015
Mali	2013
Mauritania	2013
Mauritius	2016
Morocco	2015
Mozambique	2016
Niger	2014
Nigeria	2014

Republic of the Congo	2012
Rwanda	2004 and 2008 (ban reinstated)
Senegal	2015
Somalia	Somaliland, a self-declared autonomous region, initially banned single-use plastic bags in 2005, with the ban reinstated in 2015. The Federal Government of Somalia introduced a nationwide ban in 2024
South Africa	2004 (levy)
Tanzania	2006
Togo	2014
Tunisia	2017
Uganda	2007
Zimbabwe	2010

c. Introduction of Incentives for Biodegradable Alternatives

Efficiency: Encouraging the adoption of biodegradable alternatives to plastic bags could considerably mitigate environmental damage. This solution could promote behavioral shifts towards more eco-friendly options.

Equity: Affordability and accessibility of these alternatives might present barriers, particularly for economically marginalized groups including IDPs, and pastoralists, raising concerns about equitable access.

Biodiversity Impact : Biodegradable alternatives can substantially reduce long-term harm to biodiversity and ecosystems by off-putting non-biodegradable waste in ecosystems

Political Feasibility : The success of this solution relies substantially on effective government subsidies or incentives, necessitating contextually grounded transition and implementation strategy. This may require external funding support as the Federal Government and its Member states may not be fully capable of subsidizing the incentives of the alternatives.

d. Community Engagement and Awareness Campaigns

Efficiency: Educating and sensitizing communities about the impacts of plastic waste on different layers of ecosystems and biodiversity in the short and long run and promoting responsible disposal practices can tempt behavioral changes, reducing plastic waste generation.

Equity: This approach has the potential to reach diverse demographics, promoting equitable access to knowledge and encouraging widespread participation in waste management initiatives.

Biodiversity Impact : Improved awareness of the communities, along with responsible use and disposal of plastic waste—particularly plastic bags—can indirectly benefit biodiversity by reducing pollution levels in natural habitats across both marine and terrestrial ecosystems.

Political Feasibility : Implementing awareness campaigns to educate communities about the environmental impact of plastic bags requires coordinated collaboration among government actors, non-governmental organizations, and local communities, necessitating strong political will and adequate resource allocation. However, the process may be hindered by regulatory capture, particularly from influential private sector groups that are economically reliant on the plastic trade or special interest groups.

e. Recycling of Single-Use Plastic Bags

Efficiency: Recycling options of single-use plastic bags aim to reduce environmental waste while retaining the economic utility of plastic materials. While not as immediately impactful as bans or taxes in curbing usage, recycling can gradually decrease the volume of plastic waste entering the environment. Although this option will internalize the environmental and health (human and animal) cost of plastic bags waste, and yield a tangible societal benefit, however, due to the access to affordable and reliable energy in Somalia, this option will be economically resource-intense and may require government sub-side if private actors are involved in this effort.

Equity: The recycling option may offer more inclusive participation opportunities compared to outright bans, particularly for low-income populations - such as IDPs - and informal sector workers who may rely on plastics for income generation. If contextually and appropriately designed, this option can create livelihood opportunities in collection, sorting, and processing, potentially benefiting vulnerable groups, including displacement affected groups and youth in urban informal dwellings.

Biodiversity Impact : While this option (recycling) will not eliminate plastic use, it can significantly reduce the accumulation of plastic waste from the single-use plastic bags in natural environments, thereby reducing risks to biodiversity at different ecosystems. Effective and context-tailored recycling systems can help the target administrations prevent plastics from entering marine and terrestrial ecosystems, meanderingly supporting biodiversity conservation efforts by minimizing ingestion and entanglement threats to livestock, wildlife, and aquatic ecosystems and biodiversity.

Political Feasibility : In the context of Somalia, recycling option may face fewer political challenges compared to bans and levying taxes, as they are often perceived as more socially and economically palatable. Private sector actors, including those invested in plastic production and trade, might be more supportive of recycling initiatives, especially if -by any means- incentivized through public-private partnerships or subsidies. Nevertheless, in the context of Somalia, where fragile governance systems and weak institutional capacity, limited infrastructure, and lack of regulatory oversight can undermine implementation.

8. Recommendation:

Policy Recommendations

Addressing the challenge of single-use plastic bag pollution in Somalia requires a coherent, integrated policy response that directly confronts the underlying market, governance, and information failures identified in this analysis. Isolated bans or awareness campaigns, implemented in the absence of institutional capacity and economic alignment, are unlikely to deliver sustained results. The following recommendations are presented in a narrative format, combining analytical explanation with structured bulleting to enhance clarity and usability for policymakers

1. Internalize Environmental and Livelihood Costs through a Targeted Plastic Levy

A core driver of plastic bag overuse in Somalia is market failure, whereby the substantial environmental, livestock, and public health costs associated with plastic bags are not reflected in their market price. As a result, plastic bags remain artificially cheap and widely consumed, while the costs of pollution—such as livestock deaths, flooding, and ecosystem degradation—are borne disproportionately by pastoralists and low-income urban communities.

To correct this imbalance, it is recommended that the Federal Government of Somalia, in collaboration with Federal Member States, introduce a targeted levy on single-use plastic bags at points of importation and wholesale distribution. Rather than imposing an immediate blanket ban, levy allows for gradual behavioral change while minimizing adverse impacts on vulnerable populations who rely on low-cost packaging.

Key elements of this recommendation include:

- Differentiating levy rates based on bag thickness and recyclability to discourage the most harmful products;
- Legally ring-fencing revenues to ensure transparent allocation toward:
    - Municipal drainage maintenance and flood-risk reduction;
    - Livestock protection and veterinary outreach in pastoral areas;
    - Seed funding for recycling initiatives and biodegradable alternatives.

2. Protect Pastoral Livelihoods through the Establishment of Plastic-Free Livestock Zones

Evidence presented in this policy analysis demonstrates that single-use plastic bags are a major cause of livestock morbidity and mortality across Somalia. Plastic ingestion by cattle, goats, and camels represents not only an environmental concern but a direct threat to livelihoods, food security, and national economic stability.

Given the centrality of livestock to Somali society, plastic policy must explicitly incorporate pastoral livelihood protection. This can be achieved through the creation of Plastic-Free Livestock Zones in high-risk areas, including:

- Major grazing corridors and rangelands;
- Livestock markets and holding areas;
- Abattoirs and watering points in peri-urban zones.

Within these zones, the distribution and use of single-use plastic bags should be restricted or prohibited, supported by:

- Regular waste collection and clean-up campaigns;
- Community-led monitoring and reporting mechanisms;
- Provision of affordable alternative packaging materials.

3. Strengthen Implementation through Decentralized Enforcement Mechanisms

The persistence of plastic bag pollution despite formal bans highlights a critical governance failure rooted in weak enforcement capacity and fragmented authority between federal and state institutions. While national-level policies exist, enforcement is undermined by limited institutional reach, state-level control over ports, and inconsistent local implementation.

To overcome these constraints, plastic bag regulation should be operationalized through a decentralized enforcement model based on subsidiarity. Under this approach:

- The Federal Government sets minimum standards, import controls, and national targets;
- Federal Member States and municipalities enforce regulations through localized bylaws, inspections, and penalties;
- Port authorities integrate plastic controls into customs and licensing procedures.

To incentivize compliance, enforcement performance should be linked to:

- Intergovernmental fiscal transfers;
- Urban service and infrastructure grants;
- Environmental performance benchmarks.

4. Address Information Asymmetry through Livelihood-Centered Risk Communication

Although awareness of plastic pollution exists in Somalia, high consumption persists due to information asymmetry and the limited relevance of existing environmental messaging. Abstract narratives around environmental degradation often fail to resonate with communities facing immediate livelihood pressures.

To correct this imbalance, public awareness strategies should be reframed around tangible economic and livelihood risks, particularly those affecting livestock health. Risk communication should emphasize:

- Empirical evidence of plastic ingestion in livestock and associated mortality;
- Economic losses borne by pastoral households due to plastic pollution;
- Links between improper plastic disposal, flooding, and human health risks.

Dissemination should utilize trusted local channels, including:

- Community radio and mobile outreach;
- Veterinary extension services;
- Religious leaders, elders, and local councils.

5. Mitigate Regulatory Capture through Incentive-Compatible Private Sector Engagement

The analysis highlights the disproportionate influence of private sector actors involved in the importation and trade of plastic products, whose economic interests can undermine regulatory enforcement. Purely punitive approaches risk provoking resistance, evasion, and regulatory capture.

To address this challenge, plastic policy should incorporate incentive-compatible mechanisms that align private sector interests with public objectives. Recommended actions include:

- Establishing conditional public–private partnerships for plastic recovery and recycling;
- Requiring importers and distributors to co-finance take-back schemes as part of licensing conditions;
- Offering tax relief or regulatory incentives linked to verified plastic recovery and recycling performance.

Plastic waste contributes directly to urban flooding by blocking drainage systems, thereby exacerbating the impacts of heavy rainfall and climate variability. Despite this clear linkage, plastic management remains largely disconnected from disaster risk reduction and climate adaptation frameworks.

It is therefore recommended that plastic waste reduction be formally integrated into:

- National and municipal climate adaptation strategies;
- Urban flood mitigation and drainage maintenance plans;
- Disaster risk financing and resilience programming.

Overall Policy Implication

Collectively, these recommendations underscore that effective management of single-use plastic bags in Somalia requires an integrated governance approach that internalizes costs, protects livelihoods, decentralizes enforcement, and aligns incentives across actors. Plastic pollution in Somalia is fundamentally a political economy challenge, and addressing it demands policies that are environmentally sound, socially equitable, and institutionally realistic.

9. Conclusion:

The management of single-use plastic bag pollution in Somalia represents a complex and deeply embedded policy challenge that extends beyond environmental degradation alone. As demonstrated throughout this analysis, plastic waste in Somalia is the outcome of intertwined market failures, institutional weaknesses, and information asymmetries that collectively externalize environmental and livelihood costs onto vulnerable communities—particularly pastoralists and low-income urban residents. Consequently, no singular intervention, whether a ban, awareness campaign, or recycling initiative, can adequately address the scale or structural nature of the problem.

This paper sheds light on the necessity of a comprehensive and integrated policy response that simultaneously internalizes the hidden costs of plastic use, protects critical livelihood systems, strengthens decentralized enforcement, and aligns incentives across public and private actors. Effective plastic waste management in Somalia must therefore move beyond symbolic regulation toward a pragmatic governance model that reflects political realities, economic constraints, and social equity considerations.

Government institutions at both federal and state levels have a central role to play in this transition. This includes establishing policy instruments that correct market distortions—such as targeted levies with ring-fenced revenues—while ensuring that enforcement authority is devolved to institutions best positioned to act, including municipalities and port authorities. Equally important is the explicit integration of plastic management into broader policy domains, notably livestock protection, climate adaptation, and urban flood risk reduction, where the consequences of plastic pollution are most acutely felt.

At the same time, meaningful progress depends on the constructive engagement of non-state actors. The private sector must be incorporated through incentive-compatible mechanisms that encourage compliance and investment in recovery and recycling, rather than through purely punitive approaches that risk regulatory capture and non-enforcement. Civil society organizations, research institutions, and the media are equally vital in generating evidence, supporting policy learning, and facilitating accountability.

Community engagement and risk communication remain indispensable pillars of any sustainable solution. However, as this analysis demonstrates, awareness efforts must be grounded in locally relevant livelihood and health risks—particularly livestock losses and flood-related hazards—rather than abstract environmental narratives. Empowering communities with actionable, context-specific knowledge is essential for fostering behavioral change and social ownership of plastic waste management initiatives.

Finally, equitable resource allocation is fundamental to ensuring both effectiveness and legitimacy. Investments in waste collection, drainage maintenance, and alternative materials must prioritize underserved and high-risk areas, where the social and economic costs of plastic pollution are greatest. Continuous monitoring, adaptive implementation, and policy learning will be necessary to respond to evolving consumption patterns and institutional constraints.

In sum, Somalia's pathway toward sustainable plastic waste management hinges on the adoption of an integrated, politically feasible, and equity-sensitive strategy. By aligning environmental regulation with livelihood protection, decentralized governance, and resilience-building objectives, Somalia can transform the plastic waste challenge from a persistent liability into an opportunity for improved environmental stewardship, economic resilience, and long-term sustainable development.

Appendix 1: Policy Analysis Matrix

Criteria	Status Quo	Plastic Ban & Tax	Biodegradable Alternatives	Awareness Campaigns	Recycling Initiatives
Efficiency	Low	High	Medium	Medium	Medium
Equity	Low	Low	Medium	High	High
Biodiversity Impact	Low	High	High	Medium	Medium
Political Feasibility	Low	Low	Medium	Medium	Medium

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