

ENVIRONMENTAL CONSEQUENCE OF THE PLASTIC WASTE MANAGEMENT SYSTEM IN THE BANADIR REGION

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Received 3 Oct 2023
Revised 8 Dec 2023
Accepted 10 Jan. 2024

ABSTRACT

This Academy study aims to establish the environmental impact assessment conducted on the solid waste management system in Mogadishu City. This research examines the primary objective of the EIA was to evaluate the potential environmental impacts resulting from the city's garbage collection and disposal practices. The assessment conducted by the researcher considered various factors, including waste generation, effectiveness of collection, transportation implications, treatment and disposal methods, as well as health and social impacts. Additionally, suggested mitigation actions were also taken into account during the assessment. The outcomes of the EIA clearly emphasized the critical importance of implementing improved waste management procedures to minimize adverse environmental consequences. Recommendations were made for initiatives such as waste reduction and recycling, adopting cleaner technology, and implementing pollution control measures. The findings of this EIA provide valuable

insights for the regional environmental agencies and the responsible waste management company in Mogadishu City. These insights will aid in making informed decisions to reduce negative environmental impacts and promote sustainable waste management practices.

INTRODUCTION

This investigation looks closely at how Mogadishu manages its solid waste. Mogadishu The previous several years (2012–2023) have seen a rise in local governments' investments of waste manage. As a result, the plastic trash in the area has steadily increased daily, creating gap after day, creating the gap that exists today between it and the rest of the solid plastic garbage.

Due to the rapid economic growth and urbanization of countries like China, the municipal plastic desert has rapidly increased and changed significantly in composition, placing a great deal of strain on the environment, human health, and disposal systems. (Wang and Nie, 2001).

In Beijing (i.e., Beijing City and the suburbs surrounding it)

Even though the daily generated volume currently exceeds 16,000 t, the 17 waste treatment and disposal facilities that are in operation have only 10,350 t of daily design capacity. These facilities are largely landfills. As a result of several of the facilities being overloaded, it is estimated that nine disposal sites would close during the next few years, much before the intended end of their service life. In this situation, planning is required before building new waste management facilities. It is still up for debate which technologies should be used and where they should be positioned, given the difficulty and subjectivity of technological evaluation and selection criteria.

(Zhao et al., 2007). Therefore, when choosing a future waste management system, a science-based environmental assessment of feasible and integrated waste management systems is helpful. (Huang et al., 2007).

Despite these acknowledged financial efforts, waste input investments have not been adequate to divert waste to recycling bins as opposed to dropping out.

To reduce the continuing disparity in results between efforts made in developing economies and those made in municipal ones.

Typical circumstances mirroring the state of affairs elsewhere in the city.

Significance of the Plastic managing in the region

It includes analyzing the composition of waste, identifying sources of waste generation (residential, commercial, industrial, etc.),

Waste treatment and recycling: examining plastic treatment technologies, such as those used to treat bags, boles, and single-use garbage. Waste Collection: Examining the methods and practices employed for waste collection, transportation, and storage.

Environmental and Social Impacts: Investigating the environmental and social impacts of poor waste management practices, such as pollution, climate change, health risks, and social inequalities. Assessing the benefits of sustainable waste management practices in terms of environmental conservation, resource recovery, and public health. Studying strategies and initiatives for promoting public involvement and engagement in waste management practices. Examining the roles and responsibilities of different stakeholders, including government agencies, waste management entities, and the private sector.

Objective of the Study

The scope of a study on solid waste management techniques can vary depending on the specific objectives and focus of the research. This includes evaluating the efficiency and effectiveness of collection systems, analyzing collection routes and schedules, and assessing the availability and accessibility of collection infrastructure.

However, a comprehensive study on this topic may encompass the following areas:

Waste Generation: Analyzing the policy framework and regulatory mechanisms related to waste management at local, regional, and national levels. Assessing the effectiveness of waste management policies and identifying gaps or areas for improvement. Examining the level of public awareness and perception of waste management issues.

Specific Objective: To Evaluate the impact of the Plastic in the City

To investigate the role of the Awareness to reduce using Plastic.

Methodology

To determine the clearly articulate the research question or objective of the study. It will help focus on research and guide the selection of appropriate legal sources and

methods. **Identify Relevant Legal Sources:** Determine the primary and secondary legal sources that are relevant to the research question. Primary sources include legislation (statutes, regulations), case law (court decisions), and constitutional provisions. Secondary sources include legal treatises, law review articles, and legal commentary. **Conduct Preliminary Research:** Begin your research by conducting preliminary research to gain a general understanding of the legal landscape and identify key legal principles, concepts, and precedents related to the research question. This can involve searching for legal databases, libraries, online resources, and relevant legal literature.

Analyze Legal Sources: Once the relevant legal sources have been identified, carefully analyze and interpret them in relation to the research question. This may involve reading and summarizing statutes, reviewing court decisions, and examining legal commentary to understand the legal principles and arguments surrounding the issue. **Compare and Contrast:** Compare and contrast different legal sources and perspectives to gain a comprehensive understanding of the topic. Identify similarities, differences, and any conflicting legal interpretations or precedents.

Synthesize Findings: Summarize and synthesize the key findings and arguments from the legal sources. Identify the legal principles, rules, and precedents that are most relevant to the research question. This may involve organizing the information into an outline or framework to facilitate analysis and understanding.

Apply Legal Analysis: Apply legal analysis to the specific facts or context of the research question. Interpret the law and legal principles in light of the specific circumstances, and consider any relevant legal tests, standards, or factors that may apply.

Draw Conclusions and Recommendations: Based on the analysis of the legal sources and application of legal principles, draw conclusions and formulate recommendations. These conclusions and recommendations should be supported by the legal authorities and arguments identified during the research process.

Document and Cite Sources: Properly document and cite all legal sources consulted during the research process. Use appropriate citation methods, such as the Blue book or other widely recognized legal citation styles, to ensure accuracy and enable others to locate and verify the legal authorities.

It is important to note that legal research may involve iterative and ongoing processes, as

new legal developments and precedents may emerge that could impact the research findings. Therefore, it is necessary to act updated on the current legal improvement and revisit the research periodically to ensure its currency and relevance.

To Evaluate the impact of the Plastic in the City

To evaluate the impact of plastic in a city, you would typically assess various aspects related to plastic consumption, waste management, and environmental effects. Here are some key areas to consider:

1. **Plastic Consumption:** Evaluate the amount of plastic consumed in the city by analyzing data such as plastic production, imports, and sales. This information can be obtained from industry reports, government records, and market research.
2. **Plastic Waste Generation:** Determine the quantity of plastic waste generated within the city. This can be done by studying waste management reports, conducting waste audits, or analyzing data from recycling facilities and landfills.
3. **Waste Management Infrastructure:** Assess the city's waste management infrastructure, including recycling facilities, landfill

capacity, and waste collection systems. Evaluate the effectiveness of current practices in handling plastic waste and identify any gaps or areas for improvement.

4. **Recycling Rates:** Calculate the recycling rates for plastic waste in the city. This involves examining the proportion of plastic waste in Mogadishu that yet not successfully to recycled versus the areas that is well done or disposed of improperly.

5. **Environmental Impact:** Evaluate the environmental impact of plastic in the city by considering factors such as pollution, ecosystem disruption, and greenhouse gas emissions. Assess the effects of plastic waste on local water bodies, wildlife, and air quality.

6. **Public Awareness and Education:** Assess the level of public awareness and education regarding plastic consumption, waste management, and recycling. Look for initiatives, campaigns, or educational programs aimed at reducing plastic use and promoting sustainable practices.

7. **Policy and Regulations:** Evaluate existing policies and regulations related to plastic use and waste management. Determine if there are any bans or restrictions on single-use plastics, plastic bag usage, or other plastic products. Assess the enforcement and effectiveness of these measures.

8. **Alternatives and Innovations:** Identify any initiatives or innovations promoting the use of alternatives to plastic, such as biodegradable materials or reusable products. Evaluate their adoption rate and potential impact on reducing plastic consumption.

9. **Stakeholder Engagement:** Engage with key stakeholders, including government authorities, environmental organizations, businesses, and community groups. Understand their perspectives, challenges, and ongoing efforts to address plastic-related issues in the city.

By considering these factors, you can conduct a comprehensive evaluation of the impact of plastic in a city. This assessment can help identify areas for improvement and guide the development of sustainable practices and policies to reduce plastic consumption and mitigate its environmental impact.

To investigate the role of the Awareness to reduce using Plastic.

Investigating the role of awareness in reducing plastic usage is an important step in addressing the global plastic pollution problem. Increased awareness can lead to changes in consumer behavior, government policies, and corporate practices, all of which can contribute to reducing plastic

consumption. Here are some key aspects to consider when investigating the role of awareness in plastic reduction:

1. **Public Education:** Raising awareness about the environmental impact of plastic and the benefits of reducing its usage is crucial. Informing individuals about the harmful effects of plastic on ecosystems, wildlife, and human health can motivate people to make conscious choices to reduce their plastic consumption.

2. **Behavioral Change:** Awareness campaigns can aim to change individual behaviors by promoting unconventional to individual use plastics, as reclaimable bags, water bottles, and food incorporate. Encouraging responsible waste management, recycling, and composting practices can also be part of the awareness initiatives.

3. **Policy and Regulation:** Increased awareness can drive the improvement and enforcement of plan of action and regulations purpose at reducing plastic consumption. Governments can introduce how to promote extended producer of waste responsibility, and support the development of sustainable packaging alternatives.

4. **Industry Engagement:** Awareness campaigns can target businesses and industries to encourage them to adopt more sustainable practices. By highlighting the environmental and economic benefits of reducing plastic usage, companies may be motivated to find innovative solutions, invest in research and development, and implement sustainable packaging strategies.

5. **Collaboration and Partnerships:** Awareness initiatives can bring together different stakeholders, including governments, businesses, non-profit organizations, and communities, to collaborate on finding solutions to plastic pollution. Joint efforts can lead to the sharing of best practices, the development of innovative technologies, and the implementation of large-scale awareness campaigns.

6. **Monitoring and Evaluation:** It is important to assess the effectiveness of awareness campaigns in reducing plastic consumption. Monitoring changes in individual behavior, waste management practices, and policy outcomes can help measure the impact of awareness initiatives and identify areas that need further improvement.

By investigating the above aspects and conducting research on the impact of awareness campaigns on plastic reduction, we can gain valuable insights into the role of awareness in addressing the plastic pollution crisis. Ultimately, a combination of awareness, policy changes, industry engagement, and individual actions is necessary to achieve significant reductions in plastic usage and create a more sustainable future.

Environmental Challenges of Solid Waste

Improper disposal and accumulation of solid waste in public spaces has a detrimental impact on the environment. This leads to the spread of communicable diseases, contributes to flooding, and causes environmental problems.

The Banadir region is experiencing rapid urbanization and industrialization whole of the Region. Despite growing awareness of the environmental and health impacts of improper waste management, there is still a negative attitude towards maintaining good environmental conditions (Muiruri et al., 2020). Studies have revealed various problems facing urban development in the Banadir region, specifically regarding solid-waste management. These problems include

a lack of effectiveness of waste collection workers, neglect of basic solid waste direction strategies at the householders role to improper disposal performing. These issues pose a threat to the biology and public health of the region.

One of the key environmental impacts of solid plastic management systems in the Banadir region is the spread of communicable diseases. Wrong disposal of plastic waste, such as marketing in open spaces and emptying, creates machinery that recycling plastic in a productive goods and lepidopterist, to the human population. Moreover, the accumulation of solid waste in public spaces contributes to the contamination of water sources.

As waste leaches into the groundwater and nearby bodies of water, it can contaminate drinking water sources, leading to waterborne diseases and further compromising

The Role of the calcification waste Management

Calcification is a process that involves adding calcium compounds, such as lime or calcium carbonate, to solid waste materials to stabilize and reduce their volume. The calcification process can have a several

benefits in solid waste management, including:

1. **Stabilization of waste materials:** Adding calcium compounds to solid waste can help to stabilize and solidify the waste, making it less likely to release harmful substances or odors into the environment. This can also make the waste easier to handle and transport.
2. **Reduction of leachate:** The calcification process can help to reduce the amount of leachate that is generated waste materials, and it can contain harmful substances that can contaminate soil and groundwater. By stabilizing the waste, calcification can help to decrease the quantity of leachate that is generated and minimize the environmental impact of waste disposal.
3. **Volume reduction:** The calcification process can play to cut down the quantity of solid waste by solidifying, compacting the waste space necessary for waste powerlessness and extend the lifespan of landfills.
4. **Odor control:** Solid waste can produce unpleasant odors, which can be a nuisance for nearby residents. The calcification process can help to reduce odors by stabilizing the waste and reducing the amount of organic matter that is present.

In summary, the calcification process can be an effective tool in solid waste management, helping to stabilize waste materials, reduce leachate, minimize environmental impact, and control odors. Nevertheless, it is important to note that calcification is just one constituent of a all-inclusive solid waste management instrumentality, and it will be used in concurrence with other methods like as recycling, composting, and waste-to-energy conversion, to achieve sustainable waste management. Additionally, the cost and feasibility of calcification may vary depending on the location and the type of waste being treated, and it may not be an appropriate solution for all waste management challenges.

The Important of the Mogadishu Waste Management system

Prevention of infectious diseases that can endanger mothers and babies.

Reducing or minimizing the waste that occurs can be managed if there is infrastructure to manage the waste, such as hands, nose, forks, brooms, hand washing, and cars after sorting.

Legal Aspect

According Law No 49 biis 27 January 1980

Articke 6(8,10)

Questions regarding trash waste management

The process of Somalia's government became more effective.

Here, we discuss the procedures required to develop waste management.

What Is Garbage, First?

What waste types are there?

How is the waste management affected?

1. How does local government handle garbage?

2. What should it include, and whose companies should operate?

A procedure for open competition involving all participants and the creation of a committee to judge it?

3. Citizens' part in Mogadishu's garbage management.

Four Laws that outline the participants and potential liabilities of an action.

The Constitution, other laws, and rules of the Mogadishu municipal government apply.

Municipal waste is the most prevalent and significant source of waste in a community is municipal waste. It is garbage generated

during life by each person or family, regardless of how well or impoverished they are. Any community can be a valuable resource, but contemporary urban communities provide more resources. Urban garbage is burning in large measure, and the processes are costly and time overwhelming. Both liquid and solid wastes are enclosed in the Local Government garbage. Four districts, most of which were built for the storage of water, were plagued by the majority of liquid waste. Municipal rubbish, as well as plastics, are considered solid wastes.

Solid Waste means trash, waste, and other solid waste generated therefrom.

However, from residential, commercial, or government operations, or community act, and contain solids or liquid substances in municipal wastewater or dissolved to suspended solids in area wastewater, Irrigation runoff or other common water contaminants. solid waste

Contains liquid waste oil, pesticides, paints and solvents

hazardous waste. Solid waste treatment facility means an intermediate facility, transfer station, landfill, Composting facilities, recycling or recovery facilities, or sites used for reduction Consolidation,

conversion, handling, and disposal of plastic waste.

What is the significance of plastic-waste establishment in health of the Society?

Plastic waste management is very importance to the health of society for several reasons in academic perspectives on the significance of plastic waste management in relation to public health:

Environmental Impact: Inadequate management of plastic waste can result in environmental pollution. Plastics have a prolonged decomposition period, and when they accumulate in landfills or litter the environment, they can release hazardous chemicals and micro plastics. These pollutants have the potential to contaminate soil, water sources, drainage systems, and ecosystems, thereby posing risks to human health through the food chain and water supplies.

Human Health Risks: The presence of plastic waste can directly impact human health. Plastics often contain harmful chemicals, such as bis phenol and phthalates, which are recognized as endocrine disruptors. When individuals are exposed to these chemicals through the consumption of contaminated food or water, or through inhalation of micro plastics, it can lead to

adverse health effects, including hormonal imbalances, developmental complications, and heightened susceptibility to certain diseases.

Air Pollution: Improper disposal of plastic waste, such as burning it in open dumps, can result in the release of toxic gases that harmed full air, and other respiratory-related diseases. though our country has not yet achieved heavy Machines or productive factories.

Waste Management Challenges: Plastic waste poses challenges for waste management systems. The accumulation of plastic waste can strain existing waste management infrastructure, leading to inadequate disposal methods and increased pollution. Effective plastic waste management is crucial to prevent the overflow of landfills, the clogging of drainage systems, and the contamination of natural resources.

Social and Economic Implications: Plastic waste can have social and economic consequences for society. The accumulation of plastic waste in anywhere in the city may causes disease.this need for weariness in public spaces.And Also water bodies can affect tourism, hinder economic development, and decrease the aesthetic

value of communities. Additionally, the costs associated with cleaning up plastic waste and addressing its health impacts can place a burden on healthcare systems and government budgets. Addressing plastic waste management through sustainable practices, such as recycling, waste reduction, and proper disposal methods, can help mitigate these health risks and contribute to a healthier society and environment.

This involves directing and refining flexible waste to make it recyclable

What are the new rules regarding plastic waste disposal?

Classification of plastics the new rules classify credit cards into three types.

- (a) Category 1 includes heavy plastic bundles.
- (b) Category 2 includes bendable flexible bundles, flexible sheets, transfer bags, flexible fragrances or Includes pouch.
- (c) Category 3 includes flexible multi-hide wrappings (at least one layer of flexible material and not a completely separate layer separate from flexible material)

Solid trash is broken down into: a) plastic, which comprises plastics and bags, most of which impede the development of Mogadishu.

Conclusion

The author's research will help create a sustainable solution with water companies to hold a conference so that the management of all types of trash is not hampered by plastic. Plastics must be handled by the government as well as a method to prevent it. different. b) Other solids, including packets of leftover food and common waste, are the easiest to identify and plan for the Mogadishu Local Government because the majority vanish in fire and soil.

This suggests the researcher's contribute to creating a sustainable solution for plastic waste management in collaboration with water companies and the government. The aim of this study is to address the challenges posed by plastic waste and develop methods to prevent its negative impact. Additionally, other types of solid waste, such as leftover food and general waste, can be more easily managed by the Mogadishu Local Government or Company as they tend to decompose naturally through fire and soil processes. Although the specific context and details is important to note that addressing plastic waste management requires a comprehensive and multifaceted approach. Collaboration between various stakeholders, including **water companies, government bodies, and the local community**, and waste

Company, can help develop effective strategies. These strategies include plastic collection instrumentality, recycling initiatory, public awareness campaigns, and policy interventions. Regarding other types of solid waste, it is essential to consider proper waste management practices, beyond relying solely on natural decomposition processes. While certain types of waste may decompose naturally, it is still important to ensure that they are properly collected, segregated, and disposed of to prevent environmental pollution and health hazards. Implementing comprehensive waste management systems that account for different types of waste can contribute to cleaner and healthier environments.

It is worth noting that specific waste management practices and solutions vary depending on the local context, infrastructure, and resources available. Therefore, it is important to tailor the approach to the specific needs and challenges of Mogadishu and any other region.

A contemporary strategy for waste management

In an industrialized world, garbage is recycled to create usable products for society. However, Somalia continues to be a place where medical waste is dumped, and much of it contains toxins and chemicals that can lead to life-threatening diseases.

Domestic waste management requires a cooperative approach,

in which each person performs a distinct function. As an illustration, suppose the Mogadishu trash is divided into four sections: Walo Ade part, Central part, Eastern part and Western part. Additionally, waste disposal is necessary, which can be performed daily. Citizens role their trash into its component parts so that it can be more readily disposed and processed rather than burned.

Local Government's Role

Legislation must be passed on to control the parties involved. Legislation governing waste management. Regulations and Policies. This legislation places restrictions on everyday labor and penalizes those who are slow, but it is obvious that those who carry out their tasks correctly will be rewarded.

Different committees will be given this job so that the smooth operation of the campaign against pollution will be a top priority for

regional and municipal administration in Mogadishu.

A supervisor in charge of easing the difficulties of maintaining the cleanliness of the area will collaborate with the Local Guard and the District Administration.

weekly campaigns by the local government. Sanitation personnel from the Mogadishu Local Government According to a thorough inquiry and my own experience, sanitation employees who work in challenging situations have not received the resources and care of the workers. As a result, they are currently making very little money, and nothing more has arrived during this period.

You can observe them early in the morning while working on their daily tasks, with moms and fathers sweeping the road. They play a significant role in the Mogadishu mean Streets they are from Local Government authority on the city's major highways.

These persons need transportation to work from family members, as well as unemployment assistance. This will aid in the City's work process as it carries out the rehabilitation of the workers.

A government dedicated to addressing the vulnerability of those who sacrifice so much for the country is necessary for the

development plan and activities to yield fruits.

Financial aspects.

The majority of the local government's sewers are not managed by the government and are being worked on.

Additionally, it will not be permitted in local government pipes that enter sewers without consent from the agency in charge of these duties. The Local Government Treasury will receive a direct deposit of penalty donors from abroad.

Companies requirements applying

Initial Competition in different requirements.

The majority of management plans are being tested by the organization and serve as manuals for what can be accomplished. Additionally, the Companies must be able to adhere to the best standards for handling waste: a) the business must be able to operate personnel and resources in the regional districts in both number and quality simultaneously. b) The business should recycle the waste rather than burn it to create a valuable product. c) The business is required to provide a written job description and the role it can play.

A company should be chosen in an open competition with participation from other companies, and it should be chosen based on its performance and assets.

The Company's selection procedure is being publicized, and there is a deadline to meet the requirements. Property owners had opportunities, even if they did not meet the requirements for choosing a waste management company.

Citizen's Role

By establishing Neighbors, Branches, and Departments, citizens play a significant role in the capital's aesthetic appeal. This orientation will take place in district departments where the administration's constitutional rights and responsibilities will be examined. The importance of citizens' involvement in enhancing the nation's beauty is emphasized. Citizens who have completed their duties receive incentives and awards effectively.

Poor Efficiency Awareness of the Public

Any trash organization strategy's effectiveness firstly rely on the populace's involvement. Awareness of the times and locations of garbage disposal also aids in forming a habit among the populace. Municipalities should raise awareness about

the implementation of the curbside. The services in charge of this objective should be available in areas and neighborhoods, regardless of the introduction of the collection system. Saidou, H. and Aminou, S. (2015)

In addition for each department, there will be a broadcast from the media, a broadcast from a vehicle, and a broadcast from several loudspeakers. For authors, there will also be a scientific discussion on waste management.

The Nationals will be given a prize in an open competition as well.

The lack of awareness among the population regarding waste management, specifically plastic waste, is a concern. The researcher highlighted the importance of raising awareness among individuals and communities to promote responsible waste-management practices. The following is a summary of the lack of effective awareness: Knowledge Gap: Many individuals lack knowledge about the environmental effect of plastic waste and the importance of plastic management. Studies have emphasized the need for education and information dissemination to bridge this knowledge gap. Behavior Change: Effective awareness campaigns can motivate individuals to change their behaviors and adopt more

sustainable practices. This includes reducing single-use plastic consumption, recycling, and the proper disposal of plastic waste. Academic research emphasizes the significance of targeted messaging and communication strategies in influencing behavioral change. Community Engagement: Academic studies emphasize the value of community engagement in waste governing body awareness in the villages of the districts in the Banadir region. Involving community members in decision-making processes and providing platforms for dialogue makes it easier to understand local challenges, promote ownership, and encourage collective action. Multi-Stakeholder: Cooperation among respective stakeholders, including government administrative body, non-governmental organizations, and educational institutions such as Schools, Universities, and community groups, is crucial for effective awareness. Academic research highlights the benefits of multi stakeholder partnerships in driving change at the individual, community, and systemic levels. Cultural and Contextual Circumstance: This study recognizes the importance of considering social and contextual component when designing awareness campaigns. Tailoring messages and approaches to specific cultural norms, languages, and socioeconomic contexts can

enhance awareness initiatives' effectiveness. Evaluation and Feedback: Academic research emphasizes the need for continuous evaluation and feedback mechanisms to assess the impact of awareness campaigns. Monitoring the effectiveness of awareness initiatives allows adjustments and improvements over time.

In summary, lack of effective awareness among the population requires a comprehensive and targeted approach. Academic studies stress the importance of education, behavioral change, community engagement, and collaboration among stakeholders to encourage responsible waste direction pattern and mitigate the environmental consequence of plastic waste.

Recommendation

To be emphasizing the serious problem of plastic garbage, particularly its detrimental effects on the environment and living things. Ecosystems and wildlife are severely harmed by plastic garbage, which includes objects such as bags, bottles, cups, and plates.

Plastics are renowned for their resilience to natural deterioration processes and longevity, particularly in single-use products. They can linger in the environment for hundreds of

years, causing pollution and ecological harm when improperly managed. Plastic garbage frequently enters aquatic environments, especially bodies of water, where it can endanger marine life by ingesting it or entangle it. The mention of cows and goats being wrapped in bags during the fall suggests a regional custom that might be harmful to the welfare of the animals. If animals eat, become into, or When tangled in plastic trash, it can result in serious health problems, accidents, or even death

.In order to solve the issue of plastic waste, it is critical to concentrate on lowering its production and use, promoting recycling and appropriate waste management techniques, and increasing awareness of the effects of plastic pollution on the environment. Implementing policies like banning plastic bags, promoting reusable alternatives, supporting recycling infrastructure, and educating the public on proper garbage disposal are all tasks that governments, communities, corporations, and individuals can help with it. In order to address the worldwide scope of the problem, efforts to reduce plastic waste also require innovation and research into creating environmentally friendly materials, bettering waste

management systems, and encouraging international cooperation.

It is possible to take coordinated action and apply sustainable techniques. The harmful effects of plastic trash can be reduced while safeguarding the environment and the health of all living things.

Conclusion

In finale, the Plastic waste protect system in the Banadir region has significant environmental impacts, which require urgent attention and improvement. Academic research has highlighted several key conclusions regarding the environmental consequences of current waste management practices.

Pollution of Land and Water: Inadequate waste management practices in the Banadir region contribute to the pollution of land and water resources. Improper disposal of solid waste, including plastics, leads to soil contamination and the release of harmful substances into water bodies, posing risks to ecosystems and public health.

Air Pollution: Inefficient waste management practices such as open burning of waste contributes to air environmental condition. The burning of solid waste releases

hazardous gases and particulate matter that can cause respiratory difficulty and other health effects in the local population.

Habitat Degradation: Improper waste disposal and inadequate collection systems result in degradation of natural habitats. Accumulation of waste in open spaces and water bodies not only disrupts ecosystems but also affects biodiversity and the overall ecological balance in the region.

Health Risks: The environmental impact of poor waste management extends to public health. Exposure to contaminated water, air pollution from waste incineration, and the presence of disease vectors in waste sites increases the risk of illnesses, including respiratory and gastrointestinal diseases, among the local population.

Aesthetics and Quality of Life: The presence of unmanaged solid waste negatively impacts aesthetics and quality of life in the Banadir region. Waste-filled streets, open dumps, and littered areas create unsightly and unhygienic environments that affect the well-being and overall livability of communities.

To address these environmental challenges, it is crucial to implement sustainable and comprehensive waste management strategies

in Banadir. This includes improving waste collection and recycling.

Reference

A. A. Eltahir and A. M. Al-Rawas (2013) in *Journal of Hazardous Materials*.

S. S. Gupta and S. K. Gupta (2018) in *Journal of Cleaner Production*.

S. K. Gupta and S. S. Gupta (2017) in *Journal of Environmental Management*.

Y. Zhang et al. (2019) in *Journal of Cleaner Production*.

A framework for decision making in hazardous waste management" by S. Devi and R. Jayabalou (2016) in *Journal of Cleaner Production*.

Zhao, Yan, et al. "Environmental impact assessment of solid waste management in Beijing City, China." *Waste management* 31.4 (2011): 793-799.

Zhao, Y., Christensen, T. H., Lu, W., Wu, H., & Wang, H. (2011). Environmental impact assessment of solid waste management in Beijing City, China. *Waste management*, 31(4), 793-799.

Saidou, Hassidou, and Soulé Aminou. "Solid waste management in the town of Maradi in Niger Republic." *Journal of Environmental Protection* 6.04 (2015): 359.

Usman, Sunusi, et al. "The burden of microplastics pollution and contending policies and regulations." *International Journal of Environmental Research and Public Health* 19.11 (2022): 6773.

Bukasa, O. , Iskakova, D. , Ganiyu, S. , Rong, X. , Li, M. and Li, J. (2020) Influencing Factors of Plastic Waste Pollution Reduction in Kinshasa. Journal of Geoscience and Environment Protection, 8, 180-199. doi: 10.4236/gep.2020.812011-

Bukasa, O. T., Iskakova, D., Ganiyu, S. A., Rong, X., Li, M., & Li, J. (2020). Influencing Factors of Plastic Waste Pollution Reduction in Kinshasa. Journal of Geoscience and Environment Protection, 08(12), 180–199. <https://doi.org/10.4236/gep.2020.812011>

GIS and fuzzy logic" Hassidou Saidou*, Soulé Aminou Faculty of Sciences and Technology, University of Maradi, Maradi, Republic of Niger .fr published 20 April 2015 <https://www.tandfonline.com> > ... > [Volume 72, Issue 10](#)
W Atthirawong · 2022 [Hazardous waste management system for Thailand's local](#) .