International Journal of
Financial and Economic Studies

Academixs
Open Access Publishers

Research Article

Investing in Sustainable Packaging: Making a Difference in Bangladesh's Circular Economy

Bidhan Chandra Pal[1*] and Aftab Uddin[2]

[1]*Founder and Managing Director, Probha Aurora, National Operator, Foundation for Environmental Education (FEE), Bangladesh.*

[2]*Advisor, Policy-Strategy-Research, Probha Aurora, Mahinoor Nazia Farah, Manager, Research and Special Initiatives, Probha Aurora and Proma Gulshan, Goodwill Ambassedor, Probha Aurora, Bangladesh.*

Corresponding Author:
Bidhan Chandra Pal. Founder and Managing Director, Probha Aurora, National Operator, Foundation for Environmental Education (FEE), Bangladesh.

Received Date: 09.10.2025 **Accepted Date:** 27.10.2025 **Published Date:** 08.11.2025

Abstract

Sustainable packaging has become imperative for addressing climate change and protecting the environment in many countries including Bangladesh. The Government of Bangladesh has taken bold step to ban single-use plastics meaning that urgent demand will be created for alternatives solutions such as repurposing discarded paper for packaging and utilizing vegetable peels to create eco-friendly packaging. It is crucial to explore such demand for these alternatives and how modern technology can facilitate the development of efficient and environmentally friendly packaging. Investment in sustainable packaging promises not only an attractive financial return, but also a significant social impact compared to traditional investments. In Bangladesh, Probha Aurora has successfully piloted distinctive models of the circular economy through initiatives such as the Sabuj Sathi, Eco Product Hub and ecommerce site for green product promotions. These initiatives demonstrate effective operation utilizing local ingredients and opportunities for setting up production facilities that can cater to both local and international markets. The organization envisions to utilize local ingredients for establishing a sustainable packaging system and management that sets a global precedent. This model, while fostering innovation helps reduce costs, enhance quality of packaging and creates youth-led initiatives which result in various employment opportunities. Besides, awareness on environmental responsibility is boosted through promoting sustainable practices and community involvement.

This approach helps transform waste into valuable resources as well as create job opportunities for the unemployed and we foresee, a more sustainable and prosperous future Bangladesh.More importantly, our commitment to research and development in sustainable materials is expected to drive continuous improvement and adaptability in the face of evolving environmental challenges. Thus, considering the rationale and multiple benefits to environmental as well as broader socio-economic development of Bangladesh, this paper recommends some strategies to effectively attract investment and leverage the demand for sustainable packaging in Bangladesh.

Problem Statement

Bangladesh faces a significant challenge with plastic pollution, generating approximately 821,250 tons of single-use plastic waste annually, primarily from the fast-moving consumer goods (FMCG) and packaging sectors. This pollution contributes to severe environmental degradation, affecting soil, water, and public health, particularly in urban areas with inadequate waste management systems. While recent policies aim to curb plastic usage, at one hand their enforcement remains inconsistent, and the reliance on non-biodegradable packaging continues to exacerbate the crisis on the other. To address these pressing issues, there is an urgent need to transition towards sustainable packaging solutions which will not only reduce waste but also foster a circular economy.

Reflection on Background

The urgency to tackle environmental degradation has brought sustainable practices, especially in packaging, to the forefront of global discussions. Bangladesh serves as a vital case study, exemplifying both the challenges and opportunities within its circular economy model. The exploration of innovative alternatives to traditional packaging can play a crucial role in mitigating the adverse effects of plastic waste on ecosystems. By investing in sustainable packaging solutions and enhancing

regulatory support, Bangladesh can align its economic growth with environmental responsibility. This initiative not only holds the potential to reshape consumer behavior but also contributes significantly to the broader goal of sustainability, reinforcing the need for a cultural shift toward responsible consumption and waste management practices across the nation.

Objectives

• Identify suitable, sustainable packaging alternatives to plastic in Bangladesh.
• Encourage business and investor interest in Bangladesh's sustainable packaging industry.
• Explore the current characteristics of packaging patterns and future trends toward sustainability.

Sustainable Packaging Alternatives for Bangladesh

Meanwhile, an increasing amount of plastic pollution in Bangladesh is prompting calls for alternatives to single-use plastics which might be environmentally secure packaging options. According to the alliance, which is calling for governments around the world to ban single-use plastics as a way of cutting down on pollution in rivers and waterways, Bangladesh ranks ninth for plastic waste generation. On a regular basis, nearly 250 tons of single-use plastic is tossed out as industrial and urban waste that has overburdened squander management systems which have turned uglier the ecological scenario.

It is difficult to comprehend a context in which plastic, disinforming and fueling terminal diseases like asthma, cancer (due to skin contact with its by-products), liver damages or central nervous system disorders etc., takes already more on a daily basis than the allowed quantities for human preservation. The manufacturing of plastic also emits greenhouse gases that contribute to climate change, and the environmental consequences from it are huge. Plastic particles in soil inhibit the growth of microorganisms and reduce fertility, reducing agricultural yields and contaminating sources of food and water.

To this end, Bangladesh pursued a variety of policies such as the ban on polythene bags through amendments in Environment Conservation Act and Mandatory Jute Packaging Act 2010 that mandates use of jute packaging for particular agricultural commodities. Although these are positive steps, their enforcement varies and there has been limited use of plastic alternatives for items such as bottles, straws or cutlery. A ban on single-use plastics in some areas was ordered by the High Court last year, but there has been little evidence of it being enforced. To manage this crisis, Bangladesh recently launched its National Action Plan for Sustainable Plastic Management in collaboration with the World Bank which targets to slash plastic use by 50% by the year 2025 and eliminate at least 90 percent of single-use plastics within one-year thereafter while cutting down on further waste generation levels up-to minimum standards of decent living environment. The intention of this plan is the 3R strategy, that means reducing, reusing and recycling.

The use of eco-friendly packaging options has also been proven worldwide, with countries like Denmark, the UK and Spain who have put incredibly high taxations on plastics where other biodegradable alternatives are locally available for use. Those strategies could be a formula for reducing plastics waste in Bangladesh, combined with public demand for sustainable packaging. Other encouraging initiatives are the production of biodegradable polymer bags — made from jute for example by Bangladesh's Ministry of Textiles and Jute under its "Sonali Bag" project or book-for-plastics exchanges run by a local NGO "Pasha Achi Initiative". This would help in giving a further impetus to local industries and also give farmers an economic option by being encouraged to design packaging made of natural materials like bamboo, wood or steel.

If Bangladesh wants a healthier and more sustainable future, it must invest in eco-friendly alternatives to plastic, maintain effective law enforcement on street vendors continuing to sell polythene bags even after the ban has been implemented and keep up with such an enhanced waste management system.

Economic Benefits of Sustainable Packaging Investments

The transitioning into sustainable packaging represents substantial economic benefits not only from an environmental point of view, but also within the framework and outlooks in Bangladesh's evolving Circular Economy landscape. Sustainable packaging options are more in-demand and companies looking to make these investments may look forward to improving customer loyalty, cater to greener minded clientele and also give the brand an extra edge or competitive advantage. This type of investment in the long run also suits many countries' ambitions to become more sustainable, and it can cut operational costs on waste disposal or raw materials. The Business and Sustainable Development Commission is already expecting that the global opportunity in sustainable business models for producers will be above US$2.3 trillion annually by 2030, but a huge amount of research from across academia demonstrates that marketplace potential is very real as well (Treaty Alliance Declaration).

Overall, these efforts could create new job opportunities with close to 80 million former jobs generated worldwide and a lot of them would be in the developing countries like Bangladesh (Business & Sustainable Development Commission). While far from transformative, sustainable practices guard companies against a tide that is expected to become increasingly hostile in the future as consumers demand responsible consumption and global ecology finds tribulation.

Environmental Benefits of Sustainable Packaging in Bangladesh
Sustainable packaging offers numerous environmental benefits, which are especially valuable in Bangladesh, where plastic pollution poses serious risks to ecosystems, human health, and biodiversity. Adopting environmentally friendly packaging in Bangladesh can help address these pressing issues while supporting a more sustainable future.

Waste Reduction and Resource Efficiency: Sustainable packaging is often derived from recycled or biodegradable materials, which significantly reduce waste and conserve resources. In Bangladesh, where rapid urbanization has led to inadequate waste management systems, sustainable packaging can alleviate the burden on landfills and reduce plastic waste in waterways. By prioritizing materials that have a smaller ecological footprint, the country can achieve meaningful reductions in waste and lessen the environmental impact of

packaging production.

Reduced Greenhouse Gas Emissions: Using eco-friendly materials in packaging can minimize greenhouse gas emissions associated with production. As Bangladesh is particularly vulnerable to the impacts of climate change, decreasing emissions by adopting sustainable packaging options can contribute to the global effort to mitigate climate change while improving local air quality.

Enhanced Biodiversity Protection: Eco-friendly packaging helps prevent pollution in soil and water bodies, where plastic waste can harm ecosystems. In Bangladesh, sustainable packaging reduces the likelihood of plastic litter entering rivers and the Bay of Bengal, thereby protecting marine life and biodiversity.

Increased Recycling and Circular Economy Support: Sustainable packaging can support Bangladesh's National Action Plan for Sustainable Plastic Management, which emphasizes a circular economy through recycling, reusing, and reducing single-use plastics. By using recyclable and renewable packaging materials, businesses in Bangladesh can foster a circular economic model, promoting a regenerative system that lowers waste and encourages materials to stay in circulation for as long as possible.

Energy and Water Conservation: Environmentally-friendly packaging options often require less energy and water in the manufacturing process. This conservation is crucial in Bangladesh, where industrial pollution has strained water resources and energy availability. By shifting to efficient and sustainable production methods, packaging industries can reduce the country's overall resource consumption and lessen their impact on water resources.

Reduced Soil and Marine Pollution: Sustainable packaging options, especially those that are biodegradable, help prevent the long-term pollution caused by conventional plastic packaging. In Bangladesh, where plastic waste can persist for centuries and harm soil fertility and marine habitats, switching to biodegradable materials can prevent soil and water contamination, thus preserving the health of agricultural lands and aquatic ecosystems.

Through these environmental benefits, sustainable packaging in Bangladesh can significantly reduce ecological damage, improve community health, and support the nation's commitment to sustainable development. As businesses and policymakers shift toward sustainable practices, Bangladesh has the opportunity to become a model for environmental resilience and innovation in South Asia.

Market Analysis and Investment Opportunities

As of 2024, Bangladesh's FMCG market has surpassed USD 12 billion, with packaging as a significant component, especially for products like eggs, sachets, and beverages. Currently, plastic dominates the packaging sector due to its low cost and convenience. However, with rising environmental concerns and consumer interest in sustainability, there is high potential for eco-friendly alternatives that align with Bangladesh's transition to a greener economy. Below is an in-depth exploration of each market segment, alternative solutions, and the investment scope in Bangladesh.

Egg Packaging Market

Current Packaging and Consumption: According to the Department of Livestock Services (DLS) data, Bangladesh produced 17.11 billion eggs in the fiscal year 2018-19, primarily packaged in non-biodegradable plastic or foam trays, which contribute substantially to plastic waste. This dependency on plastic poses long-term environmental risks, highlighting the need for sustainable alternatives.

Alternative Solutions and Data: Globally, recyclable paper cartons and molded fiber trays are common eco-friendly options. Molded fiber trays, for example, are fully biodegradable and have an annual market growth rate of 4.3% in Asia. Introducing such options in Bangladesh can curb waste and align with global environmental standards.

Consumer Trends and Demand: Probha Aurora's recent survey of urban Bangladeshi consumers revealed that 60% would prefer eco-friendly packaging if the price remains competitive. This consumer inclination creates a strong market for investors interested in sustainable packaging, especially if coupled with local consumer awareness campaigns and government incentives.

Sachet Packaging Market

Waste Generation Data Sachets are widely used in Bangladesh for packaging low-cost goods, producing approximately 192,104 tons of non-recyclable waste annually. The small size and complex material composition of sachets make them difficult to recycle, with a recovery rate of less than 2%. This low recyclability means that sachets contribute significantly to plastic pollution, often ending up in urban waterways, natural landscapes, and marine environments. Although sachets provide an affordable option for low-income consumers to purchase small quantities of essential goods, their environmental impact is profound.

Alternative Solution: Compostable Sachets To address this environmental challenge, compostable sachets made from biodegradable materials such as rice starch, cornstarch, and biopolymers present a promising solution. This innovative alternative is part of the expanding biodegradable packaging market, projected to grow at a CAGR of 17.8% globally. The introduction of compostable sachets in Bangladesh could potentially reduce plastic waste from sachet packaging by up to 60%, delivering significant environmental benefits and supporting a transition towards sustainable consumption.

Local Resource Availability: According to the Bangladesh Bureau of Statistics, rice production in Bangladesh reached about 39.1 million tonnes in the fiscal year 2022-23 (FY23). Bangladesh is among the largest rice producers globally. Rice starch, a by-product of rice milling, is thus readily available and can be a reliable raw material source for bioplastic manufacturing. Additionally, According to BWMRI (BANGLADESH WHEAT AND MAIZE RESEARCH INSTITUTE) annual report 20022-23, Bangladesh produced 5.63 million tons of maize in 2021-

2022, marking corn as the third most important cereal crop in the country after rice and wheat. This expanding corn production provides a supplementary source of corn starch for bioplastics, making both materials viable for local manufacturing.

Investment Potential in Bangladesh's Sustainable Sachet Market
The shift towards biodegradable packaging in the sachet market represents a considerable investment opportunity within Bangladesh's USD 3 billion sachet packaging sector. Partnering with FMCG (Fast-Moving Consumer Goods) brands to develop and promote compostable sachets can help companies comply with anticipated regulatory standards while also catering to the increasing demand from eco-conscious consumers. By investing in sustainable sachet production, investors can play a critical role in reducing the environmental impact of packaging waste and positioning their brands as leaders in environmental stewardship.

- **Establishment of Production Facilities:** Investments are required for machinery capable of starch extraction, plasticization, film formation, and testing. Launching small-scale pilot projects could help to validate the production process and refine technologies before scaling up.
- **Technology Transfer and Workforce Training:** Collaboration with research institutions and universities specializing in materials science and bioplastics can enable technology transfer and innovation. Additionally, training programs for local entrepreneurs and workers on bioplastic production techniques would support the development of a skilled workforce.

Strategy for Implementation

- **Market Research and Demand Assessment:** Surveys can be conducted to assess consumer and business interest in biodegradable packaging. Target sectors could include food packaging, agriculture, and retail, where demand for sustainable solutions is expected to grow.
- **Stakeholder Engagement:** Engaging local farmers, particularly in regions with abundant rice and corn crops, will ensure a steady, sustainable supply of raw materials. Collaboration with government bodies and environmental NGOs can also facilitate governance framework support and potential funding for the initiative.
- **Public Awareness Campaigns and Branding:** Educating the public and businesses about the environmental benefits of compostable sachets is crucial for adoption. A strong brand identity emphasizing sustainability, local sourcing, and positive environmental impact can further enhance market acceptance.
- **Regulatory Support and Policy Advocacy:** Creating favorable policies and incentives for the production and use of biodegradable materials is essential for the sector's growth. Working with policymakers to establish regulatory support can facilitate a smoother transition for companies adopting bioplastics. Additionally, collaborating with regulatory authorities to establish quality and safety standards for bioplastics would ensure product reliability and consumer trust.

Beverage Packaging Market

Plastic Bottle Waste Data

Beverage companies are significant producers of plastic waste due to their packaging, which includes bottles, caps, and labels made primarily of plastic, as highlighted in Chowdhury's study on the beverage industry in Bangladesh [1]. ESDO, the Environment & Social Development Organization, has completed its second annual survey of plastic use in Bangladesh. In 2019, ESDO focused exclusively on single-use plastics (SUP). This survey suggested that individuals throw away about 87,000 tons of single-use plastics every year in Bangladesh. Approximately 96 per cent of this waste comes from consumer items, 33 per cent of which are nonrecyclable sachets. A major fraction of the single-use plastic is not disposed of properly and therefore these end up as wastes in landfills and river systems further polluting the environment.

Alternative Packaging Options: Glass and Metal Cans

Glass Industry in Bangladesh

The glass industry in Bangladesh has seen remarkable growth over the past two decades, emerging as a self-reliant sector meeting 95% of domestic demand. From complete reliance on imports, the industry has transformed into a multi-billion-taka sector with a significant export footprint [2].

Key drivers of this growth include:
- Expansion of the real estate sector.
- Increased construction of high-rise buildings and infrastructure projects.
- Rising domestic demand for glass products in various industries.

Despite the success of float and sheet glass manufacturing, there is a significant untapped opportunity in producing glass bottles to meet growing domestic demand in various sectors, including:
- Food and Beverage Industry: A surge in demand for sustainable and reusable packaging.
- Pharmaceutical Sector: Increasing need for safe, sterile, and durable containers for medicines.
- Cosmetics and Personal Care: Rising demand for premium, eco-friendly packaging solutions.

Metal Cans: The metal can package market in Bangladesh presents a unique opportunity for eco-friendly packaging, given the global production of around 400 billion metal cans per year for food, drinks, and industrial products. Although metal cans, especially for food-grade and aerosol applications, are mainly imported into Bangladesh, a shift towards local production could help meet rising domestic demand and create a structured manufacturing industry. Current users of locally produced metal cans include the paint and some food industries, with other sectors, such as cosmetics, soft drinks, and milk products, relying on imports [3].

Investment Potential in Sustainable Beverage Packaging

The shift to glass and metal can packaging offers lucrative investment opportunities in Bangladesh's packaging market. The USD 3 billion sachet and beverage market, coupled with rising consumer interest in sustainable products, creates an ideal environment for eco-friendly packaging ventures.

- **Glass Bottles:** Although glass has higher initial production costs, adopting a circular model that includes deposit-return incentives can offset these costs, making it a profitable venture in the long term. Partnerships with local manufacturers, such as PHP Float Glass Industries, and support from the Bangladesh Glass Merchant Association (BGMA) can further catalyze this market.
- **Metal Cans:** Establishing a local metal can manufacturing

industry could tap into the growing domestic demand while providing an export potential. Industries that could benefit include food and beverage, cosmetics, and paints, where there is an increasing interest in sustainable packaging. The production of metal cans within Bangladesh can also reduce reliance on imports, creating a more self-sufficient market.

Key Investment Needs

Financial Investment

• **Infrastructure and Machinery:** Substantial investment in production facilities and technology for metal can and glass bottle manufacturing.
• **Raw Material Sourcing:** Developing supply chains for local or reliable international sources of tin plate, glass, and bioplastic materials.

Technical Expertise

• **Training Programs:** Investment in local workforce training for machinery operation, maintenance, and quality control.
• **Collaborations with Institutions:** Partnerships with technical institutions can foster expertise in sustainable packaging production.

Government Support and Incentives

• **Incentives for Eco-Friendly Packaging:** Advocacy for government subsidies on raw materials and tax reductions for sustainable packaging solutions.
• **Regulatory Standards:** Establishing environmental and safety standards for eco-friendly packaging to improve consumer trust and industry compliance.

Market Development

• **Awareness Campaigns:** Funding for public campaigns on the benefits of glass and metal cans over plastic packaging, emphasizing health and sustainability.
• **Creating Demand:** Collaborating with local businesses to encourage the adoption of metal and glass packaging, creating a market shift from plastic.

Eco-Friendly Banners, Posters, and Leaflets

Alternative Materials: Traditional banners and posters made from PVC are non-biodegradable and pose environmental risks. Recycled PVC, Kavalan (a sustainable material from recycled vinyl), biodegradable alternatives, utilizing vegetable peels and polyester fabrics are potential eco-friendly substitutes. Polyester fabric, for instance, is recyclable and free of toxic substances, while natural fibers like cotton and hemp offer biodegradable options.

Implementation Strategy for Bangladesh

• **Awareness Campaigns:** Raising public and business awareness through workshops and social media can drive adoption of eco-friendly banner materials.
• **Government Policies and Incentives:** Advocating for tax incentives for businesses using sustainable advertising materials and R&D grants could spur interest.
• **Partnerships and Upcycling Initiatives:** Collaborations with local, national and international manufacturers for eco-materials and upcycling workshops can foster community involvement and create practical uses for discarded materials.

These steps, supported by investments in machinery and technology, could introduce eco-friendly advertising materials into Bangladesh's market and promote a sustainable alternative for traditional banners.

Food Product Packaging: Millet and Barley Mixture

Project Overview: Probha Aurora's Millet and Barley Mixture initiative is an innovative approach to the food market, promoting sustainable, nutritious cereal alternatives. With BSTI approval, a strong production setup, and expansion plans for export, this project is strategically positioned for both economic gain and social impact.

Alternative Packaging Solution: Using tin packaging, this initiative aligns with a ready market of eco-conscious consumers. Tin provides durability and a fully recyclable option that meets consumer and regulatory demand for sustainable packaging.

Figure 1: Initial Glass Bottle Packaging for Millet and Barley Mixture

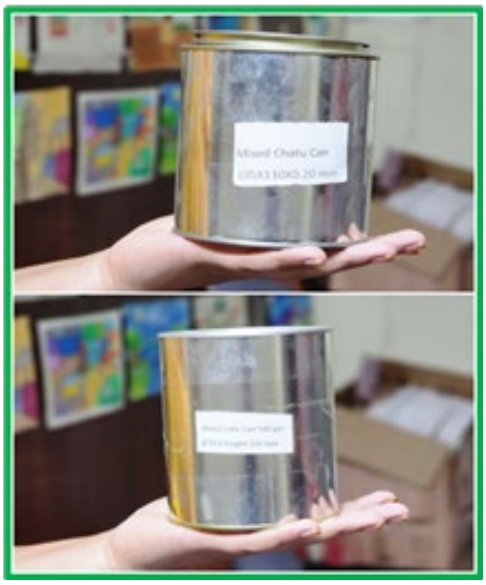

Figure 2: Transition to Tin Can Packaging – Highlighting enhanced durability, recyclability, and alignment with eco-conscious consumer *demand*.

Investment Opportunity: Investors can expect returns from this initiative's steady market demand and the support it receives through Probha Aurora's empowerment programs for women entrepreneurs. With the right investment, this segment holds promising potential in both domestic and international markets.

Strategic Collaboration with ACI Agribusiness and Other Organizations

Collaborations with key organizations like Advanced Chemical Industries (ACI) Agribusiness provide valuable support for eco-friendly initiatives, from material sourcing to distribution networks. Establishing further partnerships with companies focused on sustainable practices can accelerate the transition to eco-friendly packaging solutions across sectors in Bangladesh.

Behavioral Change and the Circular Economy

Implementing sustainable packaging solutions requires more than industrial adaptation; it demands a transformative shift in consumer behavior. While businesses must make the transition to eco-friendly packaging, it is equally essential to foster a change in consumer attitudes and habits. Awareness campaigns, incentives for eco-friendly purchases, and visible efforts by companies to adopt sustainable practices are key strategies to drive this change. By aligning consumer behavior with sustainable practices, we can create a market demand for eco-friendly products and packaging, further advancing the circular economy.

Case Study: Sabuj Sathi

Sabuj Sathi, a prominent initiative in Bangladesh, exemplifies how integrating sustainable packaging and promoting eco-friendly products can create a significant behavioral shift. This initiative has not only focused on promoting sustainable materials but has also actively worked to foster job opportunities for youth, particularly in communities where employment prospects are limited. By creating a network of young individuals who are trained in eco-friendly practices and packaging solutions, Sabuj Sathi offers hands-on experience in sustainability, while simultaneously contributing to reducing unemployment among Bangladesh's youth.

The program is committed to always prioritizing eco-friendly packaging, ensuring that all its products are packaged using sustainable alternatives such as reusable packaging and biodegradable options like paper-based products. By actively advocating for the use of recycled and biodegradable materials, Sabuj Sathi reduces the reliance on single-use plastics and supports the development of a circular economy. Furthermore, the initiative employs a dual approach—combining product innovation with educational efforts—to raise awareness and inspire consumer behavior change. Through marketing campaigns, workshops, and community-based activities, Sabuj Sathi encourages consumers to choose products that come with sustainable packaging, ultimately enhancing environmental consciousness across the country.

In addition to driving environmental impact, the program also strengthens the circular economy by creating a more sustainable supply chain that involves youth in every stage, from production to packaging. As a result, Sabuj Sathi has proven that investments in sustainable materials, coupled with a focus on behavioral nudges and youth employment, can not only promote eco-friendly packaging but also create a sustainable, job-rich ecosystem that benefits both the environment and local communities. The initiative's success in shifting consumer behavior towards greener choices and creating long-term employment opportunities serves as a model for other countries seeking to integrate sustainability into their packaging systems.

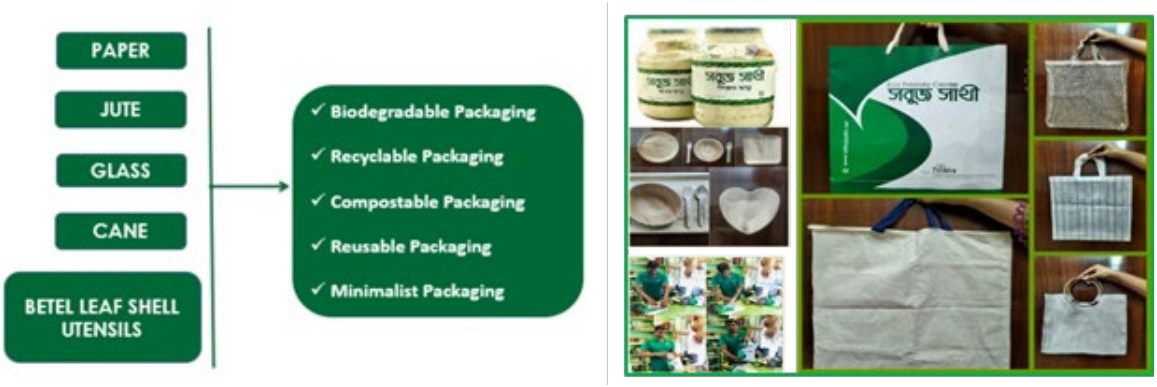

Figure 3: Sustainable Packaging Solutions and their Ecological Benefits in the Sabuj Sathi Initiative

Challenges and Risk Mitigation

High Initial Production Costs: Sustainable materials often come at a higher cost. However, economies of scale, combined with government incentives, can reduce costs. Additionally, a growing base of consumers willing to pay for eco-friendly options can help offset initial investment costs.

Infrastructure for Recycling and Composting: Limited infrastructure in Bangladesh poses a challenge for sustainable packaging solutions. However, by investing in recycling and composting facilities, investors can create a self-sustaining infrastructure that not only manages waste but also generates employment and local revenue streams.

Consumer Behavior Change: Building consumer awareness is essential to the success of sustainable packaging. Marketing campaigns, especially those that focus on health and environmental benefits, can influence consumer behavior and increase demand for eco-friendly products.

Conclusion

Sustainable packaging can be game changing for the circular economy in Bangladesh while complementing the country's larger developmental and environmental objectives. It is important for

Bangladesh to adopt sustainable packaging solutions as its waste management practices, especially in the wasteful textile and agricultural sectors, have high negative effects. Particularly, as stated earlier, the circular bioeconomy makes sense, for effective resource recovery and utilization of waste by-products while fostering clean energy and improvement of soil fertility. Besides that, the application of Circular Supply Chain Management practices in the plastics industry would be beneficial in removing challenges that are associated with infrastructural inadequacies and market forces in the quest for sustainability. Regardless, the shift towards sustainable packaging should be viewed not just as the need of the environment but as an economic opportunity that would enable job creation, boost local businesses and link Bangladesh to the global agenda on sustainability. Such endeavors, when pursued, will help develop both ecological and economic resiliency for the future of the nation [3-14].

Recommendations

To effectively attract investment and leverage the demand for sustainable packaging in Bangladesh, this paper recommends:

Scale Glass and Metal Can Production Facilities

Invest in expanding local glass and metal can manufacturing to address the growing need for eco-friendly packaging. This would reduce reliance on imports and position Bangladesh as a key player in sustainable packaging.

Increase Consumer Awareness Programs on Sustainable Packaging

Strengthen initiatives like Sabuj Sathi to educate consumers on the benefits of sustainable packaging, building demand and encouraging businesses to adopt eco-friendly alternatives.

Form Strategic International Partnerships for Technology Transfer

Collaborate with global leaders in sustainable packaging to bring advanced technology to Bangladesh, accelerating adoption of compostable and biodegradable solutions and enhancing market competitiveness.

Conduct Feasibility Studies on Starch-Based Bioplastics

Leverage Bangladesh's rice and corn production to assess the viability of starch-based bioplastics for applications like sachets, helping to create a cost-effective, eco-friendly bioplastics market in the region.

References

1. Chowdhury, A. C. N. (2023). A Liquid Future: Beverage Industry of Bangladesh and its Prospects.
2. Chowdhuri, Hina Khusi. "Glass Industry Meets 95pc Local." Scribd, uploaded on 2012.
3. Bari, A. T. (2010). Present Status of Metal Can Manufacturing in Bangladesh & the Ways to Improve its Manufacturing: A Study on Jenson & Nicholson Bangladesh Ltd.
4. Bangladesh Bureau of Statistics (BBS). (2023). Annual report on plastic waste generation.
5. Bangladesh Plastic Goods Manufacturers & Exporters Association (BPGMEA). (2024). Consumer trends in eco-friendly packaging.
6. Environmental and Social Development Organization (ESDO). (2022). Plastic sachet waste in Bangladesh.
7. Environmental and Social Development Organization (ESDO). (2023). Single Use Plastic: Hidden Costs of Health and Environment in Bangladesh
8. Oberoi, G., & Garg, A. (2021). Single-use plastics: A roadmap for sustainability? Supremo Amicus, 24, 585.
9. World Health Organization (WHO). (2020). Microplastics in drinking-water.
10. BWMRI Annual Report 2022-23. BANGLADESH WHEAT AND MAIZE RESEARCH INSTITUTE.
11. RMG Bangladesh. (2020, February 26). Eco-friendly packaging industry grows in relevance.
12. Marichelvam, M. K., Jawaid, M., & Asim, M. (2019). Corn and rice starch-based bio-plastics as alternative packaging materials. Fibers, 7(4), 32.
13. Singh, A. K., Itkor, P., Lee, M., Shin, J., & Lee, Y. S. (2023). Promoting sustainable packaging applications in the circular economy by exploring and advancing molded pulp materials for food products: a review. Critical Reviews in Food Science and Nutrition, 63(32), 11010-11025.
14. FE Online Report. (2020, October 9). Egg production in Bangladesh increased by 2.86 times. The Financial Express.

Citation: Bidhan Chandra Pal,. Aftab Uddin,. et al. (2025). Investing in Sustainable Packaging: Making a Difference in Bangladesh's Circular Economy. *Int. J. Financ. Econ. Stud. 1*(1), 1-7.