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## Towards a Circular Economy: Challenges and Opportunities in Eco-Friendly Packaging

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### ABSTRACT

The importance of protecting the environment has become a concern for the community, one of which is by supporting the concept of a circular economy. This concept aims to reduce waste, maximize the use of resources, and reduce greenhouse gas effects by employing the Reduce, Reuse, and Recycle (3R). This research aims to identify challenges and explore opportunities in developing environmentally friendly packaging. The method used in this research is a type of qualitative method through a literature study. The results of this study show that there are still many challenges faced in the use of environmentally friendly packaging towards a circular economy. The realization of the circular economy can be a good opportunity for forming new businesses and environmentally friendly packaging. In realizing this, there needs to be a collaboration between the government, producers, and consumers.

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## 1. INTRODUCTION

The circular economy paradigm is a concept of economic implementation that includes various aspects such as waste management, materials, and supply chain. One of the most important elements in this context is packaging. Packaging has an important role in the role of a product, and the development of a circular economy that aims to reduce waste (Yusriana et al., 2022). Currently, the application of packaging that supports is reflected in the development of eco packaging and green packaging. These two types of packaging are tangible implementations of the circular economy in the context of packaging. packaging context. The implementation of eco packaging includes the use of environmentally friendly materials and strategies to support the recycling process, while green packaging focuses on the use of environmentally friendly and biodegradable materials (Shalmont, 2020).

In addition, designing packaging requires various focuses of attention ranging from the selection of materials, the amount of carbon footprint, and even the responsibility of the packaging once it is in the hands of consumers (Pratama & Nurfadila, 2022). The relationship between eco packaging and the circular economy lies in its contribution to maximizing the value of the product and reducing the impact on the environment significantly. Eco-packaging plays a role in supporting sustainable product life cycles, creating wiser consumption patterns, and reducing the burden of waste on the environment. wise consumption patterns, and reducing the burden of waste on the environment. Thus, eco-packaging is an important instrument in realizing a circular economy.

In the context of a circular economy, green packaging makes a significant contribution. By using biodegradable materials, this packaging reduces the environmental impact of packaging manufacturing and disposal. environmental impact of packaging manufacturing and disposal. This creates an environment where products can go through their life cycle with minimal environmental impact. The use of green packaging has several contributions which are reflected in the reduction of greenhouse gas emissions, which is one of the sources of global warming, saving natural resources which have an impact on pressure on the environment, building environmentally friendly behavior, and supporting the development of environmentally friendly innovation and technology (Indriani et al., 2019).

Overall, eco-packaging and green packaging act as important catalysts in realizing a circular economy. By promoting the wise use of resources wisely, supporting recycling, and reducing waste, eco packaging is an integral part of the transformation towards a circular economy. is an integral part of the transformation towards a more sustainable economy. The results of this study show that there are still many challenges faced in the use of environmentally friendly packaging towards a circular economy. The realization of the circular economy can be a good opportunity for forming new businesses and environmentally friendly packaging.

## 2. METHODS

The method used in the preparation of this work is the literature review. The qualitative method is a method that emphasizes understanding the context, meaning, and interpretation of the phenomenon being studied. In the literature study method, researchers collect data by looking for various references to relevant journals and books (Zebua et al., 2021). The data collection is adjusted to the topic, namely the circular economy in supporting sustainable packaging, environmentally friendly packaging, challenges of environmentally friendly packaging, and opportunities for environmentally friendly packaging.

### 3. RESULTS AND DISCUSSION

The results of this research discuss several things, including the circular economy, challenges of eco-friendly packaging, and opportunities of Eco-Friendly packaging.

#### 3.1. Circular Economy

Currently, the world is experiencing an ecological crisis. Humans often carry out arbitrary consumption activities, this is the influence of consumerism. Consumerism is a characteristic of society that reflects the behavior of consuming goods and services. Sometimes, this act of consumption is carried out unconsciously to meet needs (Bakti *et al.*, 2019). This behavior becomes a business opportunity for producers to increase profits. Human indiscipline in managing this consumption has resulted in extreme weather changes that have an impact on environmental damage. The concept of development that has been implemented has not fully reduced the irresponsible behavior of consumers and producers. Therefore, the Sustainable Development Goals (SDGs) with 17 goals have been created to make the development model in the world adaptive to human life, especially to avoid exploitation of the earth.

In practice, one alternative that has emerged as an economic concept is the Circular Economy (CE), as a response to the dominance of conventional economic models that have long been the cornerstone of global economic development. Circular Economy is an economic strategy that aims to minimize waste and care for the environment and resources by maximizing the utilization and value of raw materials, components, and products (Sitompul, 2023). The proposal to shift from a linear economy to a circular economy arises because the linear economic model, which involves purchase, use, and disposal, has consequences for the environment and resource availability (Widyastuti, 2019). A circular economy can keep materials in circulation with energy and resources still needed for the production process. Unlike the linear economy model, the circular economy concept does not adopt a parallel approach; instead, the approach is more cycle-oriented through the 3R principles (Reduction, Reuse, and Recycling). This means that in a linear economy, the final stage of production often ends in disposal, whereas in a circular economy model, the approach is designed from the beginning, involving the stages of Product, use, end of life, remanufacturing (Widyastuti, 2019). In this context, products from production or leftover consumption that lose value in the circular economy are converted into reusable goods. In addition to economic considerations, this also aims to maintain and preserve the environmental ecosystem to remain balanced and harmonious.

#### 3.2. The Challenge of Eco-Friendly Packaging

The implementation of a circular economy requires long-term measures. The formulation of relevant policies needs to involve a thorough analysis of community dynamics and identify emerging issues. Community involvement in policy formulation is key to this process. According to Ammar (2023), there are several important reasons why environmentally friendly packaging should be used, namely:

- (i) Reduce greenhouse gas emissions: Eco-friendly packaging helps reduce greenhouse gas emissions from human activities, such as burning fossil fuels and industrial waste.
- (ii) Improves resource efficiency: Eco-friendly packaging helps optimize the use of natural resources, preventing unnecessary waste of water and energy.
- (iii) Creates new jobs: Support for eco-friendly packaging can create new jobs in related sectors.

- (iv) Improving quality of life: Eco-friendly packaging contributes to the creation of a healthier and more sustainable environment for our lives.

Currently, people's waste management habits generally involve burning, mixing, landfilling, and dumping by the river. The main cause of this behavior is the lack of public understanding of the benefits and economic value of waste management. The principles of 3R (Reduce, Reuse, Recycle) and even 5R (Reduce, Reuse, Recycle, Recovery, Repair) are still not fully understood by the community in implementing a circular economy approach (Kristianto & Nadapdap, 2021). The level of public awareness of proper waste management is still quite high. Thus, a reward and punishment system for residents who have succeeded in managing waste properly needs to be implemented (Andina, 2019). In addition, it is also necessary to apply customary law (local wisdom) and formal law for those who still litter. Community participation still needs to be increased. Thus, those involved can be responsible for the waste produced.

The steps that need to be taken involve increased mentoring and training on an ongoing basis, including simple programs such as composting, utilizing fruit and vegetable waste into eco enzymes that can be used or sold, and making biopores in each household to compost and absorb rainwater (Elamin et al., 2018).

The main issue in food and beverage products is still related to packaging. The lack of awareness of the importance of environmentally friendly packaging is due to the lack of understanding of business actors regarding the image, quality, and appearance of packaging, as well as limited packaging service facilities that can increase the competitiveness of environmentally friendly products (Relawati et al., 2021).

### 3.3. Green Packaging Opportunities

Green packaging offers a variety of opportunities that can be explored by companies and consumers. Here is a further review of opportunities in green packaging based on research findings and related articles.

Opportunities in the development of environmentally friendly packaging:

- (i) The implementation of the circular economy has great potential to drive the development of sustainability-focused businesses and packaging (Islam, 2018).
- (ii) Through cooperation between governments, producers, and consumers, the circular economy can be realized, providing impetus for innovation in business and the development of environmentally friendly packaging (Wibowo et al., 2023).

The strategic role of environmentally friendly packaging:

- (i) Environmentally friendly packaging refers to packaging that is designed in such a way that it does not create a negative impact on the environment (Zurnali & Sujanto, 2020).
- (ii) Sustainable packaging can increase consumer interest in buying products and create a brand identity that focuses on sustainability and characterizes products that are more environmentally friendly (Sulistiono et al., 2020).
- (iii) Consumers, the consumers, especially Generation Z, tend to prefer brands that are committed to environmental preservation and prefer products that emphasize sustainability values.

Positive benefits of sustainable packaging:

- (i) Sustainable packaging can increase product sales opportunities, as consumers are willing to pay more for products packaged with environmentally conscious packaging.
- (ii) Sustainable packaging can also give a positive impression of brand and product image, and increase consumer loyalty.

Thus, sustainable packaging not only brings benefits to the environment but also opens up significant business opportunities and can improve brand image and consumer confidence in a product or brand (Raswadiyanto & Pujiyanto, 2023).

Interest in environmental preservation has been at the forefront of society, and one method to support this initiative is to adopt the concept of circular economy. The main principle of this concept is to reduce waste, optimize resource utilization, and reduce greenhouse gas emissions through the implementation of the 3R principles (Reduce, Reuse, Recycle). In the context of discussing the development of environmentally friendly packaging, this research recognizes the challenges and opportunities associated with such efforts. The results of the study show that, although there are many obstacles associated with the use of environmentally friendly packaging, cooperation involving governments, producers, and consumers can turn the circular economy into a potential platform for developing businesses and packaging that support environmental sustainability (Fianda *et al.*, 2021).

#### 4. CONCLUSION

The circular economy concept is an important alternative to address the global ecological crisis, with a focus on minimizing waste and caring for the environment. Challenges arise in the implementation of the circular economy, mainly related to the lack of public understanding of the 3R concept and unmanaged waste disposal behavior. However, opportunities are wide open in the development of eco-friendly packaging, providing potential for business, consumer interest, and sustainable brand identity. With a sustainable and collaborative approach between government, producers, and consumers, the circular economy can be a potential foundation for the development of businesses and packaging that support environmental sustainability.

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#### 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

#### 7. REFERENCES

- Ammar, M. A. (2023). Peran teknologi hijau dalam mencapai pembangunan berkelanjutan di masa depan. *JECTH: Journal Economy, Technology, Social and Humanities*, 1(2), 1-7.
- Andina, E. (2019). Analisis perilaku pemilahan sampah di kota Surabaya. *Aspirasi: Jurnal Masalah-Masalah Sosial*, 10(2), 119-138.
- Bakti, I. S., Nirzalin, N., and Alwi, A. (2019). Konsumerisme dalam perspektif Jean Baudrillard. *Jurnal Sosiologi USK (Media Pemikiran and Aplikasi)*, 13(2), 147-166.
- Elamin, M. Z., Ilmi, K. N., Tahrirah, T., Zarnuzi, Y. A., Suci, Y. C., Rahmawati, D. R., and Nafisa, I. F. (2018). Analysis of waste management in the village of disanah, district of Sresheh Sampang, Madura. *Jurnal Kesehatan Lingkungan*, 10(4), 368-377.

- Fianda, A. Y. A., Fandinny, I., Kacaribu, L. N. B., Desyani, N. A. F., Asyifa, N., and Wijayanti, P. (2022). Eco-friendly packaging: preferensi dan kesediaan membayar konsumen di marketplaces. *Jurnal Ilmu Lingkungan*, 20(1), 147-157.
- Indriani I. A. D., Rahayu M., and Hadiwidjojo D. (2019). The influence of environmental knowledge on green purchase intention the role of attitude as mediating variable. *International Journal of Multicultural and Multireligious Understanding*, 6(2), 627-635.
- Islam, D. (2018). Tinjauan penerapan konsep green marketing dalam pelestarian lingkungan. *Jurnal Pamator: Jurnal Ilmiah Universitas Trunojoyo*, 11(1), 10-18.
- Kristianto, A. H., and Nadapdap, J. P. (2021). Dinamika sistem ekonomi sirkular berbasis masyarakat metode causal loop diagram kota Bengkulu. *Sebatik*, 25(1), 59-67.
- Pratama, A., and Nurfadila, S. (2022). Implementasi strategi operasi manufaktur hijau menuju keberlanjutan manufaktur. *Jurnal Ekonomia*, 12(2), 31-39.
- Raswadiyanto, D. A. K. N., and Pujiyanto, W. E. (2023). Recovery jamu tradisional menjadi produk berdaya saing global. *Dewantara: Jurnal Pendidikan Sosial Humaniora*, 2(3), 71-82.
- Relawati, R., Ariadi, B. Y., and Tain, A. (2021). Pelatihan kemasan ramah lingkungan pada kelompok wanita tani untuk mendukung pemasaran digital di desa Tawangargo Kabupaten Malang. *Community Empowerment*, 6(5), 849-855.
- Shalmont, J. (2020). Sustainable beauty: kesiapan konsumen di Indonesia dalam mengintegrasikan konsep keberlanjutan dalam pengelolaan sampah kemasan plastik produk industri kecantikan. *Law Review*, 20(2), 138-168.
- Sitompul, M. R. (2023). Ekonomi sirkular dalam pengembangan bisnis penerbangan di Indonesia. *Warta Penelitian Perhubungan*, 35(1), 49-58.
- Sulistiono, S., Mulyana, M., and Firmansyah, M. F. (2020). Pelatihan pengembangan merek dan kemasan bagi UMKM kota Bogor. *Jurnal Abdimas Dedikasi Kesatuan*, 1(2), 87-94.
- Wibowo, R. J. A., Tresnoputri, C., Wijaya, F. A., Bastanta, A., Junior, A., and Claudia, J. (2023). Studi komparatif ekonomi sirkular dalam arah kebijakan hukum pengelolaan sampah kemasan plastik di Indonesia dan Jerman. *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial*, 10(5), 2467-2480.
- Widyastuti, S. (2019). Sebuah sintesis pada literatur: strategi intervensi pemasaran hijau menuju pembangunan berkelanjutan (a synthesis of literature: a green marketing intervention strategy towards sustainability development). *JRB-Jurnal Riset Bisnis*, 2(2), 83-94.
- Yusriana, Y., Jaya, R., and Sembiring, M. T. (2023). Ekonomi sirkular pada manajemen rantai pasok agroindustri: Konseptual dan rancangan implementasi. *Jurnal Teknologi Industri Pertanian*, 33(2), 196-205.
- Zebua, W. D. A., Utari, S. A., and Djuwardie, D. T. (2021). Komunikasi krisis grab indonesia pada kasus kecelakaan grab wheels dalam menjaga citra perusahaan. *Communicator Sphere*, 1(1), 1-8.
- Zurnali, C., and Sujanto, A. (2020). Pentingnya green human resource management pada perusahaan di Indonesia. *Jurnal Ilmiah Infokam*, 16(2), 116-127.