

---

---

## Circular Economy in ASEAN: Another Rough Road Ahead?

Darynaufal Mulyaman<sup>1)</sup>, Emir Alfachridzil<sup>2)</sup>

<sup>1,2)</sup> Program Studi Hubungan Internasional, Fakultas Ilmu Sosial & Ilmu Politik, Universitas Kristen Indonesia

---

### Abstrak

*Circular economy* (CE) telah menjadi agenda prioritas bagi ASEAN dalam beberapa tahun terakhir. Pada Oktober 2021, ASEAN telah meresmikan *Framework for Circular Economy* untuk mendorong transisi ke model ekonomi yang lebih berkelanjutan di kawasan. Namun, implementasi CE di ASEAN masih menghadapi sejumlah tantangan. Pertama, terdapat perbedaan tingkat pembangunan ekonomi dan kapasitas teknis antarnegara anggota dalam menerapkan standar dan kebijakan CE. Negara maju cenderung lebih agresif menetapkan target efisiensi sumber daya, sementara negara berkembang memerlukan transisi yang lebih bertahap. Kedua, harmonisasi standar CE kerap dihambat oleh konflik kepentingan para pemangku kebijakan akibat tekanan politik dan ekonomi. Ketiga, permintaan pasar terhadap produk ramah lingkungan masih rendah di ASEAN. Keempat, praktik ekonomi sirkular masih bersifat terfragmentasi antarsektor industri dan rantai nilai. Tulisan ini bertujuan untuk menganalisis tantangan-tantangan tersebut melalui pendekatan deskriptif kualitatif dengan merujuk pada literatur dan data statistik terkini. Analisis difokuskan pada aspek harmonisasi standar CE dalam konteks perbedaan tingkat pembangunan ekonomi ASEAN dan dinamika politik ekonomi global. Studi ini diharapkan dapat memberikan rekomendasi kebijakan untuk mengatasi tantangan implementasi CE secara efektif dan berkeadilan di ASEAN.

**Kata-kunci** : ekonomi sirkular, ASEAN, harmonisasi standar, tantangan politik ekonomi, pembangunan berkelanjutan

---

### Abstract

*Circular economy* (CE) has become a priority agenda for ASEAN in recent years. In October 2021, ASEAN officially launched the *Framework for Circular Economy* to encourage the transition towards a more sustainable economic model in the region. However, the implementation of CE in ASEAN still faces several challenges. Firstly, there are differences in economic development levels and technical capabilities between member countries in implementing CE standards and policies. Developed countries tend to be more aggressive in setting resource efficiency targets, while developing countries require a more gradual transition. Secondly, the harmonization of CE standards is often hampered by conflicts of interest among policymakers due to political and economic pressures. Thirdly, market

*demand for eco-friendly products remains low in ASEAN. Fourthly, circular economic practices remain fragmented across industrial sectors and value chains. This paper aims to analyze these challenges through a qualitative descriptive approach, referring to current literature and statistical data. The analysis focuses on aspects of CE standards harmonization in the context of varying ASEAN economic development levels and global political economic dynamics. This study is expected to provide policy recommendations to overcome the challenges of implementing CE effectively and equitably in ASEAN.*

**Keywords** : *circular economy, ASEAN, standards harmonization, political economic challenges, sustainable development*

---

**Kontak Penulis**

Darynaufal Mulyaman

Program Studi Hubungan Internasional, Fakultas Ilmu Sosial & Ilmu Politik, Universitas Kristen Indonesia

Jalan Mayjen Soetoyo Nomor 2, Jakarta Timur

E-mail : Darynaufal.mulyaman@uki.ac.id

## INTRODUCTION

Circular Economy or CE has been one of the highlights of every ASEAN Summit over the past few years. On October 18, 2021, the Framework for Circular Economy for the ASEAN Economic Community (AEC) was unveiled, marking ASEAN's commitment to shift to a more sustainable economic model (ASEAN, 2021). The main goal of the CE model is to reduce waste and pollution by improving product design, extending product life, and recycling materials (MacArthur, 2013). In other words, CE aims to close the material flow loop in the economy.

Although the CE model has been around for a long time, its implementation in the ASEAN region is arguably less effective (McDowall et al., 2017). This is because most ASEAN member states still adhere to a linear economic model characterized by the use of disposable resources and the generation of high amounts of waste. This contributes to increasing environmental problems such as GHG emissions, air and water pollution, and waste accumulation and compaction (Anbumozhi & Kimura, 2018). Therefore, the adoption of CE is seen as a long-term solution for ASEAN to address these issues and achieve sustainable development goals.

So far, efforts to implement CE in ASEAN have been fragmented and focused on specific products or raw materials in specific jurisdictions or product clusters (AEC, 2021). The lack of harmonization of standards and coordination among stakeholders is an obstacle to the wider adoption of CE. Therefore, standard harmonization and trade facilitation become one of the top priorities in the circular economy framework in ASEAN.

On the other hand, harmonizing circular economy-related standards and policies in ASEAN also faces challenges due to the different levels of economic development and priorities in each member country. For example, high-income countries such as Singapore and Indonesia may find it easier to immediately implement strict standards and regulations related to waste management and recycling. While developing countries such as Cambodia, Laos and Myanmar may need to make a more gradual transition while continuing to pursue economic growth. Therefore, a flexible approach is needed in formulating circular economy policies at the ASEAN level, so as to accommodate the specific needs of each member country.

Another challenge in implementing circular economy in ASEAN is the low market awareness and demand for environmentally friendly products. Currently, most ASEAN consumers still perceive circular economy-based products and services as more expensive and less quality than conventional products (Genovese et al., 2017). Therefore, good policies are needed to "equalize" the value of circular economy-based products and services in ASEAN. With high market demand, the private sector will be more motivated to invest in circular economy innovations.

The circular economy is an economic system aimed at eliminating waste and the continual use of resources (Geissdoerfer et al., 2017). It is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. According to Kirchherr et al. (2017), a circular economy describes an economic system that is restorative and regenerative by

design. It aims to keep products, components, and materials at their highest utility and value at all times. The concept distinguishes between technical and biological cycles. In a technical cycle, products, components, and materials are restored into the economy without entering the biosphere. In a biological cycle, non-toxic materials are restored into the biosphere safely.

There are several key principles of a circular economy (Webster, 2017):

1. Design out waste and pollution
2. Keep products and materials in use
3. Regenerate natural systems

The implementation of a circular economy involves several strategies (Geissdoerfer et al., 2017; Kirchherr et al., 2017):

1. Eco-design: Designing products that can be reused, repaired, upgraded, refurbished, and eventually recycled at end of life
2. Industrial symbiosis: Using waste from one industry as a resource for another
3. Remanufacturing: Restoring used products to like-new condition
4. Product life extension: Increasing the lifespan of products through repair and maintenance
5. Sharing platforms: Enabling increased utilization rate of products through shared access

In summary, a circular economy aims to decouple economic growth from the consumption of finite resources by eliminating waste through superior design and by keeping products, components, and materials circulating in the economy at their highest value (Webster, 2017). Further, political ecology provides a critical lens to examine the political and economic forces shaping

environmental governance and outcomes (Robbins, 2012). This theory posits that environmental issues cannot be separated from their political and socio-economic context, as unequal power dynamics between stakeholders often determine policy priorities and implementation (Forsyth, 2004).

Political ecology theorists have applied this framework to analyze global environmental politics around issues like climate change, plastic pollution, and sustainable development (Newell, 2005; Svampa, 2019). It illuminates how politically and economically dominant actors – such as government, corporations, international institutions – exert disproportional influence over environmental governance to serve their interests, often sidelining marginalized communities. Unequal access to environmental resources and benefits also constitutes ecological injustice (Martinez-Alier et al., 2016).

## METHODS

Then, This study employs a qualitative method with a descriptive approach. According to Creswell (2013), a qualitative method is suitable to explore a social phenomenon within its real-world context. The political ecology framework as the theoretical lens requires an in-depth analysis of the contextual factors shaping the policy-making process (Forsyth, 2003).

The data collection technique in this study is literature review. It aims to analyze current discourse, debates, and statistical data related to circular economy governance in ASEAN. It covers academic literature, policy documents, media articles, and reports from international organizations.

The data analysis is conducted by

categorizing the literature and documents based on the main challenges and political dynamics influencing circular economy policy harmonization in ASEAN. Subsequently, a narrative summary was established, emphasizing the most crucial aspects of the topic.

## RESULT & DISCUSSION

ASEAN member countries show significant differences in economic growth rates, reflected in the GDP growth data from 2020 to 2022. For example, countries such as Malaysia and Thailand experienced a deep economic contraction in 2020 due to the pandemic, but were able to recover with positive growth above 3% in 2021 and even surged above 8% in 2022. Meanwhile, the economies of countries such as Vietnam and Cambodia proved to be more resilient during the pandemic with positive growth of 2-3% in 2020 and started to accelerate above 5% in 2022 (World Bank, (2023). On the other hand, countries such as Brunei Darussalam and Myanmar continue to experience an economic slowdown even into 2022.

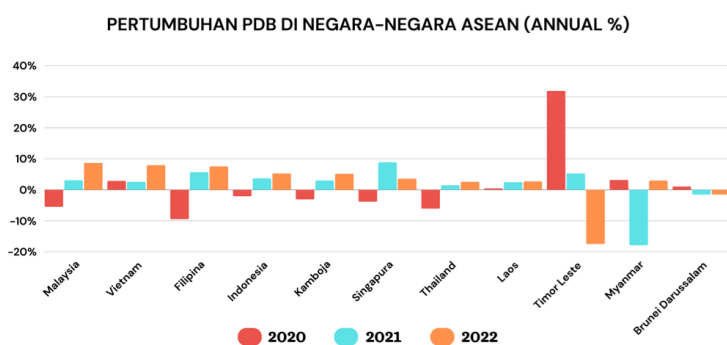


Figure 1.1 Total Domestic Product (GDP) Growth of ASEAN Countries  
Source: The World Bank, 2023

These differences in macroeconomic conditions show that each ASEAN country's priorities in post-pandemic economic recovery and

achieving sustainable growth are very diverse. This poses a challenge for regional harmonization of circular economy standards, which requires a flexible approach to accommodate country-specific needs.

Differences in economic conditions among countries in ASEAN impact the availability of financial and institutional resources to support the implementation of circular economy policies and standards. In general, high-income countries such as Singapore have access to funding, technical expertise, and more mature institutions to implement strict recycling regulations or cleaner production schemes (Kerdlap, 2019). Meanwhile, middle- and low-income countries still rely heavily on foreign investment and loan flows to finance their green infrastructure, which is often a politically sensitive issue and leads to ballooning external debt.

Because of this capability gap, ASEAN developing countries often face sharp criticism from global environmental organizations if they are not progressive in implementing international standards related to pollution control, greenhouse gases or plastic waste management, for example. A number of studies have found that global environmental standards often pay little attention to the context and capacity of developing countries, leading to unfair burdens (Agyeman & Evans, 2003). Therefore, a fair and proportional approach is needed in formulating the ASEAN Circular Economy Framework.

Different development priorities among ASEAN member states also contribute to the challenge of harmonizing circular economy standards. According to Hickel & Kallis (2020), developed countries tend to be more aggressive in setting targets to reduce GHG emissions and increase resource efficiency. For example, Singapore targets to increase the recycling ratio

of domestic and industrial waste from 57% in 2022 to 70% in 2030 (NEA, 2023).

In contrast, developing countries are still trying to balance economic growth. For example, Vietnam's economic growth is expected to slow to 6.3% in 2023 from the expected 8% due to the moderate development of services and rising prices and interest rates weighing on investors and individuals. Due to the strengthening economies of major export destinations, Vietnam maintains growth of 6.6% of GDP in 2024 (Herrador et al., 2023). In 2023, coal-fired power generation - 79.95 billion kWh, accounting for 49.8% of Vietnam's total power generation system. Differing priorities between Singapore and Vietnam could make it difficult for ASEAN consensus on legally binding regional targets. Therefore, realistic target adjustments and financial stimulants are needed to encourage active participation of all ASEAN members at different levels of economic development.

Political ecology theory emphasizes that environmental issues cannot be separated from the political and economic context in which they arise. In relation to ASEAN circular economy standards harmonization efforts, this theory is important to understand the various interests and political influences behind the difficulty of achieving regional consensus on environmental issues. In this case, developing country governments are reluctant to burden their domestic industrial sectors to protect their GDP targets. Meanwhile, civil society groups and global environmental NGOs continue to urge ASEAN countries to be ambitious in harmonizing environmentally friendly standards. These political and economic dynamics between different stakeholders often hinder significant progress on issues such as climate change, forest management, or hazardous waste (Dauvergne, 2018).

Indonesia's reliance on coal, which currently still accounts for 60% of the energy mix (MEMR 2022), poses a challenge for Indonesia's national sustainable development goals. The government is committed to reaching peak emissions by 2030, which requires the early retirement of a number of coal-fired power plants that are the largest contributors to GHG emissions. However, this has the potential to significantly impact the domestic coal sector and coal-producing regions. Global environmental NGOs continue to push for an accelerated transition, while mining unions and coal regions resist abrupt retirements (IESR, 2022). These political dynamics between diverse interests hinder agreement on national climate ambitions, let alone efforts to harmonize the much more stringent ASEAN industry standards. A fair energy transition roadmap that includes solutions for new jobs and social protection for affected groups is needed for consensus to be reached. In addition, large coal companies such as Adaro and Indika also have strong lobbying influence over energy policy (Mori, 2020).

Political ecology inequality also occurs in Vietnam, which is currently trying to encourage the implementation of the circular economy model, but its application is still limited and sporadic. According to Trinh Thu (2023), only 3-5.5% of companies in Vietnam have successfully implemented this model. While the other 51-66% have not even implemented it at all. This low adoption rate is due to a number of complex political and economic barriers.

The first obstacle is the weak legal and policy framework to promote the development of the circular economy. According to a survey of 508 Vietnamese enterprises, 63-71% stated that government policies on circular economy are unclear, and 55-65% rated the policy

framework as very inadequate (Trinh Thu, 2023). As a result, businesses in Vietnam struggle to shift to a circular model.

The second barrier is the lack of economic incentives for companies. The initial investment costs of switching to circular economy practices are often high, while the short-term benefits are limited (Trinh Thu, 2023). This is unattractive to most Vietnamese companies that are more focused on short-term profit outcomes. Financial incentive schemes such as subsidies, soft loans, or tax reductions are needed to spur private sector interest.

The third barrier is political pressure to protect the extractive sector for short-term economic growth. For example, the Vietnamese government issued a controversial policy of bleaching coral reef fishing in 2022, allowing foreign fishing fleets to operate in Vietnamese waters (Trinh Thu, 2023). This sparked widespread protests from marine conservation NGOs, but was supported by the fisheries ministry in favor of export and foreign exchange targets. The same is true in the coal and steel mining sectors. These global political and economic pressures are hampering environmental protection efforts in Vietnam.

The fourth barrier is business culture and linear consumption behavior.

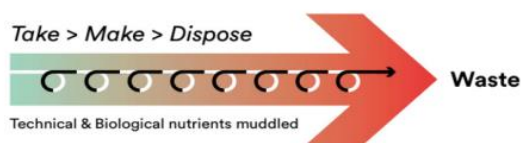


Figure 1.2 Linear Behavior Model  
Source: Thu, 2023

The majority of Vietnamese companies and people are still accustomed to a disposable production and consumption model that generates excess waste (Trinh Thu, 2023). These behaviors and habits are difficult to change without a paradigm shift supported by public policy. A massive campaign is needed to raise

public and business awareness about the urgency of a circular economy for a sustainable future.

The fifth barrier is the lack of networking and coordination among stakeholders. According to Trinh Thu (2023), one of the main obstacles in implementing circular economy in Vietnam is the weak mediation and coordination between business actors in the supply chain, so that the product-consumption-waste cycle chain is not closed. The role of government and civil society organizations as facilitators is needed to strengthen multi-stakeholder networks and coordination so that the circular economy wheel can rotate thoroughly.

From the perspective of global political ecology, the obstacles to the implementation of circular economy in Vietnam reflect the clash of interests between various actors in environmental issues and sustainable development. The government seeks to protect the extractive sector and their political constituency base for the sake of social stability and short-term economic achievements, which often conflict with long-term interests related to environmental sustainability. On the other hand, pressure from financial institutions and multinational companies also often impose policies that harm local communities. Meanwhile, the voices of marginalized groups such as indigenous peoples, small-scale fishers, and environmental NGOs are often ignored due to lack of political access and representation. Therefore, Vietnam needs to build inclusive circular governance by involving all stakeholders to balance these diverse needs.

As explained earlier, Vietnam also faces similar challenges in implementing the circular economy model. These challenges generally reflect the political ecology imbalance between

various interests in environmental issues and sustainable development. In Thailand, the political ecology imbalance is also very clear. According to Marks et al. (2023), the main obstacle arises from the power imbalance between the government and the petrochemical sector, which strongly opposes the extended producer responsibility (EPR) policy.

The first barrier is the absence of EPR provisions in Thailand's plastic waste management roadmap 2018-2030. This reproduces the power inequality between the relevant ministries and Thailand's petrochemical sector, which is the largest in Southeast Asia. These politically influential local companies refuse to shoulder the costs of EPR citing fears of government corruption (Marks et al., 2023). They also fear that environmental taxes will reduce competitiveness. As a result, the roadmap is only voluntary without strict sanctions for violators.

The second obstacle is government institutional fragmentation. The Department of Local Administration under the Ministry of Home Affairs has close ties with the private sector and is therefore reluctant to support CE reform. Meanwhile, the weaker Pollution Control Department attempted to implement plastic waste reduction targets. However, due to the lack of coordination between departments and the resistance of the private sector, efforts to formulate EPR regulations are difficult (Marks et al., 2023).

The third barrier is landfill politics in local government. Many local politicians have investments or majority ownership in waste management companies. They benefit from the current status quo and see CE as a threat to their existing profits. The reliance on growing waste volumes to generate energy and revenue is a major barrier to CE reforms aimed at

reducing overall waste production (Marks et al., 2023).

The fourth barrier is unequal access to formal waste management between high-income urban households versus poor urban and rural households. Due to local government budget constraints, most of the burden of waste segregation and recycling is shifted to the vulnerable informal sector such as waste pickers. However, their important contribution is not recognized in policies and budgets (Marks et al., 2023).

Based on the global political ecology analysis, the barriers to CE implementation in Thailand reflect the clash of interests between various actors. The government protects its political constituency base and short-term social stability, which often conflicts with long-term environmental sustainability. Meanwhile, the private sector resists EPR-based policies in favor of corporate profits. Such dynamics need to be addressed through an inclusive and equitable circular approach (Schröder et al., 2020). Specifically, the inequality of power between the environment ministry and sectoral technical ministries (mining, industry) reflects the inequality of political ecology at the national institutional level. While at the local level, landfill politics involving local politicians and waste management entrepreneurs reflect the dominance of short-term economic profit interests over environmental sustainability.

Through the lens of political ecology, the challenges of CE implementation in both Vietnam and Thailand represent a form of ecological inequality due to the dominance of certain political and economic forces that hinder the realization of environmental justice. According to Newell (2005), environmental issues cannot be separated from the political and economic context in which they arise. In the case of Thailand, the short-term interests of



political elites and corporations that control the petrochemical sector confront the demands of long-term ecological sustainability. As a result, EPR-based policies that could hurt corporate profits are strongly opposed, while the voices of marginalized communities such as waste pickers are not heard.

This unequal access to environmental benefits represents a form of ecological injustice according to political ecology theory (Agyeman et al., 2003). This situation is exacerbated by the high reliance on the economic growth agenda instead of sustainable development that integrates environmental, social, and economic aspects in an equitable manner. A fundamental reform of the development paradigm is needed for Thailand to achieve an inclusive and equitable circular transition.

### **ASEAN Circular Economy Co-financing Scheme Recommendations**

A joint funding scheme to support the implementation of circular economy in ASEAN is urgently needed given the funding challenges faced by ASEAN developing countries in financing green infrastructure. One funding scheme that has proven successful in supporting the harmonization of circular economy standards in the European Union is the LIFE programme. The LIFE program is an EU funding instrument for environment and climate action with a total budget of €5.4 billion in the period 2021-2027. The LIFE program has 4 sub-programs: Nature and Biodiversity; Circular Economy and Quality of Life; Climate Change Mitigation and Adaptation; and Clean Energy Transition. LIFE projects under the Circular Economy and Quality of Life sub-program will develop technologies and solutions to enhance the circular economy. These projects include resource recovery from waste, management of water, air, soil,

chemicals and more (European Commission, 2023).

One of the keys to the success of the LIFE program is the bottom-up approach with multi-stakeholder involvement. LIFE projects are not only funded by the EU Commission, but require co-financing from local partners such as public authorities, private companies, universities, NGOs and others. This ensures high local involvement and ownership in project implementation. For example, LIFE projects in Ireland from 1992 to 2020 totaled €176 million with €60 million of this coming from the co-financing of Irish partners (Government of Ireland, 2023).

This co-financing approach differs from other multilateral funding schemes such as the Global Environment Facility (GEF) which is fully funded by donors. While the GEF has successfully funded many environmental projects in developing countries, reliance on external funding can hinder long-term sustainability. In contrast, the LIFE program's cost-sharing approach can promote sustainability, technical and institutional capacity, and public awareness at the local level.

Therefore, an adapted version of the LIFE program at the ASEAN level could enhance member states' participation and support to achieve ASEAN circular economy targets. The scheme could be funded by ASEAN member states equitably through annual contributions, with additional co-financing from local partners. Funding priorities could be aimed at small and medium-scale circular economy innovations that provide economic, environmental and social benefits, e.g. community waste banks, agricultural waste treatment, or refurbishment and redesign of electronic products.

The ASEAN-adapted version of the LIFE Program should apply the fair and equitable principle by ensuring equal access to funding for businesses and communities in ASEAN countries regardless of country income levels. The application and administration process should be made easier for small-scale circular economy actors. At the project implementation level, technical assistance from the ASEAN secretariat should be provided to build local capacity. Thus, the scheme can accelerate the adoption of circular economy practices in ASEAN in an inclusive and sustainable manner.

The ASEAN version of the LIFE Program funding scheme can also address specific circular economy implementation challenges in Thailand. With a bottom-up and cost sharing approach, this scheme can expand access to funding for environmental NGOs and waste picker communities that have been marginalized from the benefits of circular economy reforms. This joint scheme can also mitigate political influence and resistance from petrochemical corporations by requiring equitable funding contributions from various parties, not just the government. Furthermore, the ASEAN LIFE Programme scheme should prioritize the empowerment of marginalized actors through direct grants and technical assistance to enhance their capacity and participation in an inclusive circular economy.

## CONCLUSION

Harmonizing circular economy standards in ASEAN faces challenges due to differences in economic conditions and environmental policy implementation capacity among member countries. Developed countries tend to be more aggressive in targeting resource efficiency, while

developing countries need a more gradual transition. A flexible and accommodative approach is needed in formulating the Framework for Circular Economy for the ASEAN Economic Community (AEC) to accommodate the specific needs of each country. Political-economic barriers also often arise from conflicting interests of policy makers. For example, governments protect domestic industries/jobs by rejecting overly burdensome standards; while global environmental NGOs continue to push for the adoption of stricter international standards. Understanding the political and economic power dynamics is important in designing effective and realistic ASEAN circular economy implementation. Cross-stakeholder co-financing schemes such as the European Union's LIFE Program can enhance member states' participation through co-financing. Sustainable funding through bottom-up approach and involving local stakeholders is also needed for ASEAN to meet the regional circular economy target. Fairness and equity should be prioritized to ensure all ASEAN countries have equal access to funding without discrimination.

## REFERENCES

- Agyeman, J., Bullard, R. D., & Evans, B. (Eds.). (2003). *Just sustainabilities: Development in an unequal world*. Cambridge: MIT press.
- Anbumozhi, V., & Kimura, F. (2018). *Industry 4.0: Empowering ASEAN for the circular economy*. Jakarta: Economic Research Institute for ASEAN and East Asia.
- ASEAN. (2021). *ASEAN adopts framework for Circular Economy*. <https://asean.org/asean-adopts-framework-for-circular-economy/>, diakses pada 2 Desember 2023.
- ASEAN Studies Center. (2022). *Circular*

*Economy in ASEAN: a Brief View on Plastics*

*Harmonization and Micro, Small, and Medium-Sized Enterprises Inclusion.*

<https://asc.fisipol.ugm.ac.id/2022/08/23/circular-economy-in-asean-a-brief-view-on-plastics-harmonization-and-micro-small-and-medium-sized-enterprises-inclusion/>, diakses pada 2 Desember 2023.

Dauvergne, P. (2014). *Handbook of Global Environmental Politics, Second Edition.*

Northampton: Edward Elgar Publishing.

European Commission. (2023). *Priority topics of new LIFE Circular economy and quality*

*of life Subprogramme.* <https://cinea.ec.europa.eu/system/files/2021-07/CIRCULAR%20ECONOMY%20%26%20QUALITY%20OF%20LIFE.pdf>, diakses pada 25 Desember 2023.