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\* この記事は、調査及び立法考査局内において、国政審議に係る有用性、記述の中立性、客観性及び正確性、論旨の明晰（めいせき）性等の観点からの審査を経たものです。

\* 本文中の意見にわたる部分は、筆者の個人的見解です。

## Summary

### Chapter 1 The Concept of a “Circular Economy” and Japan’s Main Measures and Initiatives

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The linear economy, often called the “take-make-waste” economy, is based on a “mass production-mass consumption-mass disposal” model and is said to have already reached its limits. Therefore, in order to address the impact of the linear economy on the global environment and to efficiently use limited resources, the social implementation of a circular economy, an economic system that circulates resources more, has become a global trend in recent years, particularly in Europe. In Japan, too, the transition to a circular economy has been positioned as a national strategy.

However, it is difficult to say that the concept has been widely understood by the public. This article summarizes the principles and concepts of the circular economy, which is said to go beyond individual efforts such as waste reduction and recycling and involve a transformation of socio-economic systems, and introduces the main circular economy measures and initiatives currently underway toward creating the “Sound Material-Cycle Society” that Japan aims to achieve.

### Chapter 2 Efforts to Achieve a Circular Plastics Economy

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The mass production, consumption, and disposal of plastics today are major drivers of plastic-related environmental pollution, raising concerns about their effects on ecosystems and human health. Consequently, the transition to a “circular plastics economy” —one that reduces unnecessary production and consumption, keeps products and materials in use for as long as possible, and ensures the proper treatment of waste that cannot be economically recycled—has become an urgent global priority.

Countries are strengthening their plastics policies to achieve such a circular system. The EU and its member states, including Germany, emphasize frameworks based on Extended Producer Responsibility (EPR), which hold producers accountable for collection, recycling, and related processes. China has introduced bans on plastic-waste imports and has imposed restrictions or bans on certain single-use plastics. Japan has enacted the Act on Promotion of Plastic Resource Circulation, which comprehensively enhances the recycling of plastic resources.

However, many challenges remain, including difficult negotiations toward an international treaty on plastic pollution. Continued and sustained efforts will be essential in the years to come.

## Chapter 3 **Current Situation, Challenges, and Global Trends in Lithium-Ion Battery Collection and Recycling**

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The collection rate remains low for small lithium rechargeable batteries. Moreover, frequent fires have occurred during waste collection by local governments. It will be necessary to establish an effective framework to define the respective responsibilities of local governments, manufacturers/importers/distributors, recyclers, and consumers.

The collection rate of automotive lithium-ion batteries is also low. Resource circulation has not yet been established, as the black mass generated in the recycling processes is exported overseas. Responding to the EU Battery Regulation is a key challenge for maintaining competitiveness in the battery industry. It will be necessary to build cost-competitive refineries capable of extracting rare metals from black mass. From around 2035-2040 onward, the number of end-of-life lithium-ion batteries generated from scrapped vehicles is expected to increase significantly in Japan. As China, Europe, the U.S., and Korea move ahead, the question arises as to whether Japan can establish a resource circulation system that contributes to economic security.

## Chapter 4 **Development of Circular Economy Regulations in the EU and Italy**

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The EU published the Circular Economy Action Plan in 2015, followed by revisions to the Waste Framework Directive and other legislation in 2018. Subsequently, a new Circular Economy Action Plan was published in 2020, and between 2024 and 2025, the Right to Repair Directive and the Packaging and Packaging Waste Regulation were enacted. The enactment of a Circular Economy Act is also scheduled for the third quarter of 2026.

In light of EU legislative developments, EU member states have been advancing amendments to relevant legislation to realise a circular economy. In Italy, at the national level, efforts centred on waste management are being advanced through parliamentary legislation and government-delegated legislation (such as legislative decrees and decrees-law). At the regional level, there are examples where regions have enacted legislation to support a circular economy and have achieved some results. Key measures are waste reduction through the introduction of economic incentives and pay-as-you-throw schemes, and promotion of reuse and recycling, including the establishment of reuse centres.

## Chapter 5 The Evolution of U.S. Circular Economy Policy

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The United States' circular economy policy is grounded in the Resource Conservation and Recovery Act of 1976 (RCRA). However, because RCRA prioritizes waste management and disposal and does not mandate recycling, the United States needs a “portfolio-based” approach that combines multiple policy tools to complement the Act, including federal procurement through executive orders and support for state governments through grants.

Since the 2000s, successive administrations have advanced circular economy policy while shifting priorities between environmental protection and economic-efficiency and national-security considerations. In this context, federal procurement has functioned as a concrete mechanism for policy implementation. Overall, the portfolio-based approach—compensating for the absence of comprehensive framework legislation through executive orders, budgetary measures, and interagency coordination—allows for agile policy shifts but may undermine long-term consistency and effectiveness.

## Chapter 6 Circular Economy and Greenwashing

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The importance of the circular economy has become widely recognized worldwide. On the other hand, the social and ethical challenges involved in transitioning to a circular economy have yet to receive sufficient attention. In this context, greenwashing—misleading claims of environmental responsibility that can hinder the realization of a circular economy—has become an issue of growing concern. The concept of greenwashing has developed, both domestically and internationally, through several stages: it began with static communication between companies and consumers, then evolved into dynamic management processes involving an increasing number of stakeholders as countermeasures against greenwashing, and in recent years has further expanded into approaches accompanied by forward-looking narratives. In response to greenwashing, tools and infrastructures such as life cycle assessment (LCA) and digital product passports (DPP) are expected to play important roles; relatedly, the “right to repair” is also likely to be increasingly institutionalized in the future.