



Ministry of Environment



Korea Environment Institute



# Introduction of the Framework Act on Resource Circulation toward Establishing a Resource-Circulating Society in Korea

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# Summary

As a resource-poor and heavy energy-using society, Korea faces serious environmental, economic and social threats. Therefore, in order to transform the mass production-oriented and mass waste-producing economic structure into a much more sustainable and efficient resource-circulating one at a fundamental level, Korea enacted the Framework Act on Resource Circulation (FARC).

The provisions of the FARC can be divided into three categories, each of which is establishing a basis for resource circulation, promoting resource circulation, and supporting recycling industries.

The FARC introduces new waste management-related programs such as 'Recyclable Resource Recognition Program(RRRP)', 'Resource Circulation Performance Management Program(RCPMP)', 'Waste Disposal Fees' and so on.

The RRRP is recognizing waste materials that meet certain requirements to be "recyclable resources" and giving exemption from regulations governing wastes in general.

The RCPMP is obligating Metropolitan, provincial governments and businesses to set their goals with regard to the final waste disposal and resource circulation rates to inhibit the increase in the amount of wastes and promote the circulation of resources.

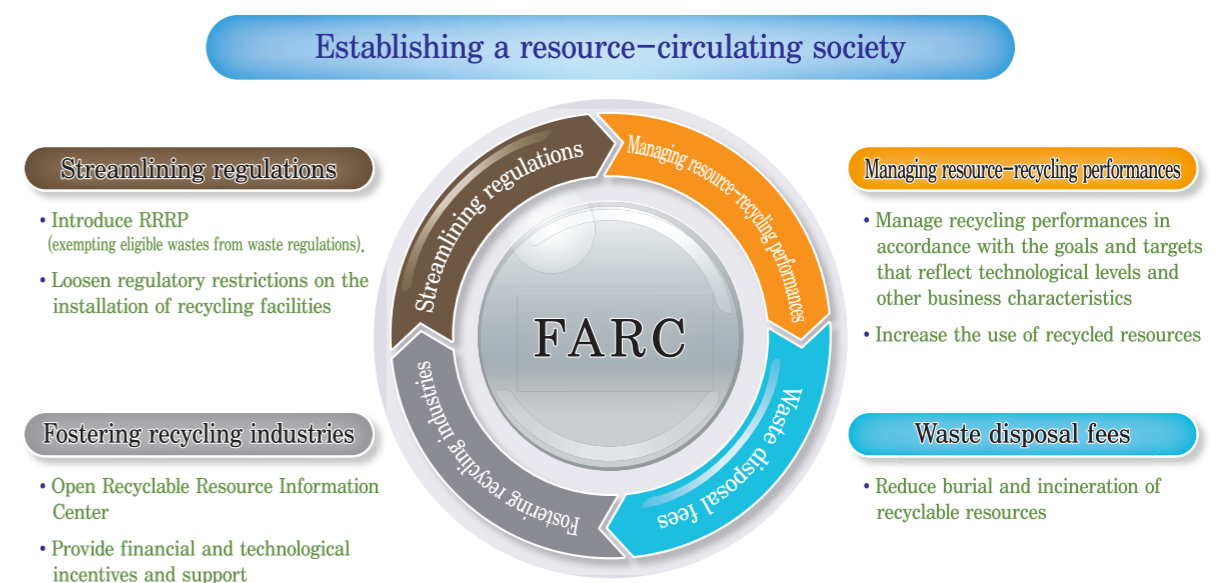
Waste disposal fees will be levied on individuals and businesses that dispose of resources that could have been recycled to incinerator or landfill site. The fees will be equivalent to the cost of recycling the resources.

With the FARC, it is expected to have economic, environmental, and social effect by preventing environmental pollution, and realizing other economic and social benefits.

For its successful transition into a resource circular economy, Korea is required to make further efforts to shift the policy paradigm on waste control, building on its progress made from enacting and implementing the FARC.

## I . Introduction

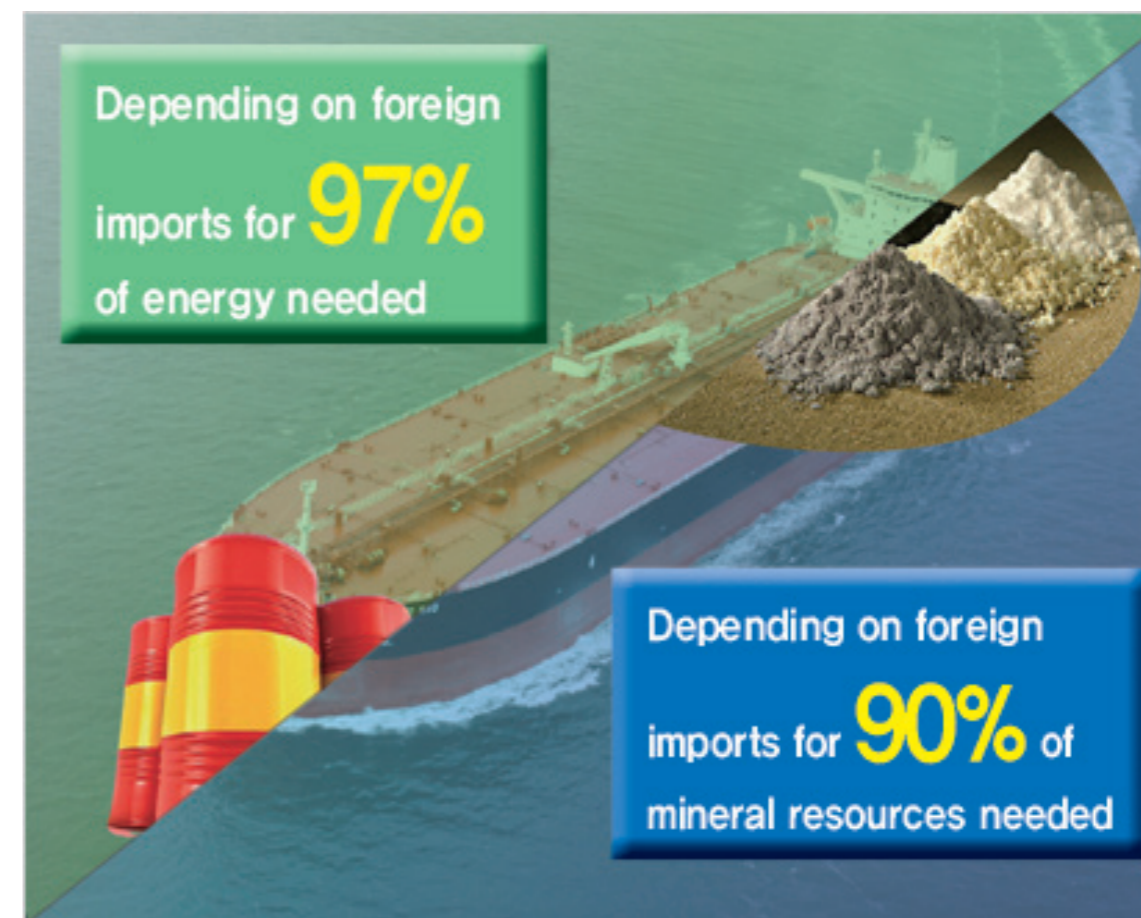
Korea enacted the Framework Act on Resource Circulation (FARC) in an attempt to transform Korea into a "resource-circulating society" that makes the most efficient use of resources, thereby solving resource, energy, and environmental problems. The legislation is to take effect from 2018. A resource-circulating society is one in which people and industries work together to minimize the amount of wastes generated and maximize the reuse or recycling of wastes as new products or energy. The FARC aims to transform the mass production-oriented and mass waste-producing economic structure into a much more sustainable and efficient resource-circulating one at a fundamental level by encouraging innovative ideas and technologies for reusing and recycling wastes rather than merely sending them to incinerators or landfill sites. To this end, the legislation introduces the Resource Circulation Performance Management Program (RCPMP), assigning mandatory recycling quotas to businesses and organizations that generate large quantities of wastes and assess their recycling performances based on the quotas. The law also introduces waste disposal fees to be charged on reusable resources that are permanently disposed of (by incineration and landfill), beginning on 1 January 2018. Under this provision, the heads of local governments and businesses that dispose of wastes instead of recycling them will be charged fees which are equivalent to the cost of recycling. The FARC also provides for the Recyclable Resource Recognition Program (RRRP), recognizing wastes, such as scrap metals, which carry little environmental impact and can be directly put into manufacture as raw materials, as recyclable resources and got exempted from regulations governing wastes. In addition, the FARC also introduces a variety of measures for fostering a culture of a resource-circulating society, evaluating the hazards and recyclability of products, and promoting the recycling of waste materials (including the Recyclable Resource Quality Certificate or RRQC). These measures are summarized in the following figure.



Policy makers expect that the introduction of such a comprehensive new law will effectively encourage recycling, help to decrease the number of incineration and landfill sites, prevent environmental degradation, and create additional social and economic benefits including new industries and jobs associated with recycling market.

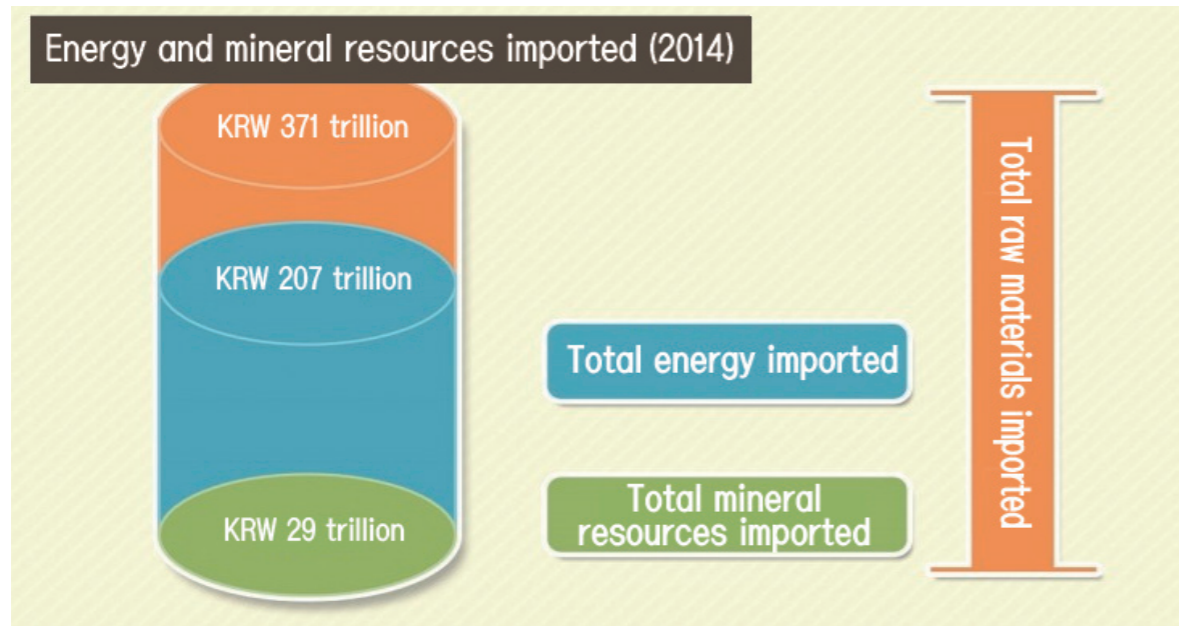
## II. Background

Korea is a heavy energy-consuming society, dependent on foreign imports for 90% of the mineral resources and 97% of energy it consumes.



In 2013, Korea imported raw materials amounting to an average of KRW 1 trillion every day, or to a total of KRW 371 trillion a year. Taking into consideration that Korea's major exports—steel, semiconductors, automobiles, and ships—amounted to KRW 550 billion in aggregate value per day, raw material imports almost doubled Korea's major exports in terms of value.

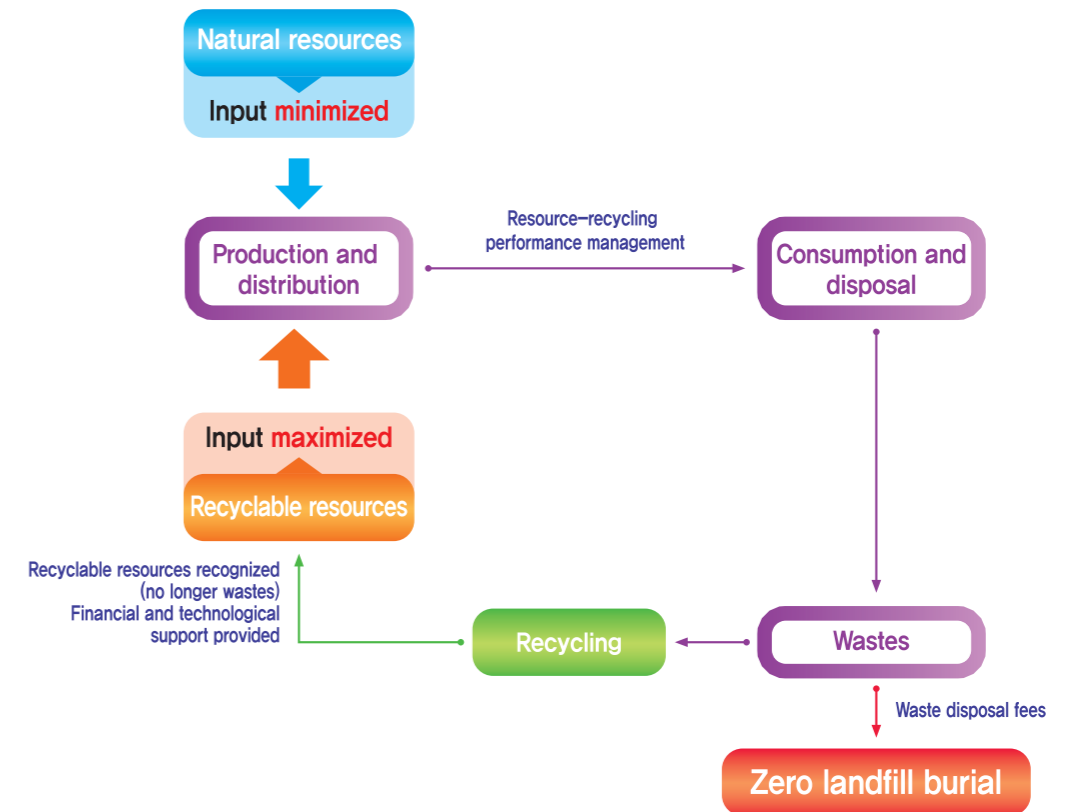




In the meantime, Korea also ranks the fourth among the Organization for Economic Cooperation and Development (OECD) member states in terms of the amount of wastes generated per unit area. Approximately 56% of wastes that could be turned into fuels for energy are being either buried in landfills or incinerated daily in Korea. Given the limited area of Korea’s national territories, it is impossible and unwise to keep increasing landfill sites in the country.



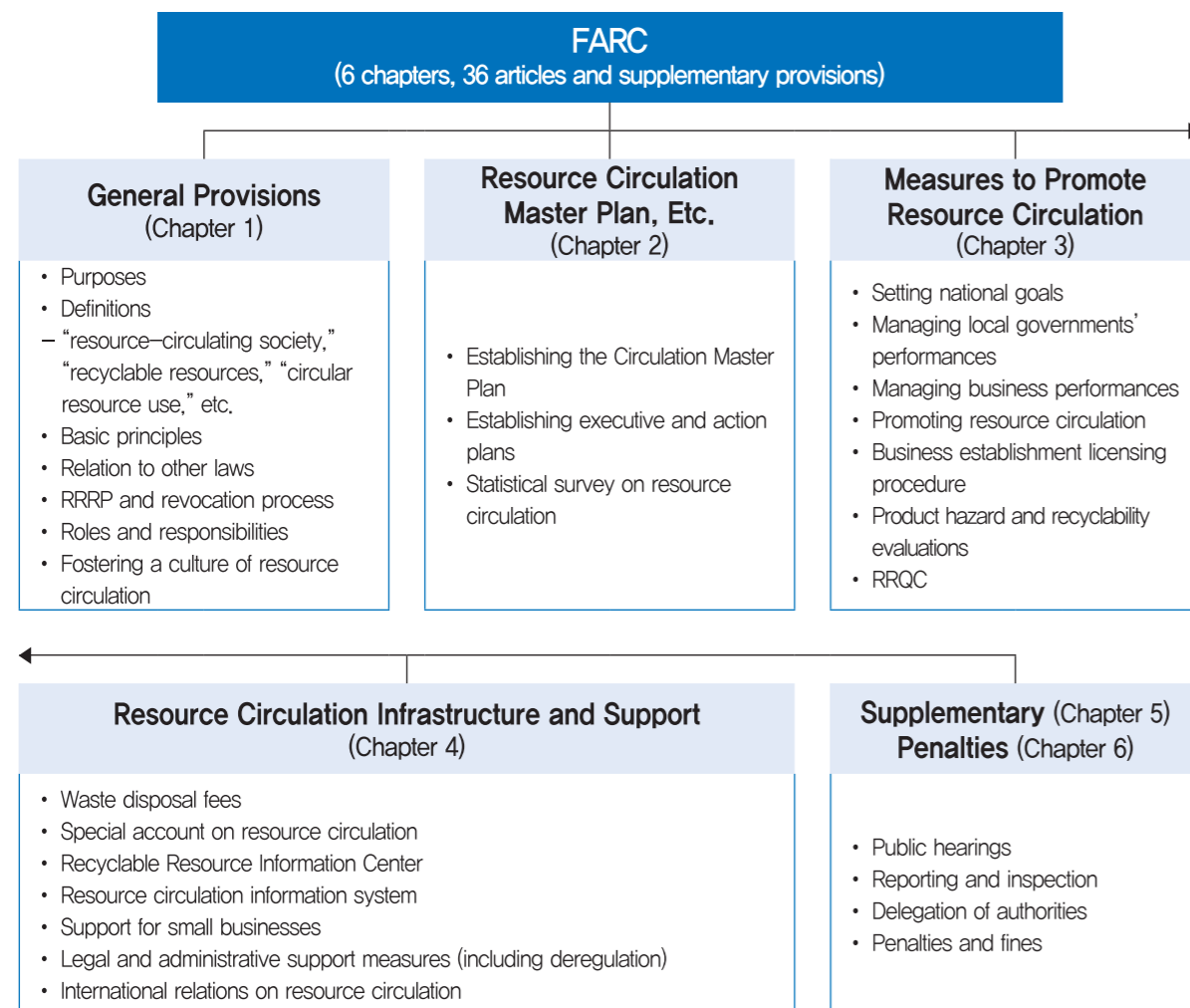
As a resource-poor and heavy energy-using society, Korea faces serious economic and social threats in the forms of excessive reliance on foreign imports for raw materials, the still-staggering ratio of wastes being buried in landfills, and the acute shortage of landfills to accommodate the increasing amount of garbage. It is, therefore, critical for Korea to seek a transition into a resource-circulating society which ensures maximum efficiency in all stages of the resource life cycle, from production and distribution to consumption and disposal.



Since 2015, many countries worldwide have been introducing policy measures for achieving a resource-circulating society. The European Union (EU), first of all, revealed the Circular Economy Package policy, which is intended to improve resource productivity of the European economy, promote sustainable growth, and create new jobs in a virtuous circle. The OECD has also introduced the Sustainable Materials Management (SMM) program, emphasizing the need for efficient management of resources throughout their life cycles. G7 governments have endorsed resource efficiency policies for sustainable development, preservation of natural resources, and maximization of the efficiency in resource use.

# III. Features of the FARC

## 1. Structure



The provisions of the FARC that promote Korea’s transition into a resource-circulating society can be divided into the following three categories.

The first category concerns setting a basis for resource circulation by defining and clarifying the basic principles, roles and responsibilities involved, establishment of the master plan, need for fostering a conducive culture and international relations. These measures address the perception of businesses, citizens, and the society as a whole.

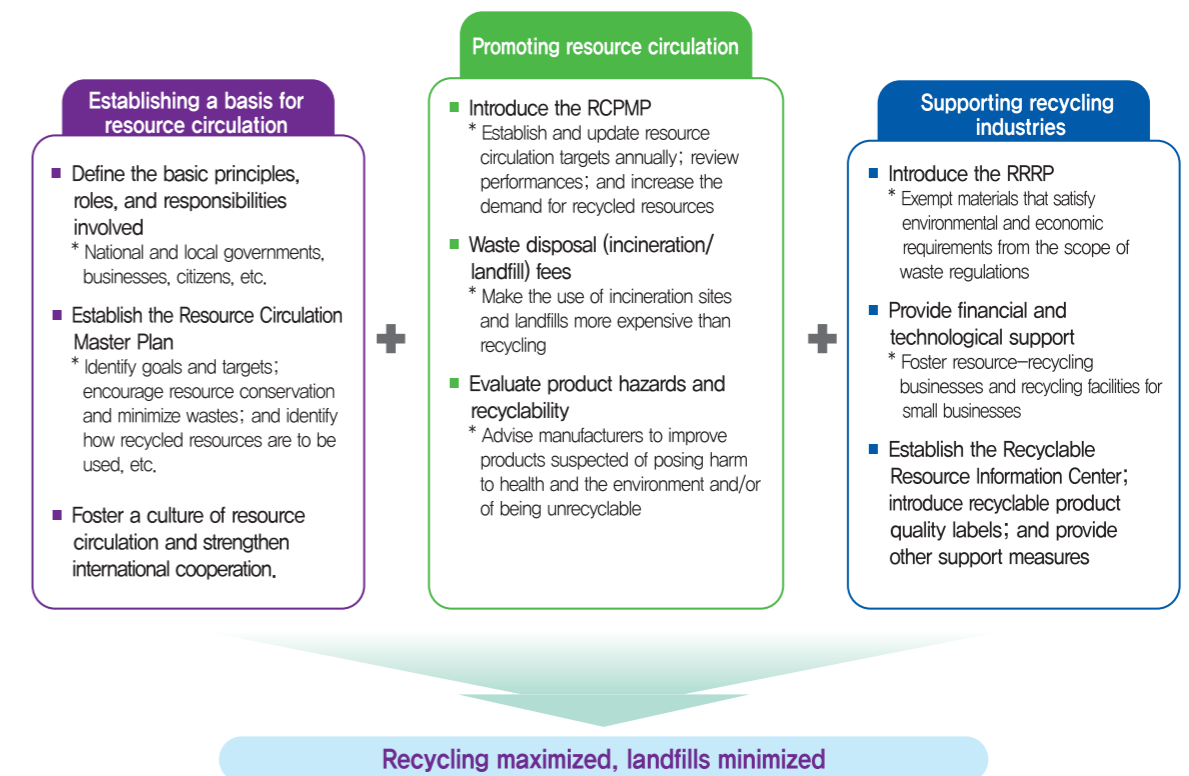
The second category involves measures for supporting resource circulation in industries by implementing

the RRRP, providing fiscal and technological support, and establishing an information center. The objective is to avoid unnecessary regulations and encourage businesses to participate.

The third and final category includes measures that promote resource circulation, such as the RCPMP, waste disposal fees, and the Hazard and Recyclability Evaluation Program. These are appropriate regulatory measures intended to catalyze the realization of a resource-circulating society.

These measures are summarized in the following figure.

《System of FARC Provisions toward a Resource-Circulating Society》



## 2. Key provisions of the FARC

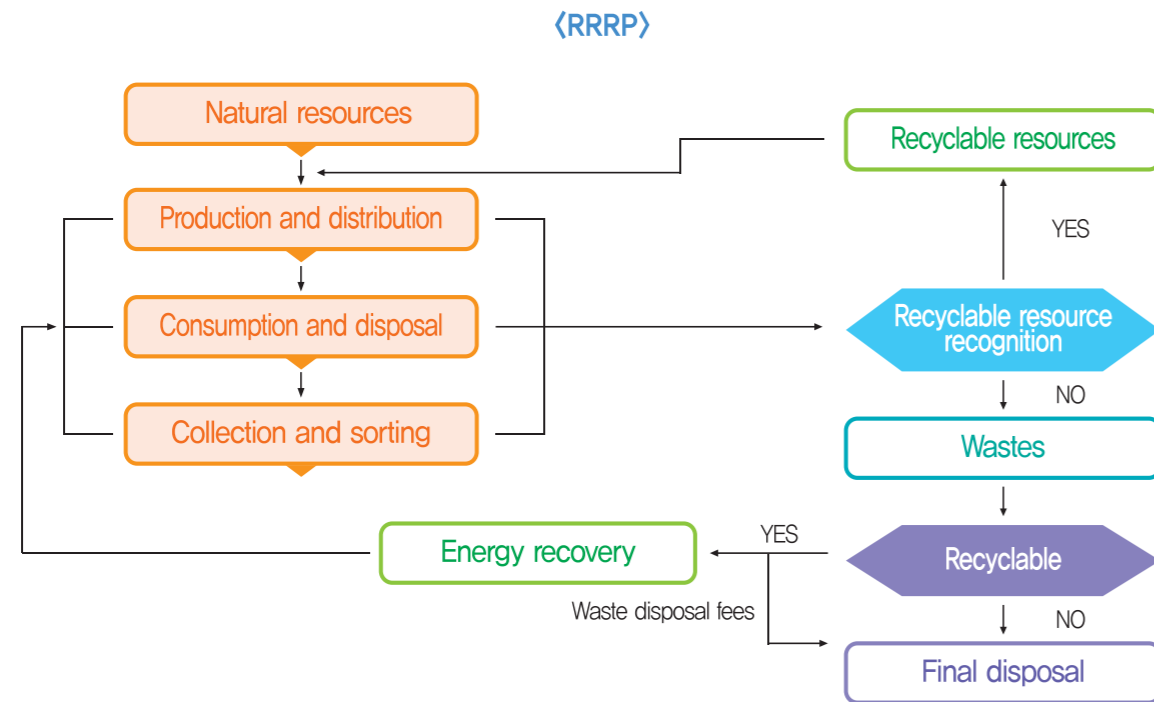
### A. RRRP

#### ○ Overview

The RRRP involves recognizing waste materials that meet certain requirements to be “recyclable resources” and giving exemption from regulations governing wastes in general. “Recyclable resource” here refers to the substance that is produced or used by recycling wastes and that meets the environmental, economic, and technological standards established by the Minister of Environment.

Today, wastes are subject to waste regulations even after they are recycled. However, once they are newly recognized as recyclable resources under the RRRP, they will no longer be subject to the cumbersome requirements of waste control. Businesses that collect, transport, recycle, and distribute such recyclable resources will thus face fewer regulatory restraints on their economic activities and,

therefore, become better able to participate in the trade of recycled products on the market. The Minister of Environment may always revoke the recyclable resource status of waste materials that do not satisfy the safety standards. Materials that lose the recyclable resource status will be subject again to waste regulations. The RRRP is summarized in the following figure.



○ Revocation of the recognized recyclable resource status

In order to qualify as a recyclable resource, a waste material or object must, first, pose no harm to human health and the natural environment; second, possess economic values for paid transactions; and third, satisfy all the requirements for recyclable resources defined by a presidential decree (Paragraph 1 of Article 9 of the FARC).

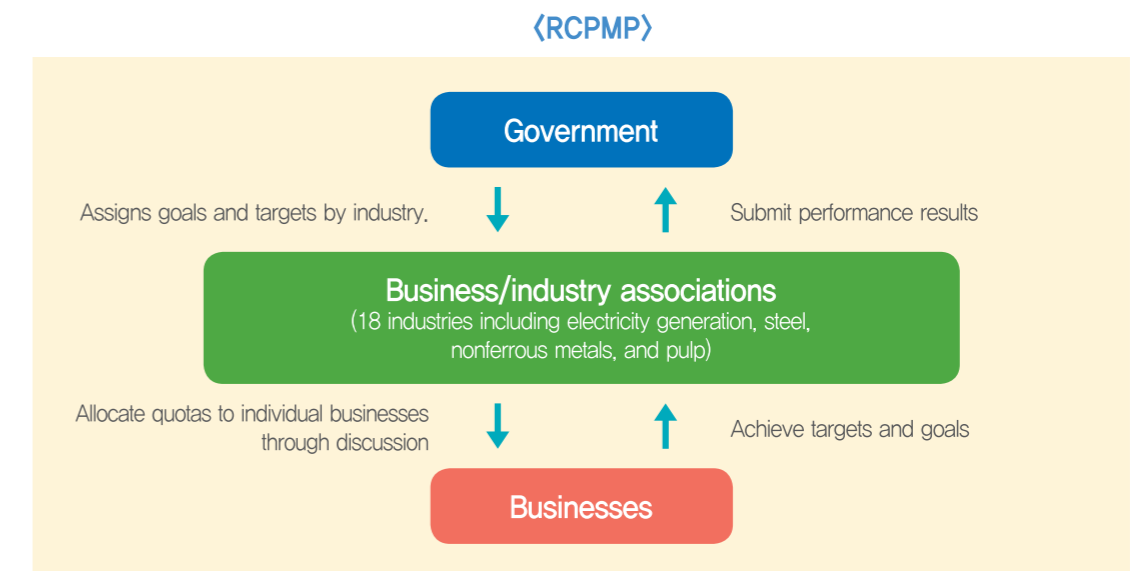
Individuals and businesses can apply to have their waste materials or objects recognized as recyclable resources. Upon reviewing the application and confirming that the given materials or objects satisfy all the requirements, the Minister of Environment will issue certificates of recognition (Paragraph 2 of the same Article). The FARC, however, limits the period for which wastes can be recognized as recyclable resources. The recognition must be renewed three years after the initial date of recognition and five years after each renewed recognition (Paragraph 3 of the same Article). The details of the application and recognition procedures are to be laid out in the Enforcement Decree of the FARC (Paragraph 6 of the same Article). However, part of the recognition procedure as defined by the Enforcement Decree may be omitted with respect to materials and objects, such as scrap metals and paper, which pose little environmental impact and can be directly put into the manufacturing process as raw materials. This is to minimize the certification burden on recycling businesses (Paragraph 7 of the same Article).

Waste materials and objects so recognized as recyclable resources are no longer treated as wastes (Paragraph 4 of the same Article) and are, therefore, exempted from various waste regulations.

However, the recognized recyclable resource status may be revoked where it is found that the individual or the business that has obtained such recognition did so with the help of false or misleading information, or has, otherwise, failed to satisfy the requirements for recognition (Article 10.1). Upon revoking the recognized recyclable resource status, the Minister of Environment must inform the party of the revocation (Paragraph 2 of the same Article). The party that has so lost the recognition status must file a report of waste disposal and/or a confirmation of a waste disposal plan concerning the recognition–revoked materials or objects pursuant to Article 17 of the Wastes Control Act. Within 30 days following the handling and disposal of waste materials, the party must submit a report on the outcome or status of the disposal to the Minister of Environment in accordance with the procedure defined by a decree of the Minister of Environment (Paragraph 3 of the same Article). The RRRP is intended to exclude waste materials and objects that meet certain economic and environmental requirements from the scope of waste regulations so as to alleviate the burden on businesses and ensure public safety.

B. RCPMP

Under the FARC, the Minister of Environment has the obligations to inhibit the increase in the amount of wastes and promote the circulation of resources by setting mid- to long-term and phase-by-phase nationwide resource circulation goals concerning final waste disposal, resource circulation, and energy recovery rates, and by taking actions accordingly (Article 14). Metropolitan and provincial governments and businesses are also required to set their own goals with regard to the final waste disposal and resource circulation rates (and not the energy recovery rates; Article 15). The key to these provisions is the implementation of the RCPMP on businesses. Under the RCPMP, the Minister of Environment is to encourage businesses to strengthen and improve their recycling performances by setting resource circulation goals for different types of businesses, and providing financial and technological incentives for the subject businesses to strive to achieve those goals.



In setting the target rates to be met by businesses, the Minister of Environment is to consider the scales of business, the technological level, the global competitiveness, and past records on satisfying the target rates, and is to consult business associations (Paragraph 2 of Article 16). Where difficulties are expected



due to the shutdown or malfunction of resource circulation facilities and/or delays in the infrastructure expansion plan, the Minister of Environment may request that the target rates be readjusted accordingly (Paragraph 3 of the same Article).

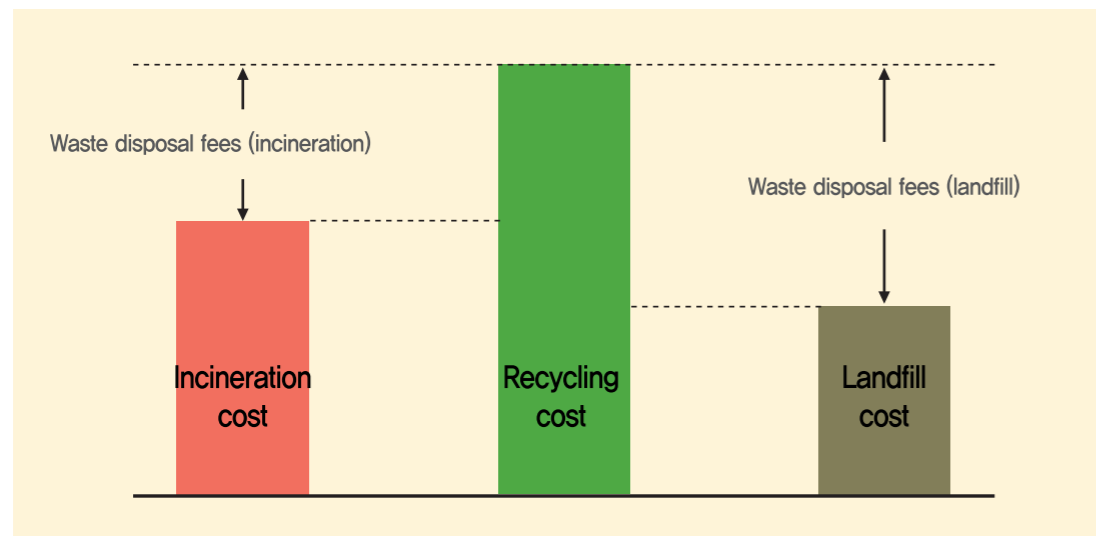
Businesses subject to the RCPMP are to submit to the Minister of Environment their plans for achieving the resource circulation goals, documented records on their performances with regard to past goals, and other documented materials necessary for the government to decide or validate the mid- to long-term and phase-by-phase goals and target rates.

Businesses that meet the target rates can expect to receive administrative, financial, and technological support from the government. If businesses manage to perform better than the target rates, they can have the portion of their achievements in excess of the target rates carried forward and included in their performances for the following year. If businesses fail to reach the target rates, the Minister of Environment may order them to perform the shortages the next year. Failure to carry out this order and provide the required plans and documents may result in disciplinary actions, starting with the disclosure of the names of businesses that have failed to comply with the requirements. The RCPMP is expected to encourage businesses to reduce the amount of wastes they generate and increase the use of recyclable resources.

**C. Waste disposal fees**

Waste disposal fees will be levied from individuals and businesses that dispose of resources that could have been recycled to incinerator or landfill site. The fees will be equivalent to the cost of recycling the resources. In sum, the fees require individuals and businesses to pay for the social cost of recyclable resources that are wasted in incinerators or landfill sites.

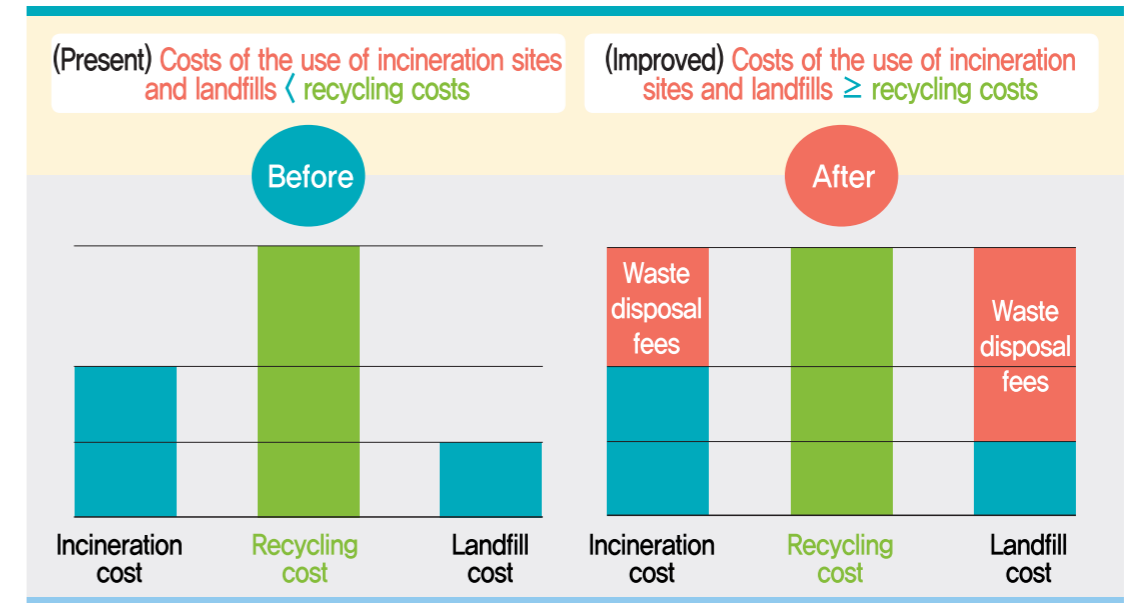
**Concept of Waste Disposal Fees**



Waste disposal fees are introduced in order to incentivize the public to reuse recyclable resources better rather than to have them buried or incinerated. These fees are expected to minimize the amount

of recyclable resources being incinerated and buried by maximizing the reuse and recycling, thereby reducing the demand for new landfills.

**Before and After: Introduction of Waste Disposal Fees**



Waste disposal fees are charged on the heads of metropolitan, provincial, and municipal governments and businesses that generate wastes.

The amounts of fees to be charged are based on the cost of recycling wastes that have been incinerated or buried in landfills. More specifically, they are determined by the formula provided by the law for calculating the amount of recyclable resources wasted, and then multiplying it by the legally stipulated index (Paragraph 3 of Article 21). The law, however, also provides extenuating circumstances under which the fees to be charged may be discounted. Examples include businesses or local governments that accumulate and store recyclable resources in the forms of landfills for the purpose of future recycling or use and/or recovering energy of certain amounts from incinerating or burying recyclable resources. Small and medium enterprises that have already paid their waste fees are also exempted from paying waste disposal fees.

The financial resources raised by levying waste disposal fees may be spent on public campaigns and educational programs that encourage recycling, fostering a recycling culture, improving recycling and waste treatment facilities as well as the living environments surrounding them, developing new recycling technologies, fostering recycling industries, and investing in small businesses' recycling facilities and R & D as well as international relations concerning waste control and recycling.

**D. Other measures**

The FARC promotes the quality and technological competitiveness of resource-recycling businesses by enabling them to submit their projects to quality and process tests, and attaching quality certificate labels to products of proven quality.



The law also provides for the Hazard and Recyclability Evaluation of products so that the evaluation results can be used to advise businesses against using hazardous and unrecyclable materials, and disclose the evaluation results of businesses that failed to comply.

Moreover, the FARC lays out various measures for fostering a resource-circulating culture, and providing financial and technical support for resource-recycling businesses.

Finally, the law requires the creation and operation of the Recyclable Resource Information Center in order to encourage the public to recycle resources by providing information on available technologies. The Resource Circulation Information System is also to be set up in order to ensure the systematic management and sharing of recycling performance evaluation results and other such data.

## M. Future Tasks

### 1. Establishing legal and policy grounds for a resource-circulating society

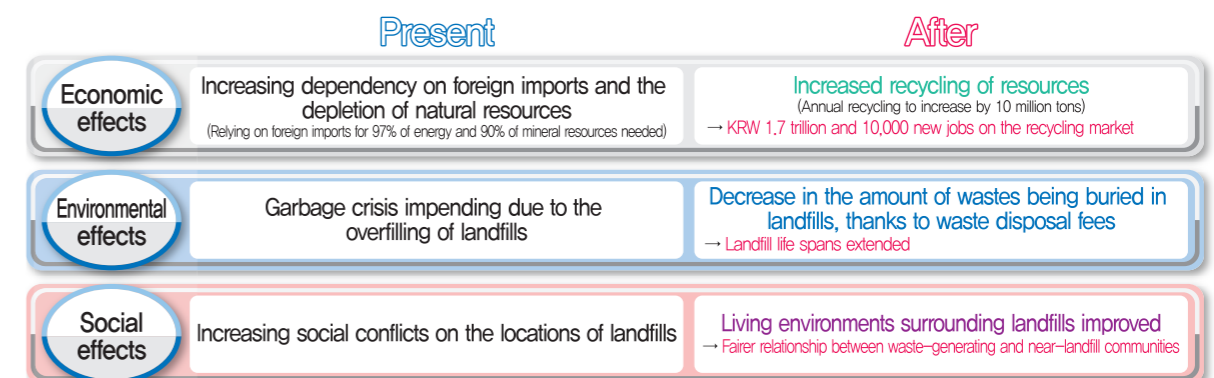
#### 〈Shifting the Policy Paradigm on Waste Control〉

	Previous Policy	New Policy
Motives	Environmental degradation due to wastes	Climate change and depletion of natural resources
Objective	Creation of a pleasant living environment	Establishment of a resource-circulating society
Strategy	Reduce, recycle, and treat wastes	Ensure efficient production and consumption, recycling, energy recovery, and advanced treatment
Tasks	Volume-based waste fees, producer recycling system, and addition of treatment facilities	Recognition of recyclable resources, management of recycling performances, turning of wastes into energy, and increase of wider-region treatment
Core concept	Waste	Resource (natural/recycled)

Whereas the past policymaking on waste control centrally focused on reducing, recycling, and treating wastes including through the volume-based waste fee system and the producer recycling system, the new model of policymaking keeps in mind climate change and depletion of natural resources, and seeks to ensure a more efficient management of resource production and consumption, recycling, energy recovery, and advanced treatment. The main tasks of the latter thus include recognizing recyclable resources, managing recycling performances, turning wastes into energy, and increasing wider-region treatment.

### 2. Preventing environmental pollution, and realizing other economic and social benefits

#### 〈Anticipated Effects of the FARC〉



The FARC is expected to reduce the ratio of wastes being buried in landfills in Korea from the current 9% to 3%, and eliminate the burial of recyclable wastes. This, in turn, would extend the life span of existing landfill sites by more than two decades and significantly reduce pollution in Korea.

Moreover, the FARC will effectively help Korea transform itself into a resource-circulating society by promoting recycling and the replacement of natural resources with recycled resources, thereby reducing Korea's dependency on imported raw materials.

By increasing the amount of recycled resources by 10 million tons a year and expanding the recycling market to KRW 1.7 trillion in value, the FARC could also lead to creating over 10,000 new jobs in the Korean economy.

Finally, by effectively managing and reducing conflicts of interests over the use of landfills, improving living environments for communities nearby landfills, and more fairly allocating the costs of landfills between those communities that are adjacent to landfill sites and those send their wastes to the sites, the FARC will help reduce social conflicts on waste disposal.

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