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HARMONIZING THE CYCLES OF NATURE AND ECONOMIC SOCIETY

The Leaders' Declaration of the G7 Summit in 2015 asserted, "The protection and efficient use of natural resources is vital for sustainable development." An improvement of resource efficiency and a reduction of waste are also embraced in the SDGs.

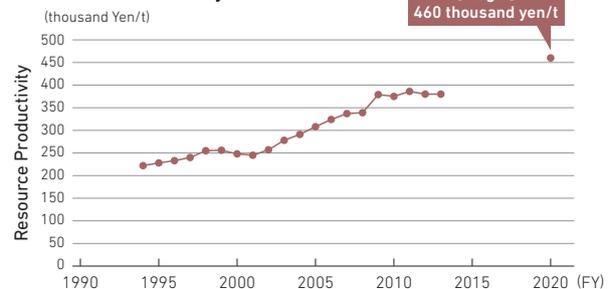
Current state of measures for promoting a sound material-cycle society

In 2000, the first year of the "sound material-cycle society," the Basic Act on Establishing a Sound Material-Cycle Society was enacted with the aim of forming a sound material-cycle society in order to minimize consumption of natural resources and reduce environmental loads. In addition, progress was made towards developing the individual recycling laws. Under the basic act, priorities were established for the use of resources through the 3Rs (Reduce, Reuse, Recycle) initiative, heat recovery and proper disposal were promoted, and the Fundamental Plan for Establishing a Sound Material-Cycle Society was determined by Cabinet decision in March 2003, for systematically building a sound material-cycle society. As a result, the final disposal amount of waste was dramatically reduced after 2000 when the basic act was enacted, declining from approximately 56 million tons in 2000 to approximately 16.30 million tonnes in 2013, and the rate of cyclical use has steadily increased from 10.0% in 2000 to 16.1% in 2013.

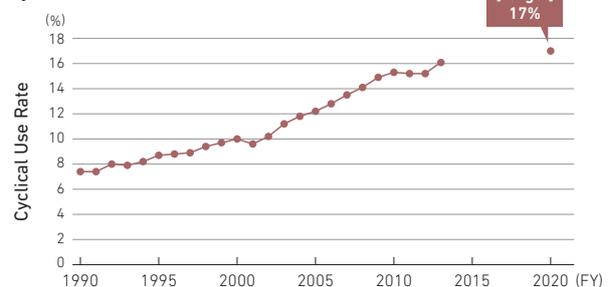
Meanwhile, the Third Fundamental Plan for Establishing a Sound Material-Cycle Society, which was determined by Cabinet decision in 2013, pointed out the inadequacy of the effort for 2R (reduction and reuse), which are higher priorities than recycling. Even for recycling, although the rate of recycling of industrial waste has made relatively good progress, at 53.4% as of 2013, the rate of recycling of municipal solid waste, which is more directly related to our everyday lifestyles, is still only 20.6%. Furthermore, although resource productivity (378,000 yen/tonne) is showing long-term improvement since FY 2000 (248,000 yen/tonne), achieving the Fundamental Plan's target for FY 2020 (460,000 yen/tonne) appears extremely difficult.

In order to improve resource productivity and promote 3R, rather than just focusing on actions at the stage at which things are discarded or disposed of, it is important to move ahead with reducing the amount of resources consumed, eco-friendly design, and use / reuse of recycled materials at the earlier stages of production, distribution, and consumption.

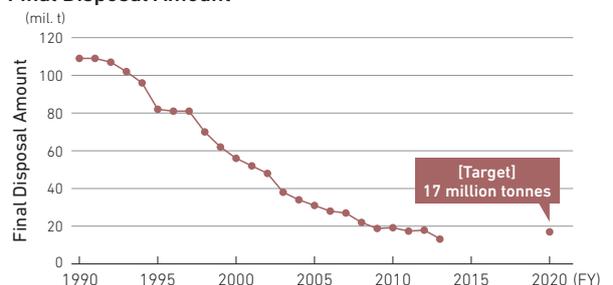
Resource Productivity



Cyclical Use Rate



Final Disposal Amount



Harmonization of two cycles

The Fundamental Plan for Establishing a Sound Material-Cycle Society states that, in order to sustain circulation in nature in a sound way and coexist with it, we must minimize adverse effects on the natural world caused by economic society, by conserving resource use in our socioeconomic system as much as possible and by promoting recycling, as well as by minimizing the environmental loads due to mining or landfill. Put simply, it aims to achieve harmonization of two cycles—the circulation in the natural world and the material cycle in our socioeconomic system. In other words, it stresses the importance of sustaining the healthy circulation in the natural world by minimizing adverse effects on that circulation through sound material cycles in our socioeconomic system (see figure below).

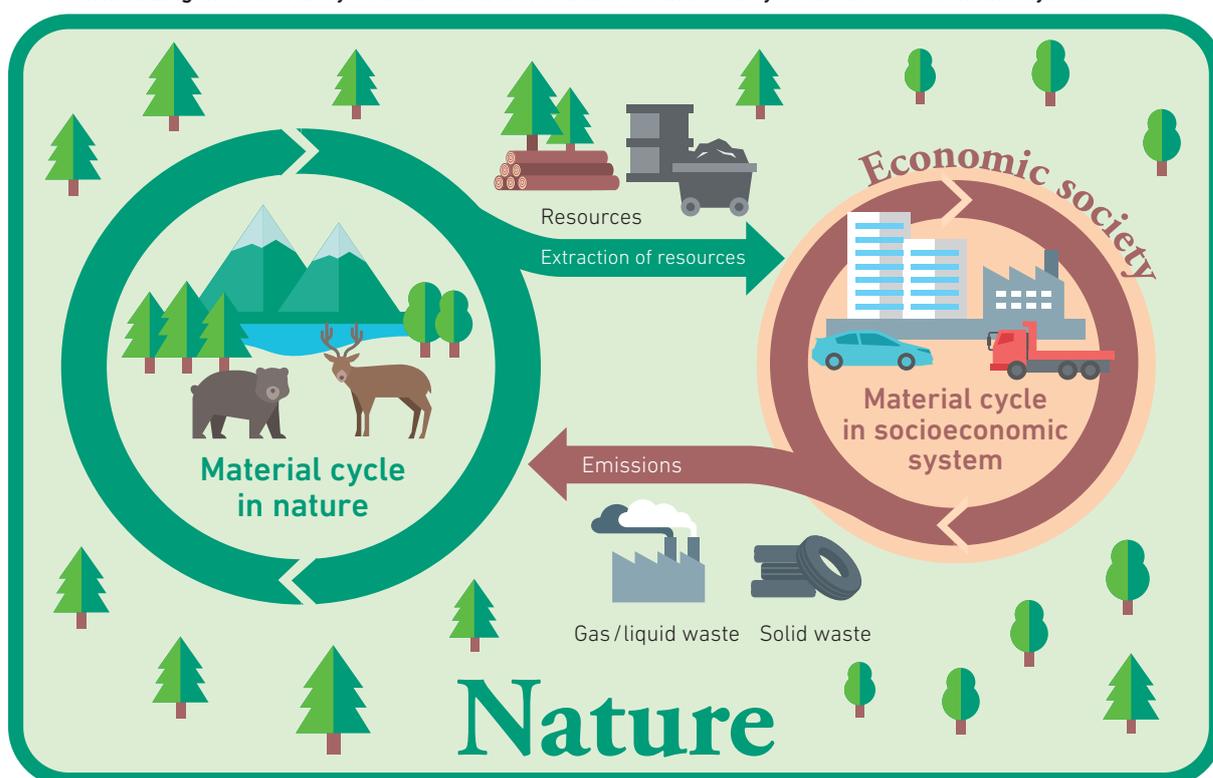
In order to make this kind of society a reality, in addition to achieving reduction, reuse, recycling, and proper disposal at the discarding / recycling stage, it is necessary to broaden our perspective and consider actions for reducing environmental loads during various stages, including resource mining, procurement of materials, production, distribution, and consumption.

Events around the world indicate that initiatives for achieving a sound material-cycle society have become a world trend, with improvement of resource efficiency

and the 3Rs-related initiatives addressed in the G7 Summit Leaders' Declaration at Schloss Elmau in Bavaria, Germany and in the Sustainable Development Goals (SDGs). Consumption of resources is increasing worldwide, and concerns grow about the scarcity of resources and about the environmental impact of mining and consuming resources. Japan, which is dependent on imports for many of its resources, must take an integrated approach, reorganizing in terms of various existing environmental policies, economic policies, and social policies, while responding in an appropriate manner to socioeconomic system reforms and changes in regional societies and global trends.

Moving forward with these actions, the potential to achieve a sound material-cycle society realizes for the first time the harmonization of the two cycles—the circulation in the natural world and the material cycle in our socioeconomic system. At the same time, it is linked with surmounting a diverse range of environmental, economic, and social issues, including efforts such as global warming countermeasures, conservation of biodiversity, and measures for toxic substances. Consequently, it also contributes to the realization/achievement of sustainable development.

Harmonizing the material cycle in the natural world and the material cycle in our socioeconomic system



Source: Compiled by Ministry of the Environment based on *Comparative Analysis on Images of Cycle-Oriented Society* by Hashimoto Seiji, et al.