



## Overview 2

The World Has Reached a Turning Point in the Creation  
of a Sound Material-Cycle Society, and Japan's Efforts

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## Introduction

Conventional socioeconomic activities based on mass production and mass consumption lead to the creation of mass-disposal societies and hamper environmental protection and the development of sound material cycles. In Japan, about 470 million tons of waste is generated annually. The increasingly diverse nature of wastes produced is making disposal more and more difficult and environmental burdens are increasing due to inappropriate disposal. This situation is further aggravated by the shortage of landfill capacity at final disposal sites, as demonstrated by the fact that the remaining useful life of final disposal sites for industrial wastes averages approximately 7.7 years, across the country, and only about 3.4 years in the metropolitan Tokyo area.

Such socioeconomic activities are also closely related to concerns about the exhaustion of natural resources (especially fossil resources), global warming caused by greenhouse gases, the destruction of nature through large-scale resource extraction, and the disturbance of natural material cycles in the natural world. These activities, along with the global warming crisis and the ecosystem crisis, feed on each other in a vicious circle and represent deteriorating global environmental problems. In particular, waste disposal problems are becoming increasingly serious in developing countries, especially in fast-growing Asian regions. Some estimate that the worldwide amount of waste generation in 2050 will be double the amount in 2000. Furthermore, recent increases in demand for resources, worldwide, and soaring resource prices have raised concerns over the stable supply of resources, adding tighter resource-related constraints not only to resource-scarce Japan but also to other countries in the world.

If human beings continue these socioeconomic activities, we will face constraints on both resource availability and the environmental capacity to accept further waste, which may hinder the sustainable development of society and the economy.

In light of the current situation, there is an urgent need to step up efforts towards a sustainable society and to

integrate these activities with efforts towards a low-carbon society and a society in harmony with nature so that a sound material-cycle (SMC) society based on lower natural resource consumption and lower environmental burdens can be successfully established in Japan, as well as in the rest of the world.

With this in mind, we analyze the world as it is approaching a turning point in the establishment of a SMC Society.

It first describes how Japan has taken the initiative in creating a SMC Society and disseminating information on the 3Rs, and describes the kinds of 3R activities that are being carried out in the developed world, including the G8 and the OECD. This provides an overview of the world as it approaches an important turning point in the establishment of an international SMC Society. This chapter also provides as much information as possible on 3R activities discussed at the G8 Environmental Ministers Meetings and the G8 Summit. This year, the Fundamental Plan for Establishing a SMC Society was revised for the first time in five years (decided by the cabinet March 2008). In line with the revised Fundamental Plan, Japan will take measures to establish a SMC Society mainly through (i) the integrated promotion of efforts toward a low-carbon society, a society in harmony with nature and efforts toward a SMC Society, (ii) the construction of SMC blocks, (iii) the achievement of newly set numerical targets such as material flow indicators and effort indices, and (iv) international contributions that take account of growing resource consumption and waste generation in Asian countries.

Chapter 2, titled "History of Japan's sound material-cycle society," examines the SMC Society from a historical perspective. Japanese society in the Edo era is believed to have been a SMC Society based on community activities. People in those days were engaged in social activities involving lower carbon emissions and lived their lives with a deeper awareness of being in harmony with nature. Efforts taken during this period clearly suggest that a sustainable society can be established through the

comprehensive promotion of a low-carbon society, a society in harmony with nature and a sound material-cycle society. (For example, Edo possessed a safe and sanitary night soil recycling system in which night soil stored in night soil reservoirs was carried to villages around the Musashi no Kuni region in order to be bartered for farmers' agricultural produce.)

Chapter 3 focuses on the establishment of Spheres of SMCs. In recent years, efforts have been made towards establishing a SMC Society by means of various levels of SMC blocks. This chapter describes and examines the concept of SMC blocks, as spelled out in the Second Fundamental Plan for Establishing a SMC Society, and discusses issues from the perspective of the integrated establishment of a low-carbon society, a society in harmony with nature and a SMC Society. By citing specific examples, this chapter illustrates how collaborations among different entities play a critical role in establishing

successful SMC blocks.

Chapter 4 examines the prospects for establishing a SMC Society in East Asia, involving Japan's cooperation. This chapter describes how active Japan is in promoting the establishment of a SMC Society with not only East Asia but also the entire international society. Japan has an important role to play in creating a SMC Society in East Asia. Specifically, Japan should understand the detailed needs of East Asian countries, consider country-specific situations, such as the status of economic infrastructure, and determine which of its technologies, systems and experiences are suitable for each country before transferring them in a manner that ensures the protection of intellectual property rights. By highlighting past cooperation results and future prospects, this chapter also outlines Japan's efforts to transfer such technologies and systems in a well-planned manner.