

Introduction

As aging society with a declining birthrate or depopulating society is becoming reality in Japan, the decline in national vitality and international competitiveness is concerned about. There are global issues to be solved through collective, concerted and international efforts, including the issues of global warming, infectious diseases, water, food and energy. Many people look to science and technology for bold answers to resolve these issues, to innovate on Japanese socioeconomy and to promote the sustainable development of the entire human society. In some sense, to resolve such issues is deemed to be the mission of science and technology.

This year marks the 20th anniversary of the Science and Technology Basic Law, since it was enacted as lawmaker-initiated legislation in 1995. Two decades ago, the Japanese economy, which had consistently recorded post-war growth, ran aground as the bubble economy burst and entered a period of prolonged stagnation, later called the “lost decade.” In those days, the possible emergence of the aging society with a declining birthrate was discussed with a sense of crisis. This was also the time when the superiority of Japanese science and technology, as symbolized by high-quality products, began to lose ground to China and other emerging countries, which made economic growth. At the same time, Japan reached a turning point, changing from the country which strove to catch up to the U.S. and European nations to the country as the world’s second-largest economy, showcasing its own creativity, contributing to the society not just domestically but also globally and gaining global respect.

Under the circumstances, as a country lacking natural resources, Japan set itself the goal of becoming a “nation based on the creativity of science and technology” to pave the way for a future with science and technology and enacted the Science and Technology Basic Law to implement policies to promote science and technology comprehensively and thoroughly and thereby achieve the goal.

Based on this law, four Science and Technology Basic Plans have been implemented. The 4th basic plan will be completed this year and the 5th is already under discussion. How have science and technology in Japan and the supporting infrastructure and environment changed? What policies have been taken and outcomes obtained? How have they helped improve people’s lives and the welfare of humankind over 20 years since the Science and Technology Basic Law was enacted? The continued progress of scientific and technological development to a new phase is contingent on verifying the relevant matters during this period. Based on the result, the courses of the future policies and the direction of innovation of science and technology are equally important.

With this in mind, Part 1 of this year’s white paper presents scientific and technological achievements in Japan for 20 years since the enactment of the Science and Technology Basic Law, outlines the various policies implemented and outcomes obtained according to the Science and Technology Basic Plans and addresses the direction of future science and technology innovation policies and activities.