

Introduction

The Third Science and Technology Basic Plan, started in fiscal 2006, calls for science and technology to be “supported by the public and to benefit society” as its primary tenet.

Based on the Science and Technology Basic Law, Japan has been promoting science and technology under three successive Science and Technology Basic Plans since fiscal 1996 and endeavored to expand government-funded R&D investments despite its tight fiscal condition.

Every edition of the Annual Report on the Promotion of Science and Technology describes in its Part 1 science and technology-related movements based on a specific theme, and this year’s edition seeks to comprehensively introduce the results of the past efforts to promote science and technology to people. This reflects the beliefs that in order to obtain public support for the promotion of science and technology, it is essential to have people understand the results of the promotional activities, and that it is the responsibility of the government to endeavor to provide sufficient explanations in this regard if it is to promote science and technology.

In modern society, benefits of science and technology have spread throughout the whole society, supporting our lives as well as society. Many of these benefits have been reaped as a result of long years of research activities, and the process of moving technology from basic research to commercialization involves, in many cases, the interlocking web of the persistent large efforts of researchers and the research environment that supports the work and public financial support.

Meanwhile, research activities spurred by the intellectual curiosity or unfettered ideas of researchers may go on to create values that could be prized as intellectual assets for the whole of mankind, such as the discovery of new principles. Such achievement may have an impact on our concept of nature and mankind and on our thoughts, or serve as a seed of invention that will create significant social and economic values in the future.

Another important result of the promotion of science and technology is fostering of next-generation human resources. By engaging in research activities under the instruction of the teaching staff, young people who should play an active role in the future will obtain knowledge and acquire the ability for and habit of identifying problems for themselves and seek to resolve them through the process of trial and error. Human resources thus developed, including not only researchers and engineers but also other types of skilled people, play an active role in various sectors of society and support the foundation of society.

The achievements of R&D, inherited by next generation human resources, may lead to the discovery of new truths or create new economic and social values when applied to real-life society. Thus, there arises a cycle of knowledge created by human beings, inherited and utilized by other human beings, which in turn leads to yet another creation and utilization of new knowledge. All throughout this cycle, the capability of human beings involved is the critical factor.

The Third Science and Technology Basic Plan calls for a shift of emphasis from scientific infrastructures to human resources as its second tenet.

Part 1 of this report examines the results of the promotion of science and technology from three

points of view - creation of knowledge, utilization of knowledge, and succession of knowledge - and provides explanations by citing specific cases. And then it provides an outlook of how science and technology should be promoted in the future in light of the specific cases of the people, research environment and public support involved.