

Chapter 2 Strategic Priority Setting in S&T

Section 1 Promotion of Basic Research

Basic research, which spawns human wisdom and serves as a source of knowledge, accumulates as an asset for the whole of humankind and is built upon steady and serious inquiry into the truth based on numerous trials and errors. Additionally, because it is often the unusual discoveries and inventions that result in the greatest leaps in knowledge, it is important to foster innovation. Basic research consists of two types: Type-1 basic research that is conducted based on the free ideas of researchers in S&T (Academic research); and Type-2 basic research, which aims at future applications based on policies. Both types of basic research should be promoted continuously and extensively with consideration given to the significance of each type.

For the reasons mentioned above, universities are conducting basic research utilizing the Grants-in-Aid for Scientific Research for Type-1, and “JST Basic Research Programs” and other competitive funds for Type-2, while securing fundamental expenses with government subsidies for national university corporations, financial aid for private educational institutions, and so on.

Section 2 Priority Setting in R&D for Policy-oriented Subjects

According to the 3rd Basic Plan, in order to maximize the effects of the governmental R&D expenditure, “Investment in Tomorrow,” life sciences, information and telecommunications, environmental sciences, and nanotechnology/materials are labeled as the four priority fields to be promoted and are to be the fields prioritized for key investment, while energy, manufacturing technology, infrastructure, and frontiers as the four fields to be promoted for adequate investment. MEXT finalized the Sectoral Promotion Strategy toward selection and concentration of investments as well as achievement of results during the period of the Basic Plan. In the Strategy, 237 projects were chosen as important R&D projects that should be worked on by the government. After research targets and achievement goals were specified for each project, 62 strategically prioritized S&Ts were chosen as the subject of selective investments. According to the Strategy, R&D projects were promoted while ensuring thorough selection and concentration of the subjects including the strategically prioritized S&T for selective investments in each of eight fields after a strict evaluation of R&D work on the Key Technologies of National Importance.

1 Life Sciences

Life sciences shed light on the complex and delicate mechanisms of the phenomenon of life in living creatures, and, when applied, lead to significant medical development and solutions to food and environmental problems—contributing greatly to the enhancement of people’s lives and to a nation’s economic prosperity.

In the Sectoral Promotion Strategy of life sciences field the following seven types of strategically prioritized S&T are indicated as the S&T fields to which investment should be focused within the next five