

Highlights of the Comprehensive Review of Japan's Science and Technology Basic Plans

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The presentation will highlight some findings from reviewing the First and Second Science and Technology (S&T) Plans. The findings will be presented in three categories: input (budget), output (research papers and patents) and some policy topics.

Input:

- * Japan's S&T budget increased more largely than its GDP and total government budget.
- * Japan narrowed the difference of S&T budget with the United States during the First S&T Plan period, but recently the United States is increasing its S&T budget aggressively to widen the gap with Japan.
- * Japan increased basic research budget; and the United States strengthened basic research to a greater extent than Japan.
- * Competitive research funds increased without decreasing non-competitive funds in Japan. However, it will be difficult to double the size of competitive funds during the Second S&T Basic Plan as planned.
- * Research facilities and intellectual infrastructure have basically been constructed planned in Japan.
- * Japan's R&D budgets of four priority areas increased. The four priority areas are a) life science, b) ICT, c) environment S&T and d) nanotechnology and material science.

Output:

- * Japan's research papers have enhanced performance in quantity and quality. They have also shown positive results in the priority areas
- * Japan's patents have shown qualitative improvement, but quantitative improvement has lagged.

Some Policy Topics:

- * In human resource development, the number of post-doctorate researchers has achieved the quantitative goal of 10,000, but many problems remain in support measures and career paths. A fixed-term employment system has been introduced in many organizations to improve researcher mobility, but only a limited number of researchers have been hired as fixed-term researchers.
- * In industry-academia-government collaboration, the number of joint research between universities and the industry increased, and the number of university spin-offs showed an upsurge, particularly in the four priority areas.
- * In regional innovation, both the national government and local governments have shown great efforts.
- * To study the contribution of S&T to the economy, society, and people's life, six case studies were carried out up to now. The study has found that the contribution of past public supports was large in supercomputer development. Additional 26 case studies are being carried out successively this year.