Part 3 discusses the measures adopted in Fiscal 2006 for the promotion of science and technology, in line with the Third Science and Technology Basic Plan.

### 3.1 Development of Science and Technology Policies

### 3.1.1 The Science and Technology Basic Plan

The Third Science and Technology Basic Plan was approved in the Cabinet meeting in March 2006. Two issues are presented as the basic position in this Plan: "science and technology to be supported by the public and to benefit society" and "shift of emphasis from 'hard' to 'soft' such as human resources; greater significance of individuals in institutions."

The Third Science and Technology Basic Plan basically complies with the three concepts laid down in the Second Basic Plan ("a nation contributing to the world by creation and utilization of scientific knowledge," "a nation with international competitiveness and ability for sustainable development" and "a nation securing safety and quality of life") while providing six more detailed policy goals from the perspective of returning the achievements of science and technology while fulfilling accountability to society and the public. In order to achieve the goals, the Basic Plan emphasizes high-quality basic research, and, with respect to research and development on topics of interest to the government and society, focus on certain areas will be intensified, by setting the Sectoral Promotion Strategy in eight areas and selecting "strategically focused science and technology"

that requires intensive investment during the period of the plan. In addition, it also states that the mission of science and technology for the next five years is to resolve a broad range of policy issues such as development of a large amount of human resources who can produce excellent research findings, creation of a competitive environment, strategic investment to promote science and create innovation on a constant basis, and removal of systematic or operational obstacles to returning the results to society.

Furthermore, the Basic Plan states the target to retain the ratio of government research and development investment to GDP to the level of the U.S. and major European countries. Specifically, a total of about 25 trillion yen in government R&D investment is required in the five-year period from Fiscal 2006 to Fiscal 2010 (based on the presumption that government research and development investment will be 1% of GDP during the period of the Basic Plan, with a nominal GDP growth rate of 3.1%.) (Figure 3-1-1).

Upon the budget preparation for each fiscal year, by considering the future social and economic trend and the necessity of the promotion of science and technology, and based on the severe fiscal situation of Japan, it will be intended to retain the expenses necessary for the promotion of measures given in the Third Science and Technology Basic Plan with an aim to maximize the effect of government research and development investment through the stable implementation of the science and technology system reform given in the Basic Plan.



Figure 3-1-1 Main points of the Third Science and Technology Basic Plan (Fiscal 2006-Fiscal 2010)

# 3.1.2 The Council for Science and Technology Policy

The Council for Science and Technology Policy was set up in the Cabinet Office as one of "Policy Councils on Key Policy Fields" at the reorganization of government ministries and agencies that took place in January 2001. Under the leadership of the Prime Minister, the Council serves as the headquarters for the promotion of science and technology policy. It oversees all of the nation's science and technology, formulates comprehensive and basic policies, and conducts their overall coordination. The Council meets once a month as a general rule. The meeting is chaired by the Prime Minister, and attended by relevant ministers and eminent members (Table 3-1-2).

In addition, under the Council for Science and Technology Policy, five expert panels had been established as of March 2007 to promptly seek expert opinion on important matters (Figure 3-1-3).

Chairperson	Shinzo Abe	Prime minister				
Cabinet members	Yasuhira Shiozaki	Chief Cabinet Secretary				
	Sanae Takaichi	Minister of State for Science and Technology Policy				
	Yoshihide Suga	Minister of Internal Affairs and Communications				
	Koji Omi	Minister of Finance				
	Bunmei Ibuki	Minister of Education, Culture, Sports, Science, and Technology				
	Akira Amari	Minister of Economy Trade, and Industry				
Executive members	Masuo Aizawa (Part-time member)	President, Tokyo Institute of Technology	Engineering (Biotechnology)			
	Taizo Yakushiji (Full-time member)	Visiting Professor, Keio University	Political Science			
	Tasuku Honjo (Full-time member)	Visiting Professor, Kyoto University	Medicine (Immunology)			
	Naoki Okumura (Full-time member)	Former Representative Director and Executive Vice President,Nippon Steel Corporation,Ltd				
	Etsuhiko Shoyama (Part-time member)	President, Chief Executive Officer and Director, Hitachi, Ltd.				
	Yuko Harayama (Part-time member)	Professor, Graduate School of Engineering Tohoku University	Economics			
	Mitiko Go (Part-time member)	President, Ochanomizu University	Biophysics			
Science Council	Ichiro Kanazawa	President of the Science Council of Japan				

Table 3-1-2 Chairman and Members	of the Council for	Science and	<b>Technology Pol</b>	icy (as of the
end of March 2007)				



Figure 3-1-3 Organization of the Council for Science and Technology Policy

#### 3.1.2.1 Major Decisions Made in the Council for Science and Technology Policy in Fiscal 2006

#### (1) "Report on the Management of Intellectual Properties" (opinions presented on May 23, 2006)

The Council for Science and Technology Policy decided the "Report on the Management of Intellectual Properties," including measures such as the international acquisition of rights connected to obtaining basic patents, the development of an integrated search system for papers and patent information, the enhancement of the international function of intellectual property headquarters in universities, and the fostering and retaining of international human resources whose expertise in intellectual property and opinions were presented to relevant ministers. At the same time, in order to facilitate the use of intellectual property rights in research at universities and other organizations, "Guideline for the Research License for Intellectual Property Right Stemming from Government-Funded Research and Development at Universities, etc." had been decided and opinions were presented to relevant ministers.

### (2) Comprehensive Strategy for Innovation Creation [Decided and opinions presented on June 14, 2006]

It is an important task to further develop science and technology, and to realize further economic growth and strengthening of international competitiveness by connecting the achievements of science and technology into continuous innovation. The Third Science and Technology Basic Plan focuses on creating innovation, and upholds the policy objective of "Innovator Japan," which aims to enable Japan to lead the world with innovation unique to the country. In order to implement this policy objective, "Comprehensive Strategy for Creating Innovation" was formulated by the Council for Science and Technology Policy, and opinions were presented to relevant ministers.

#### (3) Efforts in Relation to the Prevention of the Misuse of Public Research Funds (common guideline) [Decided and opinions presented on August 31, 2006]

The Council for Science and Technology Policy decided "Guideline for Prevention of Misuse of Public Research Funds (common guideline)," which requires relevant ministries, allocation organizations and research institutes to take early measures such as the development and clarification of rules and the development of a management/audit system for research funds, for the prevention of the misuse of public research funds by researchers, and opinions were presented to relevant ministers.

#### (4) System reforms toward the promotion of science and technology and return of achievements to the society [Decided and opinions presented on December 25, 2006]

Upon the promotion of science and technology, the key to raising the effect of personnel and material investments in science and technology is to develop an environment with systems to support active exchange of human resources, smooth implementation of research activities and the return of research achievements to society. To this end, the Council for Science and Technology Policy made 66 reform suggestions for seven items, including the "realization of a system to attract talented foreign researchers to Japan," "comprehensive promotion of clinical studies including clinical trials" and "development of environment to expand opportunities for female researchers." A progress schedule chart, including ministries in charge, deadline for discussions and conclusion and implementation period, were prepared for each item and opinions were presented to relevant ministers.

#### 3.1.2.2 Strategic Focusing and Comprehensive Promotion of Science- and Technology-Related Measures

The Council for Science and Technology Policy is intending to improve the quality of science- and technology-related measures through PDCA cycle, as well as enhancing its effort to further improve the balance of budgets related to science and technology. In Fiscal 2006, in order to securely implement the Third Science and Technology Basic Plan and the Sectoral Promotion Strategy, it is putting forward the reform of budgets related to science and technology. At the same time, it is intending to focus certain science- and technology-related measures by thorough selection and concentration. The Council is promoting efforts to ensure that truly important R&D are implemented, and the achievements of such R&D will be returned to society and the public on a broad basis (Figure 3-1-4).



Figure 3-1-4 Conceptual Diagram of the PDCA Cycle to Improve the Balance of Science and Technology Budgets

#### (1) Policy of Resource Allocation such as Budgets for Science and Technology in Fiscal 2007 [Decided and opinions presented on June 14, 2006]

Based on the Third Science and Technology Basic Plan and the Sectoral Promotion Strategy, "Resource Allocation Guideline for Science and Technology Budget in Fiscal Year 2007," which clarifies the items to be addressed intensively in Fiscal 2007, had been decided, and opinions were presented to relevant ministers.

The said Policy clarifies focused issues that must have priority in the budget of Fiscal 2007, such as the promotion of strategically focused science and technology including the Key Technologies of National Importance, reinforcement of basic research and the fundamental reinforcement of math and science education, with a thorough selection and concentration. In addition, it also referred to the enhancement of efforts to improve and reform budgets related to science and technology, such as strengthening efforts to completely eliminate wastes in the allocation of research budgets, ensuring accountability and transmission of achievements to the public, and reforms in prioritization.

#### (2) Prioritization of science- and technology-related measures (October 2006)

In order to allocate resources intensively in truly important measures, science- and technology-related measures of which relevant ministries requested budget were checked in detail through hearings and other methods, based on the "Policy of Resource Allocation such as Budgets for Science and Technology in Fiscal 2007." Prioritization (SABC) had been implemented by also obtaining advice from external experts (Figure 3-1-5).

Upon the prioritization of science- and technologyrelated measures in the estimate of budget requests for Fiscal 2007, check is being made in a further strategic and detailed manner. Therefore, the prioritization was implemented with a reformed method including the expansion of the scope of prioritization and improvement of the evaluation system, mainly for focused issues such as strategically focused science and technology.

#### (3) "Comprehension of Science and Technology Activities Conducted by Independent Administrative Institutions and National Universities, and the Publication of Opinions Offered Regarding the Activities" (October 2006)

Independent administrative institutions and national universities engaged in science and technology activities are mainly funded by grants for administration, so there is a limitation in understanding the usage, services implemented and allocated amount of the grants at the stage of budget preparation. Therefore, from the perspective of ensuring appropriate implementation of the Science and Technology Basic Plan, survey had been conducted for various indices that are outputs from corporations.

Based on the results of the survey, the eminent members of the Council summarized their findings on items with progress found and items that are regarded to be in need for further enhancement of efforts.



Figure 3-1-5 Outline of the prioritization of science- and technology-related measures in the estimate of budget requests for fiscal 2007

#### (4) Towards the preparation of science- and technology-related budget for Fiscal 2007 [Decided and opinions presented on November 21, 2006]

Based on the results of prioritization, items to be focused in the preparation of budget for Fiscal 2007 and the thorough implementation of the elimination of waste and prevention of misconduct at the stage of research funds allocation had been summarized in order to sufficiently ensure a well-balanced science- and technology-related budget. The summary was decided in the Council, and opinions were presented to relevant ministers.

In the Fiscal 2007 budget, the promotion of science and technology is positioned as the source of growth, and expenses for the promotion of science and technology accounts for 1,346,200 million yen (up 1.1% from the previous year) while almost all other major expenses other than social security-related expenses decreased from the previous year. The total amount of science- and technology-related budget, including expenses other than expenses for the promotion of science and technology, accounts for 3,511,300 million yen (down 1.8% from the previous year).

#### (5) Promotion of the coordination program of science and technology projects (November 2006)

As a new method to remove the harmful effects of sectionalism and enhance collaboration between relevant ministries and agencies, since fiscal 2005, the Coordination Program for Science and Technology Projects is being promoted for the following eight themes that are important nationally and socially and that should be promoted with collaboration between ministries and agencies: 1) Post-genome - Promotion of health sciences -, ② New or revived infectious diseases, ③ Ubiquitous Networks - RFID tags and technologies, - ④ Next-Generation Robots - Shared platform technology -, 5 Biomass utilization, 6 Hydrogen and fuel cell Nano-biotechnology, (8) technology, ⑦ Regional Cluster. In Fiscal 2006, an interim summary will be made on the efforts made in and achievements obtained from the group of coordination projects. It was decided that the method of group of coordination projects will also be utilized in strategically focused science and technology, in order to effectively promote the Sectoral Promotion Strategy under the Third Science and Technology Basic Plan (decided in the Council for Science and Technology Policy in March 2006).

### (6) Actual state of R&D evaluation

① Follow-up study of ex-ante evaluations of large scale R&D projects (October 2006)

As for the "development and adoption of state-of-the-art general-purpose computers of high performance," which had been evaluated in advance in Fiscal 2005 as one of the large R&D projects, reactions to the results of the evaluation had been followed-up at the Expert Panel on Evaluation, and improvements to be made were presented to MEXT, which is in charge of this project.

<sup>(2)</sup> Summary of the state of implementation of midterm and ex-post evaluations by each ministry (September 2006)

The state of midterm evaluations by each ministry regarding ongoing R&D projects with funding of 1 billion yen or more in Fiscal 2005 budget had been examined. At the same time, the state of ex-post evaluations regarding R&D projects completed before the end of Fiscal 2005 with funding of 1 billion yen or more in Fiscal 2004 or Fiscal 2005 had been examined. It was instructed to ministries to conduct midterm and ex-post evaluations in an appropriate manner in the future as well, and to contribute in the promotion of measures base on the Third Science and Technology Basic Plan.

③ Evaluation of the Key Technologies of National Importance [Decided and opinions presented on July 26, 2006]

Among the Key Technologies of National Importance selected carefully based on the Sectoral Promotion Strategy, evaluation had been carried out for three projects other than those to which ex-ante evaluations were implemented as large scale R&D projects in Fiscal 2005, namely "FBR cycle technologies," "space transportation system technology" and "Earth Observation and Ocean Exploration System." The results of the evaluation were presented as opinions to relevant ministers.

④ Ex-ante evaluations of large R&D projects [Decided and opinions presented on November 21, 2006]

Ex-ante evaluation of large R&D projects starting in Fiscal 2007 with total national expenditures of about 30 billion yen or more, namely "target protein research program" and "solar energy system field test project," had been carried out, and the results were presented as opinions to relevant ministers.

# 3.1.2.3 Major Items Discussed in the Expert Panel

#### (1) Expert Panel on Basic Policy Promotion

The Expert Panel on the Promotion of Basic Policy had been established in April 2006 in order to securely promote the Third Science and Technology Basic Plan. The Panel conducted a survey on the reform of various science- and technology-related systems, as well as on the future plan for the group of Coordination Program for Science and Technology Projects.

Under the Expert Panel on the Promotion of Basic Policy, the System Reform Working Group (WG), which carries out surveys on the reform of various systems of science and technology, and the Research Funds WG, which deepens the discussions on the realization of fair and efficient use of research funds and carries out surveys on the reform of competitive funds system, had been established. As for the implementation of Sectoral Promotion Strategy (decided in the Council for Science and Technology Policy held in March 2006), Promotion Strategy Project Team (PT) is established under the Expert Panel on the Promotion of Basic Policy. Furthermore, PTs are established under the Sectoral Promotion Strategy PT for each of the Four Priority Sectors (life sciences. information and telecommunications, environmental sciences. and nanotechnology/materials), the Four Other Fundamental Areas (energy, manufacturing technology, social infrastructure and frontier), and the Regional Clusters, and follow-ups are being implemented.

#### (2) Expert Panel on Evaluation

Expert Panel on Evaluation implemented the follow-up of ex-ante evaluations of large scale R&D projects implemented in the past, as well as summarized the draft of ex-ante evaluations of the Key Technologies of National Importance and large scale R&D projects.

#### (3) Expert Panel on Bioethics

In order to cope with problems of bioethics derived in accordance with the development of bioscience, the Expert Panel on Bioethics is implementing survey and discussion in relation to bioethics. It implemented survey and discussion on the revised draft of "Guidelines for the Establishment and Utilization of Human ES Cells," consulted with MEXT in December 2006, and presented a report in March 2007.

### (4) Expert Panel on the Management of Intellectual Properties

Under the Expert Panel on the Management of Intellectual Properties, PT to discuss issues related to the protection and utilization of intellectual properties in the area of life science started from September 2006. In order to promote R&D and bring innovation, the PT summarized "Guidelines for Facilitating the Use of Research Tool Patents in Life Science."

### 3.1.3 Administrative Structure and Budget for Science and Technology

### 3.1.3.1 Administrative Structure of Science and Technology

The Science and Technology Basic law requires the government of Japan to assume the responsibility of formulating and implementing comprehensive measures in relation to the promotion of science and technology, and to formulate the Science and Technology Basic Plan.

Under the administrative organization of Japan, the Council for Science and Technology Policy (CSTP) is established in the Cabinet Office, which is in charge of the planning of key policies of the government and the overall coordination. The Council summarizes various reports on the comprehensive strategy on the promotion of science and technology and policies for the allocation of resources such as budgets and human resources. Based on these reports and the authorities of each administrative agency involved, research is carried out at national research institutions, public corporations, independent administrative institutions, universities, and university joint research institutions, and various research programs are used to promote research and carry out preparations for a research and development environment

While the CSTP prepares the comprehensive strategy and policy of resource allocation in relation to science and technology for the entire government, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) prepares specific research and development plans for individual sectors and coordinates the management of science and technology with relevant administrative institutions through works such as the allocation of the Special Coordination Fund for Promoting Science and Technology (SCF). In addition, MEXT comprehensively promotes the implementation of research and development in advanced and important science and technology fields, and the administration of science and technology that advances and strengthens creative and basic research. Council for Science and Technology is established under MEXT to survey and discuss important matters in relation to the comprehensive or academic promotion of science and technology based on consultation from the Minister of Education, Culture, Sports, Science and Technology, and to present their own opinion to the Minister.

In recent years, inter-ministerial liaison committees concerning various research sectors and related measures are being held, promoting information exchanges

Principal Reports								
Subdivision on Research and Development Planning and Evaluation								
Earth Observation in Japan in Fiscal 2007								
Policy for Promotion of Research and Development in the Life Sciences								
Policy to Promote Research and Development on Information Science and Technology								
Policy to Promote Research and Development on Geoenvironmental Science and								
Technology								
Basic Strategy for Promotion of the Nanotechnology and Materials Sectors								
Policy to Promote Research and Development on Science and Technology for								
Aeronautics								
Policy to Promote Research and Development on Disaster Prevention								
Policy to Promote Research and Development on Nuclear Power								
Policy to Promote Research and Development on Science and Technology for Ensuring								
People's Safety and Assurance								
Policy on the Implementation of Earth Observation in Japan in Fiscal 2007								
Policy of Research and Development on FBR Cycle - Based on the "Final Report on								
Strategic Survey Research Phase for the Practical Use of FBR Cycle" – (Committee on								
the Research and Development in the Area of Nuclear Power)								
Subdivision on Geodesy and Geophysics								
Review on the State of the Implementation of the Second New Program of Research and								
Observation for Earthquake Prediction (Report)								
Review on the State of the Implementation of the Seventh Program for Prediction of								
Volcanic Eruptions (Report)								
Special Committee on Scientific Misconduct								
Regarding the Guideline for Countermeasures Against Misconduct in Research								
Activities								

 Table 3-1-6 Recommendations of the Council for Science and Technology (FY2006)

concerning the progress of research, etc., and researcher exchanges.

The Science Council's recommendations are shown in Table 3-1-6.

In addition, as the representative body for the community of scientists in Japan, the Science Council of Japan, consisting of 210 members and some 2,000 associate members, is placed under the jurisdiction of the Prime Minister, and is engaged in activities such as suggesting policies in relation to science, discussing important issues, cooperating with the community of scientists, cooperation with international academic organizations and raising public awareness about the roles of science.

### 3.1.3.2 Budget for Science and Technology

In Fiscal 2006, Japan's budget for science and technology totaled 35,743 billion yen. Of this total, the general account budget was 29,979 billion yen, while the special account budget was 5,764 billion yen. In the general account budget, the amount singled out for the promotion of science and technology was 13,312 billion yen (Table 3-1-7).

#### Table 3-1-7 Trends in the science and technology expenditures

						(Billion yen)
Fiscal		2002	2003	2004	2005	2006
Science and Technology Promotion Fund	(A)	11,832	12,298	12,841	13,170	13,312
Percentage increase over the previous year	%	106.4	103.9	104.4	102.6	101.1
Other research appropriations	(B)	6,697	6,554	16,823	16,345	16,667
Percentage increase over the previous year	%	92.3	97.9	256.7	97.2	102.0
Science and technology appropriations from the General Account						
Budget		18,529	18,852	29,664	29,515	29,979
Percentage increase over the previous year		100.8	101.7	157.4	99.5	101.6
Science and technology appropriations from Special Accounts		16,915	17,122	6,419	6,264	5,764
Percentage increase over the previous year		103.7	101.2	37.5	97.6	92.0
Science and Technology Budget		35,444	35,974	36,084	35,779	35,743
Percentage increase over the previous year		102.2	101.5	100.3	99.2	100.1
General Account Budget		812,300	817,891	821,109	821,829	796,860
Percentage increase over the previous year		98.3	100.7	100.4	100.1	97.0
General Budget Expenditure		475,472	475,922	476,320	472,829	463,660
Percentage increase over the previous year		97.7	100.1	100.1	99.3	98.1

Notes: 1. Amounts shown for Other research appropriations (B) and Science and technology appropriations from Special Accounts (D) are MEXT's estimates.

- 2. All amounts represent initial budgets or appropriations for the respective fiscal year.
- 3. Since amounts have been rounded, the sum of the amounts and percentages for each column and the totals and percentages shown above do not necessarily agree.
- 4. Of the expenditures related to science and technology in the general accounts budget for Fiscal 2004 and Fiscal 2005, those for national university corporations, etc. were calculated from the aggregate of subsidies for administrative costs, grants for facility maintenance costs, and self generated income. (The amount corresponds to the science and technology budget in the National Schools Special Account (abolished at the end of Fiscal 2003)). The same in Table 3-1-8.
- 5. Based on policies of the Third Science and Technology Basic Plan, the subjects of calculation were revised starting in Fiscal 2006.

Trends in the budget for science and technology by ministry or agency are shown in Table 3-1-8.

Since the administration of science and technology in Japan is spread among a large number of ministries and agencies, there is a need for the co-ordination of science and technology measures between the relevant ministries and agencies that can eliminate unnecessary duplication and promote stronger cooperation, so as to ensure consistency among ministries as a whole, and to efficiently and effectively promote science and technology.

For this reason, the Council for Science and Technology Policy conducts overall coordination by formulating policies on allocation of the budget, human and other resources related to science and technology each fiscal year, before budget requests are made from relevant ministries, and by prioritizing science- and technology-related measures of relevant ministries and agencies after budget requests are made. In addition, MEXT contacts the relevant ministries and agencies each fiscal year, before budget requests for science and technology related expenditures are made, to hear the reasoning behind their budget requests. MEXT then coordinates with the ministries and agencies to eliminate any duplication and to promote inter-ministerial cooperation, as part of government-wide efforts.

(Million yen)

	FY2005			FY2006				
Ministry or agency	Science and Technology Promotion Fund	Other research appropriations from General Account Budget	Science and technology appropriations from Special Accounts	Total amount of Science and Technology Budget	Science and Technology Promotion Fund	Other research appropriations from General Account Budget	Science and technology appropriations from Special Accounts	Total amount of Science and Technology Budget
Diet	970	47	-	1,017	1,013	47	-	1,059
Cabinet Secretariat	-	62,457	-	62,457	-	61,195	-	61,195
Cabinet Office	8,884	4,776	-	13,660	11,876	3,916	-	15,793
National Police	2166			2 166	2 1 4 2	4.4		2 1 9 6
Agency	2,100	_	_	2,100	2,145	44	-	2,180
Defense Agency	] –	144,581	-	144,581	-	183,576	-	183,576
Ministry of Internal								
Affairs and	57,831	14,663	10,300	82,793	54,569	13,144	7,200	74,912
Communications	-							
Ministry of Justice	2,162	-	-	2,162	2,081	-	-	2,081
Ministry of Foreign	_	10.928	_	10.928	_	10.981	_	10.981
Affairs	-	10,720		10,920		10,701		10,901
Ministry of Finance	1,193	350	-	1,543	1,276	326	-	1,601
Ministry of Education,								
Culture, Sports,	831,781	1.311.532	162.290	2.305.603	841.383	1.312.497	149.818	2,303,698
Science and	,	-,,	102,270	2,505,005	,	-,,-,	119,010	_,,0,0
Technology	-							
Ministry of Health,	107,835	1,512	19,730	129,076	109,776	1,470	19,522	130,768
Labour and Welfare	-			-				-
Agriculture Forestry	114 429	2 274	1 200	110.102	117 255	2 622	800	120.089
and Fisheries	114,428	5,574	1,500	119,102	117,555	2,855	800	120,988
Ministry of Economy	-							
Trade and Industry	142,279	48,998	399,429	590,706	144,185	47,296	366,608	558,089
Ministry of Land								
Infrastructure and	26,430	26,615	29,909	82,954	23,648	25,718	29,096	78,462
Transport	,	,,		,,	,	· · ·		, .
Ministry of the	21.011	4 700	2.476	20.100	21.902	2 (9(	22((	28.042
Environment	21,011	4,709	3,476	29,196	21,892	3,686	3,366	28,943
Total	1 216 071	1 624 541	626 422	2 577 045	1 221 105	1 666 720	576 410	2 574 224

#### Table 3-1-8 Science and technology expenditure breakdown by ministry and agency

Notes: 1. All amounts represent initial expenditures or appropriations for the respective fiscal year.

2. Since amounts have been rounded off, the sum of the amounts for each column and the totals shown above do not necessarily agree.

3. Overlapping is avoided in total amounts, but some amounts include overlapping expenditures.

4. The Japan Defense Agency became the Ministry of Defense on January 9, 2007.