

Outline of Drawing up the FY2002 Budget for Science and Technology — Technical and Social Aspects —

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12.1 Introduction

Year 2002 is the second year for the Second Science and Technology Basic Plan (hereinafter, “Basic Plan”). As the newly established science and technology administrative system began running smoothly, the Japanese government started full-scale efforts to accomplish the Basic Plan.

In this report, I would like to overview how the government drew up the FY2002 S&T related budget by focusing on the activities of Council for Science and Technology Policy (CSTP). This is the first budgetary process under the new administrative structure and also regarded as the prototype for future budgetary processes. In addition, I would like to present an outline of the FY2002 S&T related budget.

12.2 Budgetary process under new administrative structure — activities of the Council for Science and Technology Policy

The CSTP council meeting submitted its recommendation number 1, “Comprehensive Strategy to Promote Science and Technology,” in March 2001. Based on this recommendation, the Japanese government determined the Second Basic Plan.

After its establishment, CSTP holds monthly council meetings to discuss and decide important matters for science and technology fields.

In this report, I would like to overview how the government drew up the FY2002 budget by

focusing on CSTP’s policy discussions and decisions.

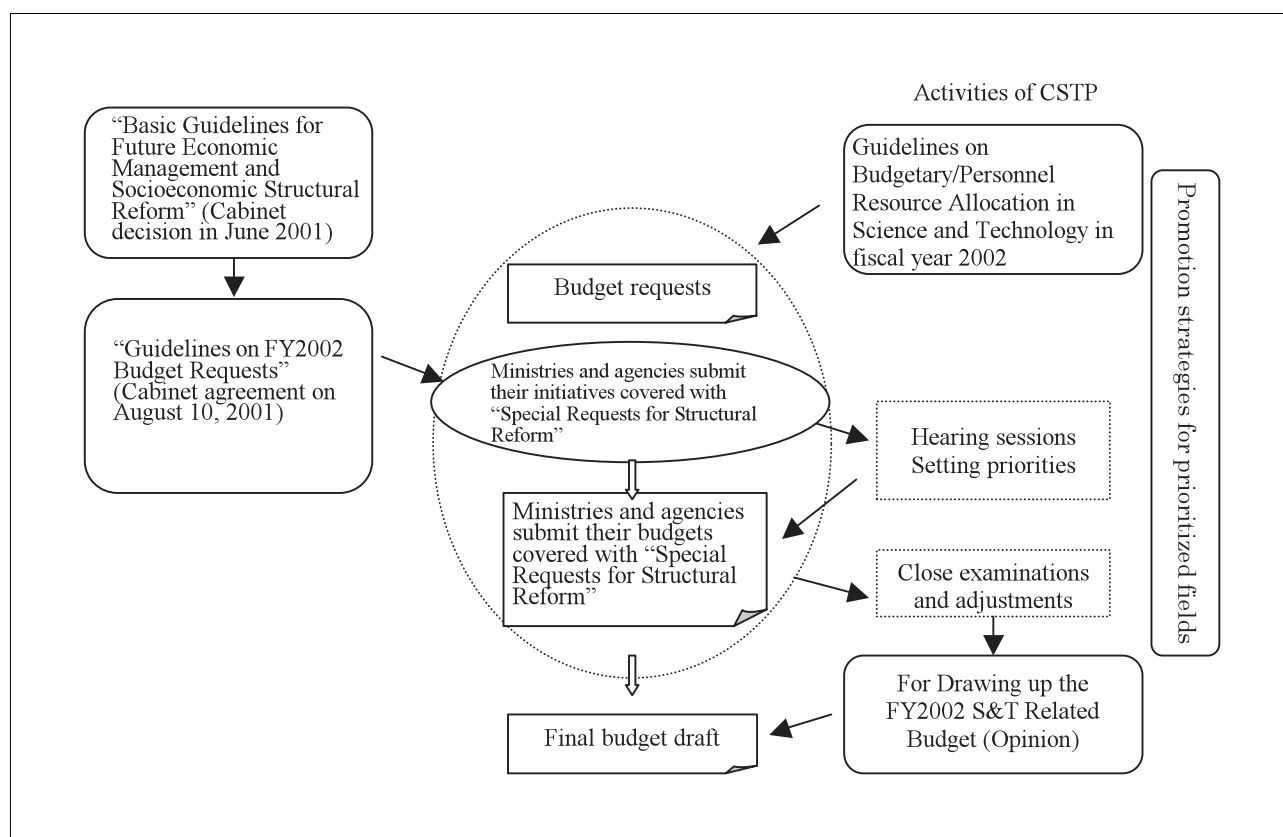
In drawing up the FY2002 budget, CSTP (i) examined promotion strategies for each prioritized area, (ii) proposed guidelines on budgetary/personnel resource allocation, and (iii) reviewed how the government actually incorporated CSTP’s resource allocation guidelines into the related programs.

In May, the council meeting discussed important matters for the FY2002 budget. The council meeting also made two decisions: (i) CSTP would prepare the resource allocation guidelines well in advance so that ministries/agencies could request the budgets in line with it, and (ii) CSTP would evaluate budget requests of the related ministries/agencies, set priorities and ensure proper resource allocation in cooperation with Ministry of Finance.

Based on its council meeting’s decision in March, CSTP established the expert panels to examine sectorial promotion strategies for prioritized fields described in the Basic Plan. These expert panels planned and examined projects for each prioritized fields and reported their findings to the monthly council meetings, mainly focusing on where the government should put more emphasis in each prioritized fields. The expert panels also surveyed and examined the resource allocation guidelines in cooperation with the expert panel on S&T system reformation and the expert panel on evaluation.

Based on these activities, the council meeting in July determined the “Guidelines on Budgetary/Personnel Resource Allocation in Science and Technology in fiscal year 2002” (hereinafter, “Resource Allocation Guidelines”),

Figure 1: Flowchart of budgetary process



which describes basic concepts for budget requests. “The Resource Allocation Guidelines” proposed more strategic fund allocation to prioritized fields mentioned in the Basic Plan, as well as more drastic system reforms to build proper environments that would create the highest-level R&D results in the world. Each of the related ministries and agencies was supposed to sufficiently incorporate the guidelines into their budget requests. CSTP also would work with the treasury authorities as necessary in the budgetary process.

In August, the government determined the “Guidelines on FY2002 Budget Requests” (Cabinet agreement on August 10, 2001). This Cabinet agreement approved “Special Requests for Structural Reforms” to prioritize budget allocation for seven important issues, such as policies for environmental problems, countermeasures for the aging society with fewer children, revitalization of local communities, urban regeneration, science and technology promotion, human resource development/education/culture, and for an IT nation. In terms of the special requests, CSTP decided to examine planned promotion initiatives based on “Resource Allocation Guidelines” and to

review prioritized public investment initiatives from viewpoints of enhancing science and technology.

In September, after ministries and agencies submitted their initiatives covered financially with the special requests, the Minister of State for Science and Technology Policy and CSTP council members held hearing sessions and set priorities on these initiatives from the viewpoints of accomplishing the Resource Allocation Guidelines and structural reforms. After having examined other issues, the Cabinet Secretariat offered its final plan to the related ministries and agencies. Based on this final plan, ministries and agencies requested their budgets through Special Requests for Structural Reform.

Then, CSTP carefully examined its budget requests as a whole. Based on “Resource Allocation Guidelines” as well as “Promotion Strategy of Prioritized Areas” decided by its September council meeting, CSTP systematically sorted out the related initiatives and examined which initiative should be aggressively promoted or should be carried out in cooperation with other ministries/agencies. In November, the CSTP council meeting compiled “For Drawing up the

FY2002 S&T Related Budget (Opinion),” which describes important issues for budgetary process. According to this opinion, although the importance of science and technology was generally emphasized in the budget request process, the budget request failed to incorporate other important initiatives, such as greater fund allocation to national university/institutions. In addition, the opinion pointed out important matters for more strategic science/technology promotions and system reforms.

After such process, the government determined the FY2002 budget. As some policy initiatives might require comprehensive implementation, continuous examination and clear strategies, CSTP decided to keep track of and adjust the related initiatives in order to ensure consistency with the Resource Allocation Guidelines and Promotion Strategy of Prioritized Areas.

12.3 Outline of the FY2002 budget for science and technology

12.3.1 Total amount of budget for S&T

Budget for S&T refers to the national budget portion that contributes to science/technology promotion, such as expenses for research activities at universities, expenses for government research institutes (including independent administrative institutions and research institutes of public corporations), subsidies for R&D activities, grants/contract charges, and other necessary expenses for R&D-related administrative activities. (In this context, expenses mean all budgetary items, such as personnel cost, gratitude, travel expense, research expense, agency expense, equipment expense, facility expense, contract

charge, subsidy and investment.) S&T promotion expenses refer to the general account budget portion that mainly aims at science and technology promotion. The budget for S&T is the sum of S&T promotion expenses, other R&D-related expenses in the general account budget (e.g., energy-related policy expense) and S&T-related expenses in special account budgets (such as the Special Account Budget for National Educational Institutions and the Special Account Budget for Electric Power Development Promotion Measures). The Ministry of Education, Culture, Sports, Science and Technology (MEXT) is in charge of compiling the S&T related expenditures.

The total amount of the FY2002 general account budget is ¥81 trillion (down 1.7% from FY2001). General expenditures are ¥47.5 trillion (down 2.3% from FY2001). Despite such tight budget, S&T promotion expenses reached ¥1.2 trillion (up 5.8% from FY2001) and enjoy significant growth. The total amount of the budget for S&T is ¥3.5 trillion, increasing by 2% from FY2001 (Table 1). The government allocated ¥2.7 trillion to the structural reform special requests for more strategic fund allocation. Out of this sum, the government allocated about ¥0.9 trillion to “Promotion of S&T, Education and IT.” The S&T-related initiatives are as follows.

- Establishing top-level universities in the world: ¥18.2 billion
- Enhancing educational/research activities at private universities [new project due to amending the system]: ¥64.5 billion
- Promoting life science through the Protein 3000 Project: ¥20.5 billion
- Groundbreaking advanced medical

Table 1: S&T related expenditures in the FY2002 budget draft
(in ¥100 million)

| | FY2001 | FY2002 | Increase / Decrease (%) |
|-------------------------|--------|--------|-------------------------|
| General account budget | 18,376 | 18,513 | 0.7% |
| S&T promotion expenses | 11,124 | 11,774 | 5.8% |
| Others | 7,252 | 6,739 | - 7.1% |
| Special account budgets | 16,309 | 16,874 | 3.5% |
| Total | 34,685 | 35,387 | 2.0% |

Source: Press release from the Research and Coordination Division, Science and Technology Policy Bureau, MEXT

Table 2: Budget amount by ministry / agency

| | Expenditure (in ¥100 million) | Percentage | Increase / decrease (%) |
|----------------|----------------------------------|------------|----------------------------|
| MEXT | 22,644 | 64% | 2.4% |
| METI | 5,972 | 17% | 6.4% |
| Defense Agency | 1,435 | 4% | - 3.7% |
| MHLW | 1,281 | 4% | 3.4% |
| MAFF | 1,224 | 3% | -0.1% |
| Total | 35,387 | 100% | 2.0% |

Source: Press release from the Research and Coordination Division, Science and Technology Policy Bureau, MEXT

- technology promotion R&D activities: ¥2.8 billion
- Developing/testing fuel cell technologies: ¥5.2 billion
- Nanotechnology comprehensive support project: ¥3.8 billion
- Creating industry-university and industry-government joint research activities: ¥5.0 billion
- Intellectual cluster formation project, etc.:

¥8.6 billion

12.3.2 Budget by ministry / agency

When we look at the budget amount for each ministry/agency, MEXT has ¥2.3 trillion and accounts for 64% of the total amount, followed by the Ministry of Economy, Trade and Industry (METI) at ¥597.2 billion, the Defense Agency at ¥143.5 billion, the Ministry of Health, Labor and Welfare (MHLW) at ¥128.1 billion, and the Ministry

Table 3: S&T related expenditures for each field

(in ¥100 million)

| | Main policies | Related policies | Independent administrative agencies (for reference) | Competitive funds (for reference) | Total (for reference) | Percentage (main purpose) | Increase / decrease % (main purpose) | Increase / decrease % (Total) |
|-----------------------|---------------|------------------|---|-----------------------------------|-----------------------|---------------------------|--------------------------------------|-------------------------------|
| Life science | 1,663 | 254 | 635 | 1,815 | 4,366 | 11% | 8% | 4% |
| IT | 1,155 | 677 | 292 | 332 | 2,456 | 8% | - 1% | - 2% |
| Environment | 507 | 6,647 | 267 | 222 | 7,643 | 3% | 33% | 6% |
| Nano-tech/ materials | 115 | 384 | 286 | 447 | 1,232 | 1% | 58% | 13% |
| Energy | 6,841 | 42 | 59 | 92 | 7,033 | 45% | 2% | 2% |
| Manufacturing | 26 | 376 | 21 | 170 | 594 | 0.2% | - 43% | - 1% |
| Social infrastructure | 2,005 | 240 | 558 | 45 | 2,848 | 13% | - 4% | - 2% |
| Frontier technologies | 2,780 | 341 | 5 | 58 | 3,184 | 18% | - 7% | - 7% |

Source: Press release from the Research and Coordination Division, Science and Technology Policy Bureau, MEXT

- (Notes) 1) After adjustments with the Cabinet Office, METX compiled these figures based on data submitted by the ministries and agencies.
- 2) "Main policies" column refers to expenses spent for research activities or other original purposes, except for the independent administrative agency and competitive fund expenses.
- 3) "Related policies" column refers to expenses spent for, if any, secondary research activities other than original purposes, except for the independent administrative institution and competitive fund expenses.
- 4) "Independent administrative agencies" column refers to expenses that MEXT calculated based on its questionnaire. With this questionnaire, MEXT asked independent administrative agencies to comment on their budget plan for each field. MEXT calculated these figures for your reference. (MEXT calculated FY2002 figures proportional to the FY2001 actual fund allocation.)
- 5) "Competitive fund" means expenses that qualify for competitive funds. MEXT calculated these figures based on the actual budget allocation in the immediately preceding fiscal year (FY2000 for this survey). MEXT calculated these figures for your reference.
- 6) Other than the funds mentioned above, there are ¥1,580 billion budget funds as expenses for cross-sectional projects, expenses that remain unallocated in the budgetary process as well as some expenses in the National Educational Institution Special Account Budget.

Table 4: Competitive funds
(in ¥100 million)

| | FY2001 | FY2002 | Increase / decrease % |
|--|--------|--------|-----------------------|
| Total | 3,265 | 3,446 | 5.5% |
| Grants-in-aid for Scientific Research | 1,580 | 1,703 | 7.8% |
| Special Coordination Funds for Promoting S&T | 343 | 365 | 6.4% |

Source: "Outline of Expenditures in the FY2002 Budget," Ministry of Finance

of Agriculture, Forestry and Fisheries (MAFF) at ¥122.4 billion. In terms of an increase in ratio from FY2001, METI is the highest (up 6.4% or ¥35.9 billion) followed by MHLW (up 3.4% or ¥4.2 billion) and MEXT (up 2.4% or ¥52.3 billion). On the other hand, the Defense Agency has a smaller budget (down 3.7% or ¥5.5 billion). (Table 2)

12.3.3 Budgets for prioritized fields

Table 3 shows S&T related expenditures by each prioritized field stated in the Basic Plan.

The energy area has the largest budget (¥684.1 billion, 45%), followed by frontier technologies (¥278.0 billion, 18%) and social infrastructure (¥200.5 billion, 13%). When adding up the amounts in "related policies," "independent administrative agencies" and "competitive fund" columns, the environment area has the largest budget (¥764.3 billion, 26%), followed by energy (¥703.3 billion, 24%) and life science (¥433.6 billion, 15%).

Although nano-technology/materials only have a small budget (¥11.5 billion for main purpose and ¥123.2 billion in total), this area enjoys the significantly largest growth rate in main policies (up 58%), related policies (up 35%) and in total (up 13%). Main initiatives include MEXT's administrative cost subsidy for the National Institute for Materials Science (¥16.7 billion), METI's nanotechnology program (¥8.3 billion) and MEXT's nanotechnology comprehensive support project (¥3.8 billion). In addition, the environment field also enjoys a significant growth rate (up 33%) in its main purpose initiative expenses.

12.3.4 Competitive fund

Competitive funds increased to ¥344.6 billion, up 5.5% from FY2001. Out of the total competitive funds, Grants-in-aid for Scientific Research and Special Coordination Funds for Promoting S&T increased by 7.8% and 6.4%, respectively. (Table 4)

12.3.5 Industrial competitiveness enhancement and industry-university-government cooperation

The government allocated ¥338.4 billion to industrial competitiveness enhancement and industry-university-government cooperation for the FY2002 budget. This area enjoys significant budget growth, up 29% from FY2001.

Main initiatives include METI's industrial technology R&D contract fees (¥9.5 billion) and MEXT's industry-university-government cooperative innovation creation project (¥7.1 billion).

12.3.6 Regional science and technology promotion

In the FY2002 budget, the government allocated ¥68.8 billion to regional science and technology promotion. This area enjoys a 40% budget increase, which is larger than the industry-university-government cooperation field. Main initiatives include METI's regional emerging consortium R&D project (¥8.8 billion) and MEXT's regional science/technology promotion expenses (¥8.6 billion).

12.4 Conclusion

The Japanese government determined the FY2002 budget as mentioned above. As follow-up activities for the FY2002 budget, CSTP holds hearing sessions and compiles new findings concerning specific initiatives of the related ministries/agencies. Although this budgetary process would be the new model for drawing up S&T related budgets in the future, it is still necessary to carry out pre/post evaluations concerning a variety of research themes in the FY2003 budgetary process.