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Federal government expenditures on scientific activities, 2004-2005^D

This bulletin presents recent information on the performance and funding of Federal government expenditures on scientific activities, 2004-2005. The statistics presented are derived from the survey of science and technology (S&T) activities of federal departments and agencies. The data in this publication are consistent with expenditures of departments and agencies as reported in the Main Estimates 2004-2005, but do not reflect changes to 2004-2005 spending plans which may result from supplementary estimates or other departmental planning decisions.

Highlights

- ▶ The federal government's S&T spending intentions for 2004-2005 are \$9.2 billion, a 2% increase over that forecasted for 2003-2004. For each dollar spent by the federal government, 5.0 cents are spent on scientific & technological (S&T) activities including 3.2 cents spent on research and development (R&D). This compares to 3.6 cents spent on S&T and 2.3 cents on R&D for every dollar back in 1994-1995.
- ▶ In 2004-2005, 63 cents of every S&T dollar was spent on R&D, the second highest proportion of the past 10 years. An expected \$5.8 billion will be devoted to R&D in 2004-2005. This includes intramural performance (activities carried out primarily by the federal government) and extramural funding (activities managed and performed by non-federal organizations) of research and development.
- ▶ In 2004-2005, 53% of the total S&T expenditures will be spent on activities performed by the federal government itself. Of total planned government R&D spending, the federal government will perform \$2.2 billion or 39%.
- ▶ The federal government departments with the largest estimated expenditures on S&T activities in 2004-2005 are the Natural Sciences and Engineering Research Council, the National Research Council, the Canadian Institutes of Health Research and Environment Canada, which together account for 33% of the government's total expenditures.
- ▶ Federal government R&D funding to the higher education sector is expected to exceed \$2.3 billion for 2004-2005. Of this amount, the three granting councils, the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council will account for almost 75%.

November 2004

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The questionnaire on scientific activities is designed to correspond as much as possible to the system of budgetary estimates used by the Federal Government. This is done to ease the response burden, assist in editing and, most importantly, to produce comparable data for policy planning and program evaluation. Thus the questionnaire covers the same time span as the Estimates including: proposed estimates for the coming fiscal year, i.e. 2004-2005; forecast expenditures for the current fiscal year, i.e. 2003-2004 and, actual expenditures for the past fiscal year, i.e. 2002-2003 (also reported in the Public Accounts).

As well as the expenditures attributable to program budgets, there are additional costs attributable to scientific activities which must be included if a full picture of the resources devoted to science activities is to be obtained. These include other sources of funds and other S&T costs which are defined below:

Budgetary Sources - as expressed in the Main Estimates:

- Own Departmental budget.
- Other Federal Agencies - transfers into the program from other Federal Government departments and agencies, net of transfers out.

External Sources:

Income from other sources such as industry and provincial governments.

Other S&T Costs:

Non-Program Costs (indirect costs) are costs that are not part of the budgets of scientific programs and include services provided by other departments, such as:

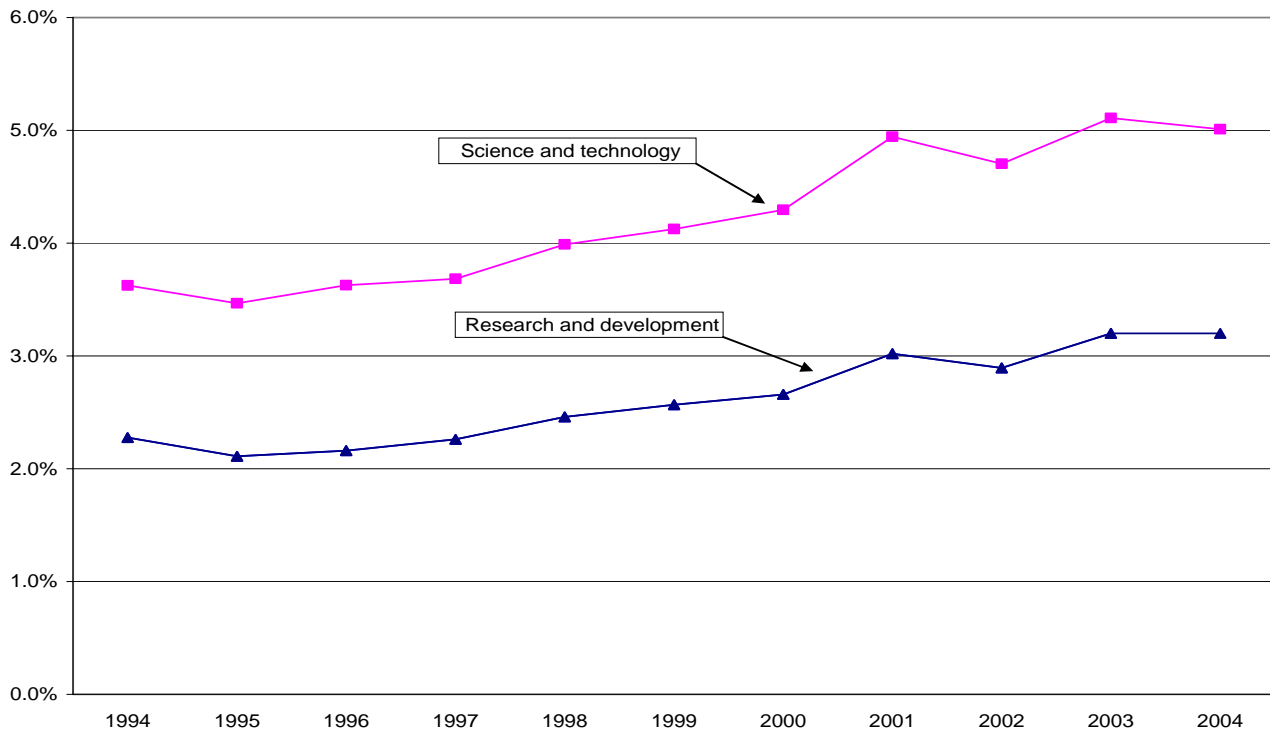
- accommodation by Public Works and Government Services Canada and own department
- employer's share of health and employment insurance premiums paid by Treasury Board
- employee compensation under Workers Compensation Acts paid by Human Resources Development Canada
- cost of legal services provided by the Department of Justice Canada
- cheques issue cost by Public Works and Government Services Canada
- overhead - portion of a central administration program costs attributable to scientific activities

| TABLE 1 Federal expenditures on R&D and S&T in current dollars and in constant 1997 dollars, 1994 to 2004 | | | | | | | |
|---|---------------------------------------|-------|-------|---------------------------------------|---------------------------------------|-------|-------|
| Year | Current Dollars | | | GDP implicit price index ² | Constant 1997 Dollars | | |
| | Budgetary Main Estimates ¹ | S&T | R&D | | Budgetary Main Estimates ¹ | S&T | R&D |
| | in millions of dollars | | | | in millions of dollars | | |
| 1994-1995 | 160,738 | 5,827 | 3,657 | 95.1 | 169,020 | 6,127 | 3,845 |
| 1995-1996 | 164,191 | 5,693 | 3,465 | 97.2 | 168,921 | 5,857 | 3,565 |
| 1996-1997 | 156,985 | 5,694 | 3,391 | 98.8 | 158,892 | 5,763 | 3,432 |
| 1997-1998 | 149,555 | 5,509 | 3,379 | 100.0 | 149,555 | 5,509 | 3,379 |
| 1998-1999 | 145,457 | 5,802 | 3,578 | 99.6 | 146,041 | 5,825 | 3,592 |
| 1999-2000 | 151,559 | 6,252 | 3,890 | 101.3 | 149,614 | 6,172 | 3,840 |
| 2000-2001 | 156,157 | 6,707 | 4,150 | 105.4 | 148,157 | 6,363 | 3,937 |
| 2001-2002 ^f | 165,234 | 8,169 | 4,989 | 106.4 | 155,295 | 7,678 | 4,689 |
| 2002-2003 ^f | 170,367 | 8,014 | 4,927 | 107.5 | 158,481 | 7,455 | 4,583 |
| 2003-2004 ^p | 175,937 | 8,988 | 5,689 | 111.1 | 158,359 | 8,090 | 5,121 |
| 2004-2005 ^p | 183,290 | 9,183 | 5,798 | .. | .. | .. | .. |

1. Part 1, Government Expenditure Plan, Estimates

2. Cansim II Table 384-0036.

S&T and R&D shares of Budgetary Main Estimates



S&T and R&D growth rates

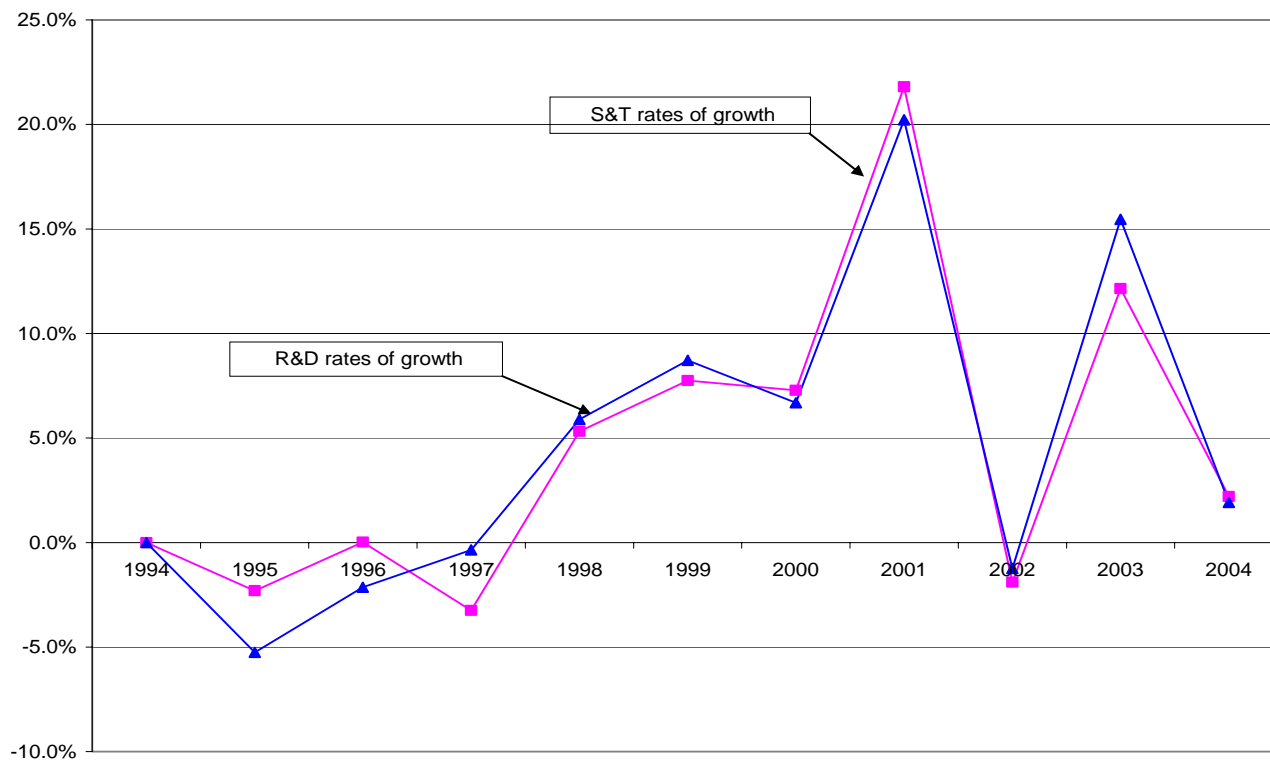


TABLE 2 Total S&T estimates of major departments or agencies, 2004-2005

| Department or agency | Sources of expenditures on science | | | | | |
|----------------------------------|---|------------------|----------------------------|------------------------------------|------------------------|----------------|
| | Total estimated expenditures on science | External sources | Other S&T costs | | Budgetary sources | |
| | | | Indirect non-program costs | Administrative costs of department | Other federal agencies | Own department |
| in millions of dollars | | | | | | |
| Agriculture and Agri-Food Canada | 335 | 0 | 16 | 0 | -10 | 329 |
| Atomic Energy of Canada Limited | 162 | 19 | 0 | 0 | 9 | 134 |
| Canadian Space Agency | 312 | 0 | 4 | 0 | -15 | 323 |
| Environment Canada | 721 | 73 | 37 | 43 | 36 | 532 |
| Fisheries and Oceans | 331 | 7 | 19 | 0 | 5 | 300 |
| Health Canada | 384 | 10 | 25 | 56 | 3 | 290 |
| Industry Canada | 373 | 0 | 15 | 0 | -20 | 378 |
| National Defence | 460 | 0 | 11 | 0 | -6 | 455 |
| National Research Council | 803 | 19 | 19 | 0 | 40 | 725 |
| Natural Resources Canada | 500 | 0 | 30 | 0 | 0 | 470 |
| Statistics Canada | 615 | 57 | 50 | 0 | 73 | 435 |

* Negative amounts denote net transfer from budget for S&T.

TABLE 3 Federal government expenditures by activity, 1995-96 to 2004-2005

| Scientific activity | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 ¹ | 2002-03 ¹ | 2003-04 ^P | 2004-05 ^P |
|---|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| in millions of dollars | | | | | | | | | | |
| Research & Development (R&D) | | | | | | | | | | |
| Current expenditures | 3,140 | 3,086 | 3,062 | 3,241 | 3,559 | 3,770 | 4,571 | 4,492 | 5,233 | 5,334 |
| Administration of extramural programs | 162 | 164 | 163 | 200 | 186 | 182 | 213 | 227 | 276 | 278 |
| Capital expenditures | 163 | 141 | 154 | 137 | 144 | 198 | 205 | 208 | 180 | 186 |
| <i>Sub-total R&D</i> | <i>3,465</i> | <i>3,391</i> | <i>3,379</i> | <i>3,578</i> | <i>3,890</i> | <i>4,150</i> | <i>4,989</i> | <i>4,927</i> | <i>5,689</i> | <i>5,798</i> |
| Related Scientific Activities(RSA) | | | | | | | | | | |
| Data collection | 923 | 1,007 | 964 | 1,022 | 1,105 | 1,231 | 1,611 | 1,555 | 1,663 | 1,667 |
| Information services | 539 | 523 | 465 | 469 | 486 | 484 | 618 | 622 | 652 | 680 |
| Special services and studies | 447 | 463 | 436 | 452 | 485 | 531 | 513 | 587 | 602 | 597 |
| Education support | 139 | 139 | 142 | 157 | 168 | 163 | 286 ¹ | 177 | 201 | 250 |
| Administration of extramural programs | 34 | 33 | 32 | 35 | 40 | 46 | 49 | 54 | 56 | 60 |
| Capital expenditures | 147 | 139 | 91 | 89 | 77 | 102 | 103 | 92 | 125 | 131 |
| <i>Sub-total RSA</i> | <i>2,228</i> | <i>2,303</i> | <i>2,130</i> | <i>2,224</i> | <i>2,362</i> | <i>2,557</i> | <i>3,180</i> | <i>3,087</i> | <i>3,299</i> | <i>3,385</i> |
| Total | 5,693 | 5,694 | 5,509 | 5,802 | 6,252 | 6,707 | 8,169 | 8,014 | 8,988 | 9,183 |

1. Includes a \$125 million grant to the Pierre Elliott Trudeau Foundation.

TABLE 4 Federal expenditures on S&T, by science and by performing sector¹, 1995-96 to 2004-2005

| Sector of performance | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 ^f | 2002-03 ^f | 2003-04 ^p | 2004-05 ^p |
|--|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| in millions of dollars | | | | | | | | | | |
| Total sciences: | | | | | | | | | | |
| Intramural | 3,427 | 3,575 | 3,351 | 3,455 | 3,658 | 4,043 | 4,555 | 4,630 | 4,856 | 4,875 |
| Canadian business enterprises | 885 | 801 | 927 | 952 | 926 | 847 | 1,109 | 998 | 1,041 | 1,021 |
| Higher education | 933 | 894 | 860 | 989 | 1,173 | 1,320 | 1,739 | 1,803 | 2,297 | 2,535 |
| Canadian non-profit institutions | 103 | 112 | 110 | 122 | 181 | 154 | 400 | 200 | 404 | 334 |
| Other Canadian performers ² | 86 | 65 | 39 | 51 | 85 | 93 | 84 | 99 | 83 | 107 |
| Foreign | 259 | 247 | 222 | 233 | 229 | 250 | 282 | 284 | 307 | 311 |
| Total | 5,693 | 5,694 | 5,509 | 5,802 | 6,252 | 6,707 | 8,169 | 8,014 | 8,988 | 9,183 |
| Natural sciences: | | | | | | | | | | |
| Intramural | 2,486 | 2,507 | 2,417 | 2,459 | 2,648 | 2,872 | 3,166 | 3,308 | 3,437 | 3,471 |
| Canadian business enterprises | 846 | 767 | 892 | 924 | 896 | 816 | 1,071 | 965 | 1,007 | 982 |
| Higher education | 773 | 737 | 702 | 836 | 1,002 | 1,139 | 1,341 | 1,583 | 1,808 | 1,950 |
| Canadian non-profit institutions | 59 | 66 | 57 | 56 | 128 | 98 | 226 ³ | 130 | 338 ⁶ | 270 ⁸ |
| Other Canadian performers ² | 69 | 56 | 28 | 42 | 57 | 55 | 44 | 71 | 51 | 74 |
| Foreign | 144 | 140 | 126 | 134 | 134 | 144 | 157 | 168 | 188 | 196 |
| Total | 4,377 | 4,273 | 4,222 | 4,450 | 4,866 | 5,124 | 6,005 | 6,225 | 6,829 | 6,943 |
| Social sciences: | | | | | | | | | | |
| Intramural | 941 | 1,068 | 934 | 996 | 1,010 | 1,171 | 1,389 | 1,322 | 1,419 | 1,404 |
| Canadian business enterprises | 40 | 34 | 35 | 29 | 30 | 31 | 38 | 33 | 34 | 39 |
| Higher education | 159 | 157 | 158 | 153 | 171 | 181 | 398 ⁴ | 220 | 489 ⁷ | 585 ⁹ |
| Canadian non-profit institutions | 44 | 46 | 53 | 65 | 52 | 56 | 174 ⁵ | 70 | 66 | 64 |
| Other Canadian performers ² | 17 | 9 | 11 | 9 | 28 | 38 | 40 | 28 | 32 | 33 |
| Foreign | 115 | 107 | 96 | 99 | 95 | 106 | 125 | 116 | 119 | 115 |
| Total | 1,316 | 1,421 | 1,287 | 1,352 | 1,386 | 1,583 | 2,164 | 1,789 | 2,159 | 2,240 |

1. As reported by the funder, the Federal Government, not by the performers.

2. Other Canadian performers includes provincial and municipal governments.

3. Includes \$100 million for the Sustainable Development Technology Fund (Environment Canada and Natural Resources Canada each provided \$50 million).

4. Includes \$200 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

5. Includes a \$125 million grant to the Pierre Elliott Trudeau Foundation.

6. Includes \$50 million for the Canadian Foundation for Climate and Atmospheric Sciences and \$125 million for the Sustainable Development Technology Fund funded by Environment Canada.

7. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

8. Includes \$100 million for the Sustainable Development Technology Fund funded by Environment Canada.

9. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

TABLE 5 Federal expenditures on R&D by science and by performing sector¹, 1995-96 to 2004-2005

| Sector of performance | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 ^f | 2002-03 ^f | 2003-04 ^p | 2004-05 ^p |
|--|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| in millions of dollars | | | | | | | | | | |
| Total sciences: | | | | | | | | | | |
| Intramural | 1,727 | 1,792 | 1,720 | 1,743 | 1,859 | 2,080 | 2,102 | 2,190 | 2,238 | 2,234 |
| Canadian business enterprises | 665 | 573 | 721 | 749 | 713 | 624 | 862 | 726 | 757 | 726 |
| Higher education | 797 | 761 | 725 | 842 | 1,010 | 1,170 | 1,595 | 1,644 | 2,117 | 2,310 |
| Canadian non-profit institutions | 59 | 75 | 71 | 82 | 130 | 76 | 233 | 142 | 351 | 280 |
| Other Canadian performers ² | 65 | 50 | 22 | 38 | 59 | 69 | 61 | 72 | 60 | 81 |
| Foreign | 151 | 141 | 120 | 124 | 118 | 131 | 136 | 153 | 166 | 167 |
| Total | 3,465 | 3,391 | 3,379 | 3,578 | 3,890 | 4,150 | 4,989 | 4,927 | 5,689 | 5,798 |
| Natural sciences: | | | | | | | | | | |
| Intramural | 1,669 | 1,724 | 1,651 | 1,667 | 1,774 | 1,995 | 2,010 | 2,073 | 2,115 | 2,107 |
| Canadian business enterprises | 662 | 570 | 720 | 747 | 711 | 622 | 857 | 722 | 752 | 722 |
| Higher education | 713 | 680 | 644 | 762 | 913 | 1,063 | 1,265 | 1,495 | 1,713 | 1,845 |
| Canadian non-profit institutions | 34 | 52 | 47 | 43 | 109 | 48 | 202 ³ | 107 | 317 ⁵ | 248 ⁷ |
| Other Canadian performers ² | 60 | 46 | 19 | 35 | 50 | 46 | 34 | 61 | 41 | 62 |
| Foreign | 114 | 110 | 94 | 97 | 95 | 104 | 112 | 123 | 134 | 133 |
| Total | 3,252 | 3,181 | 3,174 | 3,350 | 3,653 | 3,879 | 4,480 | 4,581 | 5,072 | 5,117 |
| Social sciences: | | | | | | | | | | |
| Intramural | 58 | 68 | 69 | 76 | 85 | 85 | 92 | 117 | 123 | 127 |
| Canadian business enterprises | 3 | 3 | 2 | 3 | 2 | 2 | 5 | 4 | 5 | 4 |
| Higher education | 85 | 81 | 80 | 80 | 97 | 107 | 330 ⁴ | 149 | 404 ⁶ | 465 ⁸ |
| Canadian non-profit institutions | 24 | 24 | 24 | 39 | 21 | 28 | 31 | 35 | 34 | 32 |
| Other Canadian performers ² | 5 | 4 | 3 | 3 | 10 | 23 | 27 | 11 | 19 | 19 |
| Foreign | 38 | 31 | 27 | 27 | 23 | 27 | 24 | 30 | 32 | 34 |
| Total | 213 | 210 | 205 | 228 | 237 | 271 | 509 | 346 | 617 | 681 |

1. As reported by the funder, the Federal Government, not by the performers.

2. Other Canadian performers includes provincial and municipal governments.

3. Includes \$100 million for the Sustainable Development Technology Fund (Environment Canada and Natural Resources Canada each provided \$50 million).

4. Includes \$200 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

5. Includes \$50 million for the Canadian Foundation for Climate and Atmospheric Sciences and \$125 million for the Sustainable Development Technology Fund funded by Environment Canada.

6. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

7. Includes \$100 million for the Sustainable Development Technology Fund funded by Environment Canada.

8. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council.

TABLE 6 Federal expenditures on S&T, by major department or agency, 1995-96 to 2004-2005

| Department or agency | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 ^f | 2002-03 ^f | 2003-04 ^p | 2004-05 ^p |
|---|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| in millions of dollars | | | | | | | | | | |
| Agriculture and Agri-Food Canada | 358 | 368 | 359 | 351 | 387 | 363 | 337 | 320 | 323 | 335 |
| Atomic Energy of Canada Limited | 168 | 240 | 174 | 135 | 132 | 136 | 178 | 147 | 179 | 162 |
| Canada Foundation for Innovation | ... | ... | 2 | 31 | 118 | 188 | 239 | 332 | 383 | 419 |
| Canadian Institutes of Health Research | ... | ... | ... | ... | 317 | 392 | 529 | 628 | 698 | 719 |
| Canadian International Development Agency | 334 | 339 | 303 | 314 | 335 | 358 | 387 | 352 | 341 | 403 |
| Canadian Space Agency | 299 | 253 | 230 | 343 | 305 | 310 | 330 | 320 | 307 | 312 |
| Environment Canada ¹ | 529 | 456 | 453 | 427 | 538 | 479 | 626 | 574 | 799 | 721 |
| Fisheries and Oceans | 244 | 246 | 204 | 281 | 287 | 367 | 319 | 363 | 327 | 331 |
| Genome Canada | ... | ... | ... | ... | ... | ... | 34 | 62 | 81 | 84 |
| Health Canada | 201 | 214 | 210 | 204 | 236 | 229 | 311 | 342 | 382 | 384 |
| Industry Canada | 324 | 291 | 407 | 343 | 301 | 336 | 687 | 424 | 445 | 373 |
| International Development Research Centre | 88 | 88 | 78 | 85 | 82 | 84 | 76 | 86 | 92 | 104 |
| Medical Research Council | 252 | 242 | 238 | 277 | ... | ... | ... | ... | ... | ... |
| National Defence | 233 | 253 | 311 | 304 | 335 | 315 | 315 | 358 | 439 | 460 |
| National Research Council | 481 | 479 | 524 | 554 | 597 | 655 | 719 | 793 | 804 | 803 |
| Natural Resources Canada | 475 | 430 | 396 | 386 | 421 | 437 | 554 | 511 | 493 | 500 |
| Natural Sciences and Engineering Research Council | 471 | 453 | 436 | 499 | 549 | 568 | 588 | 653 | 762 | 814 |
| Social Sciences and Humanities Research Council | 101 | 93 | 96 | 104 | 127 | 145 | 362 | 188 | 463 | 541 |
| Statistics Canada | 406 | 535 | 400 | 437 | 461 | 576 | 727 | 579 | 616 | 615 |
| Other | 729 | 714 | 688 | 727 | 724 | 769 | 851 | 982 | 1,054 | 1,103 |
| Total | 5,693 | 5,694 | 5,509 | 5,802 | 6,252 | 6,707 | 8,169 | 8,014 | 8,988 | 9,183 |

1. Environment Canada resources include large one-time grants and contributions to initiatives outside of the department which did not result in increases in departmental expenditures (\$60M for Climate and Atmospheric Sciences in 1999/2000, \$50M for the Sustainable Development Technology Fund in 2001/02, \$50M for the Canadian Foundation for Climate and Atmospheric Sciences and \$125M for the Sustainable Development Technology Fund in 2003/04 and \$100M forecasted for the Sustainable Development Technology Fund in 2004/05).

| TABLE 7 Federal expenditures on R&D, by major department or agency, 1995-96 to 2004-2005 | | | | | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| Department or agency | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 ^f | 2002-03 ^f | 2003-04 ^p | 2004-05 ^p |
| in millions of dollars | | | | | | | | | | |
| Agriculture and Agri-Food Canada | 328 | 350 | 340 | 335 | 370 | 354 | 329 | 267 | 236 | 249 |
| Atomic Energy of Canada Limited | 163 | 240 | 174 | 135 | 132 | 136 | 178 | 147 | 179 | 162 |
| Canadian Economic Development for Quebec Regions | 24 | 28 | 22 | 23 | 12 | 10 | 17 | 25 | 27 | 24 |
| Canada Foundation for Innovation | ... | ... | 2 | 31 | 118 | 188 | 239 | 332 | 383 | 419 |
| Canadian Institutes of Health Research | ... | ... | ... | ... | 304 | 384 | 522 | 622 | 690 | 712 |
| Canadian International Development Agency | 51 | 52 | 48 | 49 | 50 | 57 | 56 | 53 | 44 | 68 |
| Canadian Space Agency | 291 | 245 | 224 | 337 | 300 | 298 | 317 | 309 | 293 | 297 |
| Environment Canada ¹ | 163 | 135 | 127 | 116 | 196 | 144 | 222 | 207 | 401 | 324 |
| Fisheries and Oceans | 99 | 95 | 78 | 109 | 110 | 130 | 123 | 140 | 126 | 128 |
| Genome Canada | ... | ... | ... | ... | ... | ... | 34 | 62 | 81 | 84 |
| Health Canada | 63 | 74 | 65 | 54 | 55 | 65 | 102 | 105 | 124 | 113 |
| Industry Canada | 268 | 230 | 345 | 274 | 239 | 288 | 503 | 371 | 383 | 304 |
| International Development Research Centre | 78 | 76 | 64 | 67 | 71 | 76 | 65 | 67 | 71 | 80 |
| Medical Research Council | 244 | 234 | 229 | 266 | ... | ... | ... | ... | ... | ... |
| National Defence | 229 | 223 | 264 | 262 | 294 | 274 | 281 | 261 | 315 | 337 |
| National Research Council | 419 | 429 | 470 | 499 | 530 | 591 | 644 | 718 | 729 | 728 |
| Natural Resources Canada ² | 403 | 373 | 351 | 345 | 376 | 388 | 335 | 285 | 274 | 278 |
| Natural Sciences and Engineering Research Council | 425 | 410 | 393 | 443 | 481 | 500 | 517 | 573 | 673 | 716 |
| Social Sciences and Humanities Research Council | 70 | 64 | 65 | 68 | 92 | 105 | 325 | 148 | 408 | 464 |
| Statistics Canada | 10 | 9 | 11 | 12 | 13 | 13 | 16 | 19 | 17 | 17 |
| Other | 137 | 124 | 107 | 153 | 147 | 149 | 164 | 216 | 235 | 294 |
| Total | 3,465 | 3,391 | 3,379 | 3,578 | 3,890 | 4,150 | 4,989 | 4,927 | 5,689 | 5,798 |

1. Environment Canada resources include large one-time grants and contributions to initiatives outside of the department which did not result in increases in departmental expenditures (\$60M for Climate and Atmospheric Sciences in 1999/2000, \$50M for the Sustainable Development Technology Fund in 2001/02, \$50M for the Canadian Foundation for Climate and Atmospheric Sciences and \$125M for the Sustainable Development Technology Fund in 2003/04 and \$100M forecasted for the Sustainable Development Technology Fund in 2004/05).

2. New program structures combined with stricter interpretation of the definitions of R&D and RSA, have led to a significant change in NRCan's reporting of resources as compared to previous years (effective as of 2001-2002).

TABLE 8 S&T expenditures by socio-economic objective, 2000-2001 to 2002-2003

| Socio-economic objective | 2000-2001 | | 2001-2002 | | 2002-2003 | |
|---|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | Intramural | Extramural | Intramural | Extramural | Intramural | Extramural |
| in millions of dollars | | | | | | |
| Exploration and exploitation of the earth | 413 | 76 | 454 | 90 | 466 | 83 |
| Infrastructure and general planning of Land use: | | | | | | |
| - Transport | 46 | 21 | 120 | 27 | 65 | 28 |
| - Telecommunication | 30 | 15 | 48 | 23 | 89 | 25 |
| - Other | 148 | 27 | 146 | 28 | 162 | 32 |
| Pollution and protection of the environment | 329 | 158 | 337 | 195 | 360 | 188 |
| Public Health | 241 | 549 | 288 | 739 | 344 | 906 |
| Production, distribution and rational utilization of energy | 189 | 67 | 252 | 121 | 217 | 80 |
| Agricultural production and technology: | | | | | | |
| - Agriculture | 378 | 76 | 427 | 82 | 415 | 98 |
| - Fishing | 131 | 30 | 124 | 19 | 141 | 23 |
| - Forestry | 91 | 30 | 90 | 29 | 91 | 44 |
| Industrial production and technology | 225 | 542 | 242 | 894 | 246 | 685 |
| Social structures and relationships | 897 | 189 | 1,067 | 203 | 979 | 241 |
| Exploration and exploitation of space | 198 | 159 | 190 | 199 | 210 | 184 |
| Non-oriented research | 203 | 216 | 249 | 393 | 270 | 242 |
| Other civil research | 24 | 19 | 18 | 17 | 17 | 3 |
| Defence | 169 | 140 | 137 | 173 | 177 | 169 |
| Other | 16 | 350 | 18 | 382 | 22 | 353 |
| Total S&T expenditures | 3,728¹ | 2,664 | 4,207¹ | 3,614 | 4,271¹ | 3,384 |

1. Non-program (indirect costs) are excluded.

| TABLE 9 R&D expenditures by socio-economic objective, 2000-2001 to 2002-2003 | | | | | | |
|---|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| Socio-Economic Objective | 2000-2001 | | 2001-2002 ¹ | | 2002-2003 | |
| | Intramural | Extramural | Intramural | Extramural | Intramural | Extramural |
| in millions of dollars | | | | | | |
| Exploration and exploitation of the earth | 207 | 46 | 125 | 69 | 141 | 59 |
| Infrastructure and general planning of land use: | | | | | | |
| - Transport | 37 | 20 | 71 | 24 | 54 | 25 |
| - Telecommunication | 28 | 15 | 44 | 23 | 48 | 24 |
| - Other | 48 | 20 | 30 | 25 | 39 | 28 |
| Pollution and protection of the environment | 143 | 112 | 142 | 148 | 174 | 141 |
| Public health | 116 | 519 | 152 | 709 | 186 | 866 |
| Production, distribution and rational utilization of energy | 187 | 64 | 248 | 117 | 214 | 75 |
| Agricultural production and technology : | | | | | | |
| - Agriculture | 333 | 70 | 345 | 75 | 287 | 90 |
| - Fishing | 51 | 14 | 47 | 15 | 55 | 16 |
| - Forestry | 83 | 27 | 75 | 27 | 74 | 41 |
| Industrial production and technology | 165 | 518 | 164 | 741 | 189 | 657 |
| Social structures and relationships | 53 | 106 | 47 | 130 | 60 | 149 |
| Exploration and exploitation of space | 187 | 154 | 175 | 193 | 181 | 179 |
| Non-oriented research | 150 | 188 | 181 | 365 | 202 | 213 |
| Other civil research | 16 | 17 | 15 | 17 | 14 | 2 |
| Defence | 150 | 119 | 134 | 142 | 152 | 100 |
| Other | 3 | 62 | 5 | 67 | 5 | 72 |
| Total R&D expenditures | 1,957¹ | 2,070 | 2,000¹ | 2,887 | 2,075¹ | 2,737 |

1. Non-program (indirect costs) are excluded.

Symbols

The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- ^P preliminary
- ^r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- ^E use with caution
- F too unreliable to be published

Science and technology (S&T) = research and development (R&D) + related scientific activities (RSA)

Due to rounding, components may not add to totals.

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Current publications of the Science and Innovation Surveys Section include:

Industrial Research and Development, 2004 Intentions, (with 2003 preliminary estimates and 2002 actual expenditures) to be released in December of 2004, catalogue No. 88-202-XIE, annual. It presents statistics on research and development (R&D) activities performed and funded by Canadian business enterprises. The report covers current and capital expenditures on R&D, R&D as a percent of performing company revenues, R&D expenditures by province, country of control of company, personnel engaged in R&D and payments for technological services.

<http://www.statcan.ca/english/IPS/Data/88-202-XIE.htm>

Federal Scientific Activities, 2003-2004, Catalogue No. 88-204-XIE, annual. It presents statistics on the federal government's activities in science and technology (S&T). It covers expenditures and person-years by type of science, performing sectors, provinces, Federal departments and agencies.

<http://www.statcan.ca/english/IPS/Data/88-204-XIE.htm>

Note of appreciation

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