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Science Statistics

Federal Government
Expenditures on Scientific
Activities, 2008/2009 (Intentions)



November 2008 edition



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Statistics Canada
Science, Innovation and Electronic Information Division

Science Statistics

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User information

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

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Highlights

Federal Government Expenditures on Scientific Activities, 2008/2009 (intentions)

The federal government will spend an anticipated \$9.9 billion on science and technology in the fiscal year 2008/2009. (Table 1-1)

This will be a decline of about 3% (in current dollars) from the previous fiscal year, and the first decline after 5 years of increases. (Table 1-1)

About 63% of this total will go to research and development, and the remaining 37% to related scientific activities. (Table 1-1)

Of the total, natural sciences and engineering will receive just under \$7.5 billion, most of which will go to research and development. Social sciences and humanities will get an anticipated \$2.4 billion. (Table 3-2)

Analysis

Federal Government Expenditures on Scientific Activities, 2008/2009 (intentions)

This bulletin presents recent statistical information on the performance and funding of federal government expenditures on scientific activities, 2008/2009. The statistics presented are derived from a survey of federal 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 2008/2009, but do not reflect changes to 2008/2009 spending plans which may result from supplementary estimates or other departmental planning decisions.

The federal government's spending on S&T is expected to reach \$9.9 billion in the fiscal year 2008/2009. Intended spending on research and development (R&D) for 2008/2009 will be an estimated \$6.2 billion. Related scientific activities (RSA) including: the gathering, processing and analyzing of data; information services; museum services; feasibility and policy studies; and education support will receive \$3.6 billion. (Table 1-1)

S&T will account for about 4.1% of the total federal government budget in 2008/2009, compared with 4.6% two years earlier. (Table 1-1)

Federal investment in R&D stood at 2.9% of the total federal budget in 2006/2007 with an intended decline in 2008/2009 (2.6%). (Table 1-1)

RSA will account for 1.5% of the total federal government budget in 2008/2009, compared with 1.7% in 2006/2007. (Table 1-1)

The major federal departments and agencies in 2008/2009 investing in S&T activities will include the three funding councils: Natural Sciences and Engineering Research Council (\$1.0 billion); Canadian Institutes of Health Research (\$902 million); and Social Sciences and Humanities Research Council (\$649 million). The four leading departments and agencies in S&T spending will be: National Research Council Canada (\$784 million); Statistics Canada (\$644 million); Environment Canada (\$643 million); and Natural Resources Canada (\$616 million). (Table 3-3)

The leading federal departments or agencies performing R&D in 2008/2009 will continue to be the National Research Council Canada (\$590 million), Agriculture and Agri-Food Canada (\$292 million), National Defence (\$243 million) and Natural Resources Canada (\$219 million). (Table 7)

The socio-economic objectives of federal S&T investment differ depending upon whether the spending is by federal departments or agencies (intramural spending) or is funding for S&T activities by non-federal organisations (extramural spending). Based on the level of investment, the leading intramural socio-economic objective in 2006/2007 was social structures and relationships at \$1.1 billion whereas protection and improvement of human health (\$1.2 billion) led for extramural S&T spending. (Table 3-4)

In terms of R&D socio-economic objectives, of the \$2.4 billion federal intramural R&D expenditure in 2006/2007, \$340 million went to agriculture, \$339 million to production, distribution and rational utilization of energy; and \$261 million to defence. These three objectives accounted for almost 40% of total intramural R&D socio-economic objective spending. On the other hand, extramural R&D spending was directed towards protection and improvement of human health (32% or \$1.2 billion) and industrial production and technology (23%, or \$831 million). (Table 4-3)

In terms of RSA socio-economic objectives, of the \$2.5 billion federal intramural RSA expenditure in 2006/2007, \$1.0 billion went to social structures and relationships; \$265 million to control and care of the environment; and \$261 million to protection and improvement of human health. These three objectives accounted for almost 61% of total intramural RSA socio-economic objective spending. (Table 5-3)

Related products

Selected publications from Statistics Canada

88-202-X	Industrial Research and Development: Intentions
88-204-X	Federal Scientific Activities
88-221-X	Gross Domestic Expenditures on Research and Development in Canada and the Provinces
88-522-X	Science and Technology Activities and Impacts: A Framework for a Statistical Information
88F0006X	Science, Innovation and Electronic Information Division Working Papers
88F0017M	Science, Innovation and Electronic Information Division Research Papers

Selected CANSIM tables from Statistics Canada

358-0001	Gross domestic expenditures on research and development, by science type and by funder and performer sector, annual
358-0024	Business enterprise research and development (BERD) characteristics, by industry group based on the North American Industry Classification System (NAICS), annual
358-0026	Intellectual property management, by federal departments and agencies indicators, annual

Selected surveys from Statistics Canada

4201	Research and Development in Canadian Industry
4204	Research and Development of Canadian Private Non-Profit Organizations
4208	Provincial Research Organizations (PRO)
4209	Provincial Government Activities in the Natural Sciences
4210	Provincial Government Activities in the Social Sciences
4212	Federal Science Expenditures and Personnel, Activities in the Social Sciences and Natural Sciences
5109	Higher Education Research and Development Estimates

Selected summary tables from Statistics Canada

- *Research and development performed by the business enterprise sector*
- *Domestic spending on research and development (GERD), funding sector, by province*
- *Domestic spending on research and development (GERD), performing sector, by province*
- *Domestic spending on research and development (GERD)*

Statistical tables

Table 1-1
Federal expenditures on science and technology and its components — In current dollars and in constant 2002 dollars

	Current dollars				Gross ² Domestic Product implicit price index	Constant 2002 dollars			
	Science and technology					Science and technology			
	Main ¹ Estimates	Total science and technology	Research and development	Related scientific activities		Main ¹ Estimates	Total science and technology	Research and development	Related scientific activities
	millions of dollars				index = 2002	millions of dollars			
1996/1997	156,985	5,694	3,391	2,303	91.6	171,381	6,216	3,702	2,514
1997/1998	149,555	5,509	3,379	2,130	92.8	161,158	5,936	3,641	2,295
1998/1999	145,457	5,802	3,578	2,224	92.3	157,592	6,286	3,876	2,410
1999/2000	151,559	6,252	3,890	2,362	93.9	161,405	6,658	4,143	2,515
2000/2001	156,157	6,707	4,150	2,557	97.8	159,670	6,858	4,243	2,615
2001/2002	165,234	8,169	4,989	3,180	98.9	167,072	8,260	5,044	3,215
2002/2003	170,367	8,014	4,927	3,087	100.0	170,367	8,014	4,927	3,087
2003/2004	175,937	8,765	5,462	3,303	103.3	170,317	8,485	5,288	3,197
2004/2005	183,290	8,934	5,454	3,480	106.6	171,942	8,381	5,116	3,265
2005/2006 ^r	194,863	9,449	6,042	3,407	110.2	176,827	8,574	5,483	3,092
2006/2007 ^r	207,986	9,633	6,073	3,560	112.9	184,221	8,531	5,379	3,153
2007/2008 ^p	230,772	10,164	6,481	3,683	116.4	198,258	8,732	5,568	3,164
2008/2009 ^p	241,308	9,863	6,222	3,641

1. Part 1, Government Expenditure Plan, Estimates.

2. CANSIM, Table 380-0056.

Note(s): Due to rounding, components may not add to the totals.

Table 1-2
Federal expenditures on science and technology and its components — By growth rate

	Science and technology		Research and development		Related scientific activities	
	constant 2002 dollars	current dollars	constant 2002 dollars	current dollars	constant 2002 dollars	current dollars
	percent					
1996/1997	-1.5	0.0	-3.7	-2.1	1.7	3.4
1997/1998	-4.4	-3.2	-1.5	-0.4	-8.6	-7.5
1998/1999	5.9	5.3	6.3	5.9	4.9	4.4
1999/2000	5.9	7.8	6.9	8.7	4.4	6.2
2000/2001	3.0	7.3	2.4	6.7	4.0	8.3
2001/2002	20.4	21.8	18.9	20.2	22.9	24.4
2002/2003	-3.0	-1.9	-2.3	-1.2	-4.0	-2.9
2003/2004	5.9	9.4	7.3	10.9	3.6	7.0
2004/2005	-1.2	1.9	-3.3	-0.1	2.1	5.4
2005/2006 ^r	2.3	5.8	7.2	10.8	-5.3	-2.1
2006/2007 ^r	-0.5	1.9	-1.9	0.5	2.0	4.5
2007/2008 ^p	2.4	5.5	3.5	6.7	0.3	3.5
2008/2009 ^p	..	-3.0	..	-4.0	..	-1.1

Table 2
Federal science and technology spending estimates for major intramural departments and agencies, 2008/2009

Sources of expenditures on science					
Total estimated expenditures	External sources	Other costs		Budgetary sources	
		Indirect non-program costs		Other federal agencies ¹	Own department
millions of dollars					
Agriculture and Agri-Food Canada	355	0	20	-6	340
Atomic Energy of Canada Limited	171	0	0	0	171
Canadian Space Agency	373	0	5	-5	373
Environment Canada	643	74	42	28	498
Fisheries and Oceans Canada	280	19	17	11	233
Health Canada	380	37	34	0	310
Industry Canada	400	0	15	-26	411
National Defence	426	5	14	-23	430
National Research Council Canada	784	20	26	39	698
Natural Resources Canada	616	16	29	-19	590
Statistics Canada	644	34	62	96	452

1. Negative amounts denote net transfer from budget for science and technology.
Note(s): Due to rounding, components may not add to the totals.

Table 3-1
Federal science and technology spending — By activity

	2004/2005	2005/2006	2006/2007 ^f	2007/2008 ^p	2008/2009 ^p
millions of dollars					
Science and technology	8,934	9,449	9,633	10,164	9,863
Research and development	5,454	6,042	6,073	6,481	6,222
Current expenditures	5,033 ¹	5,611 ²	5,642 ^{3,4}	6,058 ⁵	5,804 ⁶
Administration of extramural programs	269	285	279	287	302
Capital expenditures	152	146	152	136	116
Related scientific activities	3,480	3,407	3,560	3,683	3,641
Data collection	1,702 ⁷	1,715	1,870	1,756	1,786
Information services	679	676	669	707	698
Special services and studies	666	627	576	743	665
Education support	230	259	298	314	326
Administration of extramural programs	58	59	64	66	69
Capital expenditures	146	70	83	96	97

1. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
2. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
3. Includes \$260 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
4. Includes \$30 million for the Agriculture Development Fund project funded by Agriculture and Agri-Food Canada.
5. Includes \$300 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
6. Includes \$315 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
7. Includes \$100 million for the Sustainable Development Technology Fund funded by Environment Canada.
Note(s): Due to rounding, components may not add to the totals.

Table 3-2
Federal science and technology spending — By science and by performing sector¹

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total sciences	8,934	9,449	9,633	10,164	9,863
Intramural	4,685	5,024	5,244	5,220	5,158
Canadian business enterprises	979	1,044	902	1,000	1,000
Higher education	2,396 ²	2,698 ³	2,660 ⁴	3,000 ⁵	3,053 ⁶
Canadian non-profit institutions	444 ⁷	307	305	408	245
Provincial and municipal government	22	19	90 ^{8,9}	92 ⁹	56
Foreign	358	306	301	407	313
Other Canadians performers	51	51	131 ¹⁰	36	39
Natural sciences	6,780	7,171	7,166	7,647	7,457
Intramural	3,341	3,618	3,729	3,775	3,756
Canadian business enterprises	942	1,010	850	924	924
Higher education	1,848	2,097	1,991	2,318	2,365
Canadian non-profit institutions	397 ²	248	243	324	184
Provincial and municipal government	20	17	82 ^{8,9}	84 ⁹	45
Foreign	202	147	155	200	158
Other Canadians performers	31	34	115 ¹⁰	23	25
Social sciences	2,155	2,279	2,467	2,517	2,406
Intramural	1,344	1,406	1,515	1,445	1,401
Canadian business enterprises	37	34	52	76	76
Higher education	549 ²	601 ³	668 ⁴	682 ⁵	688 ⁶
Canadian non-profit institutions	47	59	61	84	61
Provincial and municipal government	2	2	8	8	11
Foreign	156	159	146	207	155
Other Canadians performers	21	18	16	14	15

1. As reported by the funder, the federal government, not by the performers.
 2. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 3. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 4. Includes \$260 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 5. Includes \$300 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 6. Includes \$315 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 7. Includes \$100 million for the Sustainable Development Technology Fund funded by Environment Canada.
 8. Includes \$30 million for the Agriculture Development Fund project funded by Agriculture and Agri-Food Canada.
 9. Includes funding of the new Business Risk Management Suite which replaces the Agriculture Income Stabilization Program by Agriculture and Agri-Food Canada.
 10. Includes funding for a research chair by the Canadian Institute for Health Research.
- Note(s):** Due to rounding, components may not add to the totals.

**Table 3-3
Federal science and technology spending — By major department and agency**

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total	8,934	9,449	9,633	10,164	9,863
Agriculture and Agri-Food Canada	340	354	408 ^{1,2}	418 ²	355
Atomic Energy of Canada Limited	148	182	289	329	171
Canada Foundation for Innovation	271	437	367	316	462
Canadian Institutes of Health Research	759	808	853 ³	964	902
Canadian International Development Agency	415	346	344	491	438
Canadian Space Agency	276	281	305	321	372
Environment Canada	675 ⁴	696	588	609	643
Fisheries and Oceans Canada	291	292	317	282	280
Health Canada	284	291	330	368	380
Industry Canada	426	579	444	546 ⁵	400
National Defence	430	434	450	450	426
National Research Council Canada	793	824	769	755	784
Natural Resources Canada	632	542	580	601	616
Natural Sciences and Engineering Research Council	808	864	900	1,021	1,005
Social Sciences and Humanities Research Council of Canada	523 ⁶	574 ⁷	628 ⁸	687 ⁹	649 ¹⁰
Statistics Canada	610	703	798	680	644
Total of major departments	7,681	8,207	8,370	8,838	8,527
Other	1,253	1,242	1,262	1,326	1,336

1. Includes \$30 million for the Agriculture Development Fund Project funded by Agriculture and Agri-Food Canada.
 2. Includes funding of the new Business Risk Management Suite which replaces the Agriculture Income Stabilization Program by Agriculture and Agri-Food Canada.
 3. Includes funding for a research chair by the Canadian Institute for Health Research.
 4. Includes \$100 million for the Sustainable Development Technology Fund funded by Environment Canada.
 5. Includes several Centres of Excellence in Commercialization and Research (CECR) funded by Industry Canada.
 6. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 7. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 8. Includes \$260 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 9. Includes \$300 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 10. Includes \$315 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
- Note(s):** The major departments and agencies are those who contributed 2% or more to the total 2006/2007 expenditures. Due to rounding, components may not add to the totals.

Table 3-4
Federal science and technology spending — By socio-economic objective

	2004/2005		2005/2006		2006/2007	
	Intramural ¹	Extramural	Intramural ¹	Extramural	Intramural ¹	Extramural
	millions of dollars					
Science and technology expenditures	4,398	4,250	4,690	4,425	4,924	4,389
Exploration and exploitation of the Earth	414	98	448	101	441	74
Infrastructure and general planning of land use						
Transport	96	34	94	32	74	32
Telecommunication	58	31	57	32	56	23
Other	145	32	130	33	139	33
Control and care of the environment	396	281	470	247	452	235
Protection and improvement of human health	407	1,051	435	1,175	478	1,247
Production, distribution and rational utilization of energy	231	186	263	121	372	103
Agricultural production and technology						
Agriculture	405	89	413	114	440	142
Fishing	168	36	168	37	169	26
Forestry	92	58	95	56	93	87
Industrial production and technology	272	797	296	958	291	883
Social structures and relationships	1,005	291	1,021	336	1,097	348
Exploration and exploitation of space	141	194	176	168	178	183
Non-oriented research	283	458	317	799	315	823
Other civil research	19	2	26	5	28	10
Defence	233	184	265	156	300	140
Other	32	429	17	56	0	0

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

Note(s): Due to rounding, components may not add to the totals.

**Table 4-1
Federal research and development spending — By science and by performing sector¹**

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total sciences	5,454	6,042	6,073	6,481	6,222
Intramural	2,084	2,414	2,496	2,535	2,467
Canadian business enterprises	704	791	642	638	612
Higher education	2,173 ²	2,442 ³	2,379 ⁴	2,717 ⁵	2,761 ⁶
Canadian non-profit institutions	260	206	224	310	171
Provincial and municipal government	15	10	47 ^{7,8}	48 ⁸	8
Foreign	185	146	167	209	177
Other Canadians performers	33	33	118 ⁹	24	26
Natural sciences	4,814	5,370	5,329	5,674	5,417
Intramural	1,965	2,289	2,340	2,359	2,289
Canadian business enterprises	700	788	638	633	609
Higher education	1,734	1,974	1,864	2,181	2,224
Canadian non-profit institutions	242	186	212	298	156
Provincial and municipal government	14	9	45 ^{7,8}	46 ⁸	5
Foreign	135	100	118	140	114
Other Canadians performers	25	23	112 ⁹	17	19
Social sciences	640	672	744	807	805
Intramural	118	125	156	176	177
Canadian business enterprises	4	3	3	5	3
Higher education	439 ²	469 ³	514 ⁴	536 ⁵	537 ⁶
Canadian non-profit institutions	18	20	13	12	15
Provincial and municipal government	2	1	1	2	4
Foreign	50	46	49	69	63
Other Canadians performers	9	10	7	7	7

1. As reported by the funder, the federal government, not by the performers.
 2. Includes \$225 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 3. Includes \$245 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
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 6. Includes \$315 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
 7. Includes \$30 million for the Agriculture Development Fund project funded by Agriculture and Agri-Food Canada.
 8. Includes funding of the new Business Risk Management Suite which replaces the Agriculture Income Stabilization Program by Agriculture and Agri-Food Canada.
 9. Includes funding for a research chair by the Canadian Institute for Health Research.
- Note(s):** Due to rounding, components may not add to the totals.

Table 4-2
Federal research and development spending — By major department and agency

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total	5,454	6,042	6,073	6,481	6,222
Agriculture and Agri-Food Canada	247	327	359 ^{1,2}	360 ²	295
Atomic Energy of Canada Limited	148	182	289	329	171
Canadian Foundation for Innovation	271	437	367	316	463
Canadian Institutes of Health Research	749	795	838 ³	947	886
Canadian Space Agency	263	267	290	304	354
Environment Canada	209	253	214	222	234
Industry Canada	327	478	372	474 ⁴	321
National Defence	296	349	343	336	321
National Research Council Canada	691	756	700	685	715
Natural Resources Canada	378	281	259	270	276
Natural Sciences and Engineering Research Council	706	755	788	898	874
Social Sciences and Humanities Research Council of Canada	444 ⁵	478 ⁶	523 ⁷	544 ⁸	540 ⁹
Total of major departments	4,729	5,358	5,342	5,685	5,450
Other	725	684	731	796	772

1. Includes \$30 million for the Agriculture Development Fund project funded by Agriculture and Agri-Food Canada.
 2. Includes funding of the new Business Risk Management Suite which replaces the Agriculture Income Stabilization Program by Agriculture and Agri-Food Canada.
 3. Includes funding for a research chair by the Canadian Institute for Health Research.
 4. Includes several Centres of Excellence in Commercialization and Research (CECR) funded by Industry Canada.
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 9. Includes \$315 million for indirect costs of university research funded by the Social Sciences and Humanities Research Council of Canada.
- Note(s):** The major departments and agencies are those who contributed 2% or more to the total 2006/2007 expenditures. Due to rounding, components may not add to the totals.

Table 4-3
Federal research and development spending — By socio-economic objective

	2004/2005		2005/2006		2006/2007	
	Intramural ¹	Extramural	Intramural ¹	Extramural	Intramural ¹	Extramural
	millions of dollars					
Total science and technology expenditures	1,983	3,371	2,298	3,628	2,391	3,577
Exploration and exploitation of the earth	98	55	110	78	98	58
Infrastructure and general planning of land use						
Transport	53	27	58	28	50	26
Telecommunication	43	30	52	31	51	21
Other	38	28	46	29	40	29
Control and care of the environment	181	155	216	185	188	175
Protection and improvement of human health	203	988	210	1,106	217	1,160
Production, distribution and rational utilization of energy	199	181	229	103	339	89
Agricultural production and technology						
Agriculture	269	79	336	102	340	130
Fishing	44	26	47	25	47	19
Forestry	71	49	75	44	76	46
Industrial production and technology	174	732	198	884	196	831
Social structures and relationships	62	189	59	203	81	196
Exploration and exploitation of space	125	190	162	164	163	179
Non-oriented research	208	428	219	496	219	535
Other civil research	15	2	23	4	24	10
Defence	191	94	245	93	261	72
Other	10	119	13	54	0	0

1. Non-program (indirect costs) are excluded.
- Note(s):** Due to rounding, components may not add to the totals.

**Table 5-1
Federal related scientific activities spending — By science and by performing sector¹**

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total sciences	3,480	3,407	3,560	3,683	3,641
Intramural	2,601	2,610	2,748	2,685	2,691
Canadian business enterprises	275	253	261	362	387
Higher education	223	256	281	283	292
Canadian non-profit institutions	184	101	81	98	74
Provincial and municipal government	7	9	43	44	47
Foreign	173	160	134	198	136
Other Canadians performers	18	19	12	12	13
Natural sciences	1,965	1,801	1,837	1,973	2,040
Intramural	1,376	1,328	1,389	1,416	1,467
Canadian business enterprises	242	221	212	291	315
Higher education	114	123	127	137	141
Canadian non-profit institutions	155 ²	62	32	26	28
Provincial and municipal government	6	8	36	37	40
Foreign	67	47	37	60	44
Other Canadians performers	6	10	3	5	6
Social sciences	1,515	1,606	1,723	1,710	1,601
Intramural	1,225	1,282	1,358	1,270	1,224
Canadian business enterprises	33	31	49	71	72
Higher education	109	133	154	146	151
Canadian non-profit institutions	29	39	49	72	46
Provincial and municipal government	1	1	7	7	7
Foreign	106	113	97	138	92
Other Canadians performers	12	8	9	7	8

1. As reported by the funder, the federal government, not by the performers.

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

Note(s): Due to rounding, components may not add to the totals.

**Table 5-2
Federal related scientific activities spending — By major department and agency**

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total	3,480	3,407	3,560	3,683	3,641
Canadian International Development Agency	330	288	273	401	371
Canadian Museum of Civilization	121	73	72	82	71
Environment Canada	466 ¹	443	374	387	409
Fisheries and Oceans Canada	216	214	232	207	205
Health Canada	229	242	281	313	327
Industry Canada	99	102	72	72	78
Library and Archives Canada	83	100	94	99	99
National Defence	134	85	107	114	106
National Research Council Canada	102	68	70	70	69
Natural Resources Canada	254	261	321	332	340
Natural Sciences and Engineering Research Council	102	110	112	123	131
Parks Canada Agency	109	79	89	89	90
Social Sciences and Humanities Research Council of Canada	79	97	105	143	110
Statistics Canada	589	684	748	619	584
Total of major departments	2,913	2,846	2,950	3,051	2,990
Other	567	561	610	632	651

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

Note(s): The major departments and agencies are those who contributed 2% or more to the total 2005/2006 expenditures. Due to rounding, components may not add to the totals.

Table 5-3
Federal related scientific activities spending — By socio-economic objective

	2004/2005		2005/2006		2006/2007	
	Intramural ¹	Extramural	Intramural ¹	Extramural	Intramural ¹	Extramural
	millions of dollars					
Total science and technology expenditures	2,415	879	2,392	797	2,533	812
Exploration and exploitation of the Earth	317	43	338	23	343	16
Infrastructure and general planning of land use						
Transport	44	7	35	4	24	6
Telecommunication	15	1	5	1	5	2
Other	107	4	84	5	98	4
Control and care of the environment	214	126	254	62	265	60
Protection and improvement of human health	205	63	225	69	261	86
Production, distribution and rational utilization of energy	32	6	34	17	33	14
Agricultural production and technology						
Agriculture	136	10	77	12	100	12
Fishing	124	10	122	12	122	7
Forestry	21	9	20	11	17	42
Industrial production and technology	98	65	98	74	95	52
Social structures and relationships	943	101	962	133	1,016	151
Exploration and exploitation of space	16	4	14	4	16	4
Non-oriented research	75	30	98	303	95	288
Other civil research	3	0 ^s	3	1	4	0 ^s
Defence	42	90	20	64	38	67
Other	22	310	4	2	0	0

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

Note(s): Due to rounding, components may not add to the totals.

Table 6-1
Federal intramural science and technology spending — By activity

	2004/2005	2005/2006	2006/2007 ^f	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Science and technology	4,685	5,024	5,244	5,220	5,158
Research and development	2,084	2,414	2,496	2,535	2,467
Current expenditures	1,662	1,983	2,065	2,111	2,048
Administration of extramural programs	269	285	279	287	302
Capital expenditures	152	146	152	136	116
Related scientific activities	2,601	2,610	2,748	2,685	2,691
Data collection	1,479	1,588	1,730	1,601	1,622
Information services	587	588	579	608	602
Special services and studies	326	304	281	303	289
Education support	7	1	10	12	12
Administration of extramural programs	58	59	64	66	69
Capital expenditures	146	70	83	96	97

Note(s): Due to rounding, components may not add to the totals.

Table 6-2
Federal intramural science and technology spending — By major department and agency

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total	4,685	5,024	5,244	5,220	5,158
Agriculture and Agri-Food Canada	328	325	352	353	348
Atomic Energy of Canada Limited	141	172	288	329	171
Canadian Space Agency	112	145	150	166	219
Environment Canada	506	610	517	534	565
Fisheries and Oceans Canada	276	275	307	273	271
Health Canada	258	263	289	319	339
Industry Canada	110	115	117	114	120
National Defence	246	277	311	293	281
National Research Council Canada	656	696	643	629	658
Natural Resources Canada	458	457	475	493	505
Statistics Canada	609	702	777	671	629
Total of major departments	3,700	4,037	4,226	4,174	4,106
Other	985	987	1,017	1,046	1,052

Note(s): The major departments and agencies are those who contributed 2% or more to the total 2006/2007 expenditures. Due to rounding, components may not add to the totals.

Table 7
Federal intramural research and development spending by major department or agency

	2004/2005	2005/2006	2006/2007 ^r	2007/2008 ^p	2008/2009 ^p
	millions of dollars				
Total	2,084	2,414	2,496	2,535	2,467
Agriculture and Agri-Food Canada	236	302	307	297	292
Atomic Energy of Canada Limited	141	172	288	329	171
Canadian Institutes of Health Research	53	53	55	53	52
Canadian Space Agency	101	133	137	150	202
Environment Canada	182	220	186	192	203
Fisheries and Oceans Canada	72	77	85	74	74
Health Canada	51	46	44	50	50
Industry Canada	44	47	48	44	44
National Defence	202	257	271	253	243
National Research Council Canada	554	629	574	560	590
Natural Resources Canada	213	218	205	214	219
Statistics Canada	21	19	51	60	59
Total of major departments	1,870	2,173	2,251	2,276	2,199
Other	214	241	245	259	268

Note(s): The major departments and agencies are those who contributed 2% or more to the total 2006/2007 expenditures. Due to rounding, components may not add to the totals.

Data quality, concepts and methodology

Methodology

The federal government is a principal funder of science and technology (S&T) in Canada. This report presents information on the disposition of monies by federal departments and agencies. The information has been assembled to serve as a reference document for program managers, government officials, the media and the general public. It records the allocation of S&T resources for the last five years.

The statistics are collected through the survey of Federal Science Expenditures and Personnel, which records past, current and proposed expenditures for activities in the natural sciences and engineering (NSE) and social sciences and humanities (SSH). The survey 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: actual expenditures for the past fiscal year, e.g. 2006/2007 forecast expenditures for the current fiscal year, e.g. 2007/2008; and proposed estimates for the fiscal year, e.g. 2008/2009 (as also reported in the Public Accounts).

Over 55 different federal government departments and agencies either perform S&T activities or have a budgetary allocation to fund S&T. In addition to 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:

- Transfers into the program from other federal government departments and agencies, net of transfers out;
- Income from external 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 and Social Development Canada;
- cost of legal services provided by the Department of Justice;
- cheques issue cost by Public Works and Government Services Canada.

Indirect costs are included in departmental totals; however, these costs have not been included in expenditures classified by socio-economic objective.

According to international convention, S&T activities are divided into two fields of science; NSE and SSH. These fields of science are further divided into research and development (R&D) and related scientific activities (RSA). The federal government may choose to perform S&T in its own laboratories and research centres (intramural expenditures) or may pay another organization to perform S&T (extramural expenditures). Data are presented in this article on S&T activities funded by the federal government for R&D and RSA and distinguished by performer (that is, intramurally by the government itself or extramurally, by business enterprises (industry), universities, provincial and municipal governments, Canadian non-profit institutions, other performers and foreign performers). Definitions of these terms are provided in the Technical Notes section. Crown corporations which have an industrial function are not included. They are treated as commercial enterprises and the crown corporation expenditures in aggregate are included in the Statistics Canada report, **Industrial Research and Development**, Catalogue No. 88-202-X.

Considerable effort has been expended to maintain the continuity and compatibility of the data series to permit analysis and study of the impact of scientific activities. Efforts of the departments and agencies in ensuring accurate and complete information are gratefully acknowledged.

Technical notes

Scope and limitations of the data

The expenditures data for scientific activities controlled by federal departments and agencies provided in this document correspond to the budgetary expenditures by program presented in Main Estimates for the approval of Parliament. The following kinds of non-budgetary costs or expenditures are not included:

- loans or advances to and investments in Crown Corporations; loans or advances for specific purposes to other governments and international organizations or persons or corporations in the private sector.

Reliability of the data

All of the possible sources of error were examined. Definitions have been taken from a compendium of methods of error evaluation in censuses and surveys, Statistics Canada, catalogue no. 13-564E.

- A complete enumeration is carried out of all federal departments and agencies involved in scientific activities.
- Being a census, coverage and non-response are very minor causes of error.
- No imputation, coding, or sampling is done by Statistics Canada for this exercise.

Data capture

The data capture operation in a census or survey consists of converting the data received on questionnaires (e.g., respondent answers) or coding forms to a machine readable format.

All data capture for science statistics is through manual intervention, at a computer terminal.

Significant uncorrected data capture errors are unlikely because of the examination of numerous tables and listings prepared for data analysis before publication tables are created. Mistakes in expenditures due to coding error are believed to be less than 1%.

Edit

The edit procedures usually consist of:

- checking each field of every record to ascertain whether it contains a valid code or entry;
- checking codes or entries in certain predetermined combinations of fields to ascertain whether codes or entries are consistent with one another. Although there are a number of edits, all cases of failed edit checks are corrected after consideration by editors.

Definitions

Scope and limitations of the data

According to international convention, science and technology activities are divided into two fields of science; natural sciences and engineering (NSE) and social sciences and humanities (SSH). These fields of science are further divided into research and development (R&D) and related scientific activities (RSA). The federal government may choose to perform S&T in its own laboratories and research centres (intramural expenditures) or may pay another organization to perform S&T (extramural expenditures). Data are presented in this article on S&T activities funded by the federal government for R&D and RSA and distinguished by performer (that is, intramurally by the government itself or extramurally, by business enterprises (industry), the higher education sector, provincial and municipal governments, Canadian non-profit organizations, other Canadians performers and foreign performers).

Definitions applicable to both natural sciences and engineering and social sciences and humanities

Scientific research and experimental development (R&D)

Creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge and to use this knowledge in new applications.

The central characteristic of R&D is an appreciable element of novelty and of uncertainty. New knowledge, products or processes are sought. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

An R&D project generally has three characteristics:

- a substantial element of uncertainty, novelty and innovation;
- a well-defined project design;
- a report on the procedures and results of the projects.

Related scientific activities (RSA)

Those activities which complement and extend R&D by contributing to the generation, dissemination and application of scientific and technological knowledge.

Intramural performance

Where the science and technology (S&T) activities are managed and carried out primarily by federal government employees they are classified as intramural S&T. Even where major components of the project are provided by outside agencies, such as computer services, laboratory construction, testing of prototype equipment, if the planning, supervision, reporting, and key operating functions are performed by federal personnel, then the activity is considered to be intramural. This also applies to S&T activities carried out by a department or agency on behalf of another federal department or agency on a cost recovery basis.

The intramural expenditures reported for scientific activities are those direct costs, including salaries, associated with scientific programs. These costs include that portion of a program's contribution to employee benefit plans (e.g., superannuation) which is applicable to the scientific personnel within the program.

Non-program ("indirect") costs, such as the value of services provided by other departments without charge and accommodation provided by the reporting program are to be excluded. Support services (i.e., administration, finance) provided by the reporting program, proportional to S&T expenditures should be included.

Extramural performance

The management and conduct of an S&T activity is entrusted to a non-federal organization. The six extramural performance sectors used in surveying S&T expenditures by the federal government are:

Business enterprise

This sector is composed of business and government enterprises, including public utilities and government owned firms. Incorporated consultants providing scientific and engineering services are also included. Industrial research institutes located at Canadian universities are considered to be in the higher education sector.

Higher education

This sector is composed of all universities, colleges of technology and other institutes of post-secondary education, whatever their source of finance or legal status. It also includes all research institutes, experimental stations and clinics operating under the direct control of, administered by, or associated with, the higher education establishments.

Canadian non-profit institutions

Charitable foundations, voluntary health organizations, scientific and professional societies, and other organizations not established to earn profits comprise this sector. Canadian non-profit institutions primarily serving or controlled by another sector should be included in that sector.

Provincial and municipal governments

Departments and agencies of these governments form this sector. Government enterprises, such as provincial utilities are included in the business enterprise sector, and hospitals in the Canadian non-profit institutions sector.

Foreign performers

All foreign government agencies, foreign companies (including foreign subsidiaries of Canadian firms), international organizations, non resident foreign nationals and Canadians studying or teaching abroad, are included in this sector.

Other performers

This sector includes provincial research councils, and individuals or organizations in Canada not belonging to any of the above sectors.

Type of payment

Contracts

These are payments to organizations or individuals outside the federal government for the conduct of S&T by the recipient or to provide support for the federal government's in-house S&T programs.

Grants and contributions

Awards to organizations or individuals for the conduct of S&T and intended to benefit the recipients rather than provide the program with goods, services or information.

Research fellowships

Awards to individuals for advanced research training and experience. Awards intended primarily to support the education of the recipients are reported as education support.

Socio-economic objectives

Socio-economic objectives allow departments to classify their S&T resource allocations according to the purpose for which the expenditure is intended. The objectives are listed on the questionnaire at the highest level of aggregation with sub-levels given for clarification of categories. In many cases, projects have multiple objectives and a department should assign its expenditures consistent with the stated objectives of the department. Care must be taken to avoid "double counting".

The objectives are based on the Nomenclature for the Analysis and Comparison of Scientific Programmes and Budgets (NABS) produced by the Statistical Office of the European Communities (Eurostat).

• Exploration and exploitation of the Earth

Scientific activities with objectives related to the exploration of the Earth's crust and mantle, seas, oceans and atmosphere, and scientific activities on their exploitation. It also includes climatic and meteorological research, polar exploration and hydrology.

• Infrastructure and general planning of land use

Scientific activities on infrastructure and land development, including research on the construction of buildings. More generally, it covers all scientific activities relating to the general planning of land-use. This includes scientific activities into protection against harmful effects in town and country planning but not scientific activities into other types of pollution.

• Control and care of the environment

Covers scientific activities into the control of pollution, aimed at the identification and analysis of the sources of pollution and their causes, and all pollutants, including their dispersal in the environment and the effects on man, species (fauna, flora, microorganisms) and biosphere. Development of monitoring facilities for the measurement of all kinds of pollution is included. The same is valid for the elimination and prevention of all forms of pollution in all types of environment.

- **Protection and improvement of human health**

Scientific activities aimed at protecting, promoting and restoring human health broadly interpreted to include health aspects of nutrition and food hygiene. It ranges from preventative medicine, including all aspects of medical and surgical treatment, both for individuals and groups, and the provision of hospital and home care, to social medicine and pediatric and geriatric research.

- **Production, distribution and rational utilization of energy**

Covers scientific activities into the production, storage, transportation, distribution and rational use of all forms of energy. It also includes scientific activities on processes designed to increase the efficiency of energy production and distribution, and the study of energy conservation.

- **Agricultural production and technology**

Covers all scientific activities on the promotion of agriculture, forestry, fisheries and foodstuff production. It includes: scientific research on chemical fertilizers, biocides, biological pest control and the mechanization of agriculture; research on the impact of scientific activities in the field of developing food productivity and technology.

- **Industrial production and technology**

Covers scientific activities on the improvement of industrial production and technology. It includes scientific activities on industrial products and their manufacturing processes except where they form an integral part of the pursuit of other objectives (e.g., defence, space, energy, agriculture).

- **Social structures and relationships**

Scientific activities on social objectives, as analysed in particular by social and human sciences, which have no obvious connection with other objectives. This analysis includes quantitative, qualitative, organizational and forecasting aspects of social problems.

- **Exploration and exploitation of space**

All civil space scientific activities. Corresponding scientific activities in the defence field is classified in the Defence objective. (Although civil space research is not, in general, concerned with particular objectives, it frequently has a specific goal, such as the increase of general knowledge (e.g., astronomy), or relates to particular applications (e.g., telecommunications satellites).

- **Non-oriented research**

Basic activities motivated by scientific curiosity with the objective of increasing scientific knowledge. It also includes funding used to support postgraduate studies and fellowships.

- **Other civil research**

Civil scientific activities which cannot (yet) be classified to a particular objective.

• Defence

Covers scientific activities for military purposes. It also includes basic research and nuclear and space research financed by ministries of defence. Civil scientific activities financed by ministries of defence, for example, in the fields of meteorology, telecommunications and health, should be classified in the relevant objectives.

Personnel

Intramural expenditure data should be supported by data on the personnel devoted to scientific activities by all the employees engaged in these activities.

Scientific and professional

People in jobs that require at least one academic degree or nationally recognized professional qualification, as well as those with equivalent experience.

Technical

People in jobs that require specialized vocational or technical training beyond the secondary level (e.g., community colleges and technical institutes) as well as those with experience equivalent to this training.

Other

Clerical, secretarial, administrative, operational and other support personnel.

In regard to personnel resources there are two caveats:

- where the S&T activities are a part of the program being reported only the auxiliary staff relevant to the S&T activities are reported on a prorated basis;
- whenever financial and administrative support is provided from another program that support is allocated to the S&T resources for the program being reported.

Full-time equivalent (FTE)

A measure of the time actually devoted to the conduct of scientific activities. An employee who is engaged in scientific activities for a half a year has a full-time equivalence of 0.5. Personnel data reported should be consistent with expenditure data.

Administration of extramural programs (AEP)

AEP identifies the FTEs engaged in the administration of contracts and grants and contributions for scientific activities that are to be performed outside the federal government. These FTEs are broken down by the type of scientific activity supported, i.e., R&D or RSA.

Definitions specific to natural sciences and engineering

The NSE field consists of disciplines concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, life and physical sciences.

Related scientific activities (RSA)

The kinds of related scientific activities for the NSE are described below.

Scientific data collection

The gathering, processing, collating and analyzing of data on natural phenomena. These data are normally the results of surveys, routine laboratory analyses or compilations of operating records.

Data collected as part of an existing or proposed R&D project are charged to R&D. Similarly, the costs of analyzing existing data as part of a research project are R&D costs, even when the data were originally collected for some other purpose. The development of new techniques for data collection is also to be considered to be a R&D activity. Examples of scientific data collection include: routine geological, hydrographic, oceanographic and topographic surveys; routine astronomical observations; maintenance of meteorological records; and wildlife and fisheries surveys.

Information services

All work directed to recording, classifying, translating and disseminating scientific and technological information as well as museum services. Included are the operations of scientific and technical libraries, S&T consulting and advisory services, the Patent Office, the publication of scientific journals and monographs, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

General purpose information services or information services directed primarily towards the general public are excluded, as are general departmental and public libraries. When individual budgets exist, the costs of libraries which belong to institutions otherwise entirely classified to another activity, such as R&D, should be assigned to information services. The costs of printing and distributing reports from another activity, such as R&D, are normally attributable to that activity.

Sub category under “Information services”

- **Museum services**

The collecting, cataloguing, and displaying of specimens of the natural world or of representations of natural phenomena. The activity involves a systematic attempt to preserve and display items from the natural world; in some ways it could be considered an extension of information services. The scientific activities of natural history museums, zoological and botanical gardens, aquaria, planetaria and nature reserves are included. Parks which are not primarily restricted reserves for certain fauna or flora are excluded. In all cases the costs of providing entertainment and recreation to visitors should be excluded (e.g., restaurants, children’s gardens and museums).

When a museum also covers not only natural history but also aspects of human cultural activities, the museum’s resources should be appropriated between the natural and social sciences. However, museums of science and technology, war, etc., which display synthetic or artificial objects and may also illustrate the operations of certain technologies, should be considered as engaged in museum services in social sciences.

Special services and studies

Work directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects.

Sub categories under “Special services and studies” include:**• Testing and standardization**

Work directed towards the establishment of national and international standards for materials, devices, products and processes, the calibration of secondary standards and non-routine quality testing. The development of new measures for standards, or of new methods of measuring or testing, is R&D and should be reported as such. Exclude routine testing such as monitoring radioactivity levels or soil tests before construction.

• Feasibility studies

Technical investigations of proposed engineering projects to provide additional information required to reach decisions on implementation. Besides feasibility studies per se, the related activity of demonstration projects are to be included. Demonstration projects involve the operation of scaled-up versions of a facility or process, or data on factors such as costs, operational characteristics, market demand and public acceptance. Projects called ‘demonstration projects’ but which conform to the definition of R&D should be considered R&D. Once a facility or process is operated primarily to provide a service or to gain revenue, rather than as a demonstration, it should no longer be included with feasibility studies. In all demonstration projects, only the net costs should be considered.

Education support

Grants to individuals or institutions on behalf of individuals which are intended to support the post-secondary education of students in technology and the natural sciences. General operating or capital grants are excluded. The activity includes the support of foreign students in their studies of the natural sciences at Canadian or foreign institutions. Grants intended primarily to support the research of individuals at universities are either R&D grants or research fellowships.

Definitions specific to social sciences and humanities

The SSH field embraces all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, information and knowledge management, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology, and urban and regional studies.

Related scientific activities (RSA)

The kinds of related scientific activities for the social sciences and humanities are described below.

General purpose data collection

The routine gathering, processing, collating, analysis and publication of information on human phenomena using surveys, regular and special investigations and compilations of existing records. It excludes data collected primarily for internal administrative purposes (e.g., departmental personnel statistics) as well as the collection of data as part of an R&D project.

Data collected as part of an existing or proposed research project are charged to research. Similarly the costs of analyzing existing data as part of a research project are R&D costs, even when the data were originally collected for some other purpose. The development of new techniques for data collection is also considered a research activity. The institutions involved are generally the statistical bureaus of Canadian governments and the statistical sections of departments and agencies. If there are units whose principal activity is R&D, their costs and personnel should be assigned to R&D; specialized libraries with separate budgets should be assigned to information services.

Information services

All work related to recording, classifying, translating and disseminating scientific and technological information as well as museum services. Included are the operations of scientific and technical libraries, S&T consulting and advisory services, the Patent Office, the publication of scientific journals and monographs, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

General purpose information services or information services directed primarily towards the general public are excluded, as are general departmental and public libraries. When individual budgets exist, the costs of libraries which belong to institutions otherwise entirely classified to another activity, such as R&D, should be assigned to information services. The costs of printing and distributing reports from another activity, such as R&D, are normally attributable to that activity.

Sub category under “Information services” include:

- **Museum services**

The collecting, cataloguing, and displaying of specimens and representations relating to human history, social organization and creations. The activity involves a systematic attempt to preserve and display the works of human beings and to provide information on their works, history, and nature. The scientific activities of historical museums, archaeological displays, and art galleries are included. In all cases, the costs of providing entertainment and recreation to visitors should be excluded (e.g., restaurants, children’s gardens and museums).

When a museum also covers aspects of natural history, the museum’s operation should be divided between the social and natural sciences. However, museums of science and technology, war, etc., which display synthetic or artificial objects and may also illustrate the operations of certain technologies, should be considered as engaged in museum services in social sciences.

Special services and studies

Systematic investigations carried out in order to provide information needed for planning or policy formulation. Demonstration projects are also included.

The work is usually carried out by specialized units in some government departments, by consultants, by royal commissions, and by task forces. The activity is similar to R&D since it may require innovative analyses and a high degree of scientific ability. However, such studies are not intended to acquire new knowledge but to provide specific answers to specific problems (generally immediate, localized and perhaps temporary). The day-to-day operations of units concerned with departmental planning, organization or management are not normally included (i.e., administrative records kept by departments of education) but special projects may be relevant.

Sub categories under “Special services and studies” include:

- **Economic and feasibility studies**

Investigations of the socio-economic characteristics and implications of specific situations. Such studies are generally limited to a specific problem and involve the application of established social science techniques and methodologies.

- **Operations and policy studies**

The analysis and assessment of departmental programs, policies and operations, the activities of units concerned with the continuing analysis and monitoring of external phenomena (e.g., foreign economic statistics, defence and security information) as well as studies to provide an information base for policy development. The work is carried out by specialized units in some government departments, by consultants, by royal commissions and by task forces.

Education support

Grants to individuals or institutions on behalf of individuals which are intended to support the post-secondary education of students in technology and theSSH. General purpose grants to educational institutions are excluded. The activity includes the support of foreign students in their studies of the social sciences at Canadian or foreign institutions. Grants intended primarily to support the research of individuals at universities are either R&D grants or research fellowships.