

Service bulletin

Science statistics

Science, Innovation and Electronic Information Division

Aussi disponible en français

All prices exclude sales tax

Price: CDN, \$7.00 per issue or \$64.00 for a subscription.

A print-on-demand service is also available at a price of CDN \$41.00 per issues and CDN \$125.00 for a one-year subscription.

To order Statistics Canada publications, please call our National toll-free line 1-800-267-6677 or Internet: infostats@statcan.ca

Distribution of federal expenditures on science and technology by province and territories, 2002-2003

This service bulletin presents the geographic distribution of federal government science and technology expenditures. Data on federal government expenditures on science and technology are found in Volume 28, No. 11 of this publication series, released in November 2004. Science and technology (S&T) expenditures are the sum of expenditures on research and development (R&D) and on related scientific activities (RSA).

Highlights

- ▶ Of the total \$8.0 billion spent on S&T in 2002-2003 by the federal government, departments have distributed by region, \$7.3 billion. The remaining expenditures were either not identified by region or paid to foreign performers.
- ▶ Of the \$7.3 billion, the vast majority was spent in the National Capital Region (\$2.6 billion), Ontario (\$1.6 billion) and Quebec (\$1.2 billion). Ontario and Quebec figures exclude funding for S&T performed by the federal government in its own departments and agencies within the National Capital Region.
- ▶ Five provinces (Newfoundland and Labrador, Nova Scotia, New Brunswick, Manitoba and British Columbia) saw their share of the S&T federal spending increase. The majority of the other provinces found their share of federal S&T spending decrease.
- ▶ In 2002-2003, the federal government awarded \$697 million in R&D grants and contracts in the natural sciences to Canadian industry. About 43% of the total was allocated to industries in Ontario, and 34% to those in Quebec.
- ▶ Federal government R&D grants and contracts to the higher education sector increased by 3.3% in 2002-2003.

January 2005

Published by authority of the Minister responsible for Statistics Canada.

© Minister of Industry, 2005. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission from Licence Services Marketing Division, Statistics Canada, Ottawa Ontario, Canada K1A 0T6



Statistics
Canada

Statistique
Canada

Canada

As shown in Table 1, \$4.7 billion, or 64%, of the total federal government's expenditures on S&T was spent in the provinces and territories. The rest consists of categories of expenditures which are not distributed geographically. They are the following:

- All federal expenditures in the National Capital Region (NCR) for the performance of S&T in federal institutions (intramural S&T), whose expenditures were \$2,608 million;
- All payments abroad for S&T of \$284 million;
- Various other categories of federal expenditures which could not be assigned geographically, amounting to \$408 million.

The reason for treating the intramural S&T expenditures in the NCR as a separate category is the following: whether or not these expenditures accrue to one side of the Ottawa River or the other depends on the location of the particular federal agency performing the S&T and could change merely as a result of the way in which office space is allocated within the NCR.

S&T expenditures can be divided into R&D and RSA expenditures. In this bulletin, there are two other divisions that can be applied to any expenditure. They are science type and intramural versus extramural expenditures. The terms "natural sciences" and "social sciences" are to be regarded as synonymous with "natural sciences and engineering" (NSE) and "social sciences and humanities" (SSH) respectively. Definitions of these and other terms are given in the annual publication, "Federal Scientific Activities" (Catalogue number 88-204-XIE).

Tables

Table 1 is a historical presentation of identified federal S&T spending in the provinces and territories. Tables 2 and 3 provide details of the identified federal S&T spending for the year 2002-2003: S&T spending is in Table 2 and R&D spending is in Table 3. The difference in the values in the two tables provides the same level of detail for RSA.

Table 4 provides a distribution of the intramural R&D spending of selected government departments. Tables 5 and 6 deal with spending on S&T in the natural sciences.

Tables 7 and 8 deal with extramural spending on grants and contracts. Table 7 presents the value of grants and contracts to universities for R&D, while Table 8 provides the same information for industry, but for R&D in the natural sciences only.

Finally, Tables 9 and 10 provide detail for the NCR. Table 9 gives the intramural expenditures which have been excluded from the provincial and territorial distribution. Table 10 provides sectoral detail for the year 2002-2003.

Table 1 Federal expenditures on science and technology, by province and territories, 1996-97 to 2002-03

Province and territories	Year						
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	millions of dollars						
Newfoundland and Labrador	79	71	86	87	101	95	117
Prince Edward Island	17	14	17	20	29	26	24
Nova Scotia	199	175	200	197	220	226	256
New Brunswick	67	65	75	72	68	82	102
Quebec	824	787	788	833	1,017	1,382	1,243
Ontario	1,077	1,141	1,143	1,309	1,347	1,644	1,576
Manitoba	184	149	136	161	190	211	217
Saskatchewan	93	120	122	131	148	164	151
Alberta	248	247	254	301	327	475	393
British Columbia	347	373	446	528	479	526	580
Yukon, Northwest Territories and Nunavut	17	16	15	20	28	33	35
Canada (Excluding NCR*)	3,152	3,158	3,282	3,659	3,954	4,864	4,694
National Capital Region*	1,967	1,819	1,942	1,981	2,130	2,603	2,608
Canada (Including NCR)	5,119	4,977	5,224	5,640	6,084	7,467	7,302

* Federal intramural expenditures only.

Federal expenditures on science and technology, by province and territories

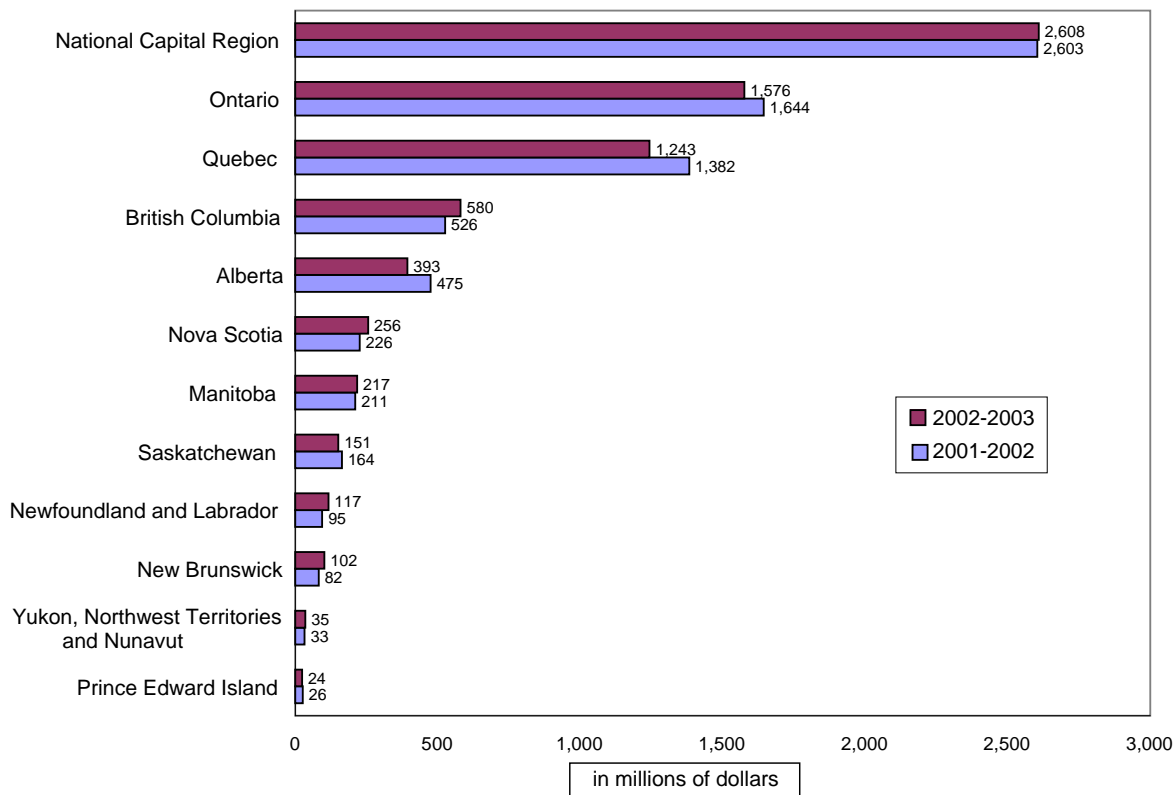


Table 2 Federal expenditures on science and technology, by science, by province and territories and sector of performance, 2002-03					
Province and territories	Federal government	Business enterprises	Higher education	Other ¹ Canadian performers	Total
millions of dollars					
Total sciences:					
Newfoundland and Labrador	67	17	22	11	117
Prince Edward Island	14	5	4	1	24
Nova Scotia	162	26	55	13	256
New Brunswick	69	9	17	7	102
Quebec	525	269	424	25	1,243
Ontario	523	342	627	84	1,576
Manitoba	146	15	52	4	217
Saskatchewan	84	9	52	6	151
Alberta	172	22	171	28	393
British Columbia	228	74	240	38	580
Yukon, Northwest Territories and Nunavut	32	2	0	1	35
Canada (Excluding NCR*)	2,022	790	1,664	218	4,694
National Capital Region*	2,608	...	...	...	2,608
Canada (Including NCR)	4,630	790	1,664	218	7,302
Natural sciences:					
Newfoundland and Labrador	65	17	19	10	111
Prince Edward Island	13	5	3	1	22
Nova Scotia	148	26	51	12	237
New Brunswick	66	9	15	6	96
Quebec	505	268	376	18	1,167
Ontario	495	334	564	42	1,435
Manitoba	139	14	48	3	204
Saskatchewan	82	9	48	5	144
Alberta	165	22	157	25	369
British Columbia	219	73	220	34	546
Yukon, Northwest Territories and Nunavut	29	2	0	1	32
Canada (Excluding NCR*)	1,926	779	1,501	157	4,363
National Capital Region*	1,382	...	...	...	1,382
Canada (Including NCR)	3,308	779	1,501	157	5,745
Social sciences:					
Newfoundland and Labrador	2	0	3	1	6
Prince Edward Island	1	0	1	0	2
Nova Scotia	14	0	4	1	19
New Brunswick	3	0	2	1	6
Quebec	20	1	48	7	76
Ontario	28	8	63	42	141
Manitoba	7	1	4	1	13
Saskatchewan	2	0	4	1	7
Alberta	7	0	14	3	24
British Columbia	9	1	20	4	34
Yukon, Northwest Territories and Nunavut	3	0	0	0	3
Canada (Excluding NCR*)	96	11	163	61	331
National Capital Region*	1,226	...	...	...	1,226
Canada (Including NCR)	1,322	11	163	61	1,557

1. Includes Canadian non-profit institutions, provincial and municipal governments and other Canadian performers.

* Federal intramural expenditures only.

Province and territories	Federal government	Business enterprises	Higher education	Other ¹ Canadian performers	Total
millions of dollars					
Newfoundland and Labrador	31	17	20	9	77
Prince Edward Island	8	5	4	1	18
Nova Scotia	76	23	53	11	163
New Brunswick	46	9	16	5	76
Quebec	370	239	413	20	1,042
Ontario	324	301	612	60	1,297
Manitoba	72	13	51	3	139
Saskatchewan	53	9	51	4	117
Alberta	92	21	131	23	267
British Columbia	99	64	235	35	433
Yukon, Northwest Territories and Nunavut	4	0	0	1	5
Canada (Excluding NCR*)	1,175	701	1,586	172	3,634
National Capital Region*	1,015	...	...	...	1,015
Canada (Including NCR)	2,190	701	1,586	172	4,649

1. Includes Canadian non-profit institutions, provincial and municipal governments and other Canadian performers.

* Federal intramural expenditures only.

Province and territories	AECL	AGR	CSA	ENV	F&O	NDEF	NRC	NRCan	Other	Total
millions of dollars										
Newfoundland and Labrador	0	1	0	1	17	0	11	1	0	31
Prince Edward Island	0	6	0	0	1	0	0	0	1	8
Nova Scotia	0	9	0	4	26	20	14	3	0	76
New Brunswick	0	20	0	2	6	0	11	7	0	46
Quebec	0	39	144	23	15	37	73	26	13	370
Ontario	120	42	0	96	12	16	12	22	4	324
Manitoba	8	20	0	4	13	0	11	0	16	72
Saskatchewan	0	27	0	7	1	0	14	0	4	53
Alberta	0	36	0	3	1	16	3	29	4	92
British Columbia	0	15	0	10	33	0	21	16	4	99
Yukon, Northwest Territories and Nunavut	0	0	0	0	3	0	0	1	0	4
Canada (Excluding NCR)	128	215	144	150	128	89	170	105	46	1,175
National Capital Region										
Ontario	8	31	10	1	10	55	400	127	308	950
Quebec	0	0	0	31	0	17	0	0	17	65
Total National Capital Region	8	31	10	32	10	72	400	127	325	1,015

Table 5 Federal expenditures on science and technology in the natural sciences, by province and territories, 1996-97 to 2002-03							
Province and territories	Year						
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	millions of dollars						
Newfoundland and Labrador	73	65	79	81	94	86	111
Prince Edward Island	17	14	17	19	27	23	22
Nova Scotia	171	150	172	172	185	196	237
New Brunswick	63	61	71	68	64	65	96
Quebec	762	733	734	772	944	1,118	1,167
Ontario	969	1,037	1,035	1,199	1,210	1,419	1,435
Manitoba	172	137	122	147	172	191	204
Saskatchewan	88	115	116	125	140	151	144
Alberta	228	231	238	284	301	427	369
British Columbia	316	340	419	495	439	463	546
Yukon, Northwest Territories and Nunavut	10	11	9	15	21	28	32
Canada (Excluding NCR*)	2,819	2,895	3,012	3,377	3,597	4,167	4,363
National Capital Region*	1,026	979	1,046	1,058	1,089	1,345	1,382
Canada (Including NCR)	3,895	3,874	4,058	4,435	4,686	5,512	5,745

* Federal intramural expenditures only.

Table 6 Federal extramural expenditures on science and technology in the natural sciences, by province and territories, 1996-97 to 2002-03							
Province and territories	Year						
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
	millions of dollars						
Newfoundland and Labrador	23	21	26	28	35	27	46
Prince Edward Island	6	3	6	5	8	5	9
Nova Scotia	42	37	43	49	45	60	89
New Brunswick	16	17	23	21	23	20	30
Quebec	441	427	406	419	484	625	662
Ontario	520	608	651	731	718	954	940
Manitoba	42	37	38	44	53	52	65
Saskatchewan	30	26	36	46	57	64	62
Alberta	99	101	116	147	151	278	204
British Columbia	169	178	253	295	237	259	327
Yukon, Northwest Territories and Nunavut	1	1	1	2	3	2	3
Canada	1,388	1,457	1,599	1,787	1,814	2,346	2,437

Table 7 Federal government grants and contracts to the higher education sector for R&D, by province and territories, 1996-97 to 2002-03							
Province and territories	Year						
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02 ^r	2002-03
	millions of dollars						
Newfoundland and Labrador	8	9	10	15	18	20	20
Prince Edward Island	1	1	1	2	2	2	4
Nova Scotia	20	20	23	36	31	45	53
New Brunswick	7	7	11	10	11	24	16
Quebec	205	185	209	252	291	434	413
Ontario	257	246	292	360	456	547	612
Manitoba	21	20	23	28	34	41	51
Saskatchewan	19	14	22	27	41	45	51
Alberta	74	73	85	104	114	168	131
British Columbia	120	120	131	149	152	210	235
Yukon, Northwest Territories and Nunavut	0	0	0	0	0	0	0
Canada	733	695	807	983	1,150	1,536	1,586

Table 8 Federal government grants and contracts to industry for R&D in the natural sciences, by province and territories, 2002-03												
Department or agency/Program	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon, N.W.T., Nvt.	Canada
millions of dollars												
A. Grants												
ACOA	7.3	2.4	9.9	5.0	0.5	0.3	0	0	0	0	0	25.4
CED(QUE)	0	0	0	0	20.5	0	0	0	0	0	0	20.5
IND:												
TPC	5.1	0.6	0.2	0	132.1	123.8	1.5	0	2.1	32.0	0	297.4
Other	0	0	0	0	0.5	23.0	0	0	0	0	0	23.5
Total	5.1	0.6	0.2	0	132.6	146.8	1.5	0	2.1	32.0	0	320.9
NRC:												
IRAP	3.4	1.8	3.8	3.0	15.9	25.7	2.2	1.8	6.0	11.9	0.3	75.8
Total	3.4	1.8	3.8	3.0	15.9	25.7	2.2	1.8	6.0	11.9	0.3	75.8
WEDC	0	0	0	0	0	0	0.3	0.8	2.4	3.7	0	7.2
Other	0.8	0.1	0.1	0	12.9	35.1	0.1	0.2	5.4	8.2	0	62.9
Total	16.6	4.9	14.0	8.0	182.4	207.9	4.1	2.8	15.9	55.8	0.3	512.7
% of Grants	3.2	0.9	2.7	1.6	35.6	40.6	0.8	0.5	3.1	10.9	0.1	100.0
B. Contracts												
CSA	0	0	0.1	0	24.8	45.6	8.8	5.4	0.4	3.0	0	88.1
NDEF	0	0	8.4	0	24.3	29.7	0.4	0.1	3.3	3.6	0	69.8
NRCan	0	0.2	0	0.3	0.6	1.4	0	0	0.1	0.4	0	3.0
Other	0.4	0	0.2	0.2	7.1	13.2	0.3	0	1.3	0.8	0	23.5
Total	0.4	0.2	8.7	0.5	56.8	89.9	9.5	5.5	5.1	7.8	0	184.4
% of Contracts	0.2	0.1	4.7	0.3	30.8	48.8	5.1	3.0	2.8	4.2	0	100.0
Total, Grants and Contracts	17.0	5.1	22.7	8.5	239.2	297.8	13.6	8.3	21.0	63.6	0.3	697.1
% of Total	2.4	0.7	3.3	1.2	34.3	42.7	2.0	1.2	3.0	9.1	0.1	100.0

Table 9 Federal intramural expenditures on science and technology in the National capital region, 1996-97 to 2002-03							
Activity and science	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
millions of dollars							
TOTAL NCR							
R&D							
SSH	67	68	76	85	84	90	115
NSE	704	689	735	736	805	836	900
Total	771	757	811	821	889	926	1,015
RSA							
SSH	874	772	821	838	957	1,168	1,111
NSE	322	290	310	322	284	509	482
Total	1,196	1,062	1,131	1,160	1,241	1,677	1,593
TOTAL S&T							
SSH	941	840	897	923	1,041	1,258	1,226
NSE	1,026	979	1,045	1,058	1,089	1,345	1,382
Total	1,967	1,819	1,942	1,981	2,130	2,603	2,608
NCR (ONTARIO)							
R&D							
SSH	61	63	70	79	77	82	105
NSE	689	675	711	709	773	803	845
Total	750	738	781	788	850	885	950
RSA							
SSH	736	646	700	722	825	1,020	925
NSE	224	201	213	228	200	405	384
Total	960	847	913	950	1,025	1,425	1,309
TOTAL S&T							
SSH	797	709	770	801	902	1,102	1,030
NSE	913	876	924	937	973	1,208	1,229
Total	1,710	1,585	1,694	1,737	1,875	2,310	2,259
NCR (QUEBEC)							
R&D							
SSH	6	5	6	6	7	8	10
NSE	15	14	24	27	32	33	55
Total	21	19	30	33	39	41	65
RSA							
SSH	138	126	121	116	132	148	186
NSE	98	89	97	94	84	104	98
Total	236	215	218	210	216	252	284
TOTAL S&T							
SSH	144	131	127	122	139	156	196
NSE	113	103	121	121	116	137	153
Total	257	234	248	243	255	293	349

Table 10 Federal expenditures on science and technology in the National capital region, 2002-03					
Activity and science	Federal government	Business enterprises	Higher education	Other ¹ Canadian performers	Total
millions of dollars					
NCR (ONTARIO)					
R&D					
SSH	105	2	9	18	134
NSE	845	127	79	4	1,055
Total	950	129	88	22	1,189
RSA					
SSH	925	4	1	7	937
NSE	384	14	1	4	403
Total	1,309	18	2	11	1,340
TOTAL S&T					
SSH	1,030	6	10	25	1,071
NSE	1,229	141	80	8	1,458
Total	2,259	147	90	33	2,529
NCR (QUEBEC)					
R&D					
SSH	10	0	0	0	10
NSE	55	1	3	0	59
Total	65	1	3	0	69
RSA					
SSH	186	0	0	0	186
NSE	98	1	0	0	99
Total	284	1	0	0	285
TOTAL S&T					
SSH	196	0	0	0	196
NSE	153	2	3	0	158
Total	349	2	3	0	354

1. Includes Canadian non-profit institutions, provincial and municipal governments and other Canadian performers.

Note of appreciation

Canada owes the success of its statistical system to a long-standing cooperation involving Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Standard of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1 800 263-1136.

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

This publication was prepared by **Gisèle Bellefeuille** under the direction of **Lloyd Lizotte**, Subject Matter Manager, Science, Innovation and Electronic Information Division.

NOTE

Due to rounding, components may not add to totals.

Departments, Agencies and Programs

ACOA	Atlantic Canada Opportunities Agency
AECL	Atomic Energy of Canada Limited
AGR	Agriculture and Agri-Food Canada
CED(QUE)	Canada Economic Development (Quebec Regions)
CSA	Canadian Space Agency
ENV	Environment Canada
F&O	Fisheries and Oceans
IRAP	Industrial Research Assistance Program
IND	Industry Canada
NDEF	National Defence
NRC	National Research Council
NRCan	Natural Resources Canada
NSE	Natural Sciences and Engineering
SSH	Social Sciences and Humanities
TPC	Technology Partnerships Canada
WEDC	Western Economic Diversification Canada

Current publications of the Science and Innovation Surveys Section include:

Industrial Research and Development, 2004 Intentions, (with 2003 preliminary estimates and 2002 actual expenditures), 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, the company's country of control, 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>