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Science, Technology
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Stock Division

Division des sciences,
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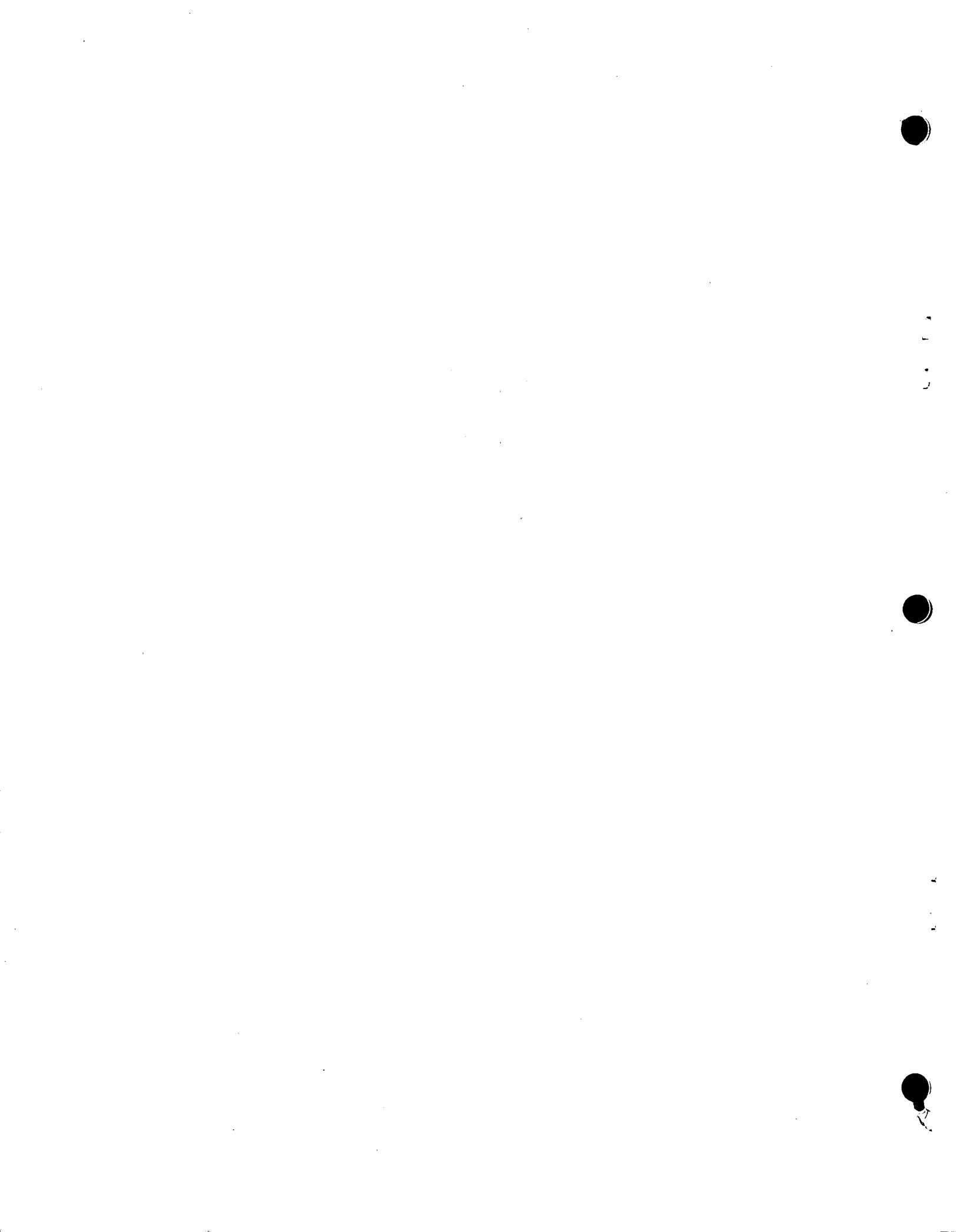
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FEDERAL SCIENCE EXPENDITURES

AND PERSONNEL

1989-90



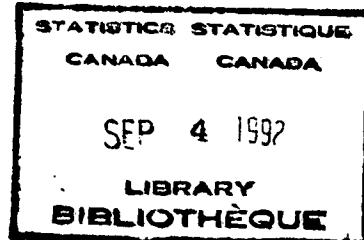
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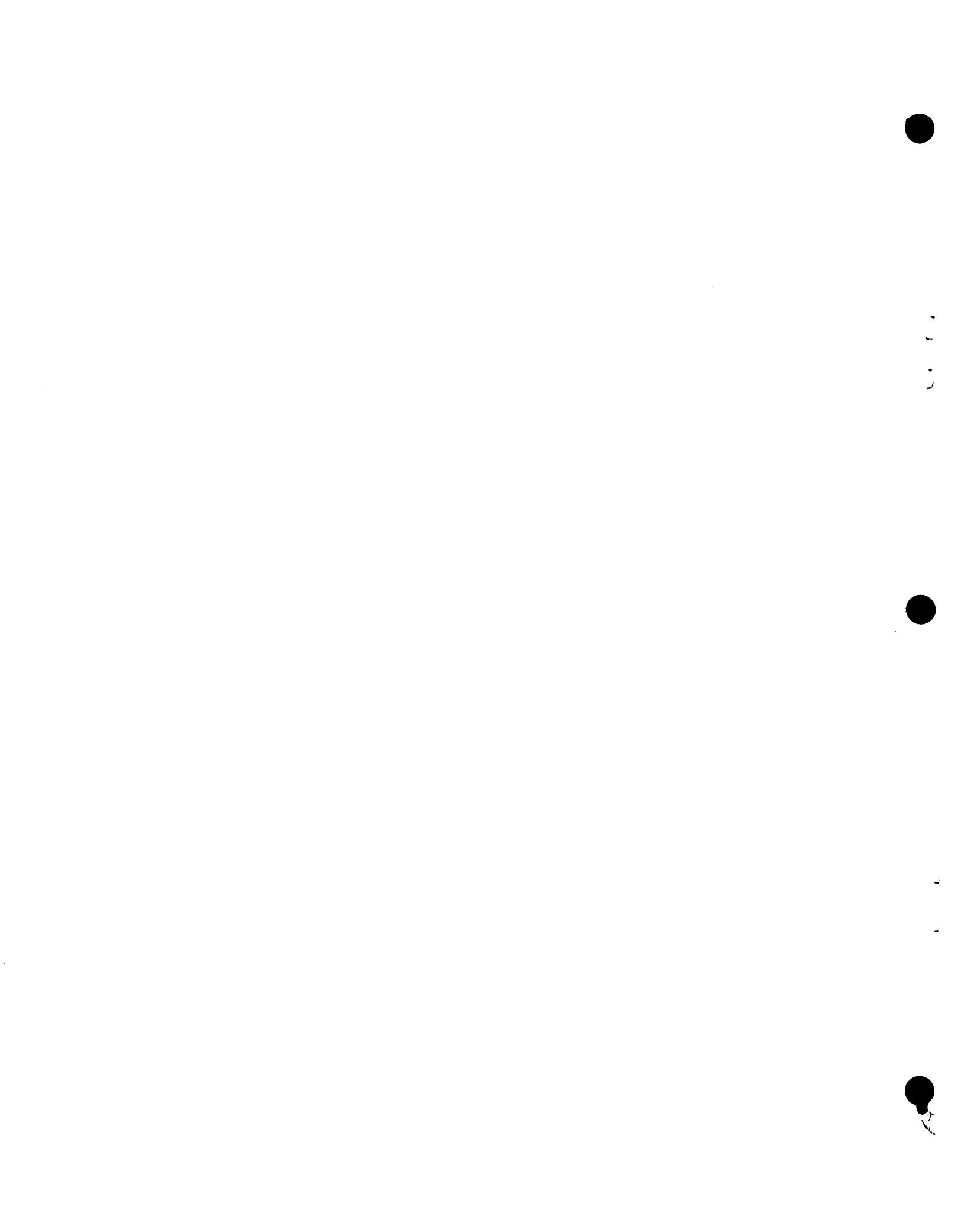


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Stock Division
Statistics Canada

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PREFACE

Each spring the Federal Government Main Estimates are tabled in the House of Commons. The Main Estimates give an overview of the broad spending programs of departments and agencies. Scientific expenditures although provided for, may not be separately displayed in published departmental estimates. These statistical tabulations fill that gap.

In an attempt to provide an overall appreciation of federal scientific expenditures, these tabulations present science statistics assembled during the complicated process which culminated in the tabling of Main Estimates 1989-90. The government's support of science provided through other means, e.g. tax incentives, is not included in these statistics.

People from many departments and agencies, particularly the Financial Officers upon whom fell the onus to provide the details of both the actual and the planned science expenditures, contributed to the preparation of this statistical report. The Treasury Board Secretariat made it possible for these statistics to be obtained by incorporating the request for data as addenda to the Main Estimates submissions.

These statistical tabulations were prepared under the direction of Bert Plaus, Project Leader, Public Sector by:

- Rose Krakower, Statistical Officer
- Stephen Rook, Computer Systems

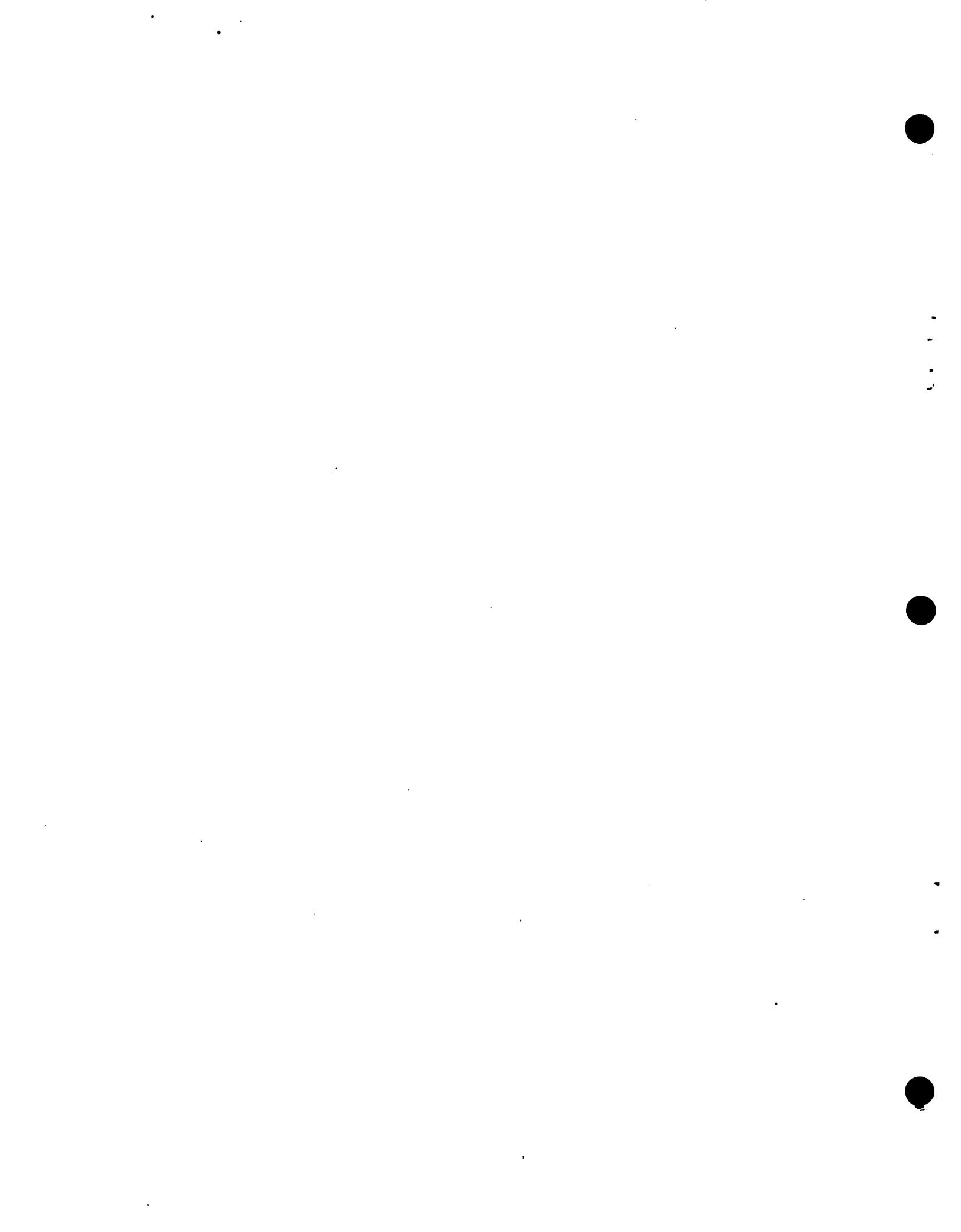


TABLE OF CONTENTS

FOREWORD	5
DEPARTMENT/PROGRAM NAMES AND ABBREVIATIONS	7
NOTES TO READERS	11

TABLES OF SCIENTIFIC AND RESOURCES

SUBJECT	Total Table No.	Science Type	
		Natural Table No.	Social Table No.
<u>Scientific and Technological (S&T) Totals</u>			
summary:			
- by department and science type	1	-	-
- by performer	2	27	52
- by activity and performer	3	28	53
by department:			
- intramural/extramural	4	29	54
by Research and Development (R&D) and Related Scientific Activity (RSA):			
- intramural	5	30	55
- industry	6	31	56
- university	7	32	57
- non-profit institutions	8	33	58
- provincial and municipal governments	9	34	59
- foreign	10	35	60
- other	11	36	61
- total	12	37	62
<u>R&D Totals</u>			
summary:			
- by performer	13	38	63
by department:			
- intramural/extramural	14	39	64

SUBJECT	Total Table No.	Science Type Natural Table No.	Social Table No.
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R&D Totals (cont'd)

by payment type:

- intramural	15	40	65
- industry	16	41	66
- university	17	42	67
- non-profit institutions	18	43	68
- provincial and municipal governments	19	44	69
- foreign	20	45	70
- other	21	46	71
- total	22	47	72

RSA Totals

summary:

- by performer	23	48	73
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by department:

- intramural/extramural	24	49	74
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S&T Personnel

summary:

- by category and activity	25	50	75
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by department:

- by category	26	51	76
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FOREWORD

The data in these tabulations are based on program budgetary expenditures presented to Parliament for approval in the 1989-90 Main Estimates. The tables display both the expenditures and the personnel resources applied to activities in the natural and social sciences. This report is a statistical companion to Statistics Canada's more descriptive report soon to be published, *Federal Science Activities 1989-90*.

As the data are designed primarily for use by those with some knowledge of the government's scientific activities, a minimum of explanatory material accompanies the statistics.

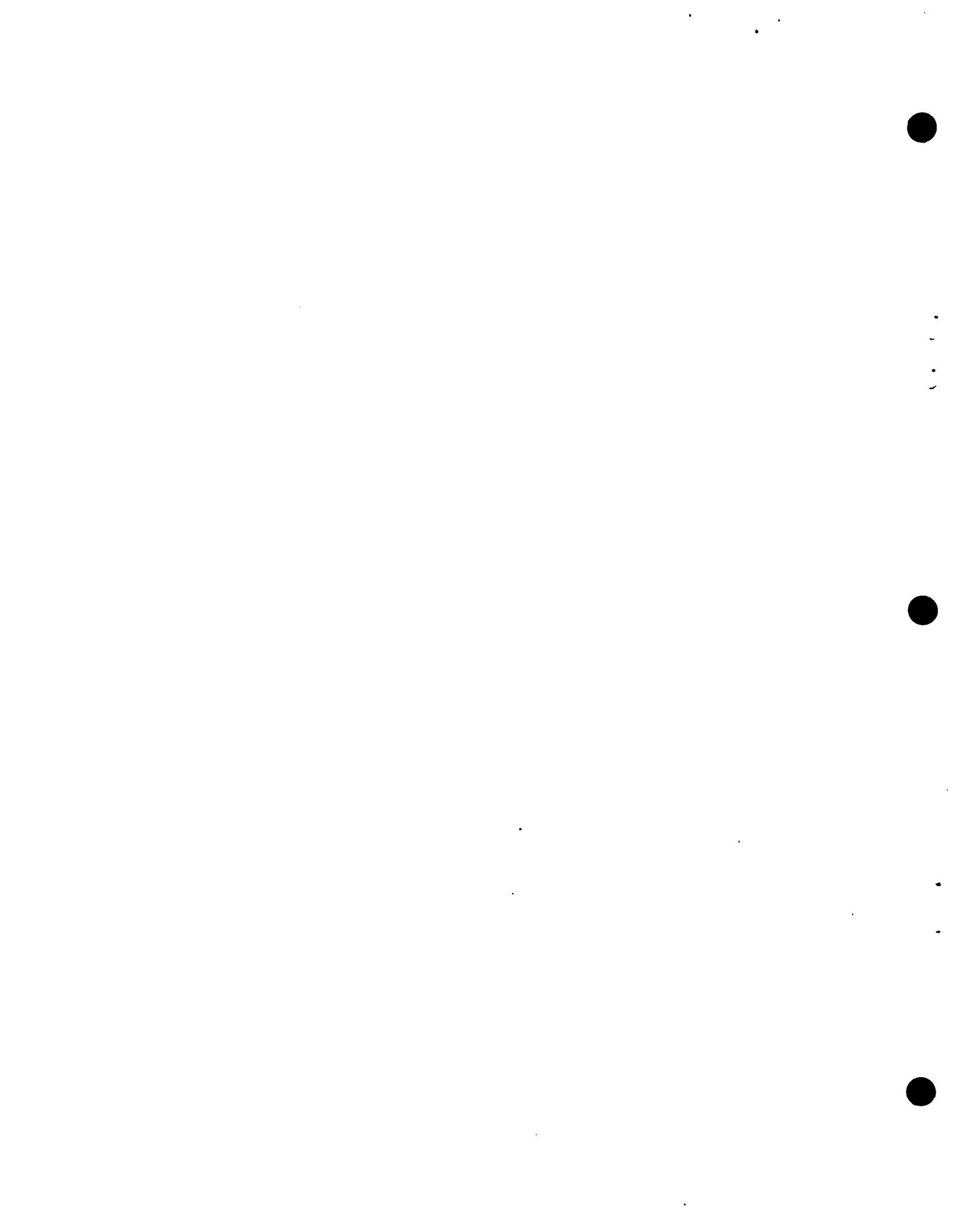
This report is organized into three main sections of statistical data. The first section presents combined data on the natural and social sciences, the second, data on the natural sciences alone and the third, data on the social sciences alone. The notes to readers contains definitions of the terms used to categorize science expenditures and personnel as well as some notes on the limitations of the data. Readers are urged to read this latter section before drawing their own conclusions from the data.

The data used for these statistical tabulations are derived from the 1989-90 Main Estimates survey of expenditures and personnel resources in the natural and social sciences, which covers the fiscal periods 1987-88, 1988-89 and 1989-90. The data, therefore, include the actual expenditures recorded in the base year 1987-88, those forecast for the current year 1988-89 and those for which funding authority is requested in estimates for the new fiscal year 1989-90. Non-program ("indirect") costs, such as the value of services provided by other departments without charge and accommodation provided by the reporting program are included.

Personnel categories are measured in full-time equivalents, that is, the number of person-years cumulatively devoted to scientific activities, whether on a continuing, term, casual or seasonal basis. The 1987-88 data are the actual totals of the person-years used in that period, while the 1988-89 and 1989-90 data are the total authorized person-years indicated in the Main Estimates.

Additional sub-divisions or rearrangements of the data totals presented in this report are often available on request from the Science, Technology and Capital Stock Division (613-951-9919).

The department and program abbreviations used are explained in the following pages.

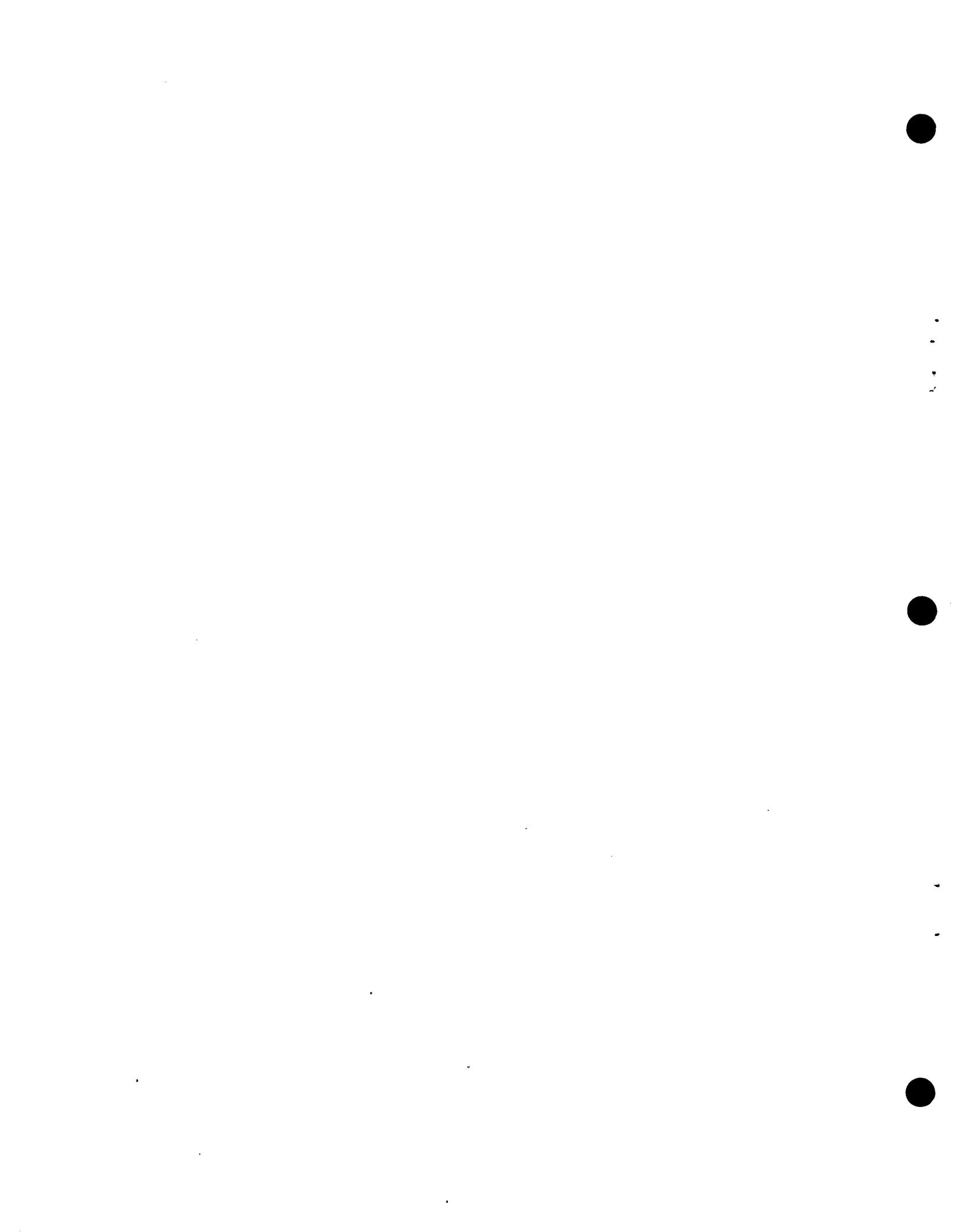


DEPARTMENT/PROGRAM NAMES AND ABBREVIATIONS

AGR	AGRICULTURE
AGR-ADM	- Administration
AGR-AFP	- Agri-Food Program
AGR-GOP	- Grains & Oilseeds Program
ACOA	ATLANTIC CANADA OPPORTUNITIES AGENCY
AECB	ATOMIC ENERGY CONTROL BOARD
AECL	ATOMIC ENERGY OF CANADA LIMITED
CC	CANADA COUNCIL
CMHC	CANADA MORTGAGE & HOUSING CORPORATION
CBC	CANADIAN BROADCASTING CORPORATION
CHRC	CANADIAN HUMAN RIGHTS COMMISSION
CIDA	CANADIAN INTERNATIONAL DEVELOPMENT AGENCY
CLFB	CANADIAN LIVESTOCK FEED BOARD
COL	COMMISSIONER OF OFFICIAL LANGUAGES
COMM	COMMUNICATIONS
COMM-CC	- Communications and Culture
CCA	CONSUMER AND CORPORATE AFFAIRS
CCA-ADM	- Administration
CCA-CON	- Consumer Affairs
CCA-COR	- Corporate Affairs
ECC	ECONOMIC COUNCIL OF CANADA
E&I	EMPLOYMENT & IMMIGRATION
E&I-ADM	- Administration
E&I-EIC	- Employment and Immigration Commission
EMR	ENERGY, MINES AND RESOURCES
EMR-ADM	- Administration
EMR-ENER	- Energy
EMR-MES	- Minerals and Earth Sciences
ENV	ENVIRONMENT
ENV-ADM	- Administration
ENV-AES	- Atmospheric Environment
ENV-C&P	- Conservation and Protection
ENV-PC	- Parks Canada

EA	EXTERNAL AFFAIRS
EA-CIA	- Canadian Interests Abroad
FIN	FINANCE
FIN-FEP	- Financial and Economic Policies
F&O	FISHERIES & OCEANS
F&O-FM	- Fisheries and Marine Services
FOR	FORESTRY
IAND	INDIAN AFFAIRS & NORTHERN DEVELOPMENT
IDRC	INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
IJC	INTERNATIONAL JOINT COMMISSION
JUST	JUSTICE
JUST-ADM	- Administration
JUST-LRC	- Law Reform Commission of Canada
LAB	LABOUR
MRC	MEDICAL RESEARCH COUNCIL
NCC	NATIONAL CAPITAL COMMISSION
NDEF	NATIONAL DEFENCE
NDEF-SER	- Defence Services
NEB	NATIONAL ENERGY BOARD
NFB	NATIONAL FILM BOARD
NHW	NATIONAL HEALTH AND WELFARE
NHW-ADM	- Administration
NHW-FAS	- Fitness & Amateur Sport
NHW-HP	- Health Protection
NHW-HSP	- Health Services and Promotion
NHW-IS	- Income Security
NHW-MS	- Medical Services
NHW-SS	- Social Services
NL	NATIONAL LIBRARY
NMC	NATIONAL MUSEUMS OF CANADA
NMC-CMC	- Canadian Museum of Civilization
NMC-NGC	- National Gallery of Canada
NMC-NMNS	- National Museum of Natural Sciences
NMC-NMST	- National Museum of Science & Technology

NRC	NATIONAL RESEARCH COUNCIL
NRC-SIR	- Scientific and Industrial Research
NREV	NATIONAL REVENUE
NREV-TAX	- Taxation
NSERC	NATURAL SCIENCES & ENGINEERING RESEARCH COUNCIL
PC	PRIVY COUNCIL
PA	PUBLIC ARCHIVES
PW	PUBLIC WORKS
PW-PTS	- Professional and Technical Services
RIE	REGIONAL INDUSTRIAL EXPANSION
RCMP	ROYAL CANADIAN MOUNTED POLICE
ST	SCIENCE AND TECHNOLOGY - MINISTRY OF STATE
SC	SCIENCE COUNCIL OF CANADA
SECS	SECRETARY OF STATE
SECS-ADM	- Administration
SECS-CIT	- Citizenship
SECS-ES	- Education Support
SECS-OL	- Official Languages
SSHRC	SOCIAL SCIENCES & HUMANITIES RESEARCH COUNCIL
SGEN	SOLICITOR GENERAL
SGEN-ADM	- Administration
STCAN	STATISTICS CANADA
SS	SUPPLY AND SERVICES
SS-SUPP	- Supply
TPT	TRANSPORT
TPT-ADM	- Administration
TPT-APT	- Airports Authority Group
TPT-AIR	- Aviation
TPT-MAR	- Marine
TPT-SUR	- Surface
TB	TREASURY BOARD
TB-ADM	- Central Administration
WDO	WESTERN DIVERSIFICATION OFFICE



NOTES TO READERS

I SCOPE AND LIMITATIONS OF THE DATA

The expenditure 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. As a consequence, the following types of costs or expenditures are not included:

- a) expenditures by federal agencies which do not receive budgetary appropriations, e.g., Petrocan, Canadian National Railways, Air Canada.
- b) non-budgetary expenditures for advances, loans, etc.

II DEFINITIONS

Federal departments and agencies in receipt of budgetary appropriations are requested to identify those resources reported in Main Estimates which are to be used in scientific and technological (S&T) activities in both natural and social sciences.

The definitions used in collecting the data for this report are essentially the same as those used by the OECD in its "Frascati Manual" and by UNESCO in its "Manual for Statistics on Scientific and Technological Activities".

A. NATURAL AND SOCIAL SCIENCES

The term, natural sciences, embraces those disciplines of study concerned with understanding, exploring, developing or utilizing the natural world. It covers the physical sciences, the life sciences, including the medical and agricultural sciences and engineering.

The term, social sciences, is to be regarded as synonymous with social sciences and humanities. Thus it embraces all disciplines involved in the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, 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.

In some situations it may be difficult to decide whether an activity falls in the domain of the natural or social sciences. Nevertheless, an assignment must be made, and respondents are asked to consider the dominant orientation of the work and the nature of the expertise of the personnel involved.

B. SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES

There are two main categories of scientific and technological activities (S&T):

- i) Scientific research and experimental development (R&D) is defined as creative work undertaken on a systematic basis in order to increase the stock of knowledge, including the knowledge of humans, their culture and society, and the use of this stock of knowledge to devise new applications.
- ii) Related scientific activities (RSA) are defined as those activities which complement and extend R&D by contributing to the generation, dissemination and application of scientific and technological knowledge. Enumerated below are the sub-groupings of related scientific activities divided by field of science. They are more fully defined later in this text.

Natural Sciences

Scientific data collection

Scientific information services

Feasibility studies

Testing and standardization

Museum services

Education support

Social Sciences

General purpose data collection

Scientific information services

Economic and feasibility studies

Operations and policy studies

Museum services

Education support

C. INTRAMURAL AND EXTRAMURAL PERFORMANCE

Intramural S&T is defined as those activities carried out primarily by the federal government. Considered to be intramural are those activities or services provided by outside agencies but directly controlled and managed by in-house personnel. Examples include computer services, provision of ship and plane services, construction of laboratory, test or prototype equipment. Intramural also includes those activities performed by one federal government department or agency on behalf of another on a cost recovery basis.

An activity is considered to be extramurally performed if the management as well as the performance is entrusted to a non-federal organization. The six extramural performing sectors are: Canadian industry, Canadian universities, Canadian non-profit institutions, provincial and municipal governments, foreign performers, and other performers.

Intramural performance includes:

- scientific activities carried out by personnel of units assigned to the program;

- the acquisition of land, buildings, machinery and equipment for scientific activities;
- the administration of scientific activities by program employees;
- the purchase of support services such as EDP and travel.

The intramural expenditures reported for scientific activities are those direct costs 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 manpower 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 included.

Extramural performers include:

Canadian industry - business and government enterprises including public utilities and government-owned firms. Incorporated consultants who provide scientific and engineering services are also included. Industrial research institutes located at Canadian universities are considered to be in the university sector.

Canadian universities - including affiliated institutes owned, administered or staffed by universities.

Canadian non-profit institutions - charitable foundations, voluntary health organizations, scientific and professional societies, and other organizations not established to earn profits. Non-profit institutions primarily serving or controlled by another sector are included in that sector (e.g. The Pulp and Paper Research Institute is considered to be part of Canadian industry).

Canadian provincial and municipal governments - departments and agencies of provincial and municipal governments. However, provincial utilities are included in the Canadian industry sector.

Foreign performers - all foreign governments, foreign companies (including foreign subsidiaries of Canadian firms), international organizations, non-resident foreign nationals and Canadians studying or teaching abroad.

Other performers - individuals or organizations not belonging to any of the above sectors. This includes provincial research councils and organizations.

D. CONTRACTS, GRANTS AND CONTRIBUTIONS

The federal government uses three methods of funding extramurally-performed S&T activities:

- i) A contract is a legal agreement between two or more parties which will usually specify the nature and general objective of the S&T activity to be performed and the provision of the service according to an agreed schedule and cost.

- ii) A grant is an unconditional payment for which service is not necessarily expected (information, goods, etc.). It is to be noted, however, that prospective recipients may have to satisfy certain eligibility requirements.
- iii) A contribution is an agreement between the government and the recipient which specifies the terms and conditions under which funds will be paid. The payments are conditional upon performance or achievement and the recipients use of the funds is subject to audit.

In this report the term "grants" encompasses both grants and contributions. Data subdivided by type of funding are collected only for R&D activities.

E. DEFINITIONS FOR THE NATURAL SCIENCES

Research and experimental development (R&D) - creative work undertaken on a systematic basis to increase the stock of scientific and technical knowledge or to discover new applications for existing knowledge. The central characteristic of R&D is an appreciable element of novelty and uncertainty. The work is normally performed by, or under the supervision of, persons with postgraduate degrees in the natural sciences or engineering.

R&D is generally carried out by specialized R&D units. An R&D project, however, may also involve the use of non-R&D facilities (e.g. testing grounds), the purchase or construction of specialized equipment and materials, and the assistance of other units. The cost of such items, attributable to the project, is considered part of the R&D costs.

R&D units may also be engaged in non-R&D activities such as the provision of technical advisory services, testing, and construction of special equipment for other units. So far as is practical, the effort devoted to such operations is excluded from R&D.

On the other hand, R&D may be carried out by units normally engaged in other functions (e.g. a marine survey ship used for hydrological research, a geological survey team directed to work in a certain area in order to provide data for a geophysical research project). Such effort is considered to be part of an R&D project and so far as is practical, the costs are assigned to R&D expenditures.

Examples:

1. Routine autopsy on the cause of death is not research, but special investigation of a particular mortality in order to establish the side effects of certain treatments is research. Similarly, routine tests, such as blood and bacteriological analyses, are not research, but a special program of blood tests in connection with the introduction of a new drug is applied research.
2. The maintenance of daily temperature or atmospheric pressure records is data collection and not research. The investigation of new methods of

measuring temperature is research as is the study and development of new systems and techniques for interpreting the data.

Research fellowships - awards to individuals for advanced research training and experience. Such payments are included as expenditures for R&D activities. Awards intended primarily to support the education of the recipients are reported as education support.

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 research project are costed against 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 data collection techniques is also considered to be a research activity.

Examples 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. Included are the operations of scientific and technical libraries, S&T information and advisory services, the Patent Office, the publication of scientific journals, bibliographies, 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 and teaching activities.

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 new methods of measuring or testing, is R&D. Excluded is routine testing such as monitoring radioactivity levels or soil tests before construction.

Feasibility studies - technical investigations of proposed innovative engineering projects to provide additional information necessary for implementation decisions. Excluded is such routine work as the selection of road routes and bridge sites unless there are extraordinary conditions which might require innovative solutions.

In addition to feasibility studies per se, demonstration projects which involve the operation of scaled-up versions of a facility or process, or which provide data on such factors as costs, operational characteristics, market demand and public acceptance are included. Projects called "demonstration projects" but which conform to the definition of R&D are considered as such. Once a facility or process is operated primarily to provide a service or to gain revenue, it is no longer included with feasibility studies. In all demonstration projects, only the net costs are considered. Examples of demonstration projects are the Spry Point Ark, the Geothermal Heating Project, Regina, and the Fluidized Bed Combustion System, P.E.I.

Museum services - the collecting, cataloguing, and displaying of specimens of the the natural world or representations of natural phenomena. The scientific activities of natural history museums, zoological and botanical gardens, aquaria, planetaria and nature reserves are included.

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 scientific information services. Parks which are not primarily restricted reserves for certain fauna or flora are excluded.

Where practical, efforts of those institutions devoted to R&D or to other activities such as S&T information are excluded from museum services and assigned to those activities. The costs of providing entertainment and recreation to visitors are excluded (e.g. restaurants, children's gardens and nurseries).

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

Administration of extramural programs - the costs of identifiable units engaged in the administration of contracts and grants and contributions for scientific activities that are to be performed outside the federal government. These expenditures are broken down by type of scientific activity supported, i.e., R&D or RSA.

F. DEFINITIONS FOR THE SOCIAL SCIENCES

Research and experimental development (R&D) - creative work undertaken on a systematic basis towards the acquisition of new knowledge about humans, their actions and institutions, and the application of this knowledge in new ways.

R&D requires the acquisition of knowledge and not just information. 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 project.

Examples:

1. Investigation of the factors determining regional variations in economic growth.
2. Studies of the effects of an urban development scheme on family group cohesiveness.

3. Investigation of the variables affecting the educational performance of children drawn from different social and ethnic groups.
4. Development of reward systems which take into account the differing motives, attitudes and perceptions of management and workers.

Both "research" and "development" are often used with different meanings in the government. For example, it is increasingly common to hear that a person is "researching" something (i.e. the person is looking for information about something). Similarly, there are many units with either research or development or both terms in their titles which are concerned primarily with information gathering, speech writing, preparation of position papers or departmental organization. These are excluded from the scientific activity of R&D.

Research fellowships - awards to individuals for advanced research training and experience. Such payments are included as expenditures for R&D activities. Awards intended primarily to support the education of the recipients are reported as education support.

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).

Data collected as part of an existing or proposed research project are costed against 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.

Examples of general purpose data collection are the quinquennial censuses and surveys of employment and production.

Information services - the recording, classifying, translating, and disseminating activities of units concerned primarily with providing information for scientific activities in the social sciences and humanities.

Included are the operations of specialized libraries or national archives, costs involved in the publication of scholarly journals, monographs and bibliographies, grants for the publication of scholarly works and the support of scientific and academic conferences.

General purpose information services or information services directed primarily towards the general public are excluded, as are general departmental and public libraries and teaching activities.

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. Examples include a study of the viability of an iron foundry in a foreign country, or a cost-benefit study of a proposed paper manufacturing centre in Manitoba.

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.

Museum services - the collecting, cataloguing and displaying of specimens and representations relating to the history, social organization and creative efforts of humans.

The activity represents a systematic attempt to preserve and display the works of humankind and to provide information on his works, history, and nature. The scientific activities of historical museums, archeological displays, and art galleries are included.

The costs of providing entertainment and recreation to visitors are excluded (e.g. restaurants, children's gardens and museums).

Education support - grants to individuals or institutions intended to support the post-secondary education of students in the social sciences and humanities. General purpose and capital 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 activities of individuals at universities are either R&D grants or research fellowships.

Administration of extramural programs - the costs of identifiable units engaged in the administration of contracts and grants and contributions for scientific activities that are to be performed outside the federal government. These expenditures are broken down by type of scientific activity supported, i.e., R&D or RSA.

G. PERSONNEL RESOURCES

Data are also collected on the personnel resources devoted to or in support of intramurally-performed S&T activities. These resources include both scientific and technical personnel directly engaged in S&T activities, such as scientific and engineering staff, technical staff, operational staff (e.g., field hands in agricultural research), and auxiliary staff such as secretaries, typists, administrative and financial staff. In regard to auxiliary staff there are two caveats:

- i) 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 pro rata basis;
- ii) whenever financial and administrative support is provided from another program, that support is not allocated to the S&T resources for the program being reported.

Personnel resources are reported on a full-time equivalent basis. The unit used is person-years. Thus an employee working half-time on S&T activities is reported as 0.5 person-years.

Information on personnel appearing in this report is presented under the six categories identified in the general classification system that applies to most public service positions:

1. Executive: refers only to the senior executive group. The incumbents of the positions are responsible for managing an agency and for providing advice on the development and conduct of government programs.
2. Scientific & professional: groups engaged in the application of a comprehensive body of knowledge acquired through university graduation or groups in which membership in Canada is generally controlled by legal licensing bodies.
3. Administrative & foreign service: groups engaged in the planning, execution, and control of programs serving the public interest, relations between Canada and other countries and the requirements of internal management in the Public Service of Canada.
4. Technical: groups engaged in the conduct of analytical, experimental and investigative duties in all the sciences and the performance of similar technical duties in which the requisite knowledge and skills are normally acquired through completion of secondary school and a specialized training program.
5. Administrative support: groups such as clerical and regulatory; communications; data processing; office equipment operation; secretarial, stenographic, typing, and telephone operation.
6. Operational: groups engaged in the performance of a craft or of unskilled work. It refers to groups such as correctional, general services, postal operations, and printing operations.
7. Military personnel: members of the Canadian Forces engaged in scientific activities.

H. NON-PROGRAM COSTS

Services provided by other departments, accommodation costs, that portion of administration costs attributable to scientific activities where a separate administration program exists.



TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE,
1987-88 TO 1989

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		SCIENCE TYPE			SCIENCE TYPE			SCIENCE TYPE		
		NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	6607	.	6607	6556	.	6556	6451	.	6451
	AGR-AFP	292814	3427	296241	308583	4169	312752	315815	3116	318931
	AGR-GDP	9347	.	9347	10452	.	10452	12475	.	12475
	TOTAL	308767	3427	312194	325591	4169	329760	334740	3116	337857
ACOA	ACOA	.	4827	4827	.	9842	9842	.	7347	7347
AECB	AECB	3819	.	3819	4675	.	4675	3722	.	3722
AECL	AECL	138700	.	138700	118800	.	118800	142600	.	142600
CC	CC	.	364	364	.	373	373	.	382	382
CMHC	CMHC	5308	19526	24834	5067	20422	25489	5369	21627	26996
CBC	CBC	.	5360	5360	.	5528	5528	.	5533	5533
CHRC	CHRC	.	719	719	.	606	606	.	770	770
CIDA	CIDA	176739	132463	309202	202232	155530	357762	190519	134956	325475
CLFB	CLFB	.	137	137	.	142	142	.	148	148
COL	COL	.	2909	2909	.	3445	3445	.	3981	3981
COMM	COMM-CC	61550	3274	64824	61624	3998	65622	60502	4862	65364
CCA	CCA-ADM	.	2589	2589	.	3032	3032	.	3251	3251
	CCA-CON	.	4143	4143	.	4359	4359	.	4245	4245
	CCA-COR	14933	.	14933	15912	.	15912	16950	.	16950
	TOTAL	14933	6732	21665	15912	7391	23303	16950	7496	24446
ECC	ECC	.	10093	10093	.	10623	10623	.	10575	10575
E&I	E&I-ADM	.	16372	16372	.	19269	19269	.	20604	20604
	E&I-EIC	.	48210	48210	.	45526	45526	.	45763	45763
	TOTAL	.	84582	64582	.	64795	64795	.	66367	66367
EMR	EMR-ADM	13712	.	13712	13273	.	13273	14158	.	14158
	EMR-ENER	39698	.	39698	28503	.	28503	22565	.	22565
	EMR-MES	329611	.	329611	341620	.	341620	325266	.	325266
	TOTAL	383020	.	383020	383396	.	383396	361989	.	361989
ENV	ENV-ADM	1102	.	1102	1118	.	1118	1141	.	1141
	ENV-AES	263373	.	263373	265996	.	265996	277738	.	277738
	ENV-C&P	110339	8335	118674	120542	9139	129681	135638	10213	145851
	ENV-PC	5809	52307	58116	6198	55823	62021	6538	58855	65393
	TOTAL	380623	60642	441265	393854	64962	458816	421054	69068	490122
EA	EA-CIA	.	16681	16681	.	29329	29329	.	31814	31814
FIN	FIN-FEP	.	20377	20377	.	21212	21212	.	22764	22764
F&O	F&O-FM	200672	12073	212745	208205	11506	219711	233351	11641	244992
FOR	FOR	78105	.	78105	87963	.	87963	76054	.	76054
IAND	IAND	4851	3163	8014	3918	2883	6801	4204	2788	6992

(CONTINUED)

TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE.
1987-88 TO 1989

		YEAR								
		1987-88			1988-89			1989-90		
		SCIENCE TYPE			SCIENCE TYPE			SCIENCE TYPE		
		NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
IDRC	IDRC	55636	38041	93677	63100	43100	106200	68400	46800	115200
IJC	IJC	3569	.	3569	4791	.	4791	4835	.	4835
JUST	JUST-ADM	.	8494	8494	.	8517	8517	.	6153	6153
	JUST-LRC	.	3154	3154	.	3294	3294	.	3298	3298
	TOTAL	.	11648	11648	.	11811	11811	.	9451	9451
LAB	LAB	.	866	866	.	890	890	.	1065	1065
MRC	MRC	175125	.	175125	188970	.	188970	202442	.	202442
NCC	NCC	570	633	1203	737	759	1496	568	707	1275
NDEF	NDEF-SER	247389	3654	251043	265501	3783	269284	291499	3919	295418
NEB	NEB	339	1410	1749	349	1593	1942	414	1633	2047
NFB	NFB	1254	.	1254	1269	.	1269	1200	.	1200
NHW	NHW-ADM	.	15894	15894	.	15591	15591	.	14951	14951
	NHW-FAS	.	1162	1162	.	1140	1140	.	1140	1140
	NHW-HP	84137	220	84357	100461	266	100727	100664	268	100932
	NHW-HSP	11928	13620	25548	13623	15699	29322	15075	17207	32282
	NHW-IS	.	1375	1375	.	1454	1454	.	1633	1633
	NHW-MS	2724	1102	3826	3636	1130	4766	3108	1160	4268
	NHW-SS	.	10235	10235	.	10848	10848	.	10963	10963
	TOTAL	98789	43608	142397	117720	46128	163848	118847	47322	166169
NL	NL	.	45450	45450	.	47762	47762	.	47283	47283
NMC	NMC-CMC	.	37626	37626	.	73530	73530	.	55508	55508
	NMC-NGC	.	32866	32866	.	34347	34347	.	37327	37327
	NMC-NMNS	16693	.	16693	22273	.	22273	24375	.	24375
	NMC-NMST	15531	.	15531	21347	.	21347	22969	.	22969
	TOTAL	32224	70492	102716	43620	107877	151497	47344	92835	140179
NRC	NRC-SIR	481755	.	481755	526448	.	526448	549992	.	549992
NREV	NREV-TAX	.	3952	3952	.	4959	4959	.	5105	5105
NSERC	NSERC	339366	.	339366	366022	.	366022	391155	.	391155
PC	PC	.	71	71	.	90	90	.	65	65
PA	PA	.	15167	15167	.	24322	24322	.	25125	25125
PW	PW-PTS	5673	.	5673	7113	.	7113	8063	.	8063
RIE	RIE	216933	2323	219256	232783	2380	235163	270527	2458	272985
RCMP	RCMP	915	.	915	863	.	863	1010	.	1010
ST	ST	12303	19548	31851	15762	20947	36709	30687	16024	46711
SC	SC	.	3276	3276	.	3054	3054	.	3223	3223
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	.	4316	4316	.	4474	4474	.	4501	4501

(CONTINUED)

TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE.
1987-88 TO 1989

DEPARTMENT	PROGRAM	YEAR									
		1987-88			1988-89			1989-90			
		SCIENCE TYPE			SCIENCE TYPE			SCIENCE TYPE			
		NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
SECS	SECS-ES	.	379	379	.	395	395	.	415	415	
	SECS-OL	.	2330	2330	.	2448	2448	.	2473	2473	
	TOTAL	.	7065	7065	.	7387	7387	.	7459	7459	
SSHRC	SSHRC	.	70691	70691	.	76338	76338	.	82143	82143	
SGEN	SGEN-ADM	.	10254	10254	.	9277	9277	.	9121	9121	
STCAN	STCAN	.	287024	287024	.	281830	281830	.	290737	290737	
SS	SS-SUPP	17627	2676	20303	22150	3855	26005	22183	3857	26040	
TPT	TPT-ADM	18293	66	18359	19294	156	19450	22887	256	23143	
	TPT-APT	800	165	965	1421	399	1820	763	555	1318	
	TPT-AIR	5933	.	5933	6022	.	6022	6081	.	6081	
	TPT-MAR	5446	.	5446	8424	.	8424	8353	.	8353	
	TPT-SUR	1067	662	1729	1407	743	2150	1211	794	2005	
	TOTAL	29539	893	30432	36568	1298	37866	39295	1605	40900	
TB	TB-ADM	.	22388	22388	.	20988	20988	.	24045	24045	
WDO	WDO	1255	.	1255	17452	.	17452	27217	.	27217	
TOTAL	TOTAL	3477348	1028479	4505827	3722454	1137183	4859637	3926733	1127217	5053950	

TABLE 2
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	2720183	60	2838282	58	2941555	58
CANADIAN INDUSTRY	702357	16	802626	17	871928	17
CANADIAN UNIVERSITY	696741	15	768650	16	808384	16
CANADIAN NP INST	77476	2	88913	2	104645	2
PROV. & MUN. GOV'T	35850	1	47661	1	29787	1
FOREIGN PERFORMERS	224181	5	264201	5	244495	5
OTHER PERFORMERS	49039	1	49304	1	53156	1
TOTAL	4505827	100	4859637	100	5053950	100

TABLE 3-A

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY ACTIVITY AND PERFORMER,
1987-88

SCIENCE TYPE TOTAL
AND YEAR 1987-88

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
ACTIVITIES								
IN-HOUSE R&D	935797	.	.	.	.	.	.	935797
R&D CONTRACTS	2926	221893	33537	4293	497	7883	16291	287320
SUPPORTING CONTRACTS	58163	.	.	.	.	.	.	58163
R&D GRANTS	.	300433	503937	20197	19231	109567	10218	963583
RESEARCH FELLOWSHIPS	17077	2772	36659	263	13	11741	223	68748
ADMIN. EXTRAMURAL R&D	94386	.	.	.	.	.	.	94386
CAPITAL - R&D	172643	.	.	.	.	.	.	172643
SUB TOTAL R&D	1280992	525098	574133	24753	19741	129191	26732	2580640
DATA COLLECTION	720195	43148	5501	5324	4871	7157	5063	791259
INFORMATION SERVICES	296074	10143	11651	17239	1324	41995	5075	383501
ECONOMIC & FEAS. STUDIES	30444	12951	3801	18208	3942	9044	8661	87051
OPERN'S & POLICY STUDIES	86722	13524	1262	4894	706	10748	1005	118861
TESTING & STANDARDIZATION	33920	2968	427	1180	2	810	316	39623
FEASIBILITY STUDIES	11681	91784	645	542	5209	8492	1057	119410
MUSEUM SERVICES	117357	.	.	195	.	.	22	117574
EDUCATIONAL SUPPORT	1682	2741	99321	5141	55	16744	1108	126792
ADMIN. EXTRAMURAL RSA	32539	.	.	.	.	.	.	32539
CAPITAL - RSA	108577	.	.	.	.	.	.	108577
SUB TOTAL RSA	1439191	177259	122608	52723	16109	94990	22307	1925187
TOTAL	2720183	702357	696741	77476	35850	224181	49039	4505827

TABLE 3-B

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY ACTIVITY AND PERFORMER,
1988-89

SCIENCE TYPE TOTAL
AND YEAR 1988-89

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
ACTIVITIES								
IN-HOUSE R&D	954806	.	.	.	.	.	.	954806
R&D CONTRACTS	3044	260385	41884	6400	1098	5828	15898	334537
SUPPORTING CONTRACTS	61007	.	.	.	.	.	.	61007
R&D GRANTS	.	341192	544670	25539	32881	136047	7895	1088224
RESEARCH FELLOWSHIPS	18522	2971	43034	300	13	12502	200	77542
ADMIN. EXTRAMURAL R&D	100202	.	.	.	.	.	.	100202
CAPITAL - R&D	172747	.	.	.	.	.	.	172747
SUB TOTAL R&D	1310329	604548	629588	32239	33992	154377	23993	2789066
DATA COLLECTION	732139	46734	6689	5626	5267	4523	6480	807438
INFORMATION SERVICES	308268	14282	12993	18509	1263	44741	6165	406221
ECONOMIC & FEAS. STUDIES	31212	13684	3969	18327	4021	15680	8854	95747
OPERN'S & POLICY STUDIES	91272	12988	1331	6601	648	13036	1264	127120
TESTING & STANDARDIZATION	41822	2837	445	1376	6	905	391	47782
FEASIBILITY STUDIES	11637	104657	835	632	2405	12225	932	133323
MUSEUM SERVICES	164220	.	.	.	.	.	23	164243
EDUCATIONAL SUPPORT	1604	2916	112820	5603	59	18714	1202	142918
ADMIN. EXTRAMURAL RSA	33276	.	.	.	.	.	.	33276
CAPITAL - RSA	112503	.	.	.	.	.	.	112503
SUB TOTAL RSA	1527953	198078	139062	56674	13669	109824	25311	2070571
TOTAL	2838282	802626	768650	88913	47661	264201	49304	4859637

TABLE 3-C

TOTAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY ACTIVITY AND PERFORMER, 1989-90
1989-90

SCIENCE TYPE TOTAL
AND YEAR 1989-90

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
ACTIVITIES								
IN-HOUSE R&D	992800	.	.	.	.	.	.	992800
R&D CONTRACTS	6555	297633	41233	6866	1324	5792	15012	374415
SUPPORTING CONTRACTS	62777	.	.	.	.	.	.	62777
R&D GRANTS	.	373422	582759	40637	16467	125737	11814	1150836
RESEARCH FELLOWSHIPS	19569	3182	42437	300	14	13341	300	79143
ADMIN. EXTRAMURAL R&D	103879	.	.	.	.	.	.	103879
CAPITAL - R&D	185763	.	.	.	.	.	.	185763
SUB TOTAL R&D	1371343	674237	666429	47803	17805	144870	27126	2949613
DATA COLLECTION	750227	52606	8175	6264	5663	4516	6968	834419
INFORMATION SERVICES	318246	17844	12074	20268	549	43023	7275	419279
ECONOMIC & FEAS. STUDIES	32633	13883	3909	18370	4087	9723	8835	91440
OPERN'S & POLICY STUDIES	91301	11657	1412	5252	158	11546	1104	122430
TESTING & STANDARDIZATION	45170	2728	571	1406	7	1005	234	51121
FEASIBILITY STUDIES	11598	96150	894	417	1459	9207	387	120112
MUSEUM SERVICES	155596	.	.	.	.	.	24	155620
EDUCATIONAL SUPPORT	1748	2823	114920	4865	59	20605	1203	146223
ADMIN. EXTRAMURAL RSA	35627	.	.	.	.	.	.	35627
CAPITAL - RSA	128066	.	.	.	.	.	.	128066
SUB TOTAL RSA	1570211	197691	141955	56842	11982	99625	26030	2104336
TOTAL	2941555	871928	808384	104645	29787	244495	53156	5053950

TABLE 4

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	6443	164	6607	6449	107	6556	6344	107	6451
	AGR-AFP	287387	8854	296241	303101	9651	312752	311746	7185	318931
	AGR-GOP	6941	2406	9347	8045	2407	10452	10068	2407	12475
	TOTAL	300770	11424	312194	317595	12165	329760	328158	9699	337857
ACOA	ACOA	.	4827	4827	.	9842	9842	.	7347	7347
AECB	AECB	1143	2676	3819	1332	3343	4675	1150	2572	3722
AECL	AECL	112486	26214	138700	96347	22453	118800	115649	26951	142600
CC	CC	361	3	364	370	3	373	379	3	382
CMHC	CMHC	19125	5709	24834	17292	8197	25489	18799	8197	26996
CBC	CBC	2111	3249	5360	2427	3101	5528	2324	3209	5533
CHRC	CHRC	680	39	719	515	91	606	672	98	770
CIDA	CIDA	8618	300584	309202	8999	348763	357762	9055	316420	325475
CLFB	CLFB	137	.	137	142	.	142	148	.	148
COL	COL	2909	.	2909	3445	.	3445	3981	.	3981
COMM	COMM-CC	38543	26281	64824	41147	24475	65622	45318	20046	65364
CCA	CCA-ADM	2424	165	2589	2853	179	3032	3050	201	3251
	CCA-CON	4143	.	4143	4359	.	4359	4245	.	4245
	CCA-COR	14933	.	14933	15912	.	15912	16950	.	16950
	TOTAL	21500	165	21665	23124	179	23303	24245	201	24446
ECC	ECC	9481	612	10093	10293	330	10623	10245	330	10575
E&I	E&I-ADM	15379	993	16372	18564	705	19269	20053	551	20604
	E&I-EIC	7755	40455	48210	6797	38729	45526	6961	38802	45763
	TOTAL	23134	41448	64582	25361	39434	64795	27014	39353	66367
EMR	EMR-ADM	13712	.	13712	13273	.	13273	14158	.	14158
	EMR-ENER	4191	35507	39698	2985	25518	28503	3207	19358	22565
	EMR-MES	265953	63658	329611	270213	71407	341620	261150	64116	325266
	TOTAL	283855	99165	383020	286471	96925	383396	278515	83474	361989
ENV	ENV-ADM	724	378	1102	748	370	1118	771	370	1141
	ENV-AES	243328	20045	263373	245929	20067	265996	256816	20922	277738
	ENV-C&P	102285	16389	118674	111573	18108	129681	125922	19929	145851
	ENV-PC	57455	661	58116	61327	694	62021	64663	730	65393
	TOTAL	403792	37473	441265	419577	39239	458816	448171	41951	490122
EA	EA-CIA	10742	5939	16681	10984	18345	29329	11431	20383	31814
FIN	FIN-FEP	20377	.	20377	21212	.	21212	22754	.	22764
F&O	F&O-FM	201827	10918	212745	203459	16252	219711	230035	14957	244992
FOR	FOR	66228	11877	78105	63258	24705	87963	63899	12155	76054

(CONTINUED)

TABLE 4

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
IAND	IAND	1483	6531	8014	1630	5171	6801	1585	5307	6992
IDRC	IDRC	29825	63852	93677	33900	72300	106200	36800	78400	115200
IJC	IJC	3341	228	3569	4679	112	4791	4271	564	4835
JUST	JUST-ADM	2488	6006	8494	2577	5940	8517	2543	3610	6153
	JUST-LRC	1872	1282	3154	1920	1374	3294	1952	1346	3298
	TOTAL	4360	7288	11648	4497	7314	11811	4495	4956	9451
LAB	LAB	866	.	866	890	.	890	1065	.	1065
MRC	MRC	4658	170467	175125	5110	183860	188970	5296	197146	202442
NCC	NCC	1069	134	1203	1173	323	1496	942	333	1275
NDEF	NDEF-SER	143071	107972	251043	148071	121213	269284	159804	135614	295418
NEB	NEB	1749	.	1749	1942	.	1942	2047	.	2047
NFB	NFB	1254	.	1254	1269	.	1269	1200	.	1200
NHW	NHW-ADM	13969	1925	15894	13315	2276	15591	13176	1775	14951
	NHW-FAS	40	1122	1162	40	1100	1140	40	1100	1140
	NHW-HP	81587	2770	84357	96486	4241	100727	96631	4301	100932
	NHW-HSP	2733	22815	25548	3158	26164	29322	3333	28949	32282
	NHW-IS	1325	50	1375	1424	30	1454	1633	.	1633
	NHW-MS	2724	1102	3826	3636	1130	4766	3108	1160	4268
	NHW-SS	1702	8533	10235	1758	9090	10848	1831	9132	10963
	TOTAL	104080	38317	142397	119817	44031	163848	119752	46417	166169
NL	NL	45388	62	45450	47692	70	47762	47211	72	47283
NMC	NMC-CMC	37826	.	37826	73530	.	73530	55508	.	55508
	NMC-NGC	32866	.	32866	34347	.	34347	37327	.	37327
	NMC-NMNS	16497	196	16693	22053	220	22273	24140	235	24375
	NMC-NMST	15531	.	15531	21347	.	21347	22969	.	22969
	TOTAL	102520	196	102716	151277	220	151497	139344	235	140179
NRC	NRC-SIR	332285	149470	481755	341664	184784	526448	346209	203783	549992
NREV	NREV-TAX	3952	.	3952	4959	.	4959	5105	.	5105
NSERC	NSERC	13108	326258	339366	16388	349634	366022	16663	374492	391155
PC	PC	.	71	71	.	90	90	.	65	65
PA	PA	15017	150	15167	24002	320	24322	23005	2120	25125
PW	PW-PTS	4243	1430	5673	4484	2629	7113	4771	3292	8063
RIE	RIE	22135	197121	219256	18092	217071	235163	18335	254650	272985
RCMP	RCMP	535	380	915	468	395	863	415	595	1010
ST	ST	20075	11776	31851	21544	15165	36709	16480	30231	46711
SC	SC	2972	304	3276	2719	335	3054	2888	335	3223

(CONTINUED)

TABLE 4

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
SECS	SECS-ADM		40	40		70	70		70	70
	SECS-CIT	342	3974	4316	97	4377	4474	96	4405	4501
	SECS-ES	202	177	379	289	106	395	305	110	415
	SECS-OL	1921	409	2330	1972	476	2448	2048	425	2473
	TOTAL	2465	4600	7065	2358	5029	7387	2449	5010	7459
SSHRC	SSHRC	6412	64279	70691	7078	69260	76338	7148	74995	82143
SGEN	SGEN-ADM	4326	5928	10254	3527	5750	9277	3371	5750	9121
STCAN	STCAN	287009	15	287024	281813	17	281830	290726	11	290737
SS	SS-SUPP	430	19873	20303	512	25493	26005	547	25493	26040
TPT	TPT-ADM	4696	11663	16359	5596	13854	19450	6133	17010	23143
	TPT-APT	357	608	965	738	1082	1820	716	602	1318
	TPT-AIR	4507	1426	5933	4596	1426	6022	4655	1426	6081
	TPT-MAR	1472	3974	5446	1266	7158	8424	1265	7088	8353
	TPT-SUR	469	1260	1729	513	1637	2150	483	1522	2005
	TOTAL	11501	18931	30432	12709	25157	37866	13252	27648	40900
TB	TB-ADM	22235	153	22388	20670	318	20988	23727	318	24045
WDO	WDO	0	1255	1255	0	17452	17452	0	27217	27217
TOTAL	TOTAL	2720183	1785644	4505827	2838282	2021355	4859637	2941555	2112395	5053950

TABLE 5
FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	.	6443	6443	.	6449	6449	.	6344	6344
	AGR-AFP	271745	15642	287387	281189	21912	303101	284420	27326	311746
	AGR-GOP	3905	3036	6941	4713	3332	8045	5978	4090	10068
	TOTAL	275650	25120	300770	285901	31693	317595	290399	37759	328158
AECB	AECB	1129	14	1143	1318	14	1332	1136	14	1150
AECL	AECL	104818	7668	112486	89745	6602	96347	107663	7986	115649
CC	CC	183	178	361	187	183	370	191	188	379
CMHC	CMHC	5723	13402	19125	5984	11308	17292	6105	12694	18799
CBC	CBC	.	2111	2111	.	2427	2427	.	2324	2324
CHRC	CHRC	.	680	680	.	515	515	.	672	672
CIDA	CIDA	1293	7325	8618	1350	7649	8999	1330	7725	9055
CLFB	CLFB	110	27	137	115	27	142	121	27	148
COL	COL	.	2909	2909	.	3445	3445	.	3981	3981
COMM	COMM-CC	35990	2553	38543	37490	3657	41147	41483	3835	45318
CCA	CCA-ADM	.	2424	2424	.	2853	2853	.	3050	3050
	CCA-CON	.	4143	4143	.	4359	4359	.	4245	4245
	CCA-COR	.	14933	14933	.	15912	15912	.	16950	16950
	TOTAL	.	21500	21500	.	23124	23124	.	24245	24245
ECC	ECC	8051	1430	9481	8574	1719	10293	8510	1735	10245
E&I	E&I-ADM	.	15379	15379	.	18564	18564	.	20053	20053
	E&I-EIC	.	7755	7755	.	6797	6797	.	6961	6961
	TOTAL	.	23134	23134	.	25361	25361	.	27014	27014
EMR	EMR-ADM	.	13712	13712	.	13273	13273	.	14158	14158
	EMR-ENER	1170	3021	4191	1304	1681	2985	1351	1856	3207
	EMR-MES	80847	185106	265953	89772	180441	270213	86597	174553	261150
	TOTAL	82016	201839	283855	91076	195395	286471	87947	190567	278515
ENV	ENV-ADM	686	38	724	708	40	748	730	41	771
	ENV-AES	19725	223602	243328	25647	220282	245929	26373	230443	256816
	ENV-C&P	33942	68343	102285	36629	74944	111573	40521	85401	125922
	ENV-PC	.	57455	57455	.	61327	61327	.	84663	64663
	TOTAL	54354	349438	403792	62984	356593	419577	67623	380548	448171
EA	EA-CIA	.	10742	10742	.	10984	10984	.	11431	11431
FIN	FIN-FEP	.	20377	20377	.	21212	21212	.	22764	22764
F&O	F&O-FM	107891	93936	201827	106936	96524	203459	118997	111039	230035
FOR	FOR	58707	7520	66228	55431	7827	63258	56505	7394	63899
IAND	IAND	547	936	1483	442	1188	1630	458	1227	1685

(CONTINUED)

TABLE 5

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
IDRC	IDRC	20543	9282	29825	23300	10600	33900	25300	11500	36800
IJC	IJC	.	3341	3341	.	4679	4679	.	4271	4271
JUST	JUST-ADM	.	2488	2488	.	2577	2577	.	2543	2543
	JUST-LRC	1231	641	1872	1256	664	1920	1274	678	1952
	TOTAL	1231	3129	4360	1256	3241	4497	1274	3221	4495
LAB	LAB	.	866	866	.	890	890	.	1065	1065
MRC	MRC	4488	170	4658	4914	196	5110	5092	204	5296
NCC	NCC	.	1069	1069	.	1173	1173	.	942	942
NDEF	NDEF-SER	139220	3851	143071	143572	4499	148071	155235	4569	159804
NEB	NEB	.	1749	1749	.	1942	1942	.	2047	2047
NFB	NFB	968	286	1254	1059	210	1269	1000	200	1200
NHW	NHW-ADM	.	13969	13969	.	13315	13315	.	13176	13176
	NHW-FAS	40	.	40	40	.	40	40	.	40
	NHW-HP	19289	62298	81587	16945	79540	96486	16527	80104	96631
	NHW-HSP	1988	745	2733	2324	834	3158	2437	896	3333
	NHW-IS	.	1325	1325	.	1424	1424	.	1633	1633
	NHW-MS	609	2115	2724	579	3057	3636	692	2416	3108
	NHW-SS	300	1401	1702	311	1447	1758	323	1508	1831
	TOTAL	22225	81855	104080	20199	99618	119817	20019	99733	119752
NL	NL	.	45388	45388	.	47692	47692	.	47211	47211
NMC	NMC-CMC	4303	33323	37626	6700	66830	73530	7482	48026	55508
	NMC-NGC	6518	26348	32866	6797	27550	34347	7394	29933	37327
	NMC-NMNS	2867	13630	16497	2793	19260	22053	3129	21011	24140
	NMC-NMST	.	15531	15531	.	21347	21347	.	22969	22969
	TOTAL	13688	88832	102520	16290	134986	151277	18004	121939	139944
NRC	NRC-SIR	278936	53350	332285	290161	51504	341664	293544	52664	346209
NREV	NREV-TAX	289	3663	3952	314	4645	4959	324	4781	5105
NSERC	NSERC	11621	1486	13108	14530	1858	16388	14774	1889	16663
PA	PA	.	15017	15017	.	24002	24002	.	23005	23005
PW	PW-PTS	1174	3069	4243	1702	2782	4484	2038	2733	4771
RIE	RIE	20960	1175	22135	16907	1185	18092	16899	1436	18335
RCMP	RCMP	535	.	535	468	.	468	415	.	415
ST	ST	527	19548	20075	597	20947	21544	456	16024	16480
SC	SC	1411	1561	2972	1318	1401	2719	1379	1509	2888
SECS	SECS-CIT	274	68	342	33	64	97	34	62	96
	SECS-ES	.	202	202	.	289	289	.	305	305

(CONTINUED)

TABLE 5

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
SECS	SECS-OL		1921	1921		1972	1972		2048	2048
	TOTAL	274	2191	2465	33	2325	2358	34	2415	2449
SSHRC	SSHRC	3351	3061	6412	3767	3311	7078	3805	3343	7148
SGEN	SGEN-ADM	3708	618	4326	2936	591	3527	2807	564	3371
STCAN	STCAN	11005	276004	287009	10451	271362	281813	10762	279963	290726
SS	SS-SUPP	210	220	430	236	276	512	263	284	547
TPT	TPT-ADM	3833	863	4696	4609	987	5596	5328	805	6133
	TPT-APT	5	352	357	12	726	738	18	698	716
	TPT-AIR	2724	1783	4507	2755	1841	4596	2774	1881	4655
	TPT-MAR	1472	.	1472	1266	.	1266	1265	.	1265
	TPT-SUR	130	339	469	145	368	513	65	418	483
	TOTAL	8164	3337	11501	8787	3922	12709	9450	3803	13252
TB	TB-ADM	.	22235	22235	.	20670	20670	.	23727	23727
WDO	WDO	0	.	0	0	0	0	0	0	0
TOTAL	TOTAL	1280992	1439191	2720183	1310329	1527953	2838282	1371343	1570211	2941555

TABLE 6

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE INDUSTRY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	.	144	144	.	94	94	.	94	94
	AGR-AFP	1724	113	1837	2046	54	2100	1528	54	1582
	AGR-GOP	2000	.	2000	2000	.	2000	2000	.	2000
	TOTAL	3724	257	3981	4046	148	4194	3528	148	3678
ACOA	ACOA	3955	.	3955	9842	.	9842	7347	.	7347
AECB	AECB	1513	12	1525	1473	.	1473	1300	.	1300
AECL	AECL	23179	400	23579	20078	356	20434	24100	427	24527
CC	CC	.	3	3	.	3	3	.	3	3
CMHC	CMHC	1240	1233	2473	1124	1207	2331	1124	1207	2331
CBC	CBC	.	3249	3249	.	3101	3101	.	3209	3209
CHRC	CHRC	.	16	16	.	.	.	.	.	.
CIDA	CIDA	498	99185	99683	561	116731	117292	483	111840	112323
COMM	COMM-CC	17004	1399	18403	13331	1406	14737	10892	1982	12874
CCA	CCA-ADM	.	96	96	.	110	110	.	130	130
	TOTAL	.	96	96	.	110	110	.	130	130
ECC	ECC	106	.	106	82	.	82	82	.	82
E&I	E&I-ADM	.	651	651	.	440	440	.	350	350
	E&I-EIC	.	9199	9199	.	7414	7414	.	7467	7467
	TOTAL	.	9850	9850	.	7854	7854	.	7817	7817
EMR	EMR-ENER	10242	13134	23376	9536	9048	18584	9846	4126	13972
	EMR-MES	15044	11992	27036	13332	8803	22135	12960	13234	26194
	TOTAL	25286	25126	50412	22868	17851	40719	22806	17360	40166
ENV	ENV-ADM	176	.	176	190	.	190	200	.	200
	ENV-AES	1850	12861	14711	1924	13375	15299	2001	13910	15911
	ENV-C&P	5274	1861	7135	5835	2073	7908	6425	2282	8707
	ENV-PC	271	41	312	285	43	328	299	45	344
	TOTAL	7571	14763	22334	8234	15491	23725	8925	16237	25162
EA	EA-CIA	.	382	382	.	2441	2441	.	3146	3146
F&O	F&O-FM	4636	3164	7800	6617	5682	12299	7022	4093	11115
FOR	FOR	8154	108	8262	7946	140	8086	8487	339	8826
IAND	IAND	1439	1667	3106	631	1566	2197	1008	1524	2532
IDRC	IDRC	439	.	439	500	.	500	500	.	500
IJC	IJC	.	86	86	.	61	61	.	288	288
JUST	JUST-ADM	.	1840	1840	.	1640	1640	.	1571	1571
	JUST-LRC	291	73	364	302	81	383	295	90	385
	TOTAL	291	1913	2204	302	1721	2023	295	1661	1956

(CONTINUED)

TABLE 6

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE INDUSTRY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
NCC	NCC	10	124	134	10	313	323	10	323	333
NDEF	NDEF-SER	93521	27	93548	104507	40	104547	117625	30	117655
NHW	NHW-ADM	.	505	505	.	701	701	.	700	700
	NHW-HP	779	486	1265	1316	750	2066	1316	754	2070
	NHW-HSP	622	14	636	800	15	815	805	15	820
	NHW-IS	.	50	50	.	30	30	.	.	.
	NHW-MS	.	216	216	.	220	220	.	230	230
	TOTAL	1401	1271	2672	2116	1716	3832	2121	1699	3820
NMC	NMC-NMNS	.	65	65	.	70	70	.	70	70
	TOTAL	.	65	65	.	70	70	.	70	70
NRC	NRC-SIR	108448	228	108676	145072	236	145308	158053	244	158297
NSERC	NSERC	2772	1390	4162	2971	1489	4460	3182	1595	4777
PW	PW-PTS	971	227	1198	2000	560	2560	2500	725	3225
RIE	RIE	186729	5269	191998	203399	7770	211169	236558	11130	247688
RCMP	RCMP	182	.	182	169	.	169	380	.	380
ST	ST	2852	.	2852	3722	.	3722	7999	.	7999
SC	SC	161	.	161	155	.	155	155	.	155
SECS	SECS-CIT	18	288	306	90	432	522	90	450	540
	TOTAL	18	288	306	90	432	522	90	450	540
SGEN	SGEN-ADM	477	49	526	400	100	500	400	100	500
SS	SS-SUPP	11819	3816	15635	14859	4729	19588	14820	4871	19691
TPT	TPT-ADM	10314	557	10871	11149	960	12109	12710	1700	14410
	TPT-APT	80	512	592	87	985	1072	190	402	592
	TPT-AIR	600	426	1026	600	426	1026	600	426	1026
	TPT-MAR	3757	.	3757	7158	.	7158	7088	.	7088
	TPT-SUR	824	101	925	1033	62	1095	1000	71	1071
	TOTAL	15575	1596	17171	20027	2433	22460	21588	2599	24187
WDO	WDO	1127	.	1127	7416	2321	9737	10857	2444	13301
TOTAL	TOTAL	525098	177259	702357	604548	198078	802626	674237	197691	871928

TABLE 7

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	4013	745	4758	4616	600	5216	3436	320	3756
	TOTAL	4013	745	4758	4616	600	5216	3436	320	3756
ACOA	ACOA	99	.	99	.	.	.	.	.	.
AECB	AECB	354	.	354	336	.	336	373	.	373
AECL	AECL	1387	.	1387	1188	.	1188	1426	.	1426
CMHC	CMHC	355	1721	2076	213	1941	2154	213	1941	2154
CIDA	CIDA	24847	53160	78007	28016	57708	85724	24118	52778	76896
COMM	COMM-CC	951	16	967	939	34	973	939	25	964
CCA	CCA-ADM	.	20	20	.	20	20	.	20	20
	TOTAL	.	20	20	.	20	20	.	20	20
ECC	ECC	18	.	18	10	.	10	10	.	10
E&I	E&I-ADM	.	65	65	.	.	.	.	.	.
	E&I-EIC	.	3220	3220	.	3228	3228	.	3228	3228
	TOTAL	.	3285	3285	.	3228	3228	.	3228	3228
EMR	EMR-ENER	994	288	1282	963	277	1240	1182	358	1540
	EMR-MES	4114	212	4326	4179	718	4897	4139	1648	5787
	TOTAL	5108	500	5608	5142	995	6137	5321	2006	7327
ENV	ENV-ADM	69	.	69	44	.	44	75	.	75
	ENV-AES	1021	133	1154	1080	155	1235	1137	157	1294
	ENV-C&P	492	345	837	537	377	914	591	415	1006
	ENV-PC	117	5	122	123	5	128	129	6	135
	TOTAL	1699	483	2182	1784	537	2321	1932	578	2510
EA	EA-CIA	.	4282	4282	.	12587	12587	.	13667	13667
F&O	F&O-FM	1106	190	1296	2242	143	2385	2222	148	2370
FOR	FOR	1327	40	1367	1911	.	1911	1517	.	1517
IAND	IAND	712	244	956	607	234	841	589	244	833
IDRC	IDRC	5757	.	5757	6500	.	6500	7000	.	7000
IJC	IJC	.	.	.	.	35	35	.	25	25
JUST	JUST-ADM	.	547	547	.	337	337	.	329	329
	JUST-LRC	22	.	22	35	.	35	30	.	30
	TOTAL	22	547	569	35	337	372	30	329	359
MRC	MRC	157686	5408	163094	170154	6004	176158	182450	6438	188888
NDEF	NDEF-SER	8180	41	8221	12750	40	12790	13730	62	13792
NHW	NHW-FAS	349	.	349	350	.	350	350	.	350
	NHW-HP	183	189	372	398	199	597	448	203	651
	NHW-HSP	7021	5968	12989	8385	6810	15195	9285	7565	16850

(CONTINUED)

TABLE 7

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE UNIVERSITY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY.
 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
 AND PERFORMER CANADIAN UNIVERSITY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
NHW	NHW-SS	932	212	1144	993	225	1218	998	227	1225
	TOTAL	8485	6369	14854	10126	7234	17360	11081	7995	19076
NRC	NRC-SIR	28159	79	28238	28796	82	28878	29629	85	29714
NSERC	NSERC	280518	30744	311262	300616	32947	333563	321990	35289	357279
PC	PC	65	.	65	65	.	65	65	.	65
PA	PA	.	150	150	.	320	320	.	320	320
PW	PW-PTS	.	3	3	25	.	25	25	.	25
RIE	RIE	20	687	707	80	999	1079	.	1431	1431
RCMP	RCMP	23	.	23	46	.	46	50	.	50
ST	ST	346	.	346	380	.	380	443	.	443
SC	SC	16	.	16	25	.	25	25	.	25
SECS	SECS-CIT	.	114	114	.	120	120	.	120	120
	SECS-ES	.	6	6	.	.	.	.	.	.
	SECS-OL	.	10	10	.	65	65	.	75	75
	TOTAL	.	130	130	.	185	185	.	195	195
SSHRC	SSHRC	39636	13006	52642	45902	11567	57469	49858	13346	63204
SGEN	SGEN-ADM	690	.	690	650	.	650	650	.	650
SS	SS-SUPP	1704	701	2405	2210	1105	3315	2070	1035	3105
TPT	TPT-ADM	321	41	362	339	180	519	500	450	950
	TPT-APT	.	16	16	.	.	.	.	.	.
	TPT-AIR	300	.	300	300	.	300	300	.	300
	TPT-MAR	16	.	16	.	.	.	.	.	.
	TPT-SUR	85	.	85	207	.	207	115	.	115
	TOTAL	.	722	57	779	846	180	1026	915	450	1365
WDO	WDO	128	.	128	3378	.	3378	4322	.	4322
TOTAL	TOTAL	574133	122608	696741	629588	139052	768650	666429	141955	808384

TABLE 8

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	528	.	528	455	.	455	228	.	228
	AGR-GOP	400	.	400	400	.	400	400	.	400
	TOTAL	928	.	928	855	.	855	628	.	628
ACOA	ACOA	127	.	127	.	.	.	.	.	.
AECB	AECB	39	51	90	216	.	216	240	.	240
AECL	AECL	139	-	139	118	.	118	143	.	143
CMHC	CMHC	740	224	964	1058	1319	2377	1058	1319	2377
CIDA	CIDA	1734	9561	11295	1955	10518	12473	1683	9695	11378
ECC	ECC	81	.	81	68	.	68	68	.	68
E&I	E&I-ADM	.	235	235	.	233	233	.	201	201
	E&I-EIC	.	16161	16161	.	16167	16167	.	16167	16167
	TOTAL	.	16396	16396	.	16400	16400	.	16368	16368
EMR	EMR-ENER	221	693	914	450	679	1129	532	447	979
	EMR-MES	3342	50	3392	3080	119	3199	2980	125	3105
	TOTAL	3563	743	4306	3530	798	4328	3512	572	4084
ENV	ENV-AES	.	20	20	.	20	20	.	20	20
	ENV-C&P	208	2730	2938	211	3019	3230	221	3325	3546
	ENV-PC	5	.	5	5	.	5	6	.	6
	TOTAL	213	2750	2963	216	3039	3255	227	3345	3572
F&O	F&O-FM	90	265	355	176	37	213	90	37	127
FOR	FOR	723	.	723	690	.	690	690	.	690
IAND	IAND	300	784	1084	112	589	701	112	488	600
IDRC	IDRC	382	.	382	500	.	500	500	.	500
JUST	JUST-ADM	.	2197	2197	.	2238	2238	.	1001	1001
	TOTAL	.	2197	2197	.	2238	2238	.	1001	1001
MRC	MRC	200	381	581	216	499	715	232	535	767
NDEF	NDEF-SER	248	.	248	772	.	772	770	.	770
NHW	NHW-ADM	.	5	5	.	5	5	.	5	5
	NHW-FAS	725	48	773	725	25	750	725	25	750
	NHW-HP	171	262	433	189	232	421	189	233	422
	NHW-HSP	3696	3780	7476	4550	4329	8879	5045	4809	9854
	NHW-SS	1887	4759	6646	2011	5070	7081	2019	5094	7113
	TOTAL	6479	8854	15333	7475	9661	17136	7978	10166	18144
NMC	NMC-NMNS	.	37	37	.	50	50	.	50	50
	TOTAL	.	37	37	.	50	50	.	50	50
NRC	NRC-SIR	313	78	391	302	78	380	306	78	384

(CONTINUED)

TABLE 8

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NSERC	NSERC	475	.	475	509	.	509	545	.	545
PA	PA	.	.	.	.	.	.	.	1800	1800
PW	PW-PTS	122	16	138	42	.	42	42	.	42
RIE	RIE	530	1299	1829	150	1364	1514	649	1433	2082
RCMP	RCMP	.	.	.	.	.	.	15	.	15
ST	ST	2778	.	2778	5013	.	5013	14288	.	14288
SC	SC	40	.	40	10	.	10	10	.	10
SECS	SECS-CIT	633	1927	2560	635	2010	2645	635	2010	2645
	SECS-ES	.	134	134	.	62	62	.	65	65
	SECS-OL	.	399	399	.	411	411	.	350	350
	TOTAL	633	2460	3093	635	2483	3118	635	2425	3060
SSHRC	SSHRC	.	4930	4930	.	5216	5216	.	5216	5216
SGEN	SGEN-ADM	3565	.	3565	3600	.	3600	3600	.	3600
SS	SS-SUPP	.	1489	1489	.	2099	2099	.	2099	2099
TPT	TPT-ADM	96	3	99	380	20	400	750	50	800
	TPT-MAR	17	.	17	.	.	.	.	.	.
	TPT-SUR	45	205	250	23	266	289	120	165	285
	TOTAL	158	208	366	403	286	689	870	215	1085
TB	TB-ADM	153	.	153	318	.	318	318	.	318
WDO	WDO	.	.	.	3300	.	3300	8594	.	8594
TOTAL	TOTAL	24753	52723	77476	32239	56674	88913	47803	56842	104645

TABLE 9

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE PROVINCIAL AND MUNICIPAL GOVERNMENT SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER PROV. & MUN. GOV'T

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	146	14	160	165	6	171	110	6	116
	TOTAL	146	14	160	165	6	171	110	6	116
ACOA	ACOA	646	.	646	.	.	.	.	.	.
AECB	AECB	9	.	9	62	.	62	69	.	69
CMHC	CMHC	136	.	136	995	10	1005	995	10	1005
E&I	E&I-EIC	.	3207	3207	.	3207	3207	.	3207	3207
	TOTAL	.	3207	3207	.	3207	3207	.	3207	3207
EMR	EMR-ENER	2499	4424	6923	1400	1620	3020	1139	674	1813
	EMR-MES	14361	.	14361	15276	30	15306	11825	30	11855
	TOTAL	16860	4424	21284	16676	1650	18326	12954	704	13688
ENV	ENV-ADM	4	.	4	4	.	4	.	.	.
	ENV-AES	.	412	412	.	412	412	.	428	428
	ENV-C&P	9	3240	3249	17	3589	3606	18	3954	3972
	ENV-PC	.	85	85	.	89	89	.	94	94
	TOTAL	13	3737	3750	21	4090	4111	18	4476	4494
FOR	FOR	564	.	564	13329	.	13329	602	.	602
IAND	IAND	264	873	1137	264	873	1137	264	873	1137
JUST	JUST-ADM	.	1269	1269	.	856	856	.	5	5
	TOTAL	.	1269	1269	.	856	856	.	5	5
MRC	MRC	78	.	78	83	.	83	89	.	89
NHW	NHW-ADM	.	1415	1415	.	1570	1570	.	1070	1070
	NHW-HP	33	5	38	50	12	62	50	13	63
	NHW-HSP	309	515	824	420	595	1015	465	680	1145
	NHW-SS	92	328	420	98	350	448	98	351	449
	TOTAL	434	2263	2697	568	2527	3095	813	2114	2727
NRC	NRC-SIR	124	.	124	127	.	127	131	.	131
PW	PW-PTS	.	2	2	.	.	.	.	.	.
RIE	RIE	12	320	332	2	438	440	.	587	587
SGEN	SGEN-ADM	388	.	388	450	.	450	450	.	450
TPT	TPT-ADM	67	.	67	250	.	250	500	.	500
	TOTAL	67	.	67	250	.	250	500	.	500
WDO	WDO	.	.	.	1000	12	1012	1000	.	1000
TOTAL	TOTAL	19741	16109	35850	33992	13669	47661	17805	11982	29787

TABLE 10

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE FOREIGN SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	.	20	20	.	13	13	.	13	13
	AGR-AFP	827	.	827	830	.	830	830	.	830
	AGR-GOP	.	6	6	.	7	7	.	7	7
	TOTAL	827	26	853	830	20	850	830	20	850
AECB	AECB	615	15	630	958	.	958	249	.	249
AECL	AECL	416	.	416	238	.	238	285	.	285
CMHC	CMHC	50	10	60	13	.	13	13	.	13
CHRC	CHRC	.	2	2	.	.	.	.	.	.
CIDA	CIDA	30794	71703	102497	35535	87477	123012	30990	76000	106990
COMM	COMM-CC	6682	.	6682	8543	.	8543	5986	.	5986
CCA	CCA-ADM	.	31	31	.	31	31	.	31	31
	TOTAL	.	31	31	.	31	31	.	31	31
ECC	ECC	22	.	22	.	.	.	.	.	.
EMR	EMR-ENER	744	.	744	.	.	.	.	.	.
	EMR-MES	10851	2882	13733	24172	112	24284	15148	77	15225
	TOTAL	11595	2882	14477	24172	112	24284	15148	77	15225
ENV	ENV-ADM	1	.	1	9	.	9	.	.	.
	ENV-AES	62	1762	1824	64	1094	1158	67	1185	1252
	ENV-C&P	191	87	278	211	101	312	231	111	342
	ENV-PC	5	.	5	5	.	5	5	.	5
	TOTAL	259	1849	2108	289	1195	1484	303	1296	1599
EA	EA-CIA	.	1242	1242	.	3317	3317	.	3570	3570
F&O	F&O-FM	37	416	453	37	238	275	40	252	292
FOR	FOR	173	.	173	275	.	275	129	.	129
IAND	IAND	10	54	64	.	.	.	.	.	.
IDRC	IDRC	50015	6056	56071	56700	6800	63500	61500	7400	68900
IJC	IJC	.	107	107	.	14	14	.	50	50
JUST	JUST-LRC	18	.	18	24	.	24	25	.	25
	TOTAL	18	.	18	24	.	24	25	.	25
MRC	MRC	6103	157	6260	6142	176	6318	6585	189	6774
NDEF	NDEF-SER	3984	8	3992	2828	.	2828	3172	.	3172
NHW	NHW-HP	196	125	321	303	210	513	303	210	513
	NHW-HSP	652	184	836	.	210	210	.	230	230
	NHW-SS	.	173	173	.	184	184	.	185	185
	TOTAL	848	482	1330	303	604	907	303	625	928
NL	NL	.	62	62	.	70	70	.	72	72

(CONTINUED)

TABLE 10

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE FOREIGN SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
NMC	NMC-NMNS	.	3	3	.	.	.	.	.	.
	TOTAL	.	3	3	.	.	.	.	.	.
NRC	NRC-SIR	6068	.	6068	5908	.	5908	7175	.	7175
NSERC	NSERC	2670	3980	6650	2861	4265	7126	3064	4569	7633
PW	PW-PTS	2	41	43	2	.	2	.	.	.
RIE	RIE	919	.	919	871	.	871	.	.	.
ST	ST	5800	.	5800	6050	.	6050	7501	.	7501
SC	SC	2	.	2	10	.	10	10	.	10
SSHRC	SSHRC	858	5849	6707	1112	5463	6575	1112	5463	6575
STCAN	STCAN	.	15	15	.	17	17	.	11	11
TPT	TPT-ADM	264	.	264	576	.	576	350	.	350
	TPT-AIR	100	.	100	100	.	100	100	.	100
	TPT-MAR	60	.	60	.	.	.	.	.	.
	TOTAL	424	.	424	676	.	676	450	.	450
WDO	WDO	.	.	.	.	25	25	.	.	.
TOTAL	TOTAL	129191	94990	224181	154377	109824	264201	144870	99625	244495

TABLE 11

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE OTHER SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	699	45	744	849	30	879	643	30	673
	TOTAL	699	45	744	849	30	879	643	30	673
AECB	AECB	57	11	68	281	17	298	312	29	341
AECL	AECL	693	-	693	475	-	475	570	-	570
CMHC	CMHC	-	-	-	68	249	317	68	249	317
CHRC	CHRC	-	21	21	-	91	91	-	98	98
CIDA	CIDA	7241	1861	9102	8164	2098	10262	7028	1805	8833
COMM	COMM-CC	229	-	229	222	-	222	222	-	222
CCA	CCA-ADM	-	18	18	-	18	18	-	20	20
	TOTAL	-	18	18	-	18	18	-	20	20
ECC	ECC	385	-	385	170	-	170	170	-	170
E&I	E&I-ADM	-	42	42	-	32	32	-	-	-
	E&I-EIC	-	8668	8668	-	8713	8713	-	8733	8733
	TOTAL	-	8710	8710	-	8745	8745	-	8733	8733
EMR	EMR-ENER	1128	1140	2268	587	958	1545	716	338	1054
	EMR-MES	574	236	810	735	851	1586	653	1297	1950
	TOTAL	1702	1376	3078	1322	1809	3131	1369	1635	3004
ENV	ENV-ADM	128	-	128	123	-	123	95	-	95
	ENV-AES	225	1699	1924	234	1709	1943	243	1774	2017
	ENV-C&P	1100	852	1952	1208	930	2138	1331	1025	2356
	ENV-PC	110	22	132	116	23	139	122	24	146
	TOTAL	1563	2573	4136	1681	2662	4343	1791	2823	4614
EA	EA-CIA	-	33	33	-	-	-	-	-	-
F&O	F&O-FM	286	728	1014	317	763	1080	319	734	1053
FOR	FOR	756	32	788	414	-	414	359	32	391
IAND	IAND	13	171	184	-	295	295	-	205	205
IDRC	IDRC	282	921	1203	300	1000	1300	400	1100	1500
IJC	IJC	-	35	35	-	2	2	-	201	201
JUST	JUST-ADM	-	153	153	-	869	869	-	704	704
	JUST-LRC	788	90	878	824	108	932	801	105	906
	TOTAL	788	243	1031	824	977	1801	801	809	1610
MRC	MRC	39	415	454	43	543	586	46	582	628
NDEF	NDEF-SER	1919	44	1963	276	-	276	225	-	225
NHW	NHW-HP	243	98	341	397	185	582	397	185	582
	NHW-HSP	54	-	54	50	-	50	50	-	50
	NHW-MS	-	886	886	-	910	910	-	930	930

(CONTINUED)

TABLE 11

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE OTHER SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NHW	NHW-SS	.	150	150	.	159	159	.	160	160
	TOTAL	297	1134	1431	447	1254	1701	447	1275	1722
NMC	NMC-NMNS	10	81	91	10	90	100	15	100	115
	TOTAL	10	81	91	10	90	100	15	100	115
NRC	NRC-SIR	5973	.	5973	4183	.	4183	8082	.	8082
NSERC	NSERC	2841	868	3709	3045	931	3976	3261	997	4258
PC	PC	6	.	6	25	.	25	.	.	.
PW	PW-PTS	.	46	46	.	.	.	.	.	.
RIE	RIE	.	1336	1336	.	1998	1998	.	2862	2862
RCMP	RCMP	175	.	175	180	.	180	150	.	150
SC	SC	85	.	85	135	.	135	135	.	135
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	18	976	994	15	1075	1090	15	1085	1100
	SECS-ES	.	37	37	.	44	44	.	45	45
	TOTAL	18	1053	1071	15	1189	1204	15	1200	1215
SGEN	SGEN-ADM	364	395	759	300	250	550	300	250	550
SS	SS-SUPP	187	157	344	237	254	491	388	210	598
TPT	TPT-APT	.	.	.	10	.	10	10	.	10
	TPT-MAR	124	.	124	.	.	.	.	.	.
	TPT-SUR	.	.	.	.	46	46	.	51	51
	TOTAL	124	.	124	10	46	56	10	51	61
TOTAL	TOTAL	26732	22307	49039	23993	25311	49304	27126	26030	53156

TABLE 12

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	.	6607	6607	.	6556	6556	.	6451	6451
	AGR-AFP	279682	16559	296241	290150	22602	312752	291195	27736	318931
	AGR-GOP	6305	3042	9347	7113	3339	10452	8378	4097	12475
	TOTAL	285987	26207	312194	297282	32497	329760	299574	38283	337857
ACOA	ACOA	4827	.	4827	9842	.	9842	7347	.	7347
AECB	AECB	3716	103	3819	4644	31	4675	3679	43	3722
AECL	AECL	130632	8068	138700	111842	6958	118800	134187	8413	142600
CC	CC	183	181	364	187	186	373	191	191	382
CMHC	CMHC	8244	16590	24834	9455	16034	25489	9576	17420	26996
CBC	CBC	.	5360	5360	.	5528	5528	.	5533	5533
CHRC	CHRC	.	719	719	.	606	606	.	770	770
CIDA	CIDA	66407	242795	309202	75581	282181	357762	65632	259843	325475
CLFB	CLFB	110	27	137	115	27	142	121	27	148
COL	COL	.	2909	2909	.	3445	3445	.	3981	3981
COMM	COMM-CC	60856	3968	64824	60525	5097	65622	59522	5842	65364
CCA	CCA-ADM	.	2589	2589	.	3032	3032	.	3251	3251
	CCA-CON	.	4143	4143	.	4359	4359	.	4245	4245
	CCA-COR	.	14933	14933	.	15912	15912	.	16950	16950
	TOTAL	.	21665	21665	.	23303	23303	.	24446	24446
ECC	ECC	8663	1430	10093	8904	1719	10623	8840	1735	10575
E&I	E&I-ADM	.	16372	16372	.	19269	19269	.	20604	20604
	E&I-EIC	.	48210	48210	.	45526	45526	.	45763	45763
	TOTAL	.	64582	64582	.	64795	64795	.	66367	66367
	EMR	EMR-ADM	.	13712	13712	.	13273	13273	.	14158	14158
	EMR-ENER	16998	22700	39698	14240	14263	28503	14766	7799	22565
	EMR-MES	129133	200478	329611	150546	191074	341620	134302	190964	325266
	TOTAL	146130	236890	383020	164786	218610	383396	149067	212921	361989
ENV	ENV-ADM	1064	38	1102	1078	40	1118	1100	41	1141
	ENV-AES	22883	240489	263373	28949	237047	285996	29821	247917	277738
	ENV-C&P	41216	77458	118674	44648	85033	129681	49338	98513	145851
	ENV-PC	508	57608	58116	534	61487	62021	561	64832	65393
	TOTAL	65672	375593	441265	75209	383607	458816	80819	409303	490122
EA	EA-CIA	.	16681	16681	.	29329	29329	.	31814	31814
FIN	FIN-FEP	.	20377	20377	.	21212	21212	.	22764	22764
F&O	F&O-FM	114046	98699	212745	116325	103387	219711	128690	116303	244992
FOR	FOR	70404	7700	78105	79996	7967	87963	68289	7765	76054

(CONTINUED)

TABLE 12
TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
IAND	IAND	3285	4729	8014	2056	4745	6801	2431	4561	6992
IDRC	IDRC	77418	16259	93677	87800	18400	106200	95200	20000	115200
IJC	IJC	.	3569	3569	.	4791	4791	.	4835	4835
JUST	JUST-ADM	.	8494	8494	.	8517	8517	.	6153	6153
	JUST-LRC	2350	804	3154	2441	853	3294	2425	873	3298
	TOTAL	2350	9298	11648	2441	9370	11811	2425	7026	9451
LAB	LAB	.	866	866	.	890	890	.	1065	1065
MRC	MRC	168594	6531	175125	181552	7418	188970	194494	7948	202442
NCC	NCC	10	1193	1203	10	1486	1496	10	1265	1275
NDEF	NDEF-SER	247072	3971	251043	264705	4579	269284	290757	4661	295418
NEB	NEB	.	1749	1749	.	1942	1942	.	2047	2047
NFB	NFB	968	286	1254	1059	210	1269	1000	200	1200
NHW	NHW-ADM	.	15894	15894	.	15591	15591	.	14951	14951
	NHW-FAS	1114	48	1162	1115	25	1140	1115	25	1140
	NHW-HP	20894	63463	84357	19598	81128	100727	19230	81702	100932
	NHW-HSP	14342	11206	25548	16529	12793	29322	18087	14195	32282
	NHW-IS	.	1375	1375	.	1454	1454	.	1633	1633
	NHW-MS	609	3217	3826	579	4187	4766	692	3576	4268
	NHW-SS	3211	7023	10235	3413	7435	10848	3438	7525	10963
	TOTAL	40169	102228	142397	41234	122614	163848	42562	123607	166169
NL	NL	.	45450	45450	.	47762	47762	.	47283	47283
NMC	NMC-CMC	4303	33323	37626	6700	66830	73530	7482	48026	55508
	NMC-NGC	6518	26348	32866	6797	27550	34347	7394	29933	37327
	NMC-NMNS	2877	13816	16693	2803	19470	22273	3144	21231	24375
	NMC-NMST	.	15531	15531	.	21347	21347	.	22969	22969
	TOTAL	13698	89018	102716	16300	135196	151497	18019	122159	140179
NRC	NRC-SIR	428021	53735	481755	474549	51900	526448	496920	53071	549992
NREV	NREV-TAX	289	3663	3952	314	4645	4959	324	4781	5105
NSERC	NSERC	300897	38468	339366	324532	41490	366022	346816	44339	391155
PC	PC	71	.	71	90	.	90	65	.	65
PA	PA	-	15167	15167	.	24322	24322	.	25125	25125
PW	PW-PTS	2269	3404	5673	3771	3342	7113	4605	3458	8063
RIE	RIE	209170	10086	219256	221409	13754	235163	254106	18879	272985
RCMP	RCMP	915	.	915	863	.	863	1010	.	1010
ST	ST	12303	19548	31851	15762	20947	36709	30687	16024	46711
SC	SC	1715	1561	3276	1653	1401	3054	1714	1509	3223

(CONTINUED)

TABLE 12

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
SECS	SECS-ADM		40	40		70	70		70	70
	SECS-CIT	943	3373	4316	773	3701	4474	774	3727	4501
	SECS-ES	.	379	379	.	395	395	.	415	415
	SECS-OL	.	2330	2330	.	2448	2448	.	2473	2473
	TOTAL	943	6122	7065	773	6614	7387	774	6685	7459
SSHRC	SSHRC	43845	26846	70691	50781	25557	76338	54775	27368	82143
SGEN	SGEN-ADM	9192	1062	10254	8336	941	9277	8207	914	9121
STCAN	STCAN	11005	276019	287024	10451	271379	281830	10762	279874	290737
SS	SS-SUPP	13920	6383	20303	17542	8463	26005	17541	8499	26040
TPT	TPT-ADM	14895	1464	16359	17303	2147	19450	20138	3005	23143
	TPT-APT	85	880	965	109	1711	1820	218	1100	1318
	TPT-AIR	3724	2209	5933	3755	2267	6022	3774	2307	6081
	TPT-MAR	5446	.	5446	8424	.	8424	8353	.	8353
	TPT-SUR	1084	645	1729	1408	742	2150	1300	705	2005
	TOTAL	25234	5198	30432	30999	6867	37866	33783	7118	40900
TB	TB-ADM	153	22235	22388	318	20670	20988	318	23727	24045
WDO	WDO	1255	.	1255	15094	2358	17452	24773	2444	27217
TOTAL	TOTAL	2580640	1925187	4505827	2789066	2070571	4859637	2949613	2104336	5053950

TABLE 13

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY PERFORMER, 1987-88 TO 1989-90SCIENCE TYPE TOTAL
AND ACTIVITY R&D

PERFORMER	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
INTRAMURAL	1280992	50	1310329	47	1371343	46
CANADIAN INDUSTRY	525098	20	604548	22	674237	23
CANADIAN UNIVERSITY	574133	22	629588	23	666429	23
CANADIAN NP INST	24753	1	32239	1	47803	2
PROV. & MUN. GOV'T	19741	1	33992	1	17805	1
FOREIGN PERFORMERS	129191	5	154377	6	144870	5
OTHER PERFORMERS	26732	1	23993	1	27126	1
TOTAL	2580640	100	2789066	100	2949613	100

TABLE 14

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY R&D

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
AGR	AGR-AFP	271745	7937	279682	281189	8961	290150	284420	6775	291195	
	AGR-GOP	3905	2400	6305	4713	2400	7113	5978	2400	8378	
	TOTAL	275650	10337	285987	285901	11361	297262	290399	9175	299574	
ACOA	ACOA	.	4827	4827	.	9842	9842	.	7347	7347	
AECB	AECB	1129	2587	3716	1318	3326	4644	1136	2543	3679	
AECL	AECL	104818	25814	130632	89745	22097	111842	107663	26524	134187	
CC	CC	183	.	183	187	.	187	191	.	191	
CMHC	CMHC	5723	2521	8244	5984	3471	9455	6105	3471	9576	
CIDA	CIDA	1293	65114	66407	1350	74231	75581	1330	64302	65632	
CLFB	CLFB	110	.	110	115	.	115	121	.	121	
COMM	COMM-CC	35990	24866	60856	37490	23035	60525	41483	18039	59522	
ECC	ECC	8051	612	8663	8574	330	8904	8510	330	8840	
EMR	EMR-ENER	1170	15828	16998	1304	12936	14240	1351	13415	14766	
	EMR-MES	80847	48286	129133	89772	60774	150546	86597	47705	134302	
	TOTAL	82016	64114	146130	91076	73710	164786	87947	61120	149067	
ENV	ENV-ADM	686	378	1064	708	370	1078	730	370	1100	
	ENV-AES	19725	3158	22883	25647	3302	28949	26373	3448	29821	
	ENV-C&P	33942	7274	41216	36629	8019	44648	40521	8817	49338	
	ENV-PC	.	508	508	.	534	534	.	561	561	
	TOTAL	54354	11318	65672	62984	12225	75209	67623	13196	80819	
F&O	F&O-FM	107891	6155	114046	106936	9389	116325	118997	9693	128690	
FOR	FOR	58707	11697	70404	55431	24565	79996	56505	11784	68289	
IAND	IAND	547	2738	3285	442	1614	2056	458	1973	2431	
IDRC	IDRC	20543	56875	77418	23300	64500	87800	25300	69900	95200	
JUST	JUST-LRC	1231	1119	2350	1256	1185	2441	1274	1151	2425	
	TOTAL	1231	1119	2350	1256	1185	2441	1274	1151	2425	
MRC	MRC	4488	164106	168594	4914	178638	181552	5092	189402	194494	
NCC	NCC	.	10	10	.	10	10	.	10	10	
NDEF	NDEF-SER	139220	107852	247072	143572	121133	264705	155235	135522	290757	
NFB	NFB	968	.	968	1059	.	1059	1000	.	1000	
NHW	NHW-FAS	40	1074	1114	40	1075	1115	40	1075	1115	
	NHW-HP	19289	1605	20894	16945	2653	19598	16527	2703	19230	
	NHW-HSP	1988	12354	14342	2324	14205	16529	2437	15650	18087	
	NHW-MS	609	.	609	579	.	579	692	.	692	
	NHW-SS	300	2911	3211	311	3102	3413	323	3115	3438	
	TOTAL	22225	17944	40169	20199	21035	41234	20019	22543	42562	

(CONTINUED)

TABLE 14

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY R&D

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NMC	NMC-CMC	4303	.	4303	6700	.	6700	7482	.	7482
	NMC-NGC	6518	.	6518	6797	.	6797	7394	.	7394
	NMC-NMNS	2867	10	2877	2793	10	2803	3129	15	3144
	TOTAL	13688	10	13698	16290	10	16300	18004	15	18019
NRC	NRC-SIR	278936	149085	428021	290161	184388	474549	293544	203376	496920
NREV	NREV-TAX	289	.	289	314	.	314	324	.	324
NSERC	NSERC	11621	289276	300897	14530	310002	324532	14774	332042	346816
PC	PC	.	71	71	.	90	90	.	65	65
PW	PW-PTS	1174	1095	2269	1702	2069	3771	2038	2567	4605
RIE	RIE	20960	188210	209170	16907	204502	221409	16899	237207	254106
RCMP	RCMP	535	380	915	468	395	863	415	595	1010
ST	ST	527	11776	12303	597	15165	15762	456	30231	30687
SC	SC	1411	304	1715	1318	335	1653	1379	335	1714
SECS	SECS-CIT	274	669	943	33	740	773	34	740	774
	TOTAL	274	669	943	33	740	773	34	740	774
SSHRC	SSHRC	3351	40494	43845	3767	47014	50781	3805	50970	54775
SGEN	SGEN-ADM	3708	5484	9192	2936	5400	8336	2807	5400	8207
STCAN	STCAN	11005	.	11005	10451	.	10451	10762	.	10762
SS	SS-SUPP	210	13710	13920	236	17306	17542	263	17278	17541
TPT	TPT-ADM	3833	11062	14895	4609	12694	17303	5328	14810	20138
	TPT-APT	5	80	85	12	97	109	18	200	218
	TPT-AIR	2724	1000	3724	2755	1000	3755	2774	1000	3774
	TPT-MAR	1472	3974	5446	1266	7158	8424	1265	7088	8353
	TPT-SUR	130	954	1084	145	1263	1408	65	1235	1300
	TOTAL	8164	17070	25234	8787	22212	30999	9450	24333	33783
TB	TB-ADM	.	153	153	.	318	318	.	318	318
WDO	WDO	0	1255	1255	0	15094	15094	0	24773	24773
TOTAL	TOTAL	1280992	1299648	2580640	1310329	1478737	2789066	1371343	1578270	2949613

TABLE 15
FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	923	351	270471	913	505	279771	968	456	282997
	AGR-GOP	.	.	3905	.	.	4713	.	.	5978
	TOTAL	923	351	274376	913	505	284484	968	456	288975
AECB	AECB	.	.	1129	.	.	1318	.	.	1136
AECL	AECL	416	.	104402	356	.	89389	428	.	107235
CC	CC	.	1	182	.	1	186	.	1	190
CMHC	CMHC	.	.	5723	.	.	5984	.	.	6105
CIDA	CIDA	.	.	1293	.	.	1350	.	.	1330
CLFB	CLFB	.	.	110	.	.	115	.	.	121
COMM	COMM-CC	.	.	35990	.	.	37490	.	.	41483
ECC	ECC	.	.	8051	.	.	8574	.	.	8510
EMR	EMR-ENER	.	326	844	.	339	965	.	339	1012
	EMR-MES	.	39	80807	.	566	89207	.	3952	82645
	TOTAL	.	365	81651	.	904	90172	.	4291	83657
ENV	ENV-ADM	.	.	686	.	.	708	.	.	730
	ENV-AES	174	.	19551	319	.	25328	330	.	26042
	ENV-C&P	89	.	33853	88	.	36541	91	.	40430
	TOTAL	264	.	54090	407	.	62577	421	.	67202
F&O	F&O-FM	640	.	107251	640	.	106296	640	.	118356
FOR	FOR	220	.	58488	153	34	55244	146	.	56359
IAND	IAND	.	.	547	.	.	442	.	.	458
IDRC	IDRC	.	.	20543	.	.	23300	.	.	25300
JUST	JUST-LRC	.	.	1231	.	.	1256	.	.	1274
	TOTAL	.	.	1231	.	.	1256	.	.	1274
MRC	MRC	.	.	4488	.	.	4914	.	.	5092
NDEF	NDEF-SER	.	.	139220	.	.	143572	.	.	155235
NFB	NFB	.	.	968	.	.	1059	.	.	1000
NHW	NHW-FAS	.	.	40	.	.	40	.	.	40
	NHW-HP	108	872	18309	185	.	16761	184	.	16343
	NHW-HSP	.	590	1397	.	810	1514	.	839	1598
	NHW-MS	.	.	609	.	.	579	.	.	692
	NHW-SS	.	.	300	.	.	311	.	.	323
	TOTAL	108	1462	20656	185	810	19204	184	839	18996
NMC	NMC-CMC	.	193	4110	.	238	6462	.	328	7154
	NMC-NGC	.	263	6255	.	326	6471	.	361	7033
	NMC-NMNS	.	.	2867	.	.	2793	.	.	3129

(CONTINUED)

TABLE 15

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NMC	TOTAL	.	457	13232	.	564	15726	.	689	17315
NRC	NRC-SIR	14506	.	264430	15868	.	274292	16781	.	276763
NREV	NREV-TAX	.	.	289	.	.	314	.	.	324
NSERC	NSERC	.	.	11621	.	.	14530	.	.	14774
PW	PW-PTS	.	.	1174	.	.	1702	.	.	2038
RIE	RIE	.	.	20960	.	.	16907	.	.	16899
RCMP	RCMP	.	.	535	.	.	468	.	.	415
ST	ST	.	.	527	.	.	597	.	.	456
SC	SC	.	.	1411	.	.	1318	.	.	1379
SECS	SECS-CIT	.	.	274	.	.	33	.	.	34
	TOTAL	.	.	274	.	.	33	.	.	34
SSHRC	SSHRC	.	.	3351	.	.	3767	.	.	3805
SGEN	SGEN-ADM	.	.	3708	.	.	2936	.	.	2807
STCAN	STCAN	.	.	11005	.	.	10451	.	.	10762
SS	SS-SUPP	.	.	210	.	.	236	.	.	263
TPT	TPT-ADM	.	208	3624	.	227	4383	.	280	5048
	TPT-APT	.	.	5	.	.	12	.	.	18
	TPT-AIR	.	.	2724	.	.	2755	.	.	2774
	TPT-MAR	.	.	1472	.	.	1266	.	.	1265
	TPT-SUR	.	82	49	.	.	145	.	.	65
	TOTAL	.	290	7874	.	227	8560	.	280	9170
WDO	WDO	.	.	0	.	.	0	.	.	0
TOTAL	TOTAL	17077	2926	1260989	18522	3044	1288762	19569	6555	1345219

TABLE 16

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE INDUSTRY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

DEPARTMENT	PROGRAM	YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	708	1016	607	1439	304	1224
	AGR-GOP	2000	.	2000	.	2000	.
	TOTAL	2708	1016	2607	1439	2304	1224
ACOA	ACOA	3955	.	9842	.	7347	.
AECB	AECB	.	1513	.	1473	.	1300
AECL	AECL	.	23179	.	20078	.	24100
CMHC	CMHC	52	1188	1	1123	1	1123
CIDA	CIDA	.	498	.	561	.	483
COMM	COMM-CC	15353	1651	11641	1690	9202	1690
ECC	ECC	.	106	.	82	.	82
EMR	EMR-ENER	8291	1951	6503	3033	5290	4556
	EMR-MES	3317	11727	2516	10816	1738	11222
	TOTAL	11808	13678	9019	13849	7028	15778
ENV	ENV-ADM	.	176	.	190	.	200
	ENV-AES	.	1850	.	1924	.	2001
	ENV-C&P	.	5274	.	5835	.	6425
	ENV-PC	.	271	.	285	.	299
	TOTAL	.	7571	.	8234	.	8925
F&O	F&O-FM	.	4636	.	6617	.	7022
FOR	FOR	7394	780	7392	554	7273	1214
IAND	IAND	.	1439	.	631	.	1008
IDRC	IDRC	439	.	500	.	500	.
JUST	JUST-LRC	.	291	.	302	.	295
	TOTAL	.	291	.	302	.	295
NCC	NCC	.	10	.	10	.	10
NDEF	NDEF-SER	.	93521	1500	103007	8000	109625
NHW	NHW-HP	.	779	.	1316	.	1316
	NHW-HSP	106	516	120	680	145	660
	TOTAL	106	1295	120	1996	145	1976
NRC	NRC-SIR	68106	40342	84029	61043	76208	81845
NSERC	NSERC	2772	.	2971	.	3182	.
PW	PW-PTS	.	971	.	2000	.	2500
RIE	RIE	186729	.	203399	.	236558	.
RCMP	RCMP	.	182	.	168	.	380
ST	ST	2852	.	3722	.	7999	.
SC	SC	.	161	.	155	.	155

(CONTINUED)

TABLE 16

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE INDUSTRY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
SECS	SECS-CIT		18		90		90
	TOTAL	.	18	.	90	.	90
SGEN	SGEN-ADM	.	477	.	400	.	400
SS	SS-SUPP	.	11819	.	14859	.	14820
TPT	TPT-ADM	.	10314	.	11149	.	12710
	TPT-APT	.	80	.	87	.	190
	TPT-AIR	.	600	.	600	.	600
	TPT-MAR	.	3757	.	7158	.	7088
	TPT-SUR	4	820	4	1029	.	1000
	TOTAL	4	15571	4	20023	.	21588
WDO	WDO	1127	.	7416	.	10857	.
	TOTAL	303205	221893	344163	260385	376604	297633

TABLE 17

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	2883	1130	2639	1977	1819	1617
	TOTAL	2883	1130	2639	1977	1819	1617
ACOA	ACOA	98	-	-	-	-	-
AECB	AECB	-	354	-	336	-	373
AECL	AECL	-	1387	-	1188	-	1426
CMHC	CMHC	143	212	24	189	24	189
CIDA	CIDA	13750	11097	15504	12512	13347	10771
COMM	COMM-CC	624	327	606	333	606	333
ECC	ECC	-	18	-	10	-	10
EMR	EMR-ENER	392	602	413	550	334	848
	EMR-MES	1549	2565	1649	2530	1669	2470
	TOTAL	1941	3167	2062	3080	2003	3318
ENV	ENV-ADM	-	69	-	44	-	75
	ENV-AES	611	410	654	426	694	443
	ENV-C&P	-	492	-	537	-	591
	ENV-PC	-	117	-	123	-	129
	TOTAL	611	1088	654	1130	694	1238
F&O	F&O-FM	393	713	628	1614	590	1632
FOR	FOR	498	829	1123	788	940	577
IAND	IAND	524	188	524	83	524	65
IDRC	IDRC	5757	-	6500	-	7000	-
JUST	JUST-LRC	-	22	-	35	-	30
	TOTAL	-	22	-	35	-	30
MRC	MRC	157686	-	170154	-	182450	-
NDEF	NDEF-SER	-	8180	-	12750	-	13730
NHW	NHW-FAS	349	-	350	-	350	-
	NHW-HP	-	183	-	398	-	448
	NHW-HSP	7021	-	8360	25	9245	40
	NHW-SS	932	-	993	-	998	-
	TOTAL	8302	183	9703	423	10593	488
NRC	NRC-SIR	25950	2209	26510	2286	27263	2366
NSERC	NSERC	280518	-	300616	-	321990	-
PC	PC	65	-	65	-	65	-
PW	PW-PTS	-	-	-	25	-	25
RIE	RIE	20	-	80	-	-	-
RCMP	RCMP	-	23	-	46	-	50

(CONTINUED)

TABLE 17

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
 IN THE UNIVERSITY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
 AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ST	ST	348	.	380	.	443	.
SC	SC	.	16	.	25	.	25
SSHRC	SSHRC	39636	.	45902	.	49858	.
SGEN	SGEN-ADM	679	11	600	50	600	50
SS	SS-SUPP	.	1704	.	2210	.	2070
TPT	TPT-ADM	-	321	.	339	.	500
	TPT-AIR	-	300	.	300	.	300
	TPT-MAR	-	16	.	.	.	.
	TPT-SUR	43	42	52	155	65	50
	TOTAL	43	679	52	794	65	850
WDO	WDO	128	.	3378	.	4322	.
TOTAL	TOTAL	540596	33537	587704	41884	625196	41233

TABLE 18

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	528	.	455	.	228	.
	AGR-GOP	400	.	400	.	400	.
	TOTAL	928	.	855	.	628	.
ACOA	ACOA	127	.	.	.	.	.
AECB	AECB	.	39	.	216	.	240
AECL	AECL	.	139	.	118	.	143
CMHC	CMHC	601	139	855	203	855	203
CIDA	CIDA	.	1734	.	1955	.	1683
ECC	ECC	.	81	.	68	.	68
EMR	EMR-ENER	221	.	250	200	221	311
	EMR-MES	2752	590	1820	1260	1670	1310
	TOTAL	2973	590	2070	1460	1891	1621
ENV	ENV-C&P	110	98	110	101	110	111
	ENV-PC	.	5	.	5	.	6
	TOTAL	110	103	110	106	110	117
F&O	F&O-FM	.	90	86	90	.	90
FOR	FOR	211	512	200	490	200	490
IAND	IAND	300	.	112	.	112	.
IDRC	IDRC	382	.	500	.	500	.
MRC	MRC	200	.	216	.	232	.
NDEF	NDEF-SER	.	248	.	772	.	770
NHW	NHW-FAS	725	.	725	.	725	.
	NHW-HP	65	106	15	174	15	174
	NHW-HSP	3538	158	4400	150	4865	180
	NHW-SS	1887	.	2011	.	2019	.
	TOTAL	6215	264	7151	324	7624	354
NRC	NRC-SIR	209	104	194	108	194	112
NSERC	NSERC	475	.	509	.	545	.
PW	PW-PTS	122	.	42	.	42	.
RIE	RIE	530	.	150	.	649	.
RCMP	RCMP	.	.	.	.	.	15
ST	ST	2778	.	5013	.	14288	.
SC	SC	.	40	.	10	.	10
SECS	SECS-CIT	633	.	635	.	635	.
	TOTAL	633	.	635	.	635	.
SGEN	SGEN-ADM	3492	73	3500	100	3500	100

(CONTINUED)

TABLE 18

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
TPT	TPT-ADM	.	96	.	380	.	750
	TPT-MAR	.	17	.	.	.	.
	TPT-SUR	21	24	23	.	20	100
	TOTAL	21	137	23	380	20	850
TB	TB-ADM	153	.	318	.	318	.
WDO	WDO	.	.	3300	.	8594	.
TOTAL	TOTAL	20460	4293	25839	6400	40937	6866

TABLE 19

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
PROVINCIAL AND MUNICIPAL GOVERNMENT SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER PROV. & MUN. GOV'T

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	99	47	91	74	46	64
	TOTAL	99	47	91	74	46	64
ACOA	ACOA	646	.	.	.	.	.
AECB	AECB	.	9	.	62	.	69
CMHC	CMHC	93	43	905	90	905	90
EMR	EMR-ENER	2499	.	1400	.	1139	.
	EMR-MES	14361	.	15276	.	11825	.
	TOTAL	16860	.	16676	.	12964	.
ENV	ENV-ADM	.	4	.	4	.	.
	ENV-C&P	.	9	.	17	.	18
	TOTAL	.	13	.	21	.	18
FOR	FOR	507	57	13105	224	400	202
IAND	IAND	264	.	264	.	264	.
MRC	MRC	78	.	83	.	89	.
NHW	NHW-HP	.	33	.	50	.	50
	NHW-HSP	309	.	420	.	465	.
	NHW-SS	92	.	98	.	98	.
	TOTAL	401	33	518	50	563	50
NRC	NRC-SIR	.	124	.	127	.	131
RIE	RIE	12	.	2	.	.	.
SGEN	SGEN-ADM	284	104	250	200	250	200
TPT	TPT-ADM	.	67	.	250	.	500
	TOTAL	.	67	.	250	.	500
WDO	WDO	.	.	1000	.	1000	.
TOTAL	TOTAL	19244	497	32894	1098	16481	1324

TABLE 20

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE FOREIGN SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

DEPARTMENT	PROGRAM	YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	827	.	830	.	830	.
	TOTAL	827	.	830	.	830	.
AECB	AECB	455	160	734	224	.	249
AECL	AECL	.	416	.	238	.	285
CMHC	CMHC	50	.	.	13	.	13
CIDA	CIDA	30311	483	34931	544	30521	469
COMM	COMM-CC	6652	30	8543	.	5986	.
ECC	ECC	.	22	.	.	.	.
EMR	EMR-ENER	744	.	.	.	.	.
	EMR-MES	10189	662	23944	228	14948	200
	TOTAL	10933	662	23944	228	14948	200
ENV	ENV-ADM	.	1	.	9	.	.
	ENV-AES	.	62	.	64	.	67
	ENV-C&P	.	191	.	211	.	231
	ENV-PC	.	5	.	5	.	5
	TOTAL	.	259	.	289	.	303
F&D	F&D-FM	.	37	.	37	.	40
FOR	FOR	33	140	135	140	129	.
IAND	IAND	.	10	.	.	.	.
IDRC	IDRC	50015	.	56700	.	61500	.
JUST	JUST-LRC	.	18	.	24	.	25
	TOTAL	.	18	.	24	.	25
MRC	MRC	6103	.	6142	.	6585	.
NDEF	NDEF-SER	.	3984	.	2828	.	3172
NHW	NHW-HP	55	141	55	248	55	248
	NHW-HSP	652	.	.	.	.	.
	TOTAL	707	141	55	248	55	248
NRC	NRC-SIR	4975	1093	5581	327	6847	328
NSERC	NSERC	2670	.	2861	.	3064	.
PW	PW-PTS	.	2	.	2	.	.
RIE	RIE	919	.	871	.	.	.
ST	ST	5800	.	6050	.	7501	.
SC	SC	.	2	.	10	.	10
SSHRC	SSHRC	858	.	1112	.	1112	.
TPT	TPT-ADM	.	264	.	576	.	350
	TPT-AIR	.	100	.	100	.	100

(CONTINUED)

TABLE 20

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE FOREIGN SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
TPT	TPT-MAR	.	60	.	.	.	.
	TOTAL	.	424	.	676	.	450
TOTAL	TOTAL	121308	7883	148549	5828	139078	5792

TABLE 21

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE OTHER SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

DEPARTMENT	PROGRAM	YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	357	342	320	529	198	445
	TOTAL	357	342	320	529	198	445
AECB	AECB	.	57	.	281	.	312
AECL	AECL	.	693	.	475	.	570
CMHC	CMHC	.	.	.	68	.	68
CIDA	CIDA	.	7241	.	8164	.	7028
COMM	COMM-CC	31	198	.	222	.	222
ECC	ECC	.	385	.	170	.	170
EMR	EMR-ENER	650	478	283	304	235	481
	EMR-MES	46	528	.	735	.	653
	TOTAL	696	1006	283	1039	235	1134
ENV	ENV-ADM	.	128	.	123	.	95
	ENV-AES	.	225	.	234	.	243
	ENV-C&P	.	1100	.	1208	.	1331
	ENV-PC	.	110	.	116	.	122
	TOTAL	.	1563	.	1681	.	1791
F&O	F&O-FM	.	286	.	317	.	319
FOR	FOR	221	535	.	414	.	359
IAND	IAND	.	13	.	.	.	.
IDRC	IDRC	282	.	300	.	400	.
JUST	JUST-LRC	.	788	.	824	.	801
	TOTAL	.	788	.	824	.	801
MRC	MRC	39	.	43	.	46	.
NDEF	NDEF-SER	.	1919	.	276	.	225
NHW	NHW-HP	.	243	.	397	.	397
	NHW-HSP	.	54	.	50	.	50
	TOTAL	.	297	.	447	.	447
NMC	NMC-NMNS	.	10	.	10	.	15
	TOTAL	.	10	.	10	.	15
NRC	NRC-SIR	5950	23	4064	119	7959	123
NSERC	NSERC	2841	.	3045	.	3261	.
PC	PC	6	.	25	.	.	.
RCMP	RCMP	.	175	.	180	.	150
SC	SC	.	85	.	135	.	135
SECS	SECS-CIT	18	.	15	.	15	.
	TOTAL	18	.	15	.	15	.

(CONTINUED)

TABLE 21

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE OTHER SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
SGEN	SGEN-ADM	.	364	.	300	.	300
SS	SS-SUPP	.	187	.	237	.	388
TPT	TPT-APT	.	.	.	10	.	10
	TPT-MAR	.	124	.	.	.	.
	TOTAL	.	124	.	10	.	10
TOTAL	TOTAL	10441	16291	8095	15898	12114	15012

TABLE 22
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	6325	2886	270471	5855	4524	279771	4393	3806	282997
	AGR-GOP	2400	-	3905	2400	-	4713	2400	-	5978
	TOTAL	8725	2886	274376	8255	4524	284484	6793	3806	288975
ACOA	ACOA	4827	-	-	9842	-	-	7347	-	-
AECB	AECB	455	2132	1129	734	2592	1318	-	2543	1136
AECL	AECL	416	25814	104402	356	22097	89389	428	26524	107235
CC	CC	-	1	182	-	1	186	-	1	190
CMHC	CMHC	939	1582	5723	1785	1686	5984	1785	1686	6105
CIDA	CIDA	44061	21053	1293	50495	23736	1350	43868	20434	1330
CLFB	CLFB	-	-	110	-	-	115	-	-	121
COMM	COMM-CC	22660	2206	35990	20790	2245	37490	15794	2245	41483
ECC	ECC	-	612	8051	-	330	8574	-	330	8510
EMR	EMR-ENER	12797	3357	844	8849	4426	965	7219	6535	1012
	EMR-MES	32214	16111	80807	45205	16135	89207	31850	19807	82645
	TOTAL	45011	19468	81651	54054	20560	90172	39069	26342	83657
ENV	ENV-ADM	-	378	686	-	370	708	-	370	730
	ENV-AES	785	2547	19551	973	2648	25328	1024	2754	26042
	ENV-C&P	199	7164	33853	198	7909	36541	201	8707	40430
	ENV-PC	-	508	-	-	534	-	-	561	-
	TOTAL	985	10597	54090	1171	11461	62577	1225	12392	67202
F&O	F&O-FM	1033	5762	107251	1354	8675	106296	1230	9103	118356
FOR	FOR	9084	2833	58488	22108	2644	55244	9088	2842	56359
IAND	IAND	1088	1650	547	900	714	442	900	1073	458
IDRC	IDRC	56875	-	20543	64500	-	23300	69900	-	25300
JUST	JUST-LRC	-	1119	1231	-	1185	1256	-	1151	1274
	TOTAL	-	1119	1231	-	1185	1256	-	1151	1274
MRC	MRC	164106	-	4488	176638	-	4914	189402	-	5092
NCC	NCC	-	10	-	-	10	-	-	10	-
NDEF	NDEF-SER	-	107852	139220	1500	119633	143572	8000	127522	155235
NFB	NFB	-	-	968	-	-	1059	-	-	1000
NHW	NHW-FAS	1074	-	40	1075	-	40	1075	-	40
	NHW-HP	228	2357	18309	255	2583	16761	254	2633	16343
	NHW-HSP	11626	1318	1397	13300	1715	1514	14720	1769	1598
	NHW-MS	-	-	609	-	-	579	-	-	692
	NHW-SS	2911	-	300	3102	-	311	3115	-	323
	TOTAL	15839	3675	20656	17732	4298	19204	19164	4402	18996

(CONTINUED)

TABLE 22

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NMC	NMC-CMC	.	193	4110	.	238	6462	.	328	7154
	NMC-NGC	.	263	6255	.	326	6471	.	361	7033
	NMC-NMNS	.	10	2867	.	10	2793	.	15	3129
	TOTAL	.	467	13232	.	574	15726	.	704	17315
NRC	NRC-SIR	119696	43895	264430	136246	64010	274292	135252	84905	276763
NREV	NREV-TAX	.	.	289	.	.	314	.	.	324
NSERC	NSERC	289276	.	11621	310002	.	14530	332042	.	14774
PC	PC	71	.	.	90	.	.	65	.	.
PW	PW-PTS	122	973	1174	42	2027	1702	42	2525	2038
RIE	RIE	188210	.	20960	204502	.	16807	237207	.	16899
RCMP	RCMP	.	380	535	.	395	468	.	595	415
ST	ST	11776	.	527	15165	.	597	30231	.	456
SC	SC	.	304	1411	.	335	1318	.	335	1379
SECS	SECS-CIT	651	18	274	650	90	33	650	90	34
	TOTAL	651	18	274	650	90	33	650	90	34
SSHRC	SSHRC	40494	.	3351	47014	.	3767	50970	.	3805
SGEN	SGEN-ADM	4455	1029	3708	4350	1050	2936	4350	1050	2807
STCAN	STCAN	.	.	11005	.	.	10451	.	.	10762
SS	SS-SUPP	.	13710	210	.	17306	236	.	17278	263
TPT	TPT-ADM	.	11270	3624	.	12921	4383	.	15090	5048
	TPT-APT	.	80	5	.	97	12	.	200	18
	TPT-AIR	.	1000	2724	.	1000	2755	.	1000	2774
	TPT-MAR	.	3974	1472	.	7158	1266	.	7088	1265
	TPT-SUR	68	968	49	79	1184	145	85	1150	65
	TOTAL	68	17292	7874	79	22360	8560	85	24528	9170
TB	TB-ADM	153	.	.	318	.	.	318	.	.
WDO	WDO	1255	.	0	15094	.	0	24773	.	0
TOTAL	TOTAL	1032331	287320	1260989	1165766	334537	1288762	1229979	374415	1345219

TABLE 23

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY PERFORMER, 1987-88 TO 1989-90SCIENCE TYPE TOTAL
AND ACTIVITY RSA

PERFORMER	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
INTRAMURAL	1439191	75	1527953	74	1570211	75
CANADIAN INDUSTRY	177259	9	198078	10	197691	9
CANADIAN UNIVERSITY	122608	6	139062	7	141955	7
CANADIAN NP INST	52723	3	56674	3	56842	3
PROV. & MUN. GOV'T	16109	1	13669	1	11982	1
FOREIGN PERFORMERS	94990	5	109824	5	99625	5
OTHER PERFORMERS	22307	1	25311	1	26030	1
TOTAL	1925187	100	2070571	100	2104336	100

TABLE 24

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
DEPARTMENT	PROGRAM										
AGR	AGR-ADM	6443	164	6607	6449	107	6556	6344	107	6451	
	AGR-AFP	15642	917	16559	21912	690	22602	27326	410	27736	
	AGR-GOP	3036	6	3042	3332	7	3339	4090	7	4097	
	TOTAL	25120	1087	26207	31693	804	32497	37759	524	38283	
AECB	AECB	14	89	103	14	17	31	14	29	43	
AECL	AECL	7668	400	8068	6602	356	6958	7986	427	8413	
CC	CC	178	3	181	183	3	186	188	3	191	
CMHC	CMHC	13402	3188	16590	11308	4726	16034	12694	4726	17420	
CBC	CBC	2111	3249	5360	2427	3101	5528	2324	3209	5533	
CHRC	CHRC	680	39	719	515	91	606	672	98	770	
CIDA	CIDA	7325	235470	242795	7649	274532	282181	7725	252118	259843	
CLFB	CLFB	27	.	27	27	.	27	27	.	27	
COL	COL	2909	.	2909	3445	.	3445	3981	.	3981	
COMM	COMM-CC	2553	1415	3968	3657	1440	5097	3835	2007	5842	
CCA	CCA-ADM	2424	165	2589	2853	179	3032	3050	201	3251	
	CCA-CON	4143	.	4143	4359	.	4359	4245	.	4245	
	CCA-COR	14933	.	14933	15912	.	15912	16950	.	16950	
	TOTAL	21500	165	21665	23124	179	23303	24245	201	24446	
ECC	ECC	1430	.	1430	1719	.	1719	1735	.	1735	
E&I	E&I-ADM	15379	993	16372	18564	705	19269	20053	551	20604	
	E&I-EIC	7755	40455	48210	6797	38729	45526	6961	38802	45763	
	TOTAL	23134	41448	64582	25361	39434	64795	27014	39353	66367	
EMR	EMR-ADM	13712	.	13712	13273	.	13273	14158	.	14158	
	EMR-ENER	3021	19679	22700	1681	12582	14263	1856	5943	7799	
	EMR-MES	185106	15372	200478	180441	10633	191074	174553	16411	190964	
	TOTAL	201839	35051	236890	195395	23215	218610	190567	22354	212921	
ENV	ENV-ADM	38	.	38	40	.	40	41	.	41	
	ENV-AES	223602	16887	240489	220282	16765	237047	230443	17474	247917	
	ENV-C&P	68343	9115	77458	74944	10089	85033	85401	11112	96513	
	ENV-PC	57455	153	57608	61327	160	61487	64663	169	64832	
	TOTAL	349438	26155	375593	356593	27014	383607	380548	28755	409303	
EA	EA-CIA	10742	5939	16681	10984	18345	29329	11431	20383	31814	
FIN	FIN-FEP	20377	.	20377	21212	.	21212	22764	.	22764	
F&O	F&O-FM	93936	4763	98699	96524	6863	103387	111039	5264	116303	
FOR	FOR	7520	180	7700	7827	140	7967	7394	371	7765	
IAND	IAND	936	3793	4729	1188	3557	4745	1227	3334	4561	

(CONTINUED)

TABLE 24

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
IDRC	IDRC	9282	6977	16259	10600	7800	18400	11500	8500	20000
IJC	IJC	3341	228	3569	4679	112	4791	4271	564	4835
JUST	JUST-ADM	2488	6006	8494	2577	5940	8517	2543	3610	6153
	JUST-LRC	641	163	804	664	189	853	678	195	873
	TOTAL	3129	6169	9298	3241	6129	9370	3221	3805	7026
LAB	LAB	866	-	866	890	-	890	1065	-	1065
MRC	MRC	170	6361	6531	196	7222	7418	204	7744	7948
NCC	NCC	1069	124	1193	1173	313	1486	942	323	1265
NDEF	NDEF-SER	3851	120	3971	4499	80	4579	4569	92	4661
NEB	NEB	1749	-	1749	1942	-	1942	2047	-	2047
NFB	NFB	286	-	286	210	-	210	200	-	200
NHW	NHW-ADM	13969	1925	15894	13315	2276	15591	13176	1775	14951
	NHW-FAS	-	48	48	-	25	25	-	25	25
	NHW-HP	62298	1165	63463	79540	1588	81128	80104	1598	81702
	NHW-HSP	745	10461	11206	834	11959	12793	896	13299	14195
	NHW-IS	1325	50	1375	1424	30	1454	1633	-	1633
	NHW-MS	2115	1102	3217	3057	1130	4187	2416	1160	3576
	NHW-SS	1401	5622	7023	1447	5988	7435	1508	6017	7525
	TOTAL	81855	20373	102228	99618	22996	122614	99733	23874	123607
NL	NL	45388	62	45450	47692	70	47762	47211	72	47283
NMC	NMC-CMC	33323	-	33323	66830	-	66830	48026	-	48026
	NMC-NGC	26348	-	26348	27550	-	27550	29933	-	29933
	NMC-NMNS	13630	186	13816	19260	210	19470	21011	220	21231
	NMC-NMST	15531	-	15531	21347	-	21347	22969	-	22969
	TOTAL	88832	186	89018	134986	210	135196	121939	220	122159
NRC	NRC-SIR	53350	385	53735	51504	396	51900	52664	407	53071
NREV	NREV-TAX	3663	-	3663	4645	-	4645	4781	-	4781
NSERC	NSERC	1486	36982	38468	1858	39632	41490	1889	42450	44339
PA	PA	15017	150	15167	24002	320	24322	23005	2120	25125
PW	PW-PTS	3069	335	3404	2782	560	3342	2733	725	3458
RIE	RIE	1175	8911	10086	1185	12569	13754	1436	17443	18879
ST	ST	19548	-	19548	20947	-	20947	16024	-	16024
SC	SC	1561	-	1561	1401	-	1401	1509	-	1509
SECS	SECS-ADM	-	40	40	-	70	70	-	70	70
	SECS-CIT	68	3305	3373	64	3637	3701	62	3665	3727
	SECS-ES	202	177	378	289	106	395	305	110	415

(CONTINUED)

TABLE 24

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
SECS	SECS-OL	1921	409	2330	1972	476	2448	2048	425	2473	
	TOTAL	2191	3931	6122	2325	4289	6614	2415	4270	6685	
SSHRC	SSHRC	3061	23785	26846	3311	22246	25557	3343	24025	27368	
SGEN	SGEN-ADM	618	444	1062	591	350	941	564	350	914	
STCAN	STCAN	278004	15	276019	271362	17	271379	279963	11	279974	
SS	SS-SUPP	220	6163	6383	276	8187	8463	284	8215	8499	
TPT	TPT-ADM	863	601	1464	987	1160	2147	805	2200	3005	
	TPT-APT	352	528	880	726	985	1711	698	402	1100	
	TPT-AIR	1783	426	2209	1841	426	2267	1881	426	2307	
	TPT-SUR	339	306	645	368	374	742	418	287	705	
	TOTAL	3337	1861	5198	3922	2945	6867	3803	3315	7118	
TB	TB-ADM	22235	.	22235	20670	.	20670	23727	.	23727	
WDO	WDO	.	.	.	0	2358	2358	0	2444	2444	
	TOTAL	1439191	485996	1925187	1527953	542618	2070571	1570211	534125	2104336	

TABLE 25

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
BY ACTIVITY AND CATEGORY.
1987-88 TO 1989-90

SCIENCE TYPE TOTAL
AND YEAR 1987-88

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	219	5331	710	4436	1622	2652	179	15150	
INTRAMURAL RSA	518	4880	2307	4111	4436	877	13	17142	
ADMIN. OF EXTRAMURAL PROGRAMS	77	432	466	50	496	11	10	1542	
TOTAL	814	10643	3483	8598	6554	3540	202	33834	

SCIENCE TYPE TOTAL
AND YEAR 1988-89

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	228	5501	773	4436	1638	2476	186	15238	
INTRAMURAL RSA	558	5089	2356	4155	4143	910	13	17225	
ADMIN. OF EXTRAMURAL PROGRAMS	81	429	483	48	508	11	10	1571	
TOTAL	868	11019	3612	8640	6289	3397	209	34033	

SCIENCE TYPE TOTAL
AND YEAR 1989-90

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	227	5622	797	4471	1651	2386	184	15337	
INTRAMURAL RSA	553	5140	2401	4137	3950	896	13	17080	
ADMIN. OF EXTRAMURAL PROGRAMS	76	426	488	52	498	11	10	1561	
TOTAL	856	11187	3686	8660	6099	3293	207	33988	

TABLE 26-A
FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY.
1987-88

SCIENCE TYPE TOTAL
AND YEAR 1987-88

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
AGR	AGR-ADM	1	37	2	5	43	-	-	88	
	AGR-AFP	50	962	106	992	339	1367	-	3816	
	AGR-GOP	1	26	4	68	13	2	-	114	
	TOTAL	52	1025	112	1065	395	1369	-	4018	
AECB	AECB	-	13	-	-	1	-	-	14	
AECL	AECL	19	769	-	914	310	550	-	2562	
CC	CC	2	2	-	2	1	-	-	7	
CMHC	CMHC	7	154	-	10	52	-	-	223	
CBC	CBC	4	20	1	19	1	-	-	45	
CHRC	CHRC	1	3	3	-	2	-	-	9	
CIDA	CIDA	16	14	72	3	42	-	-	147	
CLFB	CLFB	0	1	-	0	0	-	-	2	
COL	COL	6	-	34	-	13	-	-	53	
COMM	COMM-CC	16	196	32	145	45	-	-	434	
CCA	CCA-ADM	5	25	13	3	6	-	-	52	
	CCA-CON	1	11	8	35	10	3	-	68	
	CCA-COR	7	127	21	1	101	-	-	257	
	TOTAL	13	163	42	39	117	3	-	377	
ECC	ECC	4	49	27	19	27	-	-	126	
E&I	E&I-ADM	7	90	12	24	39	-	-	172	
	E&I-EIC	9	117	31	8	47	9	-	221	
	TOTAL	16	207	43	32	86	9	-	393	
EMR	EMR-ADM	2	-	61	3	22	-	-	88	
	EMR-ENER	2	27	8	-	8	-	-	45	
	EMR-MES	72	1099	117	742	361	139	-	2530	
	TOTAL	76	1126	186	745	391	139	-	2662	
ENV	ENV-ADM	1	2	5	-	1	-	-	9	
	ENV-AES	65	658	282	1070	342	19	-	2436	
	ENV-C&P	11	374	150	318	287	81	-	1221	
	ENV-PC	10	180	105	142	118	320	-	875	
	TOTAL	87	1214	542	1530	748	420	-	4541	
EA	EA-CIA	15	8	49	-	35	-	-	107	
FIN	FIN-FEP	32	145	27	18	59	-	-	280	
F&O	F&O-FM	54	703	113	857	193	370	-	2291	
FOR	FOR	27	330	71	355	93	74	-	949	
IAND	IAND	0	11	14	-	3	-	-	27	
IDRC	IDRC	8	124	32	38	92	-	-	293	

(CONTINUED)

TABLE 26-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1987-88

SCIENCE TYPE TOTAL
AND YEAR 1987-88

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
IJC	IJC	6	11	4	4	20	.	.	45	
JUST	JUST-ADM	2	23	6	.	10	.	.	42	
	JUST-LRC	7	2	6	1	15	.	.	31	
	TOTAL	9	25	12	1	25	.	.	73	
LAB	LAB	.	7	.	1	6	.	.	14	
MRC	MRC	5	-	21	.	27	.	.	53	
NCC	NCC	.	15	9	.	.	.	.	24
NDEF	NDEF-SER	23	587	142	477	291	213	202	1935	
NEB	NEB	4	19	1	2	2	.	.	28	
NFB	NFB	.	4	.	2	2	.	.	8	
NHW	NHW-ADM	12	78	21	41	42	.	.	194	
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HP	27	753	34	228	240	52	.	1334	
	NHW-HSP	2	9	13	.	8	.	.	31	
	NHW-IS	1	8	8	3	2	.	.	22	
	NHW-MS	1	13	1	14	7	.	.	36	
	NHW-SS	2	11	3	.	8	.	.	24	
	TOTAL	45	872	81	286	307	52	.	1642	
NL	NL	13	188	51	55	213	.	.	521	
NMC	NMC-CMC	10	31	70	62	65	20	.	258	
	NMC-NGC	6	27	55	56	23	23	.	190	
	NMC-NMNS	6	36	17	52	14	20	.	145	
	NMC-NMST	4	3	24	55	20	16	.	122	
	TOTAL	26	97	166	225	122	79	.	715	
NRC	NRC-SIR	10	1377	239	879	590	225	.	3320	
NREV	NREV-TAX	2	71	.	.	.	.	.	73
NSERC	NSERC	9	.	60	.	82	.	.	151	
PA	PA	8	105	17	75	77	.	.	282	
PW	PW-PTS	.	27	6	12	10	.	.	54	
RIE	RIE	1	4	133	4	59	.	.	201	
RCMP	RCMP	1	-2	.	.	1	.	.	4	
ST	ST	37	13	69	1	57	.	.	177	
SC	SC	5	7	15	.	3	.	.	30	
SECS	SECS-CIT	1	2	.	1	2	.	.	6	
	SECS-ES	.	.	3	.	1	1	.	5	
	SECS-OL	.	.	37	.	5	.	.	42	
	TOTAL	1	5	37	2	8	.	.	53	

(CONTINUED)

TABLE 26-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY.
1987-88

SCIENCE TYPE TOTAL
AND YEAR 1987-88

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
SSHRC	SSHRC	12	.	43	.	40	.	.	95	
SGEN	SGEN-ADM	3	30	2	2	11	2	.	50	
STCAN	STCAN	89	820	836	764	1839	35	.	4383	
SS	SS-SUPP	0	.	2	.	6	.	.	9	
TPT	TPT-ADM	2	29	6	2	13	.	.	52	
	TPT-APT	.	6	.	.	.	.	.	6
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	3	3	.	.	14	
	TPT-SUR	1	4	1	2	1	.	.	8	
	TOTAL	4	65	15	14	17	.	.	114	
TB	TB-ADM	45	15	121	1	34	.	.	216	
WDO	WDO	0	0	1	.	0	.	.	1	
TOTAL	TOTAL	814	10643	3483	8598	6554	3540	202	33834	

TABLE 26-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1988-89

SCIENCE TYPE TOTAL
AND YEAR 1988-89

		CATEGORY							TOTAL
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
			PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	39	3	5	40	.	.	88
	AGR-AFP	54	1036	131	1054	363	1190	.	3828
	AGR-GDP	1	26	4	70	13	2	.	116
	TOTAL	56	1101	138	1129	416	1192	.	4032
AECB	AECB	.	13	.	.	1	.	.	14
AECL	AECL	19	772	.	811	290	550	.	2442
CC	CC	2	2	.	2	1	.	.	7
CMHC	CMHC	7	147	.	10	29	.	.	193
CBC	CBC	4	20	1	19	1	.	.	45
CHRC	CHRC	1	3	3	.	2	.	.	9
CIDA	CIDA	16	14	75	4	42	.	.	151
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	.	34	.	13	.	.	53
COMM	COMM-CC	15	186	38	128	38	.	.	405
CCA	CCA-ADM	6	26	14	2	7	.	.	55
	CCA-CON	1	12	8	36	10	3	.	70
	CCA-COR	7	130	21	1	102	.	.	261
	TOTAL	14	168	43	39	119	3	.	386
ECC	ECC	5	49	29	17	24	.	.	124
E&I	E&I-ADM	6	89	13	14	43	.	.	165
	E&I-EIC	9	87	35	6	51	.	.	188
	TOTAL	15	176	48	20	94	.	.	353
EMR	EMR-ADM	2	.	57	4	19	.	.	82
	EMR-ENER	1	21	8	.	8	.	.	38
	EMR-MES	73	1119	125	730	376	132	.	2555
	TOTAL	76	1140	190	734	404	132	.	2675
ENV	ENV-ADM	1	2	4	.	1	.	.	8
	ENV-AES	68	696	309	1004	321	18	.	2416
	ENV-C&P	10	396	154	335	306	83	.	1284
	ENV-PC	10	180	105	142	118	320	.	875
	TOTAL	89	1274	572	1481	746	421	.	4583
EA	EA-CIA	15	7	47	.	39	.	.	108
FIN	FIN-FEP	35	164	32	18	50	.	.	299
F&O	F&O-FM	54	732	110	849	189	378	.	2313
FOR	FOR	29	329	70	347	93	87	.	953
IAND	IAND	0	9	14	.	3	.	.	26
IDRC	IDRC	8	133	32	38	97	.	.	308

(CONTINUED)

TABLE 26-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1988-89

SCIENCE TYPE TOTAL
AND YEAR 1988-89

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
IJC	IJC	5	12	4	4	20	.	.	45	
JUST	JUST-ADM	2	17	6	-	9	.	.	35	
	JUST-LRC	7	2	6	1	14	.	.	30	
	TOTAL	9	19	12	1	23	.	.	65	
LAB	LAB	.	8	.	1	6	.	.	14	
MRC	MRC	7	.	22	.	25	.	.	54	
NCC	NCC	.	15	10	.	.	.	.	25
NDEF	NDEF-SER	24	608	148	474	277	203	209	1943	
NEB	NEB	6	16	1	3	4	.	.	30	
NFB	NFB	.	4	.	2	2	.	.	8	
NHW	NHW-ADM	14	81	23	11	45	.	.	174	
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HP	27	801	37	235	239	49	.	1388	
	NHW-HSP	2	9	14	.	10	.	.	34	
	NHW-IS	1	9	9	4	1	.	.	24	
	NHW-MS	1	13	1	14	7	.	.	36	
	NHW-SS	2	12	5	.	8	.	.	27	
	TOTAL	47	925	90	264	310	49	.	1684	
NL	NL	13	189	54	55	202	.	.	513	
NMC	NMC-CMC	14	43	97	86	90	28	.	358	
	NMC-NGC	9	35	74	69	30	27	.	244	
	NMC-NMNS	10	45	42	47	29	30	.	203	
	NMC-NMST	8	6	46	49	26	38	.	173	
	TOTAL	41	129	259	251	175	123	.	978	
NRC	NRC-SIR	10	1393	250	939	596	227	.	3415	
NREV	NREV-TAX	2	86	.	.	.	.	.	88
NSERC	NSERC	10	.	63	.	86	.	.	159	
PA	PA	8	108	17	81	80	.	.	294	
PW	PW-PTS	.	27	6	12	10	.	.	54	
RIE	RIE	1	4	138	4	62	.	.	209	
RCMP	RCMP	1	3	.	.	1	.	.	4	
ST	ST	45	14	70	1	55	.	.	185	
SC	SC	5	7	15	.	3	.	.	30	
SECS	SECS-CIT	1	1	.	.	1	.	.	3	
	SECS-ES	.	3	.	2	1	.	.	5	
	SECS-OL	.	.	38	.	5	.	.	43	
	TOTAL	1	4	38	2	7	.	.	50	

(CONTINUED)

TABLE 26-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1988-89

SCIENCE TYPE TOTAL
AND YEAR 1988-89

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
SSHRC	SSHRC	12	.	44	.	41	.	.	97	
SGEN	SGEN-ADM	3	28	2	1	10	1	.	45	
STCAN	STCAN	101	901	760	888	1544	31	.	4225	
SS	SS-SUPP	0	.	2	.	6	.	.	9	
TPT	TPT-ADM	2	29	6	2	13	.	.	52	
	TPT-APT	.	9	0	.	.	.	.	9
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	2	3	.	.	13	
	TPT-SUR	1	4	.	2	1	.	.	9	
	TOTAL	4	68	14	13	17	.	.	116	
TB	TB-ADM	44	13	114	.	36	.	.	207	
WDO	WDO	0	0	3	.	2	.	.	5	
TOTAL	TOTAL	868	11019	3612	8640	6289	3397	209	34033	

TABLE 26-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1989-90

SCIENCE TYPE TOTAL
AND YEAR 1989-90

DEPARTMENT	PROGRAM	CATEGORY							TOTAL
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
		PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
AGR	AGR-ADM	1	38	3	5	39	.	.	86
	AGR-AFP	52	1059	146	1076	386	1085	.	3804
	AGR-GOP	1	28	4	71	13	2	.	119
	TOTAL	54	1125	153	1152	438	1087	.	4009
AECB	AECB	.	13	.	.	1	.	.	14
AECL	AECL	19	790	.	820	295	565	.	2489
CC	CC	2	2	.	2	1	.	.	7
CMHC	CMHC	7	147	.	10	43	.	.	207
CBC	CBC	4	20	1	19	1	.	.	45
CHRC	CHRC	1	3	3	.	2	.	.	9
CIDA	CIDA	14	16	71	4	42	.	.	147
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	.	39	.	13	.	.	58
COMM	COMM-CC	14	220	37	111	34	.	.	415
CCA	CCA-ADM	6	26	15	2	7	.	.	56
	CCA-CON	1	12	8	36	10	3	.	70
	CCA-COR	8	130	24	1	102	.	.	265
	TOTAL	15	168	47	39	119	3	.	391
ECC	ECC	5	49	30	16	22	.	.	122
E&I	E&I-ADM	6	88	13	14	41	.	.	162
	E&I-EIC	9	87	35	7	51	0	.	189
	TOTAL	15	175	48	21	92	0	.	351
EMR	EMR-ADM	2	.	57	4	19	.	.	82
	EMR-ENER	2	21	7	.	6	.	.	35
	EMR-MES	75	1093	119	711	358	129	.	2485
	TOTAL	78	1114	183	715	383	129	.	2602
ENV	ENV-ADM	1	2	4	.	0	.	.	7
	ENV-AES	67	694	306	1004	321	17	.	2409
	ENV-C&P	11	398	157	339	309	84	.	1298
	ENV-PC	10	180	105	142	118	320	.	875
	TOTAL	89	1274	572	1485	748	421	.	4589
EA	EA-CIA	15	7	47	.	39	.	.	108
FIN	FIN-FEP	31	178	28	17	47	.	.	301
F&O	F&O-FM	57	753	112	858	192	380	.	2353
FOR	FOR	28	327	71	335	88	81	.	928
IAND	IAND	0	9	14	.	3	.	.	26
IDRC	IDRC	8	133	32	38	97	.	.	308

(CONTINUED)

TABLE 26-C
FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1989-90

SCIENCE TYPE TOTAL
AND YEAR 1989-90

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
IJC	IJC		5	12	5	3	20	.	45	
JUST	JUST-ADM		2	17	6	.	9	.	35	
	JUST-LRC		7	2	6	1	14	.	30	
	TOTAL		9	19	12	1	23	.	65	
LAB	LAB		.	8	.	1	5	.	14	
MRC	MRC		6	.	20	.	27	.	53	
NCC	NCC		.	16	9	.	.	.	25	
NDEF	NDEF-SER		24	608	149	473	277	203	207	
NEB	NEB		6	17	1	3	.4	.	31	
NFB	NFB		.	4	.	2	2	.	8	
NHW	NHW-ADM		13	80	22	10	44	.	169	
	NHW-FAS		.	.	1	.	.	.	1	
	NHW-HP		27	833	36	236	244	48	.	
	NHW-HSP		2	9	13	.	8	.	31	
	NHW-IS		1	9	9	3	1	.	23	
	NHW-MS		1	14	1	14	7	.	37	
	NHW-SS		2	16	5	.	8	.	31	
	TOTAL		46	961	87	263	312	48	.	
NL	NL		13	196	56	54	187	.	506	
NMC	NMC-CMC		15	44	100	89	91	29	.	
	NMC-NGC		8	35	72	69	29	27	.	
	NMC-NMNS		10	45	44	42	34	31	.	
	NMC-NMST		6	7	44	51	26	41	.	
	TOTAL		39	131	250	251	180	128	.	
NRC	NRC-SIR		10	1427	249	956	591	224	.	
NREV	NREV-TAX		2	86	.	.	.	.	88
NSERC	NSERC		10	.	75	.	88	.	173	
PA	PA		7	113	19	83	72	.	294	
PW	PW-PTS		.	27	6	12	10	.	54	
RIE	RIE		1	3	138	4	62	.	208	
RCMP	RCMP		1	2	.	.	1	.	4	
ST	ST		44	10	84	0	40	.	178	
SC	SC		5	7	14	.	4	.	30	
SECS	SECS-CIT		0	1	.	0	1	.	2	
	SECS-ES		.	3	.	2	1	.	6	
	SECS-OL		.	.	38	.	5	.	43	
	TOTAL		0	4	38	2	7	.	50	

(CONTINUED)

TABLE 26-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY.
1989-90

SCIENCE TYPE TOTAL
AND YEAR 1989-90

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
SSHRC	SSHRC	11	.	44	.	41	.	.	96	
SGEN	SGEN-ADM	3	26	2	0	8	0	.	39	
STCAN	STCAN	101	906	797	898	1378	24	.	4104	
SS	SS-SUPP	0	.	3	.	6	.	.	10	
TPT	TPT-ADM	2	29	6	2	13	.	.	52	
	TPT-APT	.	9	.	.	.	.	.	9
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	2	3	.	.	13	
	TPT-SUR	1	3	0	2	1	.	.	7	
	TOTAL	4	67	14	13	17	.	.	115	
TB	TB-ADM	44	14	115	2	35	.	.	210	
WDO	WDO	1	0	3	.	2	.	.	5	
TOTAL	TOTAL	856	11187	3686	8660	6099	3293	207	33988	

TABLE 27

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY PERFORMER.
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	2023113	58	2085493	56	2186913	56
CANADIAN INDUSTRY	658608	19	749913	20	821988	21
CANADIAN UNIVERSITY	565840	16	616817	17	655948	17
CANADIAN NP INST	24847	1	32757	1	48312	1
PROV. & MUN. GOV'T	27559	1	39233	1	22609	1
FOREIGN PERFORMERS	144653	4	166515	4	155194	4
OTHER PERFORMERS	32728	1	31726	1	35769	1
TOTAL	3477348	100	3722454	100	3926733	100

TABLE 28-A

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY ACTIVITY AND PERFORMER,
1987-88

SCIENCE TYPE NATURAL
AND YEAR 1987-88

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
ACTIVITIES								
IN-HOUSE R&D	899218	.	.	.	.	.	.	899218
R&D CONTRACTS	1878	218856	22176	2068	353	7333	14263	266927
SUPPORTING CONTRACTS	57353	.	.	.	.	.	.	57353
R&D GRANTS	.	296357	459717	11085	18003	88023	10194	883379
RESEARCH FELLOWSHIPS	17077	2772	33184	263	13	9731	4	63044
ADMIN. EXTRAMURAL R&D	77651	.	.	.	.	.	.	77651
CAPITAL - R&D	170167	.	.	.	.	.	.	170167
SUB TOTAL R&D	1223344	517985	515077	13416	18369	105087	24461	2417739
DATA COLLECTION	461675	35205	3571	3861	3759	5283	3193	516547
INFORMATION SERVICES	169312	9035	3632	2976	220	17041	3603	205819
TESTING & STANDARDIZATION	33920	2968	427	1180	2	810	316	39623
FEASIBILITY STUDIES	11681	91784	645	542	5209	8492	1057	119410
MUSEUM SERVICES	23648	.	.	195	.	.	.	23843
EDUCATIONAL SUPPORT	.	1631	42488	2677	.	7940	98	54834
ADMIN. EXTRAMURAL RSA	17358	.	.	.	.	.	.	17358
CAPITAL - RSA	82175	.	.	.	.	.	.	82175
SUB TOTAL RSA	799769	140623	50763	11431	9190	39566	8267	1059609
TOTAL	2023113	658608	565840	24847	27559	144653	32728	3477348

TABLE 28-B

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY ACTIVITY AND PERFORMER,
1988-89

SCIENCE TYPE NATURAL
AND YEAR 1988-89

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
ACTIVITIES								
IN-HOUSE R&D	916343	.	.	.	.	.	.	916343
R&D CONTRACTS	1669	257232	28859	3933	808	5209	13961	311671
SUPPORTING CONTRACTS	60140	.	.	.	.	.	.	60140
R&D GRANTS	.	331249	497181	16072	31509	110362	7855	994228
RESEARCH FELLOWSHIPS	18522	2971	35978	300	13	10090	.	67874
ADMIN. EXTRAMURAL R&D	82346	.	.	.	.	.	.	82346
CAPITAL - R&D	169568	.	.	.	.	.	.	169568
SUB TOTAL R&D	1248589	591452	562018	20305	32330	125661	21816	2602171
DATA COLLECTION	472929	36629	4465	4133	4147	2508	3965	528776
INFORMATION SERVICES	170648	12577	4175	3299	345	17175	4523	212742
TESTING & STANDARDIZATION	41822	2837	445	1376	6	905	391	47782
FEASIBILITY STUDIES	11637	104657	835	632	2405	12225	932	133323
MUSEUM SERVICES	34365	.	.	.	.	.	.	34365
EDUCATIONAL SUPPORT	.	1761	44879	3012	.	8041	99	57792
ADMIN. EXTRAMURAL RSA	18008	.	.	.	.	.	.	18008
CAPITAL - RSA	87496	.	.	.	.	.	.	87496
SUB TOTAL RSA	836904	158461	54799	12452	6903	40854	9910	1120283
TOTAL	2085493	749913	616817	32757	39233	166515	31726	3722454

TABLE 28-C

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY ACTIVITY AND PERFORMER.
1989-90

SCIENCE TYPE NATURAL
AND YEAR 1989-90

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
ACTIVITIES								
IN-HOUSE R&D	951273	.	.	.	.	.	.	951273
R&D CONTRACTS	5026	294371	29877	4641	1034	5245	13063	353257
SUPPORTING CONTRACTS	61808	.	.	.	.	.	.	61808
R&D GRANTS	.	365964	530855	31035	15085	99942	11799	1054680
RESEARCH FELLOWSHIPS	19569	3182	35369	300	14	10829	.	69263
ADMIN. EXTRAMURAL R&D	85076	.	.	.	.	.	.	85076
CAPITAL - R&D	183991	.	.	.	.	.	.	183991
SUB TOTAL R&D	1306744	663517	596101	35976	16133	116016	24862	2759349
DATA COLLECTION	481579	41534	5778	4549	4533	2529	4535	545037
INFORMATION SERVICES	180295	16230	4095	3349	477	17371	5653	227470
TESTING & STANDARDIZATION	45170	2728	571	1406	7	1005	234	51121
FEASIBILITY STUDIES	11598	96150	894	417	1459	9207	387	120112
MUSEUM SERVICES	37003	.	.	.	.	.	.	37003
EDUCATIONAL SUPPORT	.	1828	48509	2615	.	9066	98	62117
ADMIN. EXTRAMURAL RSA	20029	.	.	.	.	.	.	20029
CAPITAL - RSA	104496	.	.	.	.	.	.	104496
SUB TOTAL RSA	880169	158471	59847	12336	6476	39178	10907	1167384
TOTAL	2186913	821988	655948	48312	22609	155194	35769	3926733

TABLE 29

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	6443	164	6607	6449	107	6556	6344	107	6451
	AGR-AFP	284076	8738	292814	299012	9571	308583	308710	7105	315815
	AGR-GOP	8941	2406	9347	8045	2407	10452	10068	2407	12475
	TOTAL	297459	11308	308767	313506	12085	325591	325121	9619	334740
AECB	AECB	1143	2676	3819	1332	3343	4875	1150	2572	3722
AECL	AECL	112486	26214	138700	96347	22453	118800	115649	26951	142600
CMHC	CMHC	3825	1483	5308	3458	1609	5067	3760	1609	5368
CIDA	CIDA	4678	172061	176739	4885	197347	202232	4934	185585	190519
COMM	COMM-CC	36085	25465	61550	37957	23667	61624	41831	18671	60502
CCA	CCA-COR	14933	.	14933	15912	.	15912	16950	.	16950
	TOTAL	14933	.	14933	15912	.	15912	16950	.	16950
EMR	EMR-ADM	13712	.	13712	13273	.	13273	14158	.	14158
	EMR-ENER	4191	35507	39698	2985	25518	28503	3207	19358	22565
	EMR-MES	265953	63658	329611	270213	71407	341620	261150	64116	325266
	TOTAL	283855	99165	383020	286471	96925	383396	278515	83474	361989
ENV	ENV-ADM	724	378	1102	748	370	1118	771	370	1141
	ENV-AES	243328	20045	263373	245929	20067	265996	256816	20922	277738
	ENV-C&P	95059	15280	110339	103658	16884	120542	117056	18582	135638
	ENV-PC	5286	523	5809	5649	549	6198	5960	578	6538
	TOTAL	344397	36226	380623	355984	37870	393854	380602	40452	421054
F&O	F&O-FM	190271	10401	200672	192622	15583	208205	218988	14363	233351
FOR	FOR	66228	11877	78105	63258	24705	87963	63899	12155	76054
IAND	IAND	983	3868	4851	1024	2894	3918	1068	3136	4204
IDRC	IDRC	16627	39009	55636	18900	44200	63100	20400	48000	68400
IJC	IJC	3341	228	3569	4679	112	4791	4271	564	4835
MRC	MRC	4658	170467	175125	5110	183860	188970	5296	197146	202442
NCC	NCC	495	75	570	544	193	737	375	193	568
NDEF	NDEF-SER	139537	107852	247389	144368	121133	265501	155977	135522	291499
NEB	NEB	339	.	339	349	.	349	414	.	414
NFB	NFB	1254	.	1254	1269	.	1269	1200	.	1200
NHW	NHW-HP	81577	2560	84137	96365	4096	100461	96508	4156	100664
	NHW-HSP	885	11043	11928	994	12629	13623	1066	14009	15075
	NHW-MS	2724	.	2724	3636	.	3636	3108	.	3108
	TOTAL	85186	13603	98789	100995	16725	117720	100682	18165	118847
NMC	NMC-NMNS	16497	196	16693	22053	220	22273	24140	235	24375
	NMC-NMST	15531	.	15531	21347	.	21347	22969	.	22969

(CONTINUED)

TABLE 29

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NMC	TOTAL	32028	196	32224	43400	220	43620	47109	235	47344
NRC	NRC-SIR	332285	149470	481755	341664	184784	526448	345209	203783	549992
NSERC	NSERC	13108	326258	339366	16388	349634	366022	16653	374492	391155
PW	PW-PTS	4243	1430	5673	4484	2629	7113	4771	3292	8063
RIE	RIE	21211	195722	216933	17181	215602	232783	17420	253107	270527
RCMP	RCMP	535	380	915	468	395	863	415	595	1010
ST	ST	527	11776	12303	597	15165	15762	456	30231	30687
SS	SS-SUPP	266	17361	17627	300	21850	22150	333	21850	22183
TPT	TPT-ADM	4665	11628	16293	5530	13764	19294	8027	16860	22887
	TPT-APT	272	528	800	451	970	1421	361	402	763
	TPT-AIR	4507	1426	5933	4596	1426	6022	4655	1426	6081
	TPT-MAR	1472	3974	5446	1266	7158	8424	1265	7088	8353
	TPT-SUR	214	853	1067	199	1208	1407	146	1065	1211
	TOTAL	11130	18409	29539	12042	24526	36568	12454	26841	39295
WDO	WDO	0	1255	1255	0	17452	17452	0	27217	27217
TOTAL	TOTAL	2023113	1454235	3477348	2085493	1636961	3722454	2186913	1739820	3926733

TABLE 30

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	.	6443	6443	.	6449	6449	.	6344	6344
	AGR-AFP	271745	12331	284076	281189	17823	299012	284420	24289	308710
	AGR-GOP	3905	3036	6941	4713	3332	8045	5978	4090	10068
	TOTAL	275650	21809	297459	285901	27604	313506	290399	34723	325121
AECB	AECB	1129	14	1143	1318	14	1332	1136	14	1150
AECL	AECL	104818	7668	112486	89745	6602	96347	107663	7986	115649
CMHC	CMHC	2635	1190	3825	2749	709	3458	2843	917	3760
CIDA	CIDA	689	3979	4678	730	4155	4885	721	4213	4934
COMM	COMM-CC	34681	1403	36085	35740	2217	37957	39649	2182	41831
CCA	CCA-COR	.	14933	14933	.	15912	15912	.	16950	16950
	TOTAL	.	14933	14933	.	15912	15912	.	16950	16950
EMR	EMR-ADM	.	13712	13712	.	13273	13273	.	14158	14158
	EMR-ENER	1170	3021	4191	1304	1681	2985	1351	1856	3207
	EMR-MES	80847	185106	265953	89772	180441	270213	86597	174553	261150
	TOTAL	82016	201839	283855	91076	195395	286471	87947	190567	278515
ENV	ENV-ADM	686	38	724	708	40	748	730	41	771
	ENV-AES	19725	223602	243328	25647	220282	245929	26373	230443	256816
	ENV-C&P	32692	62367	95059	35261	68397	103658	38994	78062	117056
	ENV-PC	.	5286	5286	.	5649	5649	.	5960	5960
	TOTAL	53104	291293	344397	61616	294368	355984	66096	314507	380602
F&O	F&O-FM	107891	82380	190271	106936	85687	192622	118997	99992	218988
FOR	FOR	58707	7520	66228	55431	7827	63258	56505	7394	63899
IAND	IAND	537	446	983	431	593	1024	446	622	1068
IDRC	IDRC	12857	3770	16627	14600	4300	18900	15800	4600	20400
IJC	IJC	.	3341	3341	.	4679	4679	.	4271	4271
MRC	MRC	4488	170	4658	4914	196	5110	5092	204	5296
NCC	NCC	.	495	495	.	544	544	.	375	375
NDEF	NDEF-SER	137830	1706	139537	142146	2222	144368	153741	2236	155977
NEB	NEB	.	339	339	.	349	349	.	414	414
NFB	NFB	968	286	1254	1059	210	1269	1000	200	1200
NHW	NHW-HP	19289	62288	81577	16945	79419	96365	16527	79981	96508
	NHW-HSP	522	363	885	586	407	994	629	437	1066
	NHW-MS	609	2115	2724	579	3057	3636	692	2416	3108
	TOTAL	20420	64767	85186	18111	82884	100995	17848	82834	100682
NMC	NMC-NMNS	2867	13630	16497	2793	19260	22053	3129	21011	24140
	NMC-NMST	.	15531	15531	.	21347	21347	.	22969	22969

(CONTINUED)

TABLE 30

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
NMC	TOTAL	2867	29161	32028	2793	40607	43400	3129	43980	47109
NRC	NRC-SIR	278936	53350	332285	290161	51504	341664	293544	52664	346209
NSERC	NSERC	11621	1486	13108	14530	1858	16388	14774	1889	16663
PW	PW-PTS	1174	3089	4243	1702	2782	4484	2038	2733	4771
RIE	RIE	20960	251	21211	16907	274	17181	16899	521	17420
RCMP	RCMP	535	-	535	468	-	468	415	-	415
ST	ST	527	-	527	597	-	597	456	-	456
SS	SS-SUPP	206	60	266	232	68	300	258	75	333
TPT	TPT-ADM	3808	857	4665	4560	970	5530	5243	784	6027
	TPT-APT	-	272	272	-	451	451	-	361	361
	TPT-AIR	2724	1783	4507	2755	1841	4596	2774	1881	4655
	TPT-MAR	1472	-	1472	1266	-	1266	1265	-	1265
	TPT-SUR	82	132	214	117	82	199	65	81	146
	TOTAL	8086	3044	11130	8698	3344	12042	9347	3107	12454
WDO	WDO	0	-	0	0	0	0	0	0	0
TOTAL	TOTAL	1223344	799769	2023113	1248589	836904	2085493	1306744	880169	2186913

TABLE 31

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	144	144	.	94	94	.	94	94	94
	AGR-AFP	1724	29	1753	2046	14	2060	1528	14	1542
	AGR-GOP	2000	.	2000	2000	.	2000	2000	.	2000
	TOTAL	3724	173	3897	4046	108	4154	3528	108	3636
AECB	AECB	1513	12	1525	1473	.	1473	1300	.	1300
AECL	AECL	23179	400	23579	20078	356	20434	24100	427	24527
CMHC	CMHC	741	488	1229	801	481	1282	801	481	1282
CIDA	CIDA	431	83272	83703	485	98422	98907	418	95230	95648
COMM	COMM-CC	16978	622	17600	13306	632	13938	10867	632	11499
EMR	EMR-ENER	10242	13134	23376	9536	9048	18584	9846	4126	13972
	EMR-MES	15044	11992	27036	13332	8803	22135	12960	13234	26194
	TOTAL	25286	25126	50412	22868	17851	40719	22806	17360	40166
ENV	ENV-ADM	176	.	176	190	.	190	200	.	200
	ENV-AES	1850	12861	14711	1924	13375	15299	2001	13910	15911
	ENV-C&P	4988	1541	6529	5519	1719	7238	6077	1893	7970
	ENV-PC	271	41	312	285	43	328	299	45	344
	TOTAL	7285	14443	21728	7918	15137	23055	8577	15848	24425
F&O	F&O-FM	4636	2865	7501	6617	5057	11674	7022	3499	10521
FOR	FOR	8154	108	8262	7946	140	8086	8487	339	8826
IAND	IAND	1439	417	1856	631	301	932	1008	264	1272
IDRC	IDRC	439	.	439	500	.	500	500	.	500
IJC	IJC	.	86	86	.	61	61	.	288	288
NCC	NCC	.	75	75	.	193	193	.	193	193
NDEF	NDEF-SER	93521	.	93521	104507	.	104507	117625	.	117625
NHW	NHW-HP	779	486	1265	1316	750	2066	1316	754	2070
	NHW-HSP	17	.	17	20	.	20	35	.	35
	TOTAL	796	486	1282	1336	750	2086	1351	754	2105
NMC	NMC-NMNS	.	65	65	.	70	70	.	70	70
	TOTAL	.	65	65	.	70	70	.	70	70
NRC	NRC-SIR	108448	228	108676	145072	236	145308	158053	244	158297
NSERC	NSERC	2772	1390	4162	2971	1489	4460	3182	1595	4777
PW	PW-PTS	971	227	1198	2000	560	2560	2500	725	3225
RIE	RIE	186729	5269	191998	203399	7770	211169	236558	11130	247688
RCMP	RCMP	182	.	182	169	.	169	380	.	380
ST	ST	2852	.	2852	3722	.	3722	7999	.	7999
SS	SS-SUPP	11571	3376	14947	14539	4170	18709	14500	4312	18812

(CONTINUED)

TABLE 31

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TPT-ADM	10314	557	10871	11149	960	12109	12710	1700	14410
	TPT-APT	.	512	512	.	970	970	.	402	402
	TPT-AIR	600	426	1026	600	426	1026	600	426	1026
	TPT-MAR	3757	.	3757	7158	.	7158	7088	.	7088
	TPT-SUR	540	.	540	745	.	745	700	.	700
	TOTAL	15211	1495	16706	19652	2356	22008	21098	2528	23626
WDO	WDO	1127	.	1127	7416	2321	9737	10857	2444	13301
TOTAL	TOTAL	517985	140623	658608	591452	158461	749913	663517	158471	821988

TABLE 32

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	4013	741	4754	4616	590	5206	3436	310	3746
	TOTAL	4013	741	4754	4616	590	5206	3436	310	3746
AECB	AECB	354	-	354	336	-	336	373	-	373
AECL	AECL	1387	-	1387	1188	-	1188	1426	-	1426
CMHC	CMHC	103	-	103	23	-	23	23	-	23
CIDA	CIDA	13182	8645	21827	14863	8513	23376	12795	9044	21839
COMM	COMM-CC	939	15	954	939	25	964	939	25	964
EMR	EMR-ENER	994	288	1282	963	277	1240	1182	358	1540
	EMR-MES	4114	212	4326	4179	718	4897	4138	1648	5787
	TOTAL	5108	500	5608	5142	995	6137	5321	2006	7327
ENV	ENV-ADM	69	-	69	44	-	44	75	-	75
	ENV-AES	1021	133	1154	1080	155	1235	1137	157	1294
	ENV-C&P	492	345	837	537	377	914	591	415	1006
	ENV-PC	77	5	82	81	5	86	85	6	91
	TOTAL	1659	483	2142	1742	537	2279	1888	578	2466
F&O	F&O-FM	1106	172	1278	2242	143	2385	2222	148	2370
FOR	FOR	1327	40	1367	1911	-	1911	1517	-	1517
IAND	IAND	712	20	732	607	-	607	589	10	599
IDRC	IDRC	4343	-	4343	4900	-	4900	5300	-	5300
IJC	IJC	-	-	-	-	35	35	-	25	25
MRC	MRC	157686	5408	163094	170154	6004	176158	182450	6438	188888
NDEF	NDEF-SER	8180	-	8180	12750	-	12750	13730	-	13730
NHW	NHW-HP	183	178	361	398	199	597	448	203	651
	NHW-HSP	3213	2610	5823	4000	2980	6980	4435	3305	7740
	TOTAL	3396	2788	6184	4398	3179	7577	4883	3508	8391
NRC	NRC-SIR	28159	79	28238	28796	82	28878	29629	85	29714
NSERC	NSERC	280518	30744	311262	300616	32947	333563	321990	35289	357279
PW	PW-PTS	-	3	3	25	-	25	25	-	25
RIE	RIE	20	687	707	80	999	1079	-	1431	1431
RCMP	RCMP	23	-	23	46	-	46	50	-	50
ST	ST	346	-	346	380	-	380	443	-	443
SS	SS-SUPP	1704	381	2085	2140	570	2710	2000	500	2500
TPT	TPT-ADM	286	41	327	249	180	429	350	450	800
	TPT-APT	-	16	16	-	-	-	-	-	-
	TPT-AIR	300	-	300	300	-	300	300	-	300
	TPT-MAR	16	-	16	-	-	-	-	-	-

(CONTINUED)

TABLE 32

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TPT-SUR	82	.	82	197	.	197	100	.	100
	TOTAL	684	57	741	746	180	926	750	450	1200
WDO	WDO	128	.	128	3378	.	3378	4322	.	4322
TOTAL	TOTAL	515077	50763	565840	562018	54799	616817	596101	59847	655948

TABLE 33

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR BY
DEPARTMENT AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	528	.	528	455	.	455	228	.	228
	AGR-GOP	400	.	400	400	.	400	400	.	400
	TOTAL	928	.	928	855	.	855	628	.	628
AECB	AECB	39	51	90	216	.	216	240	.	240
AECL	AECL	139	.	139	118	.	118	143	.	143
CMHC	CMHC	.	148	148	19	218	237	19	218	237
CIDA	CIDA	.	4586	4586	.	5105	5105	.	4708	4708
EMR	EMR-ENER	221	693	914	450	679	1129	532	447	979
	EMR-MES	3342	50	3392	3080	119	3199	2980	125	3105
	TOTAL	3563	743	4306	3530	798	4328	3512	572	4084
ENV	ENV-AES	.	20	20	.	20	20	.	20	20
	ENV-C&P	208	2730	2938	211	3019	3230	221	3325	3546
	ENV-PC	5	.	5	5	.	5	6	.	6
	TOTAL	213	2750	2963	216	3039	3255	227	3345	3572
F&O	F&O-FM	90	256	346	176	37	213	90	37	127
FOR	FOR	723	.	723	690	.	690	690	.	690
IAND	IAND	.	217	217	112	111	223	112	111	223
IDRC	IDRC	344	.	344	400	.	400	400	.	400
MRC	MRC	200	381	581	216	499	715	232	535	767
NDEF	NDEF-SER	248	.	248	772	.	772	770	.	770
NHW	NHW-HP	171	63	234	189	87	276	189	88	277
	NHW-HSP	2401	1872	4273	3100	2144	5244	3435	2379	5814
	TOTAL	2572	1935	4507	3289	2231	5520	3624	2467	6091
NMC	NMC-NMNS	.	37	37	.	50	50	.	50	50
	TOTAL	.	37	37	.	50	50	.	50	50
NRC	NRC-SIR	313	78	391	302	78	380	306	78	384
NSERC	NSERC	475	.	475	509	.	509	545	.	545
PW	PW-PTS	122	16	138	42	.	42	42	.	42
RIE	RIE	530	.	530	150	.	150	649	.	649
RCMP	RCMP	.	.	.	.	.	.	15	.	15
ST	ST	2778	.	2778	5013	.	5013	14288	.	14288
SS	SS-SUPP	.	25	25	.	.	.	.	.	.
TPT	TPT-ADM	96	3	99	380	20	400	750	50	800
	TPT-MAR	17	.	17	.	.	.	.	.	.
	TPT-SUR	26	205	231	.	266	266	100	165	265
	TOTAL	139	208	347	380	286	666	850	215	1065

(CONTINUED)

TABLE 33

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR BY
 DEPARTMENT AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN NP INST

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM				3300		3300	8594		8594
WDO	WDO									
TOTAL	TOTAL	13416	11431	24847	20305	12452	32757	35976	12336	48312

TABLE 34

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
 GOVERNMENT SECTOR, BY DEPARTMENT AND R&D/RSA ACTIVITY.
 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
 AND PERFORMER PROV. & MUN. GOV'T

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	146	14	160	165	6	171	110	6	116
	TOTAL	146	14	160	165	6	171	110	6	116
AECB	AECB	9	-	9	62	-	62	68	-	68
CMHC	CMHC	3	-	3	-	10	10	-	10	10
EMR	EMR-ENER	2499	4424	6923	1400	1620	3020	1139	674	1813
	EMR-MES	14361	-	14361	15276	30	15306	11825	30	11855
	TOTAL	16860	4424	21284	16676	1650	18326	12964	704	13668
ENV	ENV-ADM	4	-	4	4	-	4	-	-	-
	ENV-AES	-	412	412	-	412	412	-	428	428
	ENV-C&P	9	3240	3249	17	3589	3606	18	3954	3972
	ENV-PC	-	85	85	-	89	89	-	94	94
	TOTAL	13	3737	3750	21	4090	4111	18	4476	4494
FOR	FOR	564	-	564	13329	-	13329	602	-	602
IAND	IAND	185	785	970	185	785	970	185	785	970
MRC	MRC	78	-	78	83	-	83	89	-	89
NHW	NHW-HP	33	5	38	50	12	62	50	13	63
	NHW-HSP	275	3	278	380	5	385	415	5	420
	TOTAL	308	8	316	430	17	447	465	18	483
NRC	NRC-SIR	124	-	124	127	-	127	131	-	131
PW	PW-PTS	-	2	2	-	-	-	-	-	-
RIE	RIE	12	220	232	2	333	335	-	477	477
TPT	TPT-ADM	67	-	67	250	-	250	500	-	500
	TOTAL	67	-	67	250	-	250	500	-	500
WDO	WDO	-	-	-	1000	12	1012	1000	-	1000
TOTAL	TOTAL	18369	9190	27559	32330	6903	39233	16133	6476	22609

TABLE 35

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER FOREIGN PERFORMERS

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-ADM	.	20	20	.	13	13	.	13	13
	AGR-AFP	827	.	827	830	.	830	830	.	830
	AGR-GOP	.	6	6	.	7	7	.	7	7
	TOTAL	827	26	853	830	20	850	830	20	850
AECB	AECB	615	15	630	958	.	958	249	.	249
AECL	AECL	416	.	416	238	.	238	285	.	285
CIDA	CIDA	27285	26984	54269	30206	31098	61305	27226	28715	55941
COMM	COMM-CC	6682	.	6682	8543	.	8543	5986	.	5986
EMR	EMR-ENER	744	.	744	.	.	.	.	.	.
	EMR-MES	10851	2882	13733	24172	112	24284	15148	77	15225
	TOTAL	11595	2882	14477	24172	112	24284	15148	77	15225
ENV	ENV-ADM	1	.	1	9	.	9	.	.	.
	ENV-AES	62	1762	1824	64	1094	1158	67	1185	1252
	ENV-C&P	168	87	255	185	101	286	203	111	314
	ENV-PC	3	.	3	3	.	3	3	.	3
	TOTAL	234	1849	2083	261	1195	1456	273	1296	1569
F&O	F&O-FM	37	240	277	37	238	275	40	252	292
FOR	FOR	173	.	173	275	.	275	129	.	129
IAND	IAND	10	.	10	.	.	.	.	.	.
IDRC	IDRC	30395	3157	33552	34500	3500	38000	37600	3800	41400
IJC	IJC	.	107	107	.	14	14	.	50	50
MRC	MRC	6103	157	6260	6142	176	6318	6585	189	6774
NDEF	NDEF-SER	3984	.	3984	2828	.	2828	3172	.	3172
NHW	NHW-HP	196	125	321	303	210	513	303	210	513
	NHW-HSP	652	.	652	.	.	.	.	.	.
	TOTAL	848	125	973	303	210	513	303	210	513
NMC	NMC-NMNS	.	3	3	.	.	.	.	.	.
	TOTAL	.	3	3	.	.	.	.	.	.
NRC	NRC-SIR	6068	.	6068	5908	.	5908	7175	.	7175
NSERC	NSERC	2670	3980	6650	2861	4265	7126	3064	4569	7633
PW	PW-PTS	2	41	43	2	.	2	.	.	.
RIE	RIE	919	.	919	871	.	871	.	.	.
ST	ST	5800	.	5800	6050	.	6050	7501	.	7501
TPT	TPT-ADM	264	.	264	576	.	576	350	.	350
	TPT-AIR	100	.	100	100	.	100	100	.	100
	TPT-MAR	60	.	60	.	.	.	.	.	.

(CONTINUED)

TABLE 35

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TOTAL	424	.	424	676	.	676	450	.	450
WDO	WDO	.	.	.	.	25	25	.	.	.
TOTAL	TOTAL	105087	39566	144653	125661	40854	166515	116016	39178	155194

TABLE 36

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER OTHER PERFORMERS

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	699	17	716	849	.	849	643	.	643
	TOTAL	699	17	716	849	.	849	643	.	643
AECB	AECB	57	11	68	281	17	298	312	29	341
AECL	AECL	693	.	693	475	.	475	570	.	570
CMHC	CMHC	.	.	.	.	57	57	.	57	57
CIDA	CIDA	7241	435	7676	8164	490	8654	7028	421	7449
COMM	COMM-CC	229	.	229	222	.	222	222	.	222
EMR	EMR-ENER	1128	1140	2268	587	958	1545	716	338	1054
	EMR-MES	574	236	810	735	851	1586	653	1297	1950
	TOTAL	1702	1376	3078	1322	1809	3131	1369	1635	3004
ENV	ENV-ADM	128	.	128	123	.	123	95	.	95
	ENV-AES	225	1699	1924	234	1709	1943	243	1774	2017
	ENV-C&P	825	647	1472	906	704	1610	998	776	1774
	ENV-PC	36	.	36	38	.	38	40	.	40
	TOTAL	1214	2346	3560	1301	2413	3714	1376	2550	3926
F&O	F&O-FM	286	713	999	317	719	1036	319	734	1053
FOR	FOR	756	32	788	414	.	414	359	32	391
IAND	IAND	10	73	83	.	162	162	.	72	72
IDRC	IDRC	63	268	331	100	300	400	100	300	400
IJC	IJC	.	35	35	.	2	2	.	201	201
MRC	MRC	39	415	454	43	543	586	46	582	628
NDEF	NDEF-SER	1919	.	1919	276	.	276	225	.	225
NHW	NHW-HP	243	98	341	397	185	582	397	185	582
	TOTAL	243	98	341	397	185	582	397	185	582
NMC	NMC-NMNS	10	81	91	10	90	100	15	100	115
	TOTAL	10	81	91	10	90	100	15	100	115
NRC	NRC-SIR	5973	.	5973	4183	.	4183	8082	.	8082
NSERC	NSERC	2841	868	3709	3045	931	3976	3261	997	4258
PW	PW-PTS	.	46	46	.	.	.	.	.	.
RIE	RIE	.	1336	1336	.	1998	1998	.	2862	2862
RCMP	RCMP	175	.	175	180	.	180	150	.	150
SS	SS-SUPP	187	117	304	237	194	431	388	150	538
TPT	TPT-MAR	124	.	124	.	.	.	.	.	.
	TOTAL	124	.	124	.	.	.	.	.	.
TOTAL	TOTAL	24461	8267	32728	21816	9910	31726	24862	10907	35769

TABLE 37

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	.	6607	6607	.	6556	6556	.	6451	6451
	AGR-AFP	279682	13132	292814	290150	18433	308583	291195	24619	315815
	AGR-GOP	6305	3042	9347	7113	3339	10452	8378	4097	12475
	TOTAL	285987	22780	308767	297262	28328	325591	299574	35167	334740
AECB	AECB	3716	103	3819	4644	31	4675	3679	43	3722
AECL	AECL	130632	8068	138700	111842	6958	118800	134187	8413	142600
CMHC	CMHC	3482	1826	5308	3592	1475	5067	3686	1683	5369
CIDA	CIDA	48838	127901	176739	54448	147784	202232	48188	142331	190519
COMM	COMM-CC	59509	2040	61550	58750	2874	61624	57663	2839	60502
CCA	CCA-COR	.	14933	14933	.	15912	15912	.	16950	16950
	TOTAL	.	14933	14933	.	15912	15912	.	16950	16950
EMR	EMR-ADM	.	13712	13712	.	13273	13273	.	14158	14158
	EMR-ENER	16998	22700	39698	14240	14263	28503	14766	7799	22565
	EMR-MES	129133	200478	329611	150546	191074	341620	134302	190964	325266
	TOTAL	146130	236890	383020	164786	218610	383396	149067	212921	361989
ENV	ENV-ADM	1064	38	1102	1078	40	1118	1100	41	1141
	ENV-AES	22883	240489	263373	28949	237047	265996	29821	247917	277738
	ENV-C&P	39382	70957	110339	42636	77906	120542	47102	88536	135638
	ENV-PC	392	5417	5809	412	5786	6198	433	6105	6538
	TOTAL	63722	316901	380623	73075	320773	393854	78455	342600	421054
F&O	F&O-FM	114046	86626	200672	116325	91881	208205	128690	104662	233351
FOR	FOR	70404	7700	78105	79996	7967	87963	68289	7765	76054
IAND	IAND	2893	1958	4851	1966	1952	3918	2340	1864	4204
IDRC	IDRC	48441	7195	55636	55000	8100	63100	59700	8700	68400
IJC	IJC	.	3569	3569	.	4791	4791	.	4835	4835
MRC	MRC	168594	6531	175125	181552	7418	188970	194494	7948	202442
NCC	NCC	.	570	570	.	737	737	.	568	568
NDEF	NDEF-SER	245682	1706	247389	263279	2222	265501	289263	2236	291499
NEB	NEB	.	339	339	.	349	349	.	414	414
NFB	NFB	968	286	1254	1059	210	1269	1000	200	1200
NHW	NHW-HP	20894	63243	84137	19598	80862	100461	19230	81434	100664
	NHW-HSP	7080	4848	11928	8086	5536	13623	8949	6126	15075
	NHW-MS	609	2115	2724	579	3057	3636	692	2416	3108
	TOTAL	28583	70207	98789	28264	89456	117720	28871	89976	118847
NMC	NMC-NMNS	2877	13816	16693	2803	19470	22273	3144	21231	24375
	NMC-NMST	.	15531	15531	.	21347	21347	.	22969	22969

(CONTINUED)

TABLE 37

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NMC	TOTAL	2877	29347	32224	2803	40817	43620	3144	44200	47344
NRC	NRC-SIR	428021	53735	481755	474549	51900	526448	496920	53071	549992
NSERC	NSERC	300897	38468	339366	324532	41490	366022	346816	44339	391155
PW	PW-PTS	2268	3404	5673	3771	3342	7113	4605	3458	8063
RIE	RIE	209170	7763	216933	221409	11374	232783	254106	16421	270527
RCMP	RCMP	915	.	915	863	.	863	1010	.	1010
ST	ST	12303	.	12303	15782	.	15762	30887	.	30687
SS	SS-SUPP	13668	3959	17627	17148	5002	22150	17146	5037	22183
TPT	TPT-ADM	14835	1458	16293	17184	2130	19294	19903	2984	22887
	TPT-APT	.	800	800	.	1421	1421	.	763	763
	TPT-AIR	3724	2209	5933	3755	2267	6022	3774	2307	6081
	TPT-MAR	5446	.	5446	8424	.	8424	8353	.	8353
	TPT-SUR	730	337	1067	1059	348	1407	965	246	1211
	TOTAL	24735	4804	29539	30402	6166	36568	32995	6300	39295
WDO	WDO	1255	.	1255	15094	2358	17452	24773	2444	27217
TOTAL	TOTAL	2417739	1059609	3477348	2602171	1120283	3722454	2759349	1167384	3926733

TABLE 38

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	1223344	51	1248589	48	1306744	47
CANADIAN INDUSTRY	517985	21	591452	23	663517	24
CANADIAN UNIVERSITY	515077	21	562018	22	596101	22
CANADIAN NP INST	13416	1	20305	1	35976	1
PROV. & MUN. GOV'T	18369	1	32330	1	16133	1
FOREIGN PERFORMERS	105087	4	125661	5	116016	4
OTHER PERFORMERS	24461	1	21816	1	24862	1
TOTAL	2417739	100	2602171	100	2759349	100

TABLE 39

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
DEPARTMENT	PROGRAM										
AGR	AGR-AFP	271745	7937	279682	281189	8961	290150	284420	6775	291195	
	AGR-GOP	3905	2400	6305	4713	2400	7113	5978	2400	8378	
	TOTAL	275650	10337	285987	285901	11361	297262	290399	9175	299574	
AECB	AECB	1129	2587	3716	1318	3326	4644	1136	2543	3679	
AECL	AECL	104818	25814	130632	89745	22097	111842	107663	26524	134187	
CMHC	CMHC	2635	847	3482	2749	843	3592	2843	843	3686	
CIDA	CIDA	699	48139	48838	730	53718	54448	721	47457	48188	
COMM	COMM-CC	34681	24828	59509	35740	23010	58750	39649	18014	57663	
EMR	EMR-ENER	1170	15828	16998	1304	12936	14240	1351	13415	14766	
	EMR-MES	80847	48286	129133	89772	60774	150546	86597	47705	134302	
	TOTAL	82016	64114	146130	91076	73710	164786	87947	61120	149067	
ENV	ENV-ADM	686	378	1064	708	370	1078	730	370	1100	
	ENV-AES	19725	3158	22883	25647	3302	28949	26373	3448	29821	
	ENV-C&P	32692	6690	39382	35261	7375	42636	38994	8108	47102	
	ENV-PC	.	392	392	.	412	412	.	433	433	
	TOTAL	53104	10618	63722	61616	11459	73075	66096	12359	78455	
F&O	F&O-FM	107891	6155	114046	106936	9389	116325	118997	9693	128690	
FOR	FOR	58707	11697	70404	55431	24565	79996	56505	11784	68289	
IAND	IAND	537	2356	2893	431	1535	1966	446	1894	2340	
IDRC	IDRC	12857	35584	48441	14600	40400	55000	15800	43900	59700	
MRC	MRC	4488	164106	168594	4914	176638	181552	5092	189402	194494	
NDEF	NDEF-SER	137830	107852	245682	142146	121133	263279	153741	135522	289263	
NFB	NFB	968	.	968	1059	.	1059	1000	.	1000	
NHW	NHW-HP	19289	1605	20894	16945	2653	19598	16527	2703	19230	
	NHW-HSP	522	6558	7080	586	7500	8086	629	8320	8949	
	NHW-MS	609	.	609	579	.	579	692	.	692	
	TOTAL	20420	8163	28583	18111	10153	28264	17848	11023	28871	
NMC	NMC-NMNS	2867	10	2877	2793	10	2803	3129	15	3144	
	TOTAL	2867	10	2877	2793	10	2803	3129	15	3144	
NRC	NRC-SIR	278936	149085	428021	290161	184388	474549	293544	203376	496920	
NSERC	NSERC	11621	289276	300897	14530	310002	324532	14774	332042	346816	
PW	PW-PTS	1174	1095	2269	1702	2069	3771	2038	2567	4605	
RIE	RIE	20960	188210	209170	16907	204502	221409	16899	237207	254106	
RCMP	RCMP	535	380	915	468	395	863	415	595	1010	
ST	ST	527	11776	12303	597	15165	15762	456	30231	30687	
SS	SS-SUPP	206	13462	13668	232	16916	17148	258	16888	17146	

(CONTINUED)

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

TABLE 39
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
TPT	TPT-ADM	3808	11027	14835	4560	12604	17164	5243	14660	19903
	TPT-AIR	2724	1000	3724	2755	1000	3755	2774	1000	3774
	TPT-MAR	1472	3974	5446	1266	7158	8424	1265	7088	8353
	TPT-SUR	82	648	730	117	942	1059	65	900	965
	TOTAL	8086	16649	24735	8698	21704	30402	9347	23648	32995
WDO	WDO	0	1255	1255	0	15094	15094	0	24773	24773
TOTAL	TOTAL	1223344	1194395	2417739	1248589	1353582	2602171	1306744	1452605	2759349

TABLE 40

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR									
		1987-88			1988-89			1989-90			
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE			
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	
DEPARTMENT	PROGRAM	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	
AGR	AGR-AFP	923	351	270471	913	505	279771	968	456	282997	
	AGR-GOP	.	.	3905	.	.	4713	.	.	5978	
	TOTAL	923	351	274376	913	505	284484	968	456	288975	
AECB	AECB	.	.	1129	.	.	1318	.	.	1136	
AECL	AECL	416	.	104402	356	.	89389	428	.	107235	
CMHC	CMHC	.	.	2635	.	.	2749	.	.	2843	
CIDA	CIDA	.	.	699	.	.	730	.	.	721	
COMM	COMM-CC	.	.	34681	.	.	35740	.	.	39649	
EMR	EMR-ENER	.	326	844	.	339	965	.	339	1012	
	EMR-MES	.	39	80807	.	566	89207	.	3952	82645	
	TOTAL	.	365	81651	.	904	90172	.	4291	83657	
ENV	ENV-ADM	.	.	686	.	.	708	.	.	730	
	ENV-AES	174	.	19551	319	.	25328	330	.	26042	
	ENV-C&P	89	.	32603	88	.	35172	91	.	38903	
	TOTAL	264	.	52840	407	.	61208	421	.	65675	
F&O	F&O-FM	640	.	107251	640	.	106296	640	.	118356	
FOR	FOR	220	.	58488	153	34	55244	146	.	56359	
IAND	IAND	.	.	537	.	.	431	.	.	446	
IDRC	IDRC	.	.	12857	.	.	14600	.	.	15800	
MRC	MRC	.	.	4488	.	.	4914	.	.	5092	
NDEF	NDEF-SER	.	.	137830	.	.	142146	.	.	153741	
NFB	NFB	.	.	968	.	.	1059	.	.	1000	
NHW	NHW-HP	108	872	18309	185	.	16761	184	.	16343	
	NHW-HSP	.	.	522	.	.	586	.	.	629	
	NHW-MS	.	.	609	.	.	579	.	.	692	
	TOTAL	108	872	19440	185	.	17926	184	.	17664	
NMC	NMC-NMNS	.	.	2867	.	-	2793	.	.	3129	
	TOTAL	.	.	2867	.	-	2793	.	.	3129	
NRC	NRC-SIR	14506	.	264430	15868	.	274292	16781	.	276763	
NSERC	NSERC	.	.	11621	.	.	14530	.	.	14774	
PW	PW-PTS	.	.	1174	.	.	1702	.	.	2038	
RIE	RIE	.	.	20960	.	.	16907	.	.	16699	
RCMP	RCMP	.	.	535	.	.	468	.	.	415	
ST	ST	.	.	527	.	.	597	.	.	456	
SS	SS-SUPP	.	.	206	.	.	232	.	.	258	
TPT	TPT-ADM	.	208	3600	.	227	4334	.	280	4964	

(CONTINUED)

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

TABLE 40

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TPT-AIR	.	.	2724	.	.	2755	.	.	2774
	TPT-MAR	.	.	1472	.	.	1266	.	.	1265
	TPT-SUR	.	82	.	.	.	117	.	.	65
	TOTAL	.	290	7796	.	227	8471	.	280	9067
WDO	WDO	.	.	0	.	.	0	.	.	0
TOTAL	TOTAL	17077	1878	1204389	18522	1669	1228397	19569	5026	1282149

TABLE 41

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	708	1016	607	1439	304	1224
	AGR-GOP	2000	.	2000	.	2000	.
	TOTAL	2708	1016	2607	1439	2304	1224
AECB	AECB	.	1513	.	1473	.	1300
AECL	AECL	.	23179	.	20078	.	24100
CMHC	CMHC	20	721	.	801	.	801
CIDA	CIDA	.	431	.	485	.	418
COMM	COMM-CC	15353	1625	11641	1665	9202	1665
EMR	EMR-ENER	8291	1951	6503	3033	5290	4556
	EMR-MES	3317	11727	2516	10816	1738	11222
	TOTAL	11608	13678	9019	13849	7028	15778
ENV	ENV-ADM	.	176	.	190	.	200
	ENV-AES	.	1850	.	1924	.	2001
	ENV-C&P	.	4988	.	5519	.	6077
	ENV-PC	.	271	.	285	.	299
	TOTAL	.	7285	.	7918	.	8577
F&O	F&O-FM	.	4636	.	6617	.	7022
FOR	FOR	7394	760	7392	554	7273	1214
IAND	IAND	.	1439	.	631	.	1008
IDRC	IDRC	439	.	500	.	500	.
NDEF	NDEF-SER	.	93521	1500	103007	8000	109625
NHW	NHW-HP	.	779	.	1316	.	1316
	NHW-HSP	17	.	20	.	35	.
	TOTAL	17	779	20	1316	35	1316
NRC	NRC-SIR	68106	40342	84029	61043	76208	81845
NSERC	NSERC	2772	.	2971	.	3182	.
PW	PW-PTS	.	971	.	2000	.	2500
RIE	RIE	186729	.	203399	.	236558	.
RCMP.	RCMP	.	182	.	169	.	380
ST	ST	2852	.	3722	.	7999	.
SS	SS-SUPP	.	11571	.	14539	.	14500
TPT	TPT-ADM	.	10314	.	11149	.	12710
	TPT-AIR	.	600	.	600	.	600
	TPT-MAR	.	3757	.	7158	.	7088
	TPT-SUR	4	536	4	741	.	700
	TOTAL	4	15207	4	19648	.	21098

(CONTINUED)

TABLE 41

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
WDO	WDO	1127		7416		10857	
TOTAL	TOTAL	299129	218856	334220	257232	369146	294371

TABLE 42

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	2883	1130	2639	1977	1819	1617
	TOTAL	2883	1130	2639	1977	1819	1617
AECB	AECB	.	354	.	336	.	373
AECL	AECL	.	1387	.	1188	.	1426
CMHC	CMHC	1	102	.	23	.	23
CIDA	CIDA	13182	.	14863	.	12795	.
COMM	COMM-CC	624	315	606	333	606	333
EMR	EMR-ENER	392	602	413	550	334	848
	EMR-MES	1549	2565	1649	2530	1669	2470
	TOTAL	1941	3167	2062	3080	2003	3318
ENV	ENV-ADM	.	69	.	44	.	75
	ENV-AES	611	410	654	426	694	443
	ENV-C&P	.	492	.	537	.	591
	ENV-PC	.	77	.	81	.	85
	TOTAL	611	1048	654	1088	694	1194
F&O	F&O-FM	393	713	628	1614	590	1632
FOR	FOR	498	829	1123	788	940	577
IAND	IAND	524	188	524	83	524	65
IDRC	IDRC	4343	.	4900	.	5300	.
MRC	MRC	157686	.	170154	.	182450	.
NDEF	NDEF-SER	.	8180	.	12750	.	13730
NHW	NHW-HP	.	183	.	398	.	448
	NHW-HSP	3213	.	4000	.	4435	.
	TOTAL	3213	183	4000	398	4435	448
NRC	NRC-SIR	25950	2209	26510	2286	27263	2366
NSERC	NSERC	280518	.	300616	.	321990	.
PW	PW-PTS	.	.	.	25	.	25
RIE	RIE	20	.	80	.	.	.
RCMP	RCMP	.	23	.	46	.	50
ST	ST	346	.	380	.	443	.
SS	SS-SUPP	.	1704	.	2140	.	2000
TPT	TPT-ADM	.	286	.	249	.	350
	TPT-AIR	.	300	.	300	.	300
	TPT-MAR	.	16	.	.	.	.
	TPT-SUR	40	42	42	155	50	50
	TOTAL	40	644	42	704	50	700

(CONTINUED)

TABLE 42

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
 IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
 AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
WDO	WDO	128	.	3378	.	4322	.
TOTAL	TOTAL	492901	22176	533159	28859	565224	29877

TABLE 43

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR
BY DEPARTMENT AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN NP INST

DEPARTMENT	PROGRAM	YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	528	.	455	.	228	.
	AGR-GOP	400	.	400	.	400	.
	TOTAL	928	.	855	.	628	.
AECB	AECB	.	39	.	216	.	240
AECL	AECL	.	139	.	118	.	143
CMHC	CMHC	.	.	.	19	.	19
EMR	EMR-ENER	221	.	250	200	221	311
	EMR-MES	2752	590	1820	1260	1870	1310
	TOTAL	2973	590	2070	1460	1891	1621
ENV	ENV-C&P	110	98	110	101	110	111
	ENV-PC	.	5	.	5	.	6
	TOTAL	110	103	110	106	110	117
F&O	F&O-FM	.	90	86	90	.	90
FOR	FOR	211	512	200	490	200	490
IAND	IAND	.	.	112	.	112	.
IDRC	IDRC	344	.	400	.	400	.
MRC	MRC	200	.	216	.	232	.
NDEF	NDEF-SER	.	248	.	772	.	770
NHW	NHW-HP	65	106	15	174	15	174
	NHW-HSP	2401	.	3100	.	3435	.
	TOTAL	2466	106	3115	174	3450	174
NRC	NRC-SIR	209	104	194	108	194	112
NSERC	NSERC	475	.	509	.	545	.
PW	PW-PTS	122	.	42	.	42	.
RIE	RIE	530	.	150	.	649	.
RCMP	RCMP	.	.	.	.	.	15
ST	ST	2778	.	5013	.	14288	.
TPT	TPT-ADM	.	96	.	380	.	750
	TPT-MAR	.	17	.	.	.	.
	TPT-SUR	2	24	.	.	.	100
	TOTAL	2	137	.	380	.	850
WDO	WDO	.	.	3300	.	8594	.
TOTAL	TOTAL	11348	2068	16372	3933	31335	4641

TABLE 44

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
GOVERNMENT SECTOR BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER PROV. & MUN. GOVT

DEPARTMENT	PROGRAM	YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	99	47	91	74	46	64
	TOTAL	99	47	91	74	46	64
AECB	AECB	.	9	.	62	.	69
CMHC	CMHC	.	3	.	.	.	.
EMR	EMR-ENER	2499	.	1400	.	1139	.
	EMR-MES	14361	.	15276	.	11825	.
	TOTAL	16860	.	16676	.	12964	.
ENV	ENV-ADM	.	4	.	4	.	.
	ENV-C&P	.	9	.	17	.	18
	TOTAL	.	13	.	21	.	18
FOR	FOR	507	57	13105	224	400	202
IAND	IAND	185	.	185	.	185	.
MRC	MRC	78	.	83	.	89	.
NHW	NHW-HP	.	33	.	50	.	50
	NHW-HSP	275	.	380	.	415	.
	TOTAL	275	33	380	50	415	50
NRC	NRC-SIR	.	124	.	127	.	131
RIE	RIE	12	.	2	.	.	.
TPT	TPT-ADM	.	67	.	250	.	500
	TOTAL	.	67	.	250	.	500
WDO	WDO	.	.	1000	.	1000	.
TOTAL	TOTAL	18016	353	31522	808	15099	1034

TABLE 45

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	827	.	830	.	830	.
	TOTAL	827	.	830	.	830	.
AECB	AECB	455	160	734	224	.	249
AECL	AECL	.	416	.	238	.	285
CIDA	CIDA	27285	.	30206	.	27226	.
COMM	COMM-CC	6652	30	8543	.	5986	.
EMR	EMR-ENER	744	.	.	.	.	.
	EMR-MES	10189	662	23944	228	14948	200
	TOTAL	10933	662	23944	228	14948	200
ENV	ENV-ADM	.	1	.	9	.	.
	ENV-AES	.	62	.	64	.	67
	ENV-C&P	.	168	.	185	.	203
	ENV-PC	.	3	.	3	.	3
	TOTAL	.	234	.	261	.	273
F&O	F&O-FM	.	37	.	37	.	40
FOR	FOR	33	140	135	140	129	.
IAND	IAND	.	10	.	.	.	.
IDRC	IDRC	30395	.	34500	.	37600	.
MRC	MRC	6103	.	6142	.	6585	.
NDEF	NDEF-SER	.	3984	.	2828	.	3172
NHW	NHW-HP	55	141	55	248	55	248
	NHW-HSP	652	.	.	.	.	.
	TOTAL	707	141	55	248	55	248
NRC	NRC-SIR	4975	1093	5581	327	6847	328
NSERC	NSERC	2670	.	2861	.	3064	.
PW	PW-PTS	.	2	.	2	.	.
RIE	RIE	919	.	871	.	.	.
ST	ST	5800	.	6050	.	7501	.
TPT	TPT-ADM	.	264	.	576	.	350
	TPT-AIR	.	100	.	100	.	100
	TPT-MAR	.	60	.	.	.	.
	TOTAL	.	424	.	676	.	450
TOTAL	TOTAL	97754	7333	120452	5209	110771	5245

TABLE 46

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	357	342	320	529	198	445
	TOTAL	357	342	320	529	138	445
AECB	AECB	.	57	.	281	.	312
AECL	AECL	.	693	.	475	.	570
CIDA	CIDA	.	7241	.	8164	.	7028
COMM	COMM-CC	31	198	.	222	.	222
EMR	EMR-ENER	650	478	283	304	235	481
	EMR-MES	46	528	.	735	.	653
	TOTAL	696	1006	283	1039	235	1134
ENV	ENV-ADM	.	128	.	123	.	95
	ENV-AES	.	225	.	234	.	243
	ENV-C&P	.	825	.	906	.	998
	ENV-PC	.	36	.	38	.	40
	TOTAL	.	1214	.	1301	.	1376
F&O	F&O-FM	.	286	.	317	.	319
FOR	FOR	221	535	.	414	.	359
IAND	IAND	.	10	.	.	.	.
IDRC	IDRC	63	.	100	.	100	.
MRC	MRC	38	.	43	.	46	.
NDEF	NDEF-SER	.	1919	.	276	.	225
NHW	NHW-HP	.	243	.	397	.	397
	TOTAL	.	243	.	397	.	397
NMC	NMC-NMNS	.	10	.	10	.	15
	TOTAL	.	10	.	10	.	15
NRC	NRC-SIR	5950	23	4064	119	7959	123
NSERC	NSERC	2841	.	3045	.	3261	.
RCMP	RCMP	.	175	.	180	.	150
SS	SS-SUPP	.	187	.	237	.	388
TPT	TPT-MAR	.	124	.	.	.	.
	TOTAL	.	124	.	.	.	.
TOTAL	TOTAL	10198	14263	7855	13961	11799	13063

TABLE 47

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	6325	2886	270471	5855	4524	279771	4393	3806	282997
	AGR-GOP	2400	.	3905	2400	.	4713	2400	.	5978
	TOTAL	8725	2886	274376	8255	4524	284484	6793	3806	288975
AECB	AECB	455	2132	1129	734	2592	1318	.	2543	1136
AECL	AECL	416	25814	104402	356	22097	89389	428	26524	107235
CMHC	CMHC	21	826	2635	.	843	2749	.	843	2843
CIDA	CIDA	40467	7672	699	45069	8649	730	40021	7446	721
COMM	COMM-CC	22660	2168	34681	20790	2220	35740	15794	2220	39649
EMR	EMR-ENER	12797	3357	844	8849	4426	965	7219	6535	1012
	EMR-MES	32214	16111	80807	45205	16135	89207	31850	19807	82645
	TOTAL	45011	19468	81651	54054	20560	90172	39069	26342	83657
ENV	ENV-ADM	.	378	686	.	370	708	.	370	730
	ENV-AES	785	2547	19551	973	2648	25328	1024	2754	26042
	ENV-C&P	199	6580	32603	198	7265	35172	201	7998	38903
	ENV-PC	.	392	.	.	412	.	.	433	.
	TOTAL	985	9897	52840	1171	10695	61208	1225	11555	65675
F&O	F&O-FM	1033	5762	107251	1354	8675	106296	1230	9103	118356
FOR	FOR	9084	2833	58488	22108	2644	55244	9088	2842	56359
IAND	IAND	709	1647	537	821	714	431	821	1073	446
IDRC	IDRC	35584	.	12857	40400	.	14600	43900	.	15800
MRC	MRC	164106	.	4488	176638	.	4914	189402	.	5092
NDEF	NDEF-SER	.	107852	137830	1500	119633	142146	8000	127522	153741
NFB	NFB	.	.	968	.	.	1059	.	.	1000
NHW	NHW-HP	228	2357	18309	255	2583	16761	254	2633	16343
	NHW-HSP	6558	.	522	7500	.	586	8320	.	629
	NHW-MS	.	.	609	.	.	579	.	.	692
	TOTAL	6786	2357	19440	7755	2583	17926	8574	2633	17664
NMC	NMC-NMNS	.	10	2867	.	10	2793	.	15	3129
	TOTAL	.	10	2867	.	10	2793	.	15	3129
NRC	NRC-SIR	119696	43895	264430	136246	64010	274292	135252	84905	276763
NSERC	NSERC	289276	.	11621	310002	.	14530	332042	.	14774
PW	PW-PTS	122	973	1174	42	2027	1702	42	2525	2038
RIE	RIE	188210	.	20960	204502	.	16907	237207	.	16899
RCMP	RCMP	.	380	535	.	395	468	.	595	415
ST	ST	11776	.	527	15165	.	597	30231	.	456
SS	SS-SUPP	.	13462	206	.	16916	232	.	16888	258

(CONTINUED)

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

TABLE 47

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TPT-ADM	.	11235	3600	.	12831	4334	.	14940	4964
	TPT-AIR	.	1000	2724	.	1000	2755	.	1000	2774
	TPT-MAR	.	3974	1472	.	7158	1266	.	7088	1265
	TPT-SUR	46	684	.	46	896	117	50	850	65
	TOTAL	46	16893	7796	46	21885	8471	50	23878	9067
WDO	WDO	1255	.	0	15094	.	0	24773	.	0
TOTAL	TOTAL	946423	266927	1204389	1062102	311671	1228397	1123943	353257	1282149

TABLE 48

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	799769	75	836904	75	880169	75
CANADIAN INDUSTRY	140623	13	158461	14	158471	14
CANADIAN UNIVERSITY	50763	5	54799	5	59847	5
CANADIAN NP INST	11431	1	12452	1	12336	1
PROV. & MUN. GOV'T	9190	1	6903	1	6476	1
FOREIGN PERFORMERS	39566	4	40854	4	39178	3
OTHER PERFORMERS	8267	1	9910	1	10907	1
TOTAL	1059609	100	1120283	100	1167384	100

TABLE 49

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-ADM	6443	164	6607	6449	107	6556	6344	107	6451
	AGR-AFP	12331	801	13132	17823	610	18433	24289	330	24619
	AGR-GOP	3036	6	3042	3332	7	3339	4090	7	4097
	TOTAL	21809	971	22780	27604	724	28328	34723	444	35167
AECB	AECB	14	89	103	14	17	31	14	29	43
AECL	AECL	7668	400	8068	6602	356	6958	7986	427	8413
CMHC	CMHC	1190	636	1826	709	766	1475	917	766	1683
CIDA	CIDA	3979	123922	127901	4155	143629	147784	4213	138118	142331
COMM	COMM-CC	1403	637	2040	2217	657	2874	2182	657	2839
CCA	CCA-COR	14933	-	14933	15912	-	15912	16950	-	16950
	TOTAL	14933	-	14933	15912	-	15912	16950	-	16950
EMR	EMR-ADM	13712	-	13712	13273	-	13273	14158	-	14158
	EMR-ENER	3021	19679	22700	1681	12582	14263	1856	5943	7793
	EMR-MES	185106	15372	200478	180441	10633	191074	174553	16411	190964
	TOTAL	201839	35051	236890	195395	23215	218610	190567	22354	212921
ENV	ENV-ADM	38	-	38	40	-	40	41	-	41
	ENV-AES	223602	16887	240489	220282	16765	237047	230443	17474	247917
	ENV-C&P	62367	8590	70957	68397	9509	77906	78062	10474	88536
	ENV-PC	5286	131	5417	5649	137	5786	5960	145	6105
	TOTAL	291293	25608	316901	294368	26411	320779	314507	28093	342600
F&O	F&O-FM	82380	4246	86626	85687	6194	91881	99992	4670	104662
FOR	FOR	7520	180	7700	7827	140	7967	7394	371	7765
IAND	IAND	446	1512	1958	593	1359	1952	622	1242	1864
IDRC	IDRC	3770	3425	7195	4300	3800	8100	4600	4100	8700
IJC	IJC	3341	228	3569	4679	112	4791	4271	564	4835
MRC	MRC	170	6361	6531	196	7222	7418	204	7744	7948
NCC	NCC	495	75	570	544	193	737	375	193	568
NOEF	NDEF-SER	1706	-	1706	2222	-	2222	2236	-	2236
NEB	NEB	339	-	339	349	-	349	414	-	414
NFB	NFB	286	-	286	210	-	210	200	-	200
NHW	NHW-HP	62288	955	63243	79419	1443	80862	79981	1453	81434
	NHW-HSP	363	4485	4848	407	5129	5536	437	5689	6126
	NHW-MS	2115	-	2115	3057	-	3057	2416	-	2416
	TOTAL	64767	5440	70207	82884	6572	89456	82834	7142	89976
NMC	NMC-NMNS	13630	186	13816	19260	210	19470	21011	220	21231
	NMC-NMST	15531	-	15531	21347	-	21347	22969	-	22969

(CONTINUED)

TABLE 49

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
NMC	TOTAL	29161	186	29347	40607	210	40817	43980	220	44200	
NRC	NRC-SIR	53350	385	53735	51504	396	51900	52664	407	53071	
NSERC	NSERC	1486	36982	38468	1858	39632	41490	1889	42450	44339	
PW	PW-PTS	3069	335	3404	2782	560	3342	2733	725	3458	
RIE	RIE	251	7512	7763	274	11100	11374	521	15900	16421	
SS	SS-SUPP	60	3899	3959	68	4934	5002	75	4962	5037	
TPT	TPT-ADM	857	601	1458	970	1160	2130	784	2200	2984	
	TPT-APT	272	528	800	451	970	1421	361	402	763	
	TPT-AIR	1783	426	2209	1841	426	2267	1881	426	2307	
	TPT-SUR	132	205	337	82	266	348	81	165	246	
	TOTAL	3044	1780	4804	3344	2822	6166	3107	3193	6300	
WDO	WDO	.	.	.	0	2358	2358	0	2444	2444	
TOTAL	TOTAL	799769	259840	1059609	836904	283379	1120283	880169	287215	1167384	

TABLE 50

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE NATURAL SCIENCES BY ACTIVITY AND CATEGORY,
1987-88 TO 1989-90

SCIENCE TYPE NATURAL
AND YEAR 1987-88

	CATEGORY							TOTAL
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	193	5123	644	4377	1539	2643	158	14678
INTRAMURAL RSA	193	2790	737	2756	1675	473	-	8624
ADMIN. OF EXTRAMURAL PROGRAMS	42	281	326	40	334	11	10	1044
TOTAL	428	8195	1707	7174	3548	3127	168	24346

SCIENCE TYPE NATURAL
AND YEAR 1988-89

	CATEGORY							TOTAL
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	202	5289	703	4372	1548	2465	165	14743
INTRAMURAL RSA	199	2888	812	2682	1678	510	-	8770
ADMIN. OF EXTRAMURAL PROGRAMS	45	292	337	39	345	11	10	1078
TOTAL	446	8470	1852	7092	3570	2986	175	24591

SCIENCE TYPE NATURAL
AND YEAR 1989-90

	CATEGORY							TOTAL
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	200	5410	726	4406	1560	2375	163	14840
INTRAMURAL RSA	202	2910	801	2654	1686	503	-	8757
ADMIN. OF EXTRAMURAL PROGRAMS	43	284	345	43	337	11	10	1073
TOTAL	445	8605	1873	7102	3584	2889	173	24670

TABLE 51-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1987-88

SCIENCE TYPE NATURAL
AND YEAR 1987-88

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
AGR	AGR-ADM	1	37	2	5	43	-	-	88	
	AGR-AFP	49	930	101	989	328	1367	-	3764	
	AGR-GOP	1	26	4	68	13	2	-	114	
	TOTAL	51	993	107	1062	384	1369	-	3966	
AECB	AECB	-	13	-	-	1	-	-	14	
AECL	AECL	19	769	-	914	310	550	-	2562	
CMHC	CMHC	1	27	-	2	15	-	-	45	
CIDA	CIDA	10	7	37	-	26	-	-	80	
COMM	COMM-CC	15	157	30	145	44	-	-	391	
CCA	CCA-COR	7	127	21	1	101	-	-	257	
	TOTAL	7	127	21	1	101	-	-	257	
EMR	EMR-ADM	2	-	61	3	22	-	-	88	
	EMR-ENER	2	27	8	-	8	-	-	45	
	EMR-MES	72	1099	117	742	361	139	-	2530	
	TOTAL	76	1126	186	745	391	139	-	2662	
ENV	ENV-ADM	1	2	5	-	1	-	-	9	
	ENV-AES	65	658	282	1070	342	19	-	2436	
	ENV-C&P	10	354	143	298	275	80	-	1160	
	ENV-PC	-	50	10	17	10	-	-	87	
	TOTAL	76	1064	440	1385	628	99	-	3692	
F&O	F&O-FM	44	642	91	811	146	370	-	2105	
FOR	FOR	27	330	71	355	93	74	-	949	
IAND	IAND	0	8	5	-	3	-	-	16	
IDRC	IDRC	4	61	18	18	36	-	-	135	
IJC	IJC	6	11	4	4	20	-	-	45	
MRC	MRC	5	-	21	-	27	-	-	53	
NCC	NCC	-	7	4	-	-	-	-	11	
NDEF	NDEF-SER	23	570	136	477	276	213	168	1863	
NEB	NEB	-	4	1	-	-	-	-	5	
NFB	NFB	-	4	-	2	2	-	-	8	
NHW	NHW-HP	27	753	34	228	240	52	-	1334	
	NHW-HSP	1	1	6	-	4	-	-	12	
	NHW-MS	1	13	1	14	7	-	-	36	
	TOTAL	29	767	41	242	251	52	-	1382	
NMC	NMC-NMNS	6	36	17	52	14	20	-	145	
	NMC-NMST	4	3	24	55	20	16	-	122	
	TOTAL	10	39	41	107	34	36	-	267	

(CONTINUED)

TABLE 51-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1987-88

SCIENCE TYPE NATURAL
AND YEAR 1987-88

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NRC	NRC-SIR	10	1377	239	879	590	225	.	3320	
NSERC	NSERC	9	.	60	.	82	.	.	151	
PW	PW-PTS	.	27	6	12	10	.	.	54	
RIE	RIE	.	.	132	.	56	.	.	188	
RCMP	RCMP	1	2	.	.	1	.	.	4	
ST	ST	1	3	.	.	1	.	.	5	
SS	SS-SUPP	0	.	2	.	4	.	.	7	
TPT	TPT-ADM	2	28	6	2	13	.	.	51	
	TPT-APT	.	5	.	.	.	.	.	5
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	3	3	.	.	14	
	TPT-SUR	0	2	0	1	.	.	.	3	
	TOTAL	3	61	14	13	16	.	.	107	
WDO	WDO	0	0	1	.	0	.	.	1	
TOTAL	TOTAL	428	8195	1707	7174	3548	3127	168	24346	

TABLE 51-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1988-89

SCIENCE TYPE NATURAL
AND YEAR 1988-89

DEPARTMENT	PROGRAM	CATEGORY							TOTAL
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
		PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	39	3	5	40	.	.	88
	AGR-AFP	53	1003	126	1051	352	1190	.	3775
	AGR-GOP	1	26	4	70	13	2	.	115
	TOTAL	55	1068	133	1126	405	1192	.	3979
AECB	AECB	.	13	.	.	1	.	.	14
AECL	AECL	19	772	.	811	290	550	.	2442
CMHC	CMHC	1	27	.	2	9	.	.	39
CIDA	CIDA	10	7	38	.	26	.	.	81
COMM	COMM-CC	14	149	38	127	37	.	.	365
CCA	CCA-COR	7	130	21	1	102	.	.	261
	TOTAL	7	130	21	1	102	.	.	261
EMR	EMR-ADM	2	.	57	4	19	.	.	82
	EMR-ENER	1	21	8	.	8	.	.	38
	EMR-MES	73	1119	125	730	376	132	.	2555
	TOTAL	76	1140	190	734	404	132	.	2675
ENV	ENV-ADM	1	2	4	.	1	.	.	8
	ENV-AES	68	696	309	1004	321	18	.	2416
	ENV-C&P	9	374	147	316	292	82	.	1220
	ENV-PC	.	50	10	17	10	.	.	87
	TOTAL	78	1122	470	1337	624	100	.	3731
F&O	F&O-FM	44	675	90	803	149	378	.	2140
FOR	FOR	29	329	70	347	93	87	.	953
IAND	IAND	0	6	5	.	3	.	.	14
IDRC	IDRC	4	63	18	18	38	.	.	141
IJC	IJC	5	12	4	4	20	.	.	45
MRC	MRC	7	.	22	.	25	.	.	54
NCC	NCC	.	7	4	.	.	.	.	11
NDEF	NDEF-SER	24	591	142	474	262	203	175	1871
NEB	NEB	.	4	1	.	.	.	.	5
NFB	NFB	.	4	.	2	2	.	.	8
NHW	NHW-HP	27	801	36	234	239	49	.	1386
	NHW-HSP	1	1	7	.	5	.	.	13
	NHW-MS	1	13	1	14	7	.	.	36
	TOTAL	29	815	44	248	251	49	.	1435
NMC	NMC-NMNS	10	45	42	47	29	30	.	203
	NMC-NMST	8	6	46	49	26	38	.	173
	TOTAL	18	51	88	96	55	68	.	376

(CONTINUED)

TABLE 51-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1988-89

SCIENCE TYPE NATURAL
AND YEAR 1988-89

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NRC	NRC-SIR	10	1393	250	939	596	227	.	3415	
NSERC	NSERC	10	.	63	.	86	.	.	159	
PW	PW-PTS	.	27	6	12	10	.	.	54	
RIE	RIE	.	.	137	.	59	.	.	196	
RCMP	RCMP	1	3	.	.	1	.	.	4	
ST	ST	1	3	.	.	1	.	.	5	
SS	SS-SUPP	0	.	2	.	4	.	.	7	
TPT	TPT-ADM	2	28	6	2	13	.	.	51	
	TPT-APT	.	5	0	.	.	.	.	5
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	2	3	.	.	13	
	TPT-SUR	0	2	.	1	.	.	.	3	
	TOTAL	3	60	14	12	16	.	.	105	
WDO	WDO	0	0	3	.	2	.	.	5	
TOTAL	TOTAL	446	8470	1852	7092	3570	2986	175	24591	

TABLE 51-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1989-90

SCIENCE TYPE NATURAL
AND YEAR 1989-90

DEPARTMENT	PROGRAM	CATEGORY							TOTAL
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
		PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	38	3	5	39	.	.	86
	AGR-AFP	51	1026	141	1073	375	1085	.	3751
	AGR-GOP	1	28	4	71	13	2	.	119
	TOTAL	53	1092	148	1149	427	1087	.	3956
AECB	AECB	.	13	.	.	1	.	.	14
AECL	AECL	19	790	.	820	295	565	.	2489
CMHC	CMHC	1	27	.	2	11	.	.	41
CIDA	CIDA	9	8	37	.	26	.	.	80
COMM	COMM-CC	14	180	37	111	34	.	.	374
CCA	CCA-COR	8	130	24	1	102	.	.	265
	TOTAL	8	130	24	1	102	.	.	265
EMR	EMR-ADM	2	.	57	4	19	.	.	82
	EMR-ENER	2	21	7	.	6	.	.	35
	EMR-MES	75	1093	119	711	358	129	.	2485
	TOTAL	78	1114	183	715	383	129	.	2602
ENV	ENV-ADM	1	2	4	.	0	.	.	7
	ENV-AES	67	694	306	1004	321	17	.	2409
	ENV-C&P	10	377	148	319	295	83	.	1233
	ENV-PC	.	50	10	17	10	.	.	87
	TOTAL	78	1123	469	1340	626	100	.	3736
F&O	F&O-FM	47	696	92	812	152	380	.	2179
FOR	FOR	28	327	71	335	88	81	.	928
IAND	IAND	0	6	5	.	3	.	.	14
IDRC	IDRC	4	63	18	18	38	.	.	141
IJC	IJC	5	12	5	3	20	.	.	45
MRC	MRC	6	.	20	.	27	.	.	53
NCC	NCC	.	7	3	.	.	.	.	10
NDEF	NDEF-SER	24	581	143	473	262	203	173	1869
NEB	NEB	.	5	1	.	.	.	.	6
NFB	NFB	.	4	.	2	2	.	.	8
NHW	NHW-HP	27	833	36	236	244	48	.	1424
	NHW-HSP	1	1	6	.	4	.	.	12
	NHW-MS	1	14	1	14	7	.	.	37
	TOTAL	29	848	43	250	255	48	.	1473
NMC	NMC-NMNS	10	45	44	42	34	31	.	206
	NMC-NMST	6	7	44	51	26	41	.	175
	TOTAL	16	52	88	93	60	72	.	381

(CONTINUED)

TABLE 51-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1989-90

SCIENCE TYPE NATURAL
AND YEAR 1989-90

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NRC	NRC-SIR	10	1427	249	956	591	224	.	3457	
NSERC	NSERC	10	.	75	.	88	.	.	173	
PW	PW-PTS	.	27	6	12	10	.	.	54	
RIE	RIE	.	.	137	.	59	.	.	196	
RCMP	RCMP	1	2	.	.	1	.	.	4	
ST	ST	1	3	.	.	1	.	.	5	
SS	SS-SUPP	0	.	3	.	4	.	.	8	
TPT	TPT-ADM	2	28	6	2	13	.	.	51	
	TPT-APT	.	4	.	.	.	.	.	4
	TPT-AIR	1	23	3	7	.	.	.	34	
	TPT-MAR	.	3	5	2	3	.	.	13	
	TPT-SUR	0	1	0	0	.	.	.	2	
	TOTAL	3	60	14	11	16	.	.	104	
WDO	WDO	1	0	3	.	2	.	.	5	
TOTAL	TOTAL	445	8605	1873	7102	3584	2889	173	24670	

TABLE 52

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE SOCIAL SCIENCES BY PERFORMER.
 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
 AND ACTIVITY TOTAL

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	697070	68	752789	66	754642	67
CANADIAN INDUSTRY	43749	4	52713	5	49940	4
CANADIAN UNIVERSITY	130901	13	151833	13	152436	14
CANADIAN NP INST	52629	5	56156	5	56333	5
PROV. & MUN. GOV'T	8291	1	8428	1	7178	1
FOREIGN PERFORMERS	79528	8	97686	9	89301	8
OTHER PERFORMERS	16311	2	17578	2	17387	2
TOTAL	1028479	100	1137183	100	1127217	100

TABLE 53-C

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY ACTIVITY AND PERFORMER.
1989-90

SCIENCE TYPE SOCIAL
AND YEAR 1989-90

	PERFORMER							TOTAL
	INTRAMURAL	CANADIAN INDUSTRY	CANADIAN UNIVERSITY	CANADIAN NP INST	PROV. & MUN. GOV'T	FOREIGN PERFORMERS	OTHER PERFORMERS	
	\$.000	\$.000	\$.000	\$.000	\$,000	\$,000	\$,000	\$,000
ACTIVITIES								
IN-HOUSE R&D	41526	.	.	.	.	.	.	41526
R&D CONTRACTS	1529	3262	11356	2225	290	547	1949	21158
SUPPORTING CONTRACTS	969	.	.	.	.	.	.	969
R&D GRANTS	.	7458	51904	9602	1382	25795	15	96156
RESEARCH FELLOWSHIPS	.	.	7068	.	.	2512	300	9880
ADMIN. EXTRAMURAL R&D	18803	.	.	.	.	.	.	18803
CAPITAL - R&D	1772	.	.	.	.	.	.	1772
SUB TOTAL R&D	64599	10720	70328	11827	1672	28854	2264	190264
DATA COLLECTION	268648	11072	2397	1715	1130	1987	2433	289382
INFORMATION SERVICES	137951	1614	7979	16919	72	25652	1622	191809
ECONOMIC & FEAS. STUDIES	32633	13883	3909	18370	4087	9723	8835	91440
OPERN'S & POLICY STUDIES	91301	11657	1412	5252	158	11546	1104	122430
MUSEUM SERVICES	118593	.	.	.	.	.	24	118617
EDUCATIONAL SUPPORT	1748	994	66411	2250	59	11539	1105	84106
ADMIN. EXTRAMURAL RSA	15598	.	.	.	.	.	.	15598
CAPITAL - RSA	23570	.	.	.	.	.	.	23570
SUB TOTAL RSA	690042	39220	82108	44506	5506	60447	15123	936952
TOTAL	754642	49940	152436	56333	7178	89301	17387	1127217

TABLE 54

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY TOTAL

DEPARTMENT	PROGRAM	YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
AGR	AGR-AFP	3311	116	3427	4089	80	4169	3036	80	3116	
	TOTAL	3311	116	3427	4089	80	4169	3036	80	3116	
ACOA	ACOA	.	4827	4827	.	9842	9842	.	7347	7347	
CC	CC	361	3	364	370	3	373	379	3	382	
CMHC	CMHC	15300	4226	19526	13834	6588	20422	15039	6588	21627	
CBC	CBC	2111	3249	5360	2427	3101	5528	2324	3209	5533	
CHRC	CHRC	680	39	719	515	91	606	672	98	770	
CIDA	CIDA	3940	128523	132463	4114	151416	155530	4121	130835	134956	
CLFB	CLFB	137	.	137	142	.	142	148	.	148	
COL	COL	2909	.	2909	3445	.	3445	3981	.	3981	
COMM	COMM-CC	2458	816	3274	3190	808	3998	3487	1375	4862	
CCA	CCA-ADM	2424	165	2589	2853	179	3032	3050	201	3251	
	CCA-CON	4143	.	4143	4359	.	4359	4245	.	4245	
	TOTAL	6567	165	6732	7212	179	7391	7295	201	7496	
ECC	ECC	9481	612	10093	10293	330	10623	10245	330	10575	
E&I	E&I-ADM	15379	993	16372	18564	705	19269	20053	551	20604	
	E&I-EIC	7755	40455	48210	6797	38729	45526	6961	38802	45763	
	TOTAL	23134	41448	64582	25361	39434	64795	27014	39353	66367	
ENV	ENV-C&P	7226	1109	8335	7915	1224	9139	8866	1347	10213	
	ENV-PC	52169	138	52307	55678	145	55823	58703	152	58855	
	TOTAL	59395	1247	60642	63593	1369	64962	67569	1499	69068	
EA	EA-CIA	10742	5939	16681	10984	18345	29329	11431	20383	31814	
FIN	FIN-FEP	20377	.	20377	21212	.	21212	22764	.	22764	
F&O	F&O-FM	11556	517	12073	10837	669	11506	11047	594	11641	
IAND	IAND	500	2663	3163	606	2277	2883	617	2171	2788	
IDRC	IDRC	13198	24843	38041	15000	28100	43100	16400	30400	46800	
JUST	JUST-ADM	2488	6006	8494	2577	5940	8517	2543	3610	6153	
	JUST-LRC	1872	1282	3154	1920	1374	3294	1952	1346	3298	
	TOTAL	4360	7288	11648	4497	7314	11811	4495	4956	9451	
LAB	LAB	866	.	866	890	.	890	1065	.	1065	
NCC	NCC	574	59	633	629	130	759	567	140	707	
NDEF	NDEF-SER	3534	120	3654	3703	80	3783	3827	92	3919	
NEB	NEB	1410	.	1410	1593	.	1593	1633	.	1633	
NHW	NHW-ADM	13959	1925	15894	13315	2276	15591	13176	1775	14951	
	NHW-FAS	40	1122	1162	40	1100	1140	40	1100	1140	
	NHW-HP	10	210	220	121	145	266	123	145	268	

(CONTINUED)

TABLE 54

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NHW	NHW-HSP	1848	11772	13620	2164	13535	15699	2267	14940	17207
	NHW-IS	1325	50	1375	1424	30	1454	1633	.	1633
	NHW-MS	.	1102	1102	.	1130	1130	.	1160	1160
	NHW-SS	1702	8533	10235	1758	9090	10848	1831	9132	10963
	TOTAL	18894	24714	43608	18822	27306	46128	19070	28252	47322
NL	NL	45388	62	45450	47692	70	47782	47211	72	47283
NMC	NMC-CMC	37626	.	37626	73530	.	73530	55508	.	55508
	NMC-NGC	32866	.	32866	34347	.	34347	37327	.	37327
	TOTAL	70492	.	70492	107877	.	107877	92835	.	92835
NREV	NREV-TAX	3952	.	3952	4959	.	4959	5105	.	5105
PC	PC	.	71	71	.	90	90	.	65	65
PA	PA	15017	150	15167	24002	320	24322	23005	2120	25125
RIE	RIE	924	1399	2323	911	1469	2380	915	1543	2458
ST	ST	19548	.	19548	20947	.	20947	16024	.	16024
SC	SC	2972	304	3276	2719	335	3054	2888	335	3223
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	342	3974	4316	97	4377	4474	96	4405	4501
	SECS-ES	202	177	379	289	106	395	305	110	415
	SECS-OL	1921	409	2330	1972	476	2448	2048	425	2473
	TOTAL	2465	4600	7065	2358	5029	7387	2449	5010	7459
SSHRC	SSHRC	6412	64279	70691	7078	69260	76338	7148	74995	82143
SGEN	SGEN-ADM	4326	5928	10254	3527	5750	9277	3371	5750	9121
STCAN	STCAN	287009	15	287024	281813	17	281830	290726	11	290737
SS	SS-SUPP	164	2512	2676	212	3643	3855	214	3643	3857
TPT	TPT-ADM	31	35	66	66	90	156	106	150	256
	TPT-APT	85	80	165	287	112	399	355	200	555
	TPT-SUR	255	407	662	314	429	743	337	457	794
	TOTAL	371	522	893	667	631	1298	798	807	1605
TB	TB-ADM	22235	153	22388	20670	318	20988	23727	318	24045
TOTAL	TOTAL	697070	331409	1028479	752789	384394	1137183	754642	372575	1127217

TABLE 55

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	.	3311	3311	.	4089	4089	.	3036	3036
	TOTAL	.	3311	3311	.	4089	4089	.	3036	3036
CC	CC	183	178	361	187	183	370	191	188	379
CMHC	CMHC	3088	12212	15300	3235	10599	13834	3262	11777	15039
CBC	CBC	.	2111	2111	.	2427	2427	.	2324	2324
CHRC	CHRC	.	680	680	.	515	515	.	672	672
CIDA	CIDA	593	3347	3940	620	3494	4114	609	3512	4121
CLFB	CLFB	110	27	137	115	27	142	121	27	148
COL	COL	.	2909	2909	.	3445	3445	.	3981	3981
COMM	COMM-CC	1309	1149	2458	1750	1440	3190	1833	1653	3487
CCA	CCA-ADM	.	2424	2424	.	2853	2853	.	3050	3050
	CCA-CON	.	4143	4143	.	4359	4359	.	4245	4245
	TOTAL	.	6567	6567	.	7212	7212	.	7295	7295
ECC	ECC	8051	1430	9481	8574	1719	10293	8510	1735	10245
E&I	E&I-ADM	.	15379	15379	.	18564	18564	.	20053	20053
	E&I-EIC	.	7755	7755	.	6797	6797	.	6961	6961
	TOTAL	.	23134	23134	.	25361	25361	.	27014	27014
ENV	ENV-C&P	1250	5976	7226	1368	6547	7915	1527	7339	8866
	ENV-PC	.	52169	52169	.	55678	55678	.	58703	58703
	TOTAL	1250	58145	59395	1368	62225	63593	1527	66042	67569
EA	EA-CIA	.	10742	10742	.	10984	10984	.	11431	11431
FIN	FIN-FEP	.	20377	20377	.	21212	21212	.	22764	22764
F&O	F&O-FM	.	11556	11556	.	10837	10837	.	11047	11047
IAND	IAND	10	490	500	11	595	606	11	606	617
IDRC	IDRC	7686	5512	13198	8700	6300	15000	9500	6900	16400
JUST	JUST-ADM	.	2488	2488	.	2577	2577	.	2543	2543
	JUST-LRC	1231	641	1872	1256	684	1920	1274	678	1952
	TOTAL	1231	3129	4360	1256	3241	4497	1274	3221	4495
LAB	LAB	.	866	866	.	890	890	.	1065	1065
NCC	NCC	.	574	574	.	629	629	.	567	567
NDEF	NDEF-SER	1390	2144	3534	1426	2277	3703	1494	2333	3827
NEB	NEB	.	1410	1410	.	1593	1593	.	1633	1633
NHW	NHW-ADM	.	13969	13969	.	13315	13315	.	13176	13176
	NHW-FAS	40	.	40	40	.	40	40	.	40
	NHW-HP	.	10	10	.	121	121	.	123	123
	NHW-HSP	1465	383	1848	1737	426	2164	1808	459	2267

(CONTINUED)

TABLE 55

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NHW	NHW-IS	.	1325	1325	.	1424	1424	.	1633	1633
	NHW-SS	300	1401	1702	311	1447	1758	323	1508	1831
	TOTAL	1806	17088	18894	2088	16734	18822	2171	16899	19070
NL	NL	.	45388	45388	.	47692	47692	.	47211	47211
NMC	NMC-CMC	4303	33323	37626	6700	66830	73530	7482	48026	55508
	NMC-NGC	6518	26348	32866	6797	27550	34347	7394	29933	37327
	TOTAL	10821	59671	70492	13497	94380	107877	14876	77959	92835
NREV	NREV-TAX	289	3663	3952	314	4645	4959	324	4781	5105
PA	PA	.	15017	15017	.	24002	24002	.	23005	23005
RIE	RIE	.	924	924	.	911	911	.	915	915
ST	ST	.	19548	19548	.	20947	20947	.	16024	16024
SC	SC	1411	1561	2972	1318	1401	2719	1379	1509	2888
SECS	SECS-CIT	274	68	342	33	64	97	34	62	96
	SECS-ES	.	202	202	.	289	289	.	305	305
	SECS-OL	.	1921	1921	.	1972	1972	.	2048	2048
	TOTAL	274	2191	2465	33	2325	2358	34	2415	2449
SSHRC	SSHRC	3351	3061	6412	3767	3311	7078	3805	3343	7148
SGEN	SGEN-ADM	3708	618	4326	2936	591	3527	2807	564	3371
STCAN	STCAN	11005	276004	287009	10451	271362	281813	10762	279963	290726
SS	SS-SUPP	4	160	164	4	208	212	5	209	214
TPT	TPT-ADM	24	6	31	49	17	66	84	21	106
	TPT-APT	5	80	85	12	275	287	18	337	355
	TPT-SUR	49	206	255	28	286	314	.	337	337
	TOTAL	78	293	371	89	578	667	102	696	798
TB	TB-ADM	.	22235	22235	.	20670	20670	.	23727	23727
TOTAL	TOTAL	57648	639422	697070	61740	691049	752789	64599	690042	754642

TABLE 56

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN INDUSTRY

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
AGR	AGR-AFP	.	84	84	.	40	40	.	40	40
	TOTAL	.	84	84	.	40	40	.	40	40
ACOA	ACOA	3955	.	3955	9842	.	9842	7347	.	7347
CC	CC	.	3	3	.	3	3	.	3	3
CMHC	CMHC	499	745	1244	323	726	1049	323	726	1049
CBC	CBC	.	3249	3249	.	3101	3101	.	3209	3209
CHRC	CHRC	.	16	16	.	.	.	.	.	.
CIDA	CIDA	67	15913	15980	76	18309	18385	65	16610	16675
COMM	COMM-CC	26	777	803	25	774	799	25	1350	1375
CCA	CCA-ADM	.	96	96	.	110	110	.	130	130
	TOTAL	.	96	96	.	110	110	.	130	130
ECC	ECC	106	.	106	82	.	82	82	.	82
E&I	E&I-ADM	.	651	651	.	440	440	.	350	350
	E&I-EIC	.	9199	9199	.	7414	7414	.	7467	7467
	TOTAL	.	9850	9850	.	7854	7854	.	7817	7817
ENV	ENV-C&P	286	320	606	316	354	670	348	389	737
	TOTAL	286	320	606	316	354	670	348	389	737
EA	EA-CIA	.	382	382	.	2441	2441	.	3146	3146
F&O	F&O-FM	.	299	299	.	625	625	.	594	594
IAND	IAND	.	1250	1250	.	1265	1265	.	1260	1260
JUST	JUST-ADM	.	1840	1840	.	1640	1640	.	1571	1571
	JUST-LRC	291	73	364	302	81	383	295	90	385
	TOTAL	291	1913	2204	302	1721	2023	295	1661	1956
NCC	NCC	10	49	59	10	120	130	10	130	140
NDEF	NDEF-SER	.	27	27	.	40	40	.	30	30
NHW	NHW-ADM	.	505	505	.	701	701	.	700	700
	NHW-HSP	605	14	619	780	15	795	770	15	785
	NHW-IS	.	50	50	.	30	30	.	.	.
	NHW-MS	.	216	216	.	220	220	.	230	230
	TOTAL	605	785	1390	780	966	1746	770	945	1715
SC	SC	161	.	161	155	.	155	155	.	155
SECS	SECS-CIT	18	288	306	90	432	522	90	450	540
	TOTAL	18	288	306	90	432	522	90	450	540
SGEN	SGEN-ADM	477	49	526	400	100	500	400	100	500
SS	SS-SUPP	248	440	688	320	559	879	320	559	879
TPT	TPT-APT	80	.	80	87	15	102	190	.	190

(CONTINUED)

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN INDUSTRY

TABLE 56

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TPT	TPT-SUR	284	101	385	288	62	350	300	71	371
	TOTAL	364	101	465	375	77	452	490	71	561
TOTAL	TOTAL	7113	36636	43749	13096	39617	52713	10720	39220	49940

TABLE 57

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY. 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	.	4	4	.	10	10	.	10	10
	TOTAL	.	4	4	.	10	10	.	10	10
ACOA	ACOA	99	.	99	.	.	.	.	.	.
CMHC	CMHC	252	1721	1973	190	1941	2131	190	1941	2131
CIDA	CIDA	11685	44515	56180	13153	49195	62348	11323	43734	55057
COMM	COMM-CC	12	1	13	.	9	9	.	.	.
CCA	CCA-ADM	.	20	20	.	20	20	.	20	20
	TOTAL	.	20	20	.	20	20	.	20	20
ECC	ECC	18	.	18	10	.	10	10	.	10
E&I	E&I-ADM	.	65	65	.	.	.	.	.	.
	E&I-EIC	.	3220	3220	.	3228	3228	.	3228	3228
	TOTAL	.	3285	3285	.	3228	3228	.	3228	3228
ENV	ENV-PC	40	.	40	42	.	42	44	.	44
	TOTAL	40	.	40	42	.	42	44	.	44
EA	EA-CIA	.	4282	4282	.	12587	12587	.	13667	13667
F&O	F&O-FM	.	18	18	.	.	.	.	.	.
IAND	IAND	.	224	224	.	234	234	.	234	234
IDRC	IDRC	1414	.	1414	1600	.	1600	1700	.	1700
JUST	JUST-ADM	.	547	547	.	337	337	.	329	329
	JUST-LRC	22	.	22	35	.	35	30	.	30
	TOTAL	22	547	569	35	337	372	30	329	359
NDEF	NDEF-SER	.	41	41	.	40	40	.	62	62
NHW	NHW-FAS	349	.	349	350	.	350	350	.	350
	NHW-HP	.	11	11	.	.	.	.	.	.
	NHW-HSP	3808	3358	7166	4385	3830	8215	4850	4260	9110
	NHW-SS	832	212	1144	993	225	1218	998	227	1225
	TOTAL	5089	3581	8670	5728	4055	9783	6198	4487	10685
PC	PC	65	.	65	65	.	65	65	.	65
PA	PA	.	150	150	.	320	320	.	320	320
SC	SC	16	.	16	25	.	25	25	.	25
SECS	SECS-CIT	.	114	114	.	120	120	.	120	120
	SECS-ES	.	6	6	.	.	.	.	.	.
	SECS-OL	.	10	10	.	65	65	.	75	75
	TOTAL	.	130	130	.	185	185	.	195	195
SSHRC	SSHRC	39636	13006	52642	45902	11567	57469	49858	13346	63204
SGEN	SGEN-ADM	690	.	690	650	.	650	650	.	650

(CONTINUED)

TABLE 57

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
SS	SS-SUPP	.	320	320	70	535	605	70	535	605
TPT	TPT-ADM	35	.	35	90	.	90	150	.	150
	TPT-SUR	3	.	3	10	.	10	15	.	15
	TOTAL	38	.	38	100	.	100	165	.	165
TOTAL	TOTAL	59056	71845	130901	67570	84263	151833	70328	82108	152436

TABLE 58

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR
BY DEPARTMENT AND R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN NP INST

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
ACOA	ACOA	127	.	127	.	.	.	.	.	.
CMHC	CMHC	740	76	816	1039	1101	2140	1039	1101	2140
CIDA	CIDA	1734	4975	6709	1955	5413	7368	1683	4987	6670
ECC	ECC	81	.	81	68	.	68	68	.	68
E&I	E&I-ADM	.	235	235	.	233	233	.	201	201
	E&I-EIC	.	16161	16161	.	16167	16167	.	16167	16167
	TOTAL	.	16396	16396	.	16400	16400	.	16368	16368
F&O	F&O-FM	.	9	9	.	.	.	.	.	.
IAND	IAND	300	567	867	.	478	478	.	377	377
IDRC	IDRC	38	.	38	100	.	100	100	.	100
JUST	JUST-ADM	.	2197	2197	.	2238	2238	.	1001	1001
	TOTAL	.	2197	2197	.	2238	2238	.	1001	1001
NHW	NHW-ADM	.	5	5	.	5	5	.	5	5
	NHW-FAS	725	48	773	725	25	750	725	25	750
	NHW-HP	.	199	199	.	145	145	.	145	145
	NHW-HSP	1295	1908	3203	1450	2185	3635	1610	2430	4040
	NHW-SS	1887	4759	6646	2011	5070	7081	2019	5094	7113
	TOTAL	3907	6919	10826	4186	7430	11616	4354	7699	12053
PA	PA	.	.	.	.	.	.	.	1800	1800
RIE	RIE	.	1299	1299	.	1364	1364	.	1433	1433
SC	SC	40	.	40	10	.	10	10	.	10
SECS	SECS-CIT	633	1927	2560	635	2010	2645	635	2010	2645
	SECS-ES	.	134	134	.	62	62	.	65	65
	SECS-OL	.	399	399	.	411	411	.	350	350
	TOTAL	633	2460	3093	635	2483	3118	635	2425	3080
SSHRC	SSHRC	.	4930	4930	.	5216	5216	.	5216	5216
SGEN	SGEN-ADM	3565	.	3565	3600	.	3600	3600	.	3600
SS	SS-SUPP	.	1464	1464	.	2099	2099	.	2099	2099
TPT	TPT-SUR	19	.	19	23	.	23	20	.	20
	TOTAL	19	.	19	23	.	23	20	.	20
TB	TB-ADM	153	.	153	318	.	318	318	.	318
TOTAL	TOTAL	11337	41292	52629	11934	44222	56156	11827	44506	56333

TABLE 59

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
GOVERNMENT SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER PROV. & MUN. GOV'T

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
ACOA	ACOA	646	.	646	.	.	.	.	.	.
CMHC	CMHC	133	.	133	995	.	995	995	.	995
E&I	E&I-EIC	.	3207	3207	.	3207	3207	.	3207	3207
	TOTAL	.	3207	3207	.	3207	3207	.	3207	3207
IAND	IAND	79	88	167	79	88	167	79	88	167
JUST	JUST-ADM	.	1269	1269	.	856	856	.	5	5
	TOTAL	.	1269	1269	.	856	856	.	5	5
NHW	NHW-ADM	.	1415	1415	.	1570	1570	.	1070	1070
	NHW-HSP	34	512	546	40	590	630	50	675	725
	NHW-SS	92	328	420	98	350	448	98	351	449
	TOTAL	126	2255	2381	138	2510	2648	148	2096	2244
RIE	RIE	.	100	100	.	105	105	.	110	110
SGEN	SGEN-ADM	388	.	388	450	.	450	450	.	450
TOTAL	TOTAL	1372	6919	8291	1662	6766	8428	1672	5506	7178

TABLE 60

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
CMHC	CMHC	50	10	60	13	.	13	13	.	13
CHRC	CHRC	.	2	2	.	.	.	.	.	.
CIDA	CIDA	3509	44719	48228	5329	56378	61707	3764	47285	51049
CCA	CCA-ADM	.	31	31	.	31	31	.	31	31
	TOTAL	.	31	31	.	31	31	.	31	31
ECC	ECC	22	.	22	.	.	.	.	.	.
ENV	ENV-C&P	23	.	23	26	.	26	28	.	28
	ENV-PC	2	.	2	2	.	2	2	.	2
	TOTAL	25	.	25	28	.	28	30	.	30
EA	EA-CIA	.	1242	1242	.	3317	3317	.	3570	3570
F&O	F&O-FM	.	176	176	.	.	.	.	.	.
IAND	IAND	.	54	54	.	.	.	.	.	.
IDRC	IDRC	19620	2899	22519	22200	3300	25500	23900	3600	27500
JUST	JUST-LRC	18	.	18	24	.	24	25	.	25
	TOTAL	18	.	18	24	.	24	25	.	25
NDEF	NDEF-SER	.	8	8	.	.	.	.	.	.
NHW	NHW-HSP	.	184	184	.	210	210	.	230	230
	NHW-SS	.	173	173	.	184	184	.	185	185
	TOTAL	.	357	357	.	394	394	.	415	415
NL	NL	.	62	62	.	70	70	.	72	72
SC	SC	2	.	2	10	.	10	10	.	10
SSHRC	SSHRC	858	5849	6707	1112	5463	6575	1112	5463	6575
STCAN	STCAN	.	15	15	.	17	17	.	11	11
TOTAL	TOTAL	24104	55424	79528	28716	68970	97686	28854	60447	89301

TABLE 61

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER OTHER PERFORMERS

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	.	28	28	.	30	30	.	30	30
	TOTAL	.	28	28	.	30	30	.	30	30
CMHC	CMHC	.	.	.	68	192	260	68	192	260
CHRC	CHRC	.	21	21	.	91	91	.	98	98
CIDA	CIDA	.	1426	1426	.	1608	1608	.	1384	1384
CCA	CCA-ADM	.	18	18	.	18	18	.	20	20
	TOTAL	.	18	18	.	18	18	.	20	20
ECC	ECC	385	.	385	170	.	170	170	.	170
E&I	E&I-ADM	.	42	42	.	32	32	.	.	.
	E&I-EIC	.	8668	8668	.	8713	8713	.	8733	8733
	TOTAL	.	8710	8710	.	8745	8745	.	8733	8733
ENV	ENV-C&P	275	205	480	302	226	528	333	249	582
	ENV-PC	74	22	96	78	23	101	82	24	106
	TOTAL	349	227	576	380	249	629	415	273	688
EA	EA-CIA	.	33	33	.	.	.	.	.	.
F&O	F&O-FM	.	15	15	.	44	44	.	.	.
IAND	IAND	3	98	101	.	133	133	.	133	133
IDRC	IDRC	219	653	872	200	700	900	300	800	1100
JUST	JUST-ADM	.	153	153	.	869	869	.	704	704
	JUST-LRC	788	90	878	824	108	932	801	105	906
	TOTAL	788	243	1031	824	977	1801	801	809	1610
NDEF	NDEF-SER	.	44	44	.	.	.	.	.	.
NHW	NHW-HSP	54	.	54	50	.	50	50	.	50
	NHW-MS	.	886	886	.	910	910	.	930	930
	NHW-SS	.	150	150	.	159	159	.	160	160
	TOTAL	54	1036	1090	50	1069	1119	50	1090	1140
PC	PC	6	.	6	25	.	25	.	.	.
SC	SC	85	.	85	135	.	135	135	.	135
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	18	976	994	15	1075	1090	15	1085	1100
	SECS-ES	.	37	37	.	44	44	.	45	45
	TOTAL	18	1053	1071	15	1189	1204	15	1200	1215
SGEN	SGEN-ADM	364	395	759	300	250	550	300	250	550
SS	SS-SUPP	.	40	40	.	60	60	.	60	60
TPT	TPT-APT	.	.	.	10	.	10	10	.	10
	TPT-SUR	.	.	.	.	46	46	.	51	51

(CONTINUED)

TABLE 61

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM									
TPT	TOTAL				10	46	56	10	51	61
TOTAL	TOTAL	2271	14040	16311	2177	15401	17578	2264	15123	17387

TABLE 62

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP		3427	3427		4169	4169		3116	3116
	TOTAL		3427	3427		4169	4169		3116	3116
ACDA	ACOA	4827	.	4827	9842	.	9842	7347	.	7347
CC	CC	183	181	364	187	186	373	191	191	382
CMHC	CMHC	4762	14764	19526	5863	14559	20422	5890	15737	21627
CBC	CBC	.	5360	5360	.	5528	5528	.	5533	5533
CHRC	CHRC	.	719	719	.	606	606	.	770	770
CIDA	CIDA	17568	114895	132463	21133	134397	155530	17444	117512	134956
CLFB	CLFB	110	27	137	115	27	142	121	27	148
COL	COL	.	2909	2909	.	3445	3445	.	3981	3981
COMM	COMM-CC	1347	1927	3274	1775	2223	3998	1858	3003	4862
CCA	CCA-ADM	.	2589	2589	.	3032	3032	.	3251	3251
	CCA-CON	.	4143	4143	.	4359	4359	.	4245	4245
	TOTAL	.	6732	6732	.	7391	7391	.	7495	7495
ECC	ECC	8663	1430	10093	8904	1719	10623	8840	1735	10575
E&I	E&I-ADM	.	16372	16372	.	19269	19269	.	20604	20604
	E&I-EIC	.	48210	48210	.	45526	45526	.	45763	45763
	TOTAL	.	64582	64582	.	64795	64795	.	66367	66367
ENV	ENV-C&P	1834	6501	8335	2012	7127	9139	2236	7977	10213
	ENV-PC	116	52191	52307	122	55701	55823	128	58727	58855
	TOTAL	1950	58692	60642	2134	62828	64962	2364	66704	69068
EA	EA-CIA	.	16681	16681	.	29329	29329	.	31814	31814
FIN	FIN-FEP	.	20377	20377	.	21212	21212	.	22784	22764
F&O	F&O-FM	.	12073	12073	.	11506	11506	.	11641	11641
IAND	IAND	392	2771	3163	90	2793	2883	90	2698	2788
IDRC	IDRC	28977	9064	38041	32800	10300	43100	35500	11300	46800
JUST	JUST-ADM	.	8494	8494	.	8517	8517	.	6153	6153
	JUST-LRC	2350	804	3154	2441	853	3294	2425	873	3298
	TOTAL	2350	9298	11648	2441	9370	11811	2425	7026	9451
LAB	LAB	.	866	866	.	890	890	.	1065	1065
NCC	NCC	10	623	633	10	749	759	10	697	707
NDEF	NDEF-SER	1390	2264	3654	1426	2357	3783	1494	2425	3919
NEB	NEB	.	1410	1410	.	1593	1593	.	1633	1633
NHW	NHW-ADM	.	15894	15894	.	15591	15591	.	14951	14951
	NHW-FAS	1114	48	1162	1115	25	1140	1115	25	1140
	NHW-HP	.	220	220	.	266	266	.	268	268

(CONTINUED)

TABLE 62

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY.
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		ACTIVITY			ACTIVITY			ACTIVITY		
		R&D	RSA	TOTAL	R&D	RSA	TOTAL	R&D	RSA	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NHW	NHW-HSP	7261	6359	13620	8442	7256	15699	9138	8069	17207
	NHW-IS	.	1375	1375	.	1454	1454	.	1633	1633
	NHW-MS	.	1102	1102	.	1130	1130	.	1160	1160
	NHW-SS	3211	7023	10235	3413	7435	10848	3438	7525	10963
	TOTAL	11587	32021	43608	12970	33158	46128	13691	33631	47322
NL	NL	.	45450	45450	.	47762	47782	.	47283	47283
NMC	NMC-CMC	4303	33323	37626	6700	66830	73530	7482	48026	55508
	NMC-NGC	6518	26348	32866	6797	27550	34347	7394	29933	37327
	TOTAL	10821	59671	70492	13497	94380	107877	14876	77959	92835
NREV	NREV-TAX	289	3663	3952	314	4645	4959	324	4781	5105
PC	PC	71	.	71	90	.	90	65	.	65
PA	PA	.	15167	15167	.	24322	24322	.	25125	25125
RIE	RIE	.	2323	2323	.	2380	2380	.	2458	2458
ST	ST	.	19548	19548	.	20947	20947	.	16024	16024
SC	SC	1715	1561	3276	1653	1401	3054	1714	1509	3223
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	943	3373	4316	773	3701	4474	774	3727	4501
	SECS-ES	.	379	379	.	395	395	.	415	415
	SECS-OL	.	2330	2330	.	2448	2448	.	2473	2473
	TOTAL	943	6122	7065	773	6614	7387	774	6685	7459
SSHRC	SSHRC	43845	26846	70691	50781	25557	76338	54775	27368	82143
SGEN	SGEN-ADM	9192	1062	10254	8336	941	9277	8207	914	9121
STCAN	STCAN	11005	276019	287024	10451	271379	281830	10762	279974	290737
SS	SS-SUPP	252	2424	2676	394	3461	3855	395	3462	3857
TPT	TPT-ADM	59	6	66	139	17	156	234	21	256
	TPT-APT	85	80	165	109	290	399	218	337	555
	TPT-SUR	355	307	662	349	394	743	335	459	794
	TOTAL	499	394	893	597	701	1298	787	818	1605
TB	TB-ADM	153	22235	22388	318	20670	20988	318	23727	24045
TOTAL	TOTAL	162901	865578	1028479	186895	950288	1137183	190264	936952	1127217

TABLE 63

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

	YEAR					
	1987-88		1988-89		1989-90	
	\$.000		\$.000		\$.000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	57648	35	61740	33	64599	34
CANADIAN INDUSTRY	7113	4	13096	7	10720	6
CANADIAN UNIVERSITY	59056	36	67570	36	70328	37
CANADIAN NP INST	11337	7	11934	6	11827	6
PROV. & MUN. GOV'T	1372	1	1662	1	1672	1
FOREIGN PERFORMERS	24104	15	28716	15	28854	15
OTHER PERFORMERS	2271	1	2177	1	2264	1
TOTAL	162901	100	186895	100	190264	100

TABLE 64

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$.000
DEPARTMENT	PROGRAM										
ACOA	ACOA		4827	4827		9842	9842		7347	7347	
CC	CC	183	.	183	187	.	187	191	.	191	
CMHC	CMHC	3088	1674	4762	3235	2628	5863	3262	2628	5890	
CIDA	CIDA	593	16975	17568	620	20513	21133	609	18835	17444	
CLFB	CLFB	110	.	110	115	.	115	121	.	121	
COMM	COMM-CC	1309	38	1347	1750	25	1775	1833	25	1858	
ECC	ECC	8051	612	8663	8574	330	8904	8510	330	8840	
ENV	ENV-C&P	1250	584	1834	1368	644	2012	1527	709	2236	
	ENV-PC	.	116	116	.	122	122	.	128	128	
	TOTAL	1250	700	1950	1368	766	2134	1527	837	2364	
IAND	IAND	10	382	392	11	79	90	11	79	90	
IDRC	IDRC	7686	21291	28977	8700	24100	32800	9500	26000	35500	
JUST	JUST-LRC	1231	1119	2350	1256	1185	2441	1274	1151	2425	
	TOTAL	1231	1119	2350	1256	1185	2441	1274	1151	2425	
NCC	NCC	.	10	10	.	10	10	.	10	10	
NDEF	NDEF-SER	1390	.	1390	1426	.	1426	1494	.	1494	
NHW	NHW-FAS	40	1074	1114	40	1075	1115	40	1075	1115	
	NHW-HSP	1465	5796	7261	1737	6705	8442	1808	7330	9138	
	NHW-SS	300	2911	3211	311	3102	3413	323	3115	3438	
	TOTAL	1806	9781	11587	2088	10882	12970	2171	11520	13691	
NMC	NMC-CMC	4303	.	4303	6700	.	6700	7482	.	7482	
	NMC-NGC	6518	.	6518	6797	.	6797	7394	.	7394	
	TOTAL	10821	.	10821	13497	.	13497	14876	.	14876	
NREV	NREV-TAX	289	.	289	314	.	314	324	.	324	
PC	PC	.	71	71	.	90	90	.	65	65	
SC	SC	1411	304	1715	1318	335	1653	1379	335	1714	
SECS	SECS-CIT	274	669	943	33	740	773	34	740	774	
	TOTAL	274	669	943	33	740	773	34	740	774	
SSHRC	SSHRC	3351	40494	43845	3767	47014	50781	3805	50970	54775	
SGEN	SGEN-ADM	3708	5484	9192	2935	5400	8336	2807	5400	8207	
STCAN	STCAN	11005	.	11005	10451	.	10451	10762	.	10762	
SS	SS-SUPP	4	248	252	4	390	394	5	390	395	
TPT	TPT-ADM	24	35	59	49	90	139	84	150	234	
	TPT-APT	5	80	85	12	97	109	18	200	218	
	TPT-SUR	49	306	355	28	321	349	.	335	335	
	TOTAL	78	421	499	89	508	597	102	685	787	

(CONTINUED)

TABLE 64

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

		YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TB	TB-ADM		153	153		318	318		318	318
TOTAL	TOTAL	57648	105253	162901	61740	125155	186895	64599	125665	190264

TABLE 65

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		CONTRACTS	OTHER	CONTRACTS	OTHER	CONTRACTS	OTHER
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM						
CC	CC	1	182	1	186	1	190
CMHC	CMHC	.	3088	.	3235	.	3262
CIDA	CIDA	.	593	.	620	.	609
CLFB	CLFB	.	110	.	115	.	121
COMM	COMM-CC	.	1309	.	1750	.	1833
ECC	ECC	.	8051	.	8574	.	8510
ENV	ENV-C&P	.	1250	.	1368	.	1527
	TOTAL	.	1250	.	1368	.	1527
IAND	IAND	.	10	.	11	.	11
IDRC	IDRC	.	7686	.	8700	.	9500
JUST	JUST-LRC	.	1231	.	1256	.	1274
	TOTAL	.	1231	.	1256	.	1274
NDEF	NDEF-SER	.	1390	.	1426	.	1494
NHW	NHW-FAS	.	40	.	40	.	40
	NHW-HSP	590	875	810	927	839	969
	NHW-SS	.	300	.	311	.	323
	TOTAL	590	1216	810	1278	839	1332
NMC	NMC-CMC	193	4110	238	6462	328	7154
	NMC-NGC	263	6255	326	6471	361	7033
	TOTAL	457	10365	564	12933	689	14187
NREV	NREV-TAX	.	289	.	314	.	324
SC	SC	.	1411	.	1318	.	1379
SECS	SECS-CIT	.	274	.	33	.	34
	TOTAL	.	274	.	33	.	34
SSHRC	SSHRC	.	3351	.	3767	.	3805
SGEN	SGEN-ADM	.	3708	.	2936	.	2807
STCAN	STCAN	.	11005	.	10451	.	10762
SS	SS-SUPP	.	4	.	4	.	5
TPT	TPT-ADM	.	24	.	49	.	84
	TPT-APT	.	5	.	12	.	18
	TPT-SUR	.	49	.	28	.	.
	TOTAL	.	78	.	89	.	102
TOTAL	TOTAL	1048	56600	1375	60365	1529	63070

TABLE 66

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	3955	.	9842	.	7347	.
CMHC	CMHC	32	467	1	322	1	322
CIDA	CIDA	.	67	.	76	.	65
COMM	COMM-CC	.	26	.	25	.	25
ECC	ECC	.	106	.	82	.	82
ENV	ENV-C&P	.	286	.	316	.	348
	TOTAL	.	286	.	316	.	348
JUST	JUST-LRC	.	291	.	302	.	295
	TOTAL	.	291	.	302	.	295
NCC	NCC	.	10	.	10	.	10
NHW	NHW-HSP	89	516	100	680	110	660
	TOTAL	89	516	100	680	110	660
SC	SC	.	161	.	155	.	155
SECS	SECS-CIT	.	18	.	90	.	90
	TOTAL	.	18	.	90	.	90
SGEN	SGEN-ADM	.	477	.	400	.	400
SS	SS-SUPP	.	248	.	320	.	320
TPT	TPT-APT	.	80	.	87	.	190
	TPT-SUR	.	284	.	288	.	300
	TOTAL	.	364	.	375	.	490
TOTAL	TOTAL	4076	3037	9943	3153	7458	3262

TABLE 67

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	99	.	.	.	.	.
CMHC	CMHC	142	110	24	166	24	166
CIDA	CIDA	568	11097	641	12512	552	10771
COMM	COMM-CC	.	12	.	.	.	.
ECC	ECC	.	18	.	10	.	10
ENV	ENV-PC	.	40	.	42	.	44
	TOTAL	.	40	.	42	.	44
IDRC	IDRC	1414	.	1600	.	1700	.
JUST	JUST-LRC	.	22	.	35	.	30
	TOTAL	.	22	.	35	.	30
NHW	NHW-FAS	349	.	350	.	350	.
	NHW-HSP	3808	.	4360	25	4810	40
	NHW-SS	932	.	993	.	998	.
	TOTAL	5089	.	5703	25	6158	40
PC	PC	65	.	65	.	65	.
SC	SC	.	16	.	25	.	25
SSHRC	SSHRC	39636	.	45902	.	49858	.
SGEN	SGEN-ADM	679	11	600	50	600	50
SS	SS-SUPP	.	.	.	70	.	70
TPT	TPT-ADM	.	35	.	90	.	150
	TPT-SUR	3	.	10	.	15	.
	TOTAL	3	35	10	90	15	150
TOTAL	TOTAL	47695	11361	54545	13025	58972	11356

TABLE 68

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR
BY DEPARTMENT AND PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	127	.	.	.	.	.
CMHC	CMHC	601	139	855	184	855	184
CIDA	CIDA	.	1734	.	1955	.	1683
ECC	ECC	.	81	.	68	.	68
IAND	IAND	300	.	.	.	.	.
IDRC	IDRC	38	.	100	.	100	.
NHW	NHW-FAS	725	.	725	.	725	.
	NHW-HSP	1137	158	1300	150	1430	180
	NHW-SS	1887	.	2011	.	2019	.
	TOTAL	3749	158	4036	150	4174	180
SC	SC	.	40	.	10	.	10
SECS	SECS-CIT	633	.	635	.	635	.
	TOTAL	633	.	635	.	635	.
SGEN	SGEN-ADM	3492	73	3500	100	3500	100
TPT	TPT-SUR	19	.	23	.	20	.
	TOTAL	19	.	23	.	20	.
TB	TB-ADM	153	.	318	.	318	.
	TOTAL	9112	2225	9467	2467	9602	2225

TABLE 69

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
 IN THE SOCIAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
 GOVERNMENT SECTOR BY DEPARTMENT AND PAYMENT TYPE.
 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
 AND PERFORMER PROV. & MUN. GOV'T

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
\$,000		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	646	.	.	.	.	.
CMHC	CMHC	93	40	905	90	905	90
IAND	IAND	79	.	79	.	79	.
NHW	NHW-HSP	34	.	40	.	50	.
	NHW-SS	92	.	98	.	98	.
	TOTAL	126	.	138	.	148	.
SGEN	SGEN-ADM	284	104	250	200	250	200
TOTAL	TOTAL	1228	144	1372	290	1382	290

TABLE 70

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM						
CMHC	CMHC	50	.	.	13	.	13
CIDA	CIDA	3026	483	4785	544	3295	469
ECC	ECC	.	22	.	.	.	.
ENV	ENV-C&P	.	23	.	26	.	28
	ENV-PC	.	2	.	2	.	2
	TOTAL	.	25	.	28	.	30
IDRC	IDRC	19620	.	22200	.	23900	.
JUST	JUST-LRC	.	18	.	24	.	25
	TOTAL	.	18	.	24	.	25
SC	SC	.	2	.	10	.	10
SSHRC	SSHRC	858	.	1112	.	1112	.
TOTAL	TOTAL	23554	550	28097	619	28307	547

TABLE 71

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1987-88		1988-89		1989-90	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$.000	\$.000	\$.000	\$.000	\$.000	\$.000
DEPARTMENT	PROGRAM						
CMHC	CMHC	.	.	.	68	.	68
ECC	ECC	.	385	.	170	.	170
ENV	ENV-C&P	.	275	.	302	.	333
	ENV-PC	.	74	.	78	.	82
	TOTAL	.	349	.	380	.	415
IAND	IAND	.	3	.	.	.	.
IDRC	IDRC	219	.	200	.	300	.
JUST	JUST-LRC	.	788	.	824	.	801
	TOTAL	.	788	.	824	.	801
NHW	NHW-HSP	.	54	.	50	.	50
	TOTAL	.	54	.	50	.	50
PC	PC	6	.	25	.	.	.
SC	SC	.	85	.	135	.	135
SECS	SECS-CIT	18	.	15	.	15	.
	TOTAL	18	.	15	.	15	.
SGEN	SGEN-ADM	.	364	.	300	.	300
TPT	TPT-APT	.	.	.	10	.	10
	TOTAL	.	.	.	10	.	10
TOTAL	TOTAL	243	2028	240	1937	315	1949

TABLE 72

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
ACOA	ACOA	4827	.	.	9842	.	.	7347	.	.
CC	CC	.	1	182	.	1	186	.	1	190
CMHC	CMHC	918	756	3088	1785	843	3235	1785	843	3262
CIDA	CIDA	3594	13381	593	5426	15087	620	3847	12988	609
CLFB	CLFB	.	.	110	.	.	115	.	.	121
COMM	COMM-CC	.	38	1309	.	25	1750	.	25	1833
ECC	ECC	.	612	8051	.	330	8574	.	330	8510
ENV	ENV-C&P	.	584	1250	.	644	1368	.	709	1527
	ENV-PC	.	116	.	.	122	.	.	128	.
	TOTAL	.	700	1250	.	766	1368	.	837	1527
IAND	IAND	379	3	10	79	.	11	79	.	11
IDRC	IDRC	21291	.	7686	24100	.	8700	26000	.	9500
JUST	JUST-LRC	.	1119	1231	.	1185	1256	.	1151	1274
	TOTAL	.	1119	1231	.	1185	1256	.	1151	1274
NCC	NCC	.	10	.	.	10	.	.	10	.
NDEF	NDEF-SER	.	.	1390	.	.	1426	.	.	1494
NHW	NHW-FAS	1074	.	40	1075	.	40	1075	.	40
	NHW-HSP	5068	1318	875	5800	1715	927	6400	1769	969
	NHW-SS	2911	.	300	3102	.	311	3115	.	323
	TOTAL	9053	1318	1216	9977	1715	1278	10590	1769	1332
NMC	NMC-CMC	.	193	4110	.	238	6462	.	328	7154
	NMC-NGC	.	263	6255	.	326	6471	.	361	7033
	TOTAL	.	457	10365	.	564	12933	.	689	14187
NREV	NREV-TAX	.	.	289	.	.	314	.	.	324
PC	PC	71	.	.	90	.	.	65	.	.
SC	SC	.	304	1411	.	335	1318	.	335	1379
SECS	SECS-CIT	651	18	274	650	90	33	650	90	34
	TOTAL	651	18	274	650	90	33	650	90	34
SSHRC	SSHRC	40494	.	3351	47014	.	3767	50970	.	3805
SGEN	SGEN-ADM	4455	1029	3708	4350	1050	2936	4350	1050	2807
STCAN	STCAN	.	.	11005	.	.	10451	.	.	10762
SS	SS-SUPP	.	248	4	.	390	4	.	390	5
TPT	TPT-ADM	.	35	24	.	90	49	.	150	84
	TPT-APT	.	80	5	.	97	12	.	200	18
	TPT-SUR	22	284	49	33	288	28	35	300	.
	TOTAL	22	399	78	33	475	89	35	650	102

(CONTINUED)

TABLE 72

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE.
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1987-88			1988-89			1989-90		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
TB	TB-ADM	153			318			318		
TOTAL	TOTAL	85908	20393	56600	103664	22866	60365	106036	21158	63070

TABLE 73

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY PERFORMER,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

	YEAR					
	1987-88		1988-89		1989-90	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	639422	74	691049	73	690042	74
CANADIAN INDUSTRY	36636	4	39617	4	39220	4
CANADIAN UNIVERSITY	71845	8	84263	9	82108	9
CANADIAN NP INST	41292	5	44222	5	44506	5
PROV. & MUN. GOV'T	6919	1	6766	1	5506	1
FOREIGN PERFORMERS	55424	6	68970	7	60447	6
OTHER PERFORMERS	14040	2	15401	2	15123	2
TOTAL	865578	100	950288	100	936952	100

TABLE 74

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

		YEAR									
		1987-88			1988-89			1989-90			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
DEPARTMENT	PROGRAM										
AGR	AGR-AFP	3311	116	3427	4089	80	4169	3036	80	3116	
	TOTAL	3311	116	3427	4089	80	4169	3036	80	3116	
CC	CC	178	3	181	183	3	186	188	3	191	
CMHC	CMHC	12212	2552	14764	10599	3960	14559	11777	3960	15737	
CBC	CBC	2111	3249	5360	2427	3101	5528	2324	3209	5533	
CHRC	CHRC	680	39	719	515	91	606	672	98	770	
CIDA	CIDA	3347	111548	114895	3494	130903	134397	3512	114000	117512	
CLFB	CLFB	27	.	27	27	.	27	27	.	27	
COL	COL	2909	.	2909	3445	.	3445	3981	.	3981	
COMM	COMM-CC	1149	778	1927	1440	783	2223	1653	1350	3003	
CCA	CCA-ADM	2424	165	2589	2853	179	3032	3050	201	3251	
	CCA-CON	4143	.	4143	4359	.	4359	4245	.	4245	
	TOTAL	6567	165	6732	7212	179	7391	7295	201	7496	
ECC	ECC	1430	.	1430	1719	.	1719	1735	.	1735	
E&I	E&I-ADM	15379	993	16372	18564	705	19269	20053	551	20604	
	E&I-EIC	7755	40455	48210	6797	38729	45526	6961	38802	45763	
	TOTAL	23134	41448	64582	25361	39434	64795	27014	39353	66367	
ENV	ENV-C&P	5976	525	6501	6547	580	7127	7339	638	7977	
	ENV-PC	52169	22	52191	55678	23	55701	58703	24	58727	
	TOTAL	58145	547	58692	62225	603	62828	66042	662	66704	
EA	EA-CIA	10742	5939	16681	10984	18345	29329	11431	20383	31814	
FIN	FIN-FEP	20377	.	20377	21212	.	21212	22764	.	22764	
F&O	F&O-FM	11556	517	12073	10837	669	11506	11047	594	11641	
IAND	IAND	490	2281	2771	595	2198	2793	606	2092	2698	
IDRC	IDRC	5512	3552	9064	6300	4000	10300	6900	4400	11300	
JUST	JUST-ADM	2488	6006	8494	2577	5940	8517	2543	3610	6153	
	JUST-LRC	841	163	804	664	189	853	678	195	873	
	TOTAL	3129	6169	9298	3241	6129	9370	3221	3805	7026	
LAB	LAB	866	.	866	890	.	890	1065	.	1065	
NCC	NCC	574	49	623	629	120	749	567	130	697	
NDEF	NDEF-SER	2144	120	2264	2277	80	2357	2333	92	2425	
NEB	NEB	1410	.	1410	1593	.	1593	1633	.	1633	
NHW	NHW-ADM	13959	1925	15894	13315	2276	15591	13176	1775	14951	
	NHW-FAS	.	48	48	.	25	25	.	25	25	
	NHW-HP	10	210	220	121	145	266	123	145	268	
	NHW-HSP	383	5976	6359	426	6830	7256	459	7610	8069	

(CONTINUED)

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

TABLE 74

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1987-88 TO 1989-90

DEPARTMENT	PROGRAM	YEAR								
		1987-88			1988-89			1989-90		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
NHW	NHW-IS	1325	50	1375	1424	30	1454	1633	.	1633
	NHW-MS	.	1102	1102	.	1130	1130	.	1160	1160
	NHW-SS	1401	5622	7023	1447	5988	7435	1508	6017	7525
	TOTAL	17088	14933	32021	16734	16424	33158	16899	16732	33631
NL	NL	45388	62	45450	47692	70	47762	47211	72	47283
NMC	NMC-CMC	33323	.	33323	66830	.	66830	48026	.	48026
	NMC-NGC	26348	.	26348	27550	.	27550	29933	.	29933
	TOTAL	59671	.	59671	94380	.	94380	77959	.	77959
NREV	NREV-TAX	3663	.	3663	4645	.	4645	4781	.	4781
PA	PA	15017	150	15167	24002	320	24322	23005	2120	25125
RIE	RIE	924	1399	2323	911	1469	2380	915	1543	2458
ST	ST	19548	.	19548	20947	.	20947	16024	.	16024
SC	SC	1561	.	1561	1401	.	1401	1509	.	1509
SECS	SECS-ADM	.	40	40	.	70	70	.	70	70
	SECS-CIT	68	3305	3373	64	3637	3701	62	3665	3727
	SECS-ES	202	177	379	289	106	395	305	110	415
	SECS-OL	1921	409	2330	1972	476	2448	2048	425	2473
	TOTAL	2191	3931	6122	2325	4289	6614	2415	4270	6685
SSHRC	SSHRC	3061	23785	26846	3311	22246	25557	3343	24025	27368
SGEN	SGEN-ADM	618	444	1062	591	350	941	564	350	914
STCAN	STCAN	276004	15	276019	271362	17	271379	279963	11	279974
SS	SS-SUPP	160	2264	2424	208	3253	3461	209	3253	3462
TPT	TPT-ADM	6	.	6	17	.	17	21	.	21
	TPT-APT	80	.	80	275	15	290	337	.	337
	TPT-SUR	206	101	307	286	108	394	337	122	458
	TOTAL	293	101	394	578	123	701	696	122	818
TB	TB-ADM	22235	.	22235	20670	.	20670	23727	.	23727
TOTAL	TOTAL	639422	226156	865578	691049	259239	950288	690042	246910	936952

TABLE 75

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE SOCIAL SCIENCES BY ACTIVITY AND CATEGORY,
1987-88 TO 1989-90

SCIENCE TYPE SOCIAL
AND YEAR 1987-88

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	26	207	66	59	83	9	21	472	
INTRAMURAL RSA	325	2090	1570	1355	2761	404	13	8518	
ADMIN. OF EXTRAMURAL PROGRAMS	35	151	139	10	163	.	.	498	
TOTAL	386	2448	1776	1424	3007	413	34	9488	

SCIENCE TYPE SOCIAL
AND YEAR 1988-89

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	27	212	70	65	91	11	21	495	
INTRAMURAL RSA	359	2201	1544	1473	2465	400	13	8455	
ADMIN. OF EXTRAMURAL PROGRAMS	36	137	146	10	163	.	.	492	
TOTAL	422	2550	1759	1548	2719	411	34	9442	

SCIENCE TYPE SOCIAL
AND YEAR 1989-90

	CATEGORY							TOTAL	
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
ACTIVITY									
INTRAMURAL R&D	27	212	72	65	91	11	21	497	
INTRAMURAL RSA	351	2229	1600	1483	2263	393	13	8333	
ADMIN. OF EXTRAMURAL PROGRAMS	33	142	142	10	161	.	.	488	
TOTAL	411	2582	1814	1558	2515	404	34	9318	

TABLE 76-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1987-88

SCIENCE TYPE SOCIAL
AND YEAR 1987-88

		CATEGORY							TOTAL
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	
			PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
DEPARTMENT	PROGRAM								
AGR	AGR-AFP		1	32	5	3	11	.	52
	TOTAL		1	32	5	3	11	.	52
CC	CC		2	2	.	2	1	.	7
CMHC	CMHC		6	127	.	8	37	.	178
CBC	CBC		4	20	1	19	1	.	45
CHRC	CHRC		1	3	3	.	2	.	9
CIDA	CIDA		6	7	35	3	16	.	67
CLFB	CLFB		0	1	.	0	0	.	2
COL	COL		6	.	34	.	13	.	53
COMM	COMM-CC		1	39	2	.	1	.	43
CCA	CCA-ADM		5	25	13	3	6	.	52
	CCA-CON		1	11	8	35	10	3	68
	TOTAL		6	36	21	38	16	3	120
ECC	ECC		4	49	27	19	27	.	126
E&I	E&I-ADM		7	90	12	24	39	.	172
	E&I-EIC		9	117	31	8	47	9	221
	TOTAL		16	207	43	32	86	9	393
ENV	ENV-C&P		1	20	7	20	12	1	61
	ENV-PC		10	130	95	125	108	320	788
	TOTAL		11	150	102	145	120	321	849
EA	EA-CIA		15	8	49	.	35	.	107
FIN	FIN-FEP		32	145	27	18	59	.	280
F&O	F&O-FM		10	61	22	46	47	.	185
IAND	IAND		.	3	9	.	.	.	12
IDRC	IDRC		4	63	15	20	56	.	158
JUST	JUST-ADM		2	23	6	.	10	.	42
	JUST-LRC		7	2	6	1	15	.	31
	TOTAL		9	25	12	1	25	.	73
LAB	LAB		.	7	.	1	6	.	14
NCC	NCC		.	8	5	.	.	.	13
NDEF	NDEF-SER		.	17	6	-	15	.	72
NEB	NEB		4	15	.	2	2	.	23
NHW	NHW-ADM		12	78	21	41	42	.	194
	NHW-FAS		.	.	1	.	.	.	1
	NHW-HSP		1	9	6	.	4	.	20
	NHW-IS		1	8	8	3	2	.	22
	NHW-SS		2	11	3	.	8	.	24

(CONTINUED)

TABLE 76-A

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1987-88

SCIENCE TYPE SOCIAL
AND YEAR 1987-88

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NHW	TOTAL		16	105	40	44	56	.	261	
NL	NL		13	189	51	55	213	.	521	
NMC	NMC-CMC		10	31	70	62	65	20	258	
	NMC-NGC		6	27	55	56	23	23	190	
	TOTAL		16	58	125	118	88	43	448	
NREV	NREV-TAX		2	71	.	.	.	.	73
PA	PA		8	105	17	75	77	.	282	
RIE	RIE		1	4	1	4	3	.	13	
ST	ST		36	10	69	1	56	.	172	
SC	SC		5	7	15	.	3	.	30	
SECS	SECS-CIT		1	2	.	1	2	.	6	
	SECS-ES		.	3	.	1	1	.	5	
	SECS-OL		.	.	37	.	5	.	42	
	TOTAL		1	5	37	2	8	.	53	
SSHRC	SSHRC		12	.	43	.	40	.	95	
SGEN	SGEN-ADM		3	30	2	2	11	2	50	
STCAN	STCAN		88	820	836	784	1838	35	4383	
SS	SS-SUPP		0	.	0	.	2	.	2	
TPT	TPT-ADM		.	1	.	.	.	.	1
	TPT-APT		.	2	.	.	.	.	2
	TPT-SUR		1	1	1	1	1	.	5	
	TOTAL		1	4	1	1	1	.	7	
TB	TB-ADM		45	15	121	1	34	.	216	
TOTAL	TOTAL		386	2448	1776	1424	3007	413	34	9488

TABLE 76-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1988-89

SCIENCE TYPE SOCIAL
AND YEAR 1988-89

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	
AGR	AGR-AFP	1	33	5	3	11	.	.	53	
	TOTAL	1	33	5	3	11	.	.	53	
CC	CC	2	2	.	2	1	.	.	7	
CMHC	CMHC	6	120	.	8	20	.	.	154	
CBC	CBC	4	20	1	19	1	.	.	45	
CHRC	CHRC	1	3	3	.	2	.	.	9	
CIDA	CIDA	6	7	37	4	16	.	.	70	
CLFB	CLFB	0	1	.	0	0	.	.	2	
COL	COL	6	.	34	.	13	.	.	53	
COMM	COMM-CC	2	37	1	1	1	.	.	40	
CCA	CCA-ADM	6	26	14	2	7	.	.	55	
	CCA-CON	1	12	8	36	10	3	.	70	
	TOTAL	7	38	22	38	17	3	.	125	
ECC	ECC	5	49	29	17	24	.	.	124	
E&I	E&I-ADM	6	89	13	14	43	.	.	165	
	E&I-EIC	9	87	35	6	51	.	.	188	
	TOTAL	15	176	48	20	94	.	.	353	
ENV	ENV-C&P	1	22	7	19	14	1	.	64	
	ENV-PC	10	130	95	125	108	320	.	788	
	TOTAL	11	152	102	144	122	321	.	852	
EA	EA-CIA	15	7	47	.	39	.	.	108	
FIN	FIN-FEP	35	164	32	18	50	.	.	299	
F&O	F&O-FM	10	58	20	46	40	.	.	173	
IAND	IAND	.	3	9	.	.	.	.	12
IDRC	IDRC	5	70	15	20	59	.	.	167	
JUST	JUST-ADM	2	17	6	.	9	.	.	35	
	JUST-LRC	7	2	6	1	14	.	.	30	
	TOTAL	9	19	12	1	23	.	.	65	
LAB	LAB	.	8	.	1	6	.	.	14	
NCC	NCC	.	8	6	.	.	.	.	14
NDEF	NDEF-SER	.	17	6	.	15	.	34	72	
NEB	NEB	6	12	.	3	4	.	.	25	
NHW	NHW-ADM	14	81	23	11	45	.	.	174	
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HP	.	.	1	1	.	.	.	2	
	NHW-HSP	1	9	7	.	5	.	.	21	
	NHW-IS	1	9	9	4	1	.	.	24	

(CONTINUED)

TABLE 76-B

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1988-89

SCIENCE TYPE SOCIAL
AND YEAR 1988-89

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NHW	NHW-SS	2	12	5	-	8	-	-	27	
	TOTAL	18	111	46	16	59	-	-	249	
NL	NL	13	189	54	55	202	-	-	513	
NMC	NMC-CMC	14	43	97	86	90	28	-	358	
	NMC-NGC	9	35	74	69	30	27	-	244	
	TOTAL	23	78	171	155	120	55	-	602	
NREV	NREV-TAX	2	86	-	-	-	-	-	88	
PA	PA	8	108	17	81	80	-	-	294	
RIE	RIE	1	4	1	4	3	-	-	13	
ST	ST	44	11	70	1	54	-	-	180	
SC	SC	5	7	15	-	3	-	-	30	
SECS	SECS-CIT	1	1	-	-	1	-	-	3	
	SECS-ES	-	3	-	2	1	-	-	5	
	SECS-OL	-	-	38	-	5	-	-	43	
	TOTAL	1	4	38	2	7	-	-	50	
SSHRC	SSHRC	12	-	44	-	41	-	-	97	
SGEN	SGEN-ADM	3	28	2	1	10	1	-	45	
STCAN	STCAN	101	901	760	888	1544	31	-	4225	
SS	SS-SUPP	0	-	0	-	2	-	-	2	
TPT	TPT-ADM	-	1	-	-	-	-	-	1	
	TPT-APT	-	4	-	-	-	-	-	4	
	TPT-SUR	1	3	-	2	1	-	-	6	
	TOTAL	1	7	-	2	1	-	-	11	
TB	TB-ADM	44	13	114	-	36	-	-	207	
TOTAL	TOTAL	422	2550	1759	1548	2719	411	34	9442	

TABLE 76-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1989-90

SCIENCE TYPE SOCIAL
AND YEAR 1989-90

		CATEGORY							TOTAL	
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	1	33	5	3	11	.	.	53	
	TOTAL	1	33	5	3	11	.	.	53	
CC	CC	2	2	.	2	1	.	.	7	
CMHC	CMHC	6	120	.	8	32	.	.	166	
CBC	CBC	4	20	1	19	1	.	.	45	
CHRC	CHRC	1	3	3	.	2	.	.	9	
CIDA	CIDA	5	8	34	4	16	.	.	67	
CLFB	CLFB	0	1	.	0	0	.	.	2	
COL	COL	6	.	39	.	13	.	.	58	
COMM	COMM-CC	1	40	1	.	1	.	.	42	
CCA	CCA-ADM	6	26	15	2	7	.	.	56	
	CCA-CON	1	12	8	36	10	3	.	70	
	TOTAL	7	38	23	38	17	3	.	126	
ECC	ECC	5	49	30	16	22	.	.	122	
E&I	E&I-ADM	6	88	13	14	41	.	.	162	
	E&I-EIC	9	87	35	7	51	0	.	189	
	TOTAL	15	175	48	21	92	0	.	351	
ENV	ENV-C&P	1	21	8	20	14	1	.	65	
	ENV-PC	10	130	95	125	108	320	.	788	
	TOTAL	11	151	103	145	122	321	.	853	
EA	EA-CIA	15	7	47	.	39	.	.	108	
FIN	FIN-FEP	31	178	28	17	47	.	.	301	
F&O	F&O-FM	10	58	20	46	40	.	.	173	
IAND	IAND	.	3	9	.	.	.	.	12
IDRC	IDRC	5	70	15	20	59	.	.	167	
JUST	JUST-ADM	2	17	6	.	9	.	.	35	
	JUST-LRC	7	2	6	1	14	.	.	30	
	TOTAL	9	19	12	1	23	.	.	65	
LAB	LAB	.	8	.	1	5	.	.	14	
NCC	NCC	.	9	6	.	.	.	.	15
NDEF	NDEF-SER	.	17	6	.	15	.	34	72	
NEB	NEB	6	12	.	3	4	.	.	25	
NHW	NHW-ADM	13	80	22	10	44	.	.	169	
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HSP	1	9	6	.	4	.	.	20	
	NHW-IS	1	9	9	3	1	.	.	23	
	NHW-SS	2	16	5	.	8	.	.	31	

(CONTINUED)

TABLE 76-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1989-90

SCIENCE TYPE SOCIAL
AND YEAR 1989-90

		CATEGORY								
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY		
DEPARTMENT	PROGRAM									
NHW	TOTAL	17	113	43	13	57	.	.	243	
NL	NL	13	196	56	54	187	.	.	506	
NMC	NMC-CMC	15	44	100	89	91	29	.	368	
	NMC-NGC	8	35	72	69	29	27	.	240	
	TOTAL	23	79	172	158	120	56	.	608	
NREV	NREV-TAX	2	86	.	.	.	.	.	88
PA	PA	7	113	19	83	72	.	.	294	
RIE	RIE	1	3	1	4	3	.	.	12	
ST	ST	43	7	84	0	39	.	.	173	
SC	SC	5	7	14	.	4	.	.	30	
SECS	SECS-CIT	0	1	.	0	1	.	.	2	
	SECS-ES	.	3	.	2	1	.	.	6	
	SECS-OL	.	.	38	.	5	.	.	43	
	TOTAL	0	4	38	2	7	.	.	50	
SSHRC	SSHRC	11	.	44	.	41	.	.	96	
SGEN	SGEN-ADM	3	26	2	0	8	0	.	39	
STCAN	STCAN	101	906	797	898	1378	24	.	4104	
SS	SS-SUPP	0	.	0	.	2	.	.	2	
TPT	TPT-ADM	.	1	.	.	.	.	.	1
	TPT-APT	.	5	.	.	.	.	.	5
	TPT-SUR	1	2	0	2	1	.	.	5	
	TOTAL	1	7	0	2	1	.	.	11	
TB	TB-ADM	44	14	115	2	35	.	.	210	
TOTAL	TOTAL	411	2582	1814	1558	2515	404	34	9318	

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