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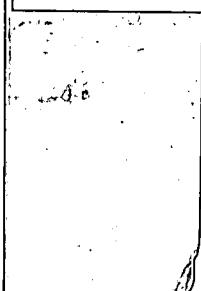
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Services, Science and Technology Division

Division des services, des sciences et de la technologie

FEDERAL SCIENCE EXPENDITURES AND PERSONNEL

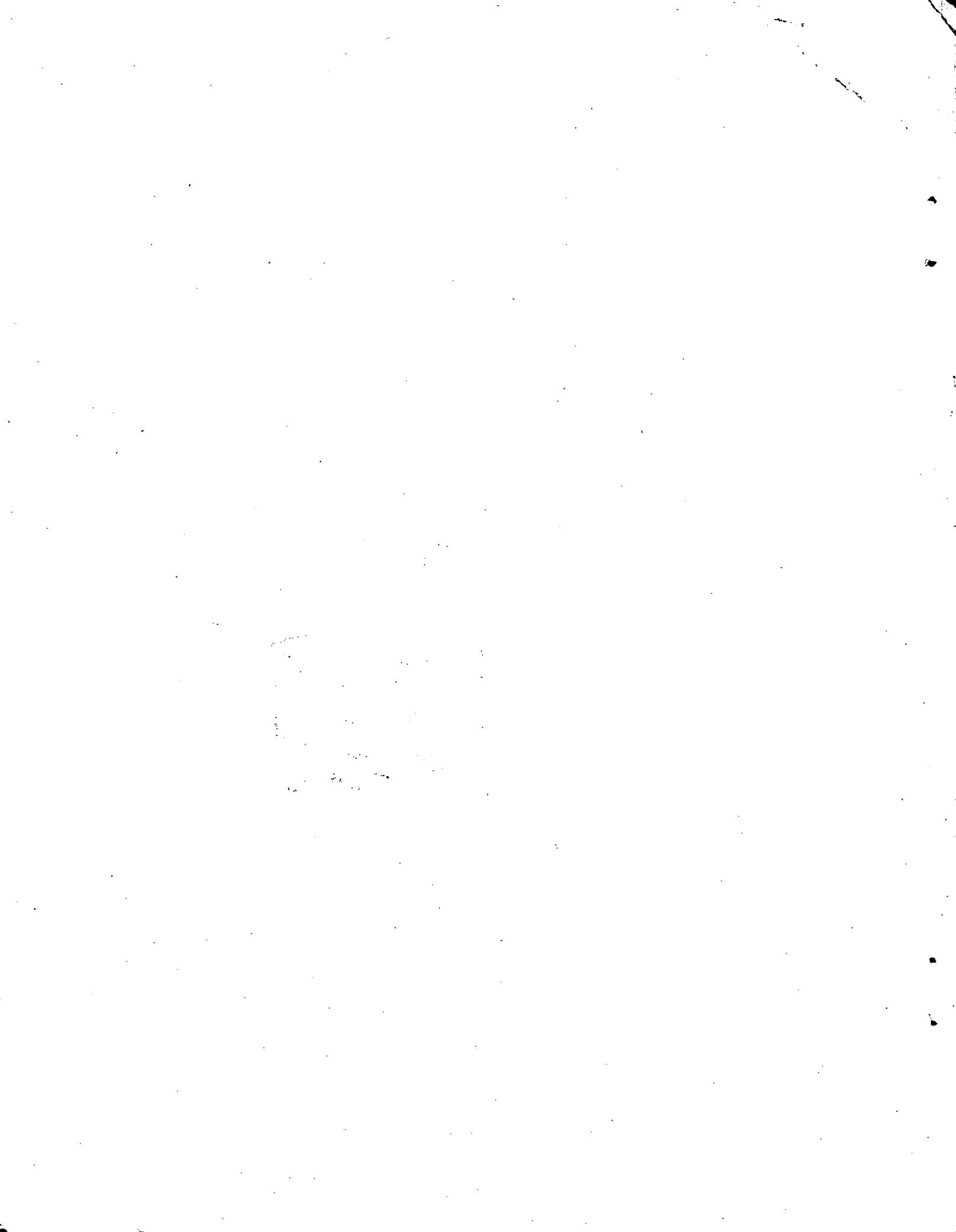
1990-91



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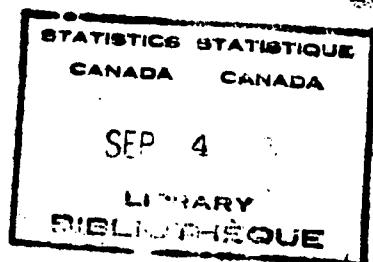
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FEDERAL SCIENCE EXPENDITURES

AND PERSONNEL

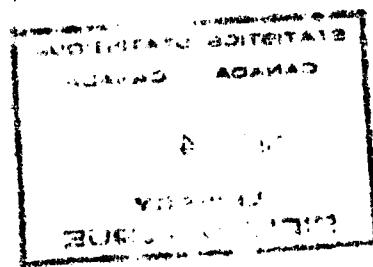
1990-91



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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 1990-91. 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:

- Charles Reid, Statistical Officer
- Stephen Rook, Computer Systems



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TABLES OF SCIENTIFIC AND RESOURCES

SUBJECT	Total Table No.	Science Type Natural Table No.	Social Table No.
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Scientific and Technological (S&T) Totals

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
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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

R&D Totals

summary:

- by performer	13	38	63
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by department:

- intramural/extramural	14	39	64
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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 1990-91 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 1990-91*.

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.

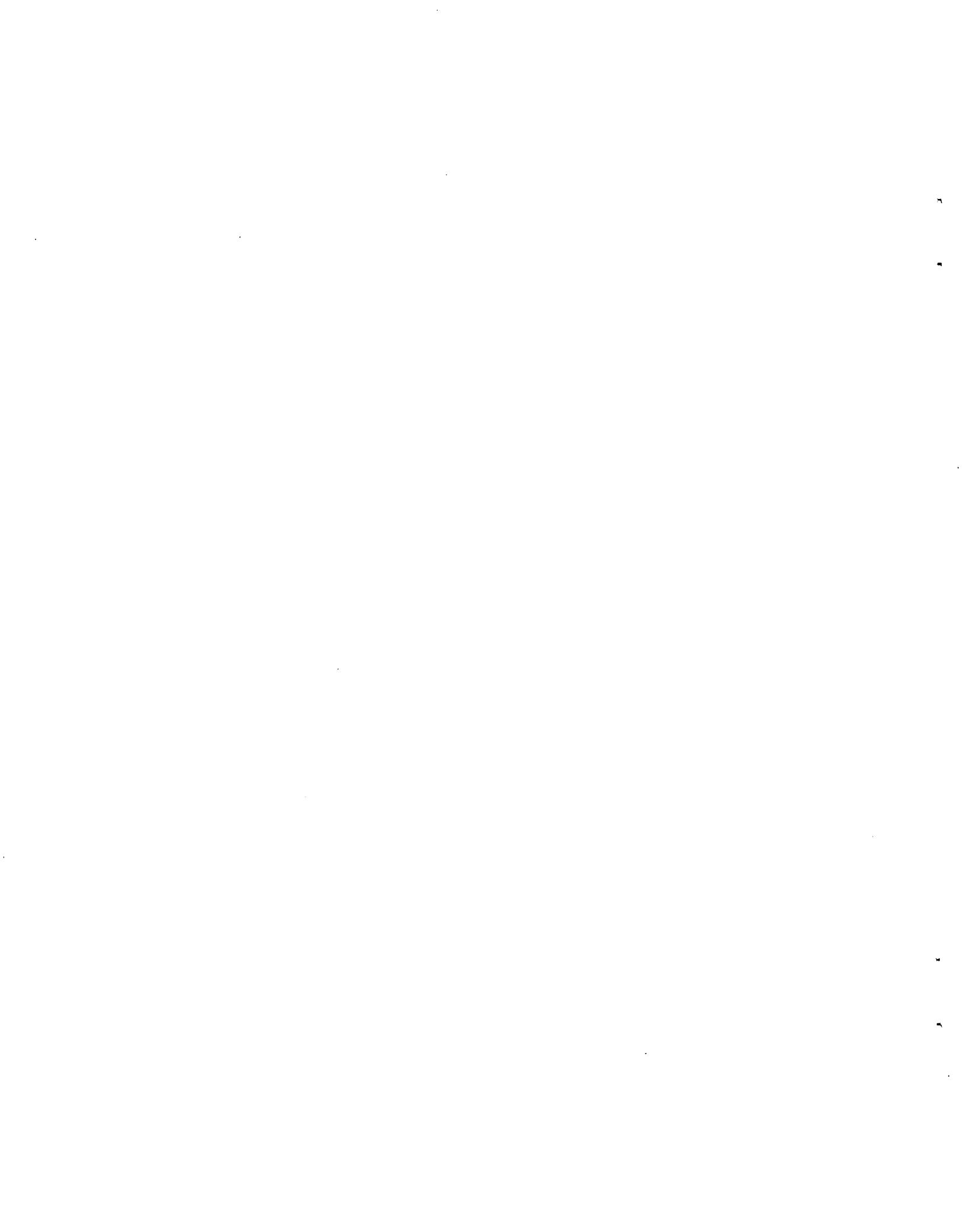
This report is organized into three main sections of statistical data. The first section presents combined data on the natural and social sciences, the second, data on the natural sciences alone and the third, data on the social sciences alone. The notes to readers contains definitions of the terms used 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 1990-91 Main Estimates survey of expenditures and personnel resources in the natural and social sciences, which covers the fiscal periods 1988-89, 1989-90 and 1990-91. The data, therefore, include the actual expenditures recorded in the base year 1988-89, those forecast for the current year 1989-90 and those for which funding authority is requested in estimates for the new fiscal year 1990-91. 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 1988-89 data are the actual totals of the person-years used in that period, while the 1989-90 and 1990-91 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 Services, Science and Technology Division (613-951-9919).

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

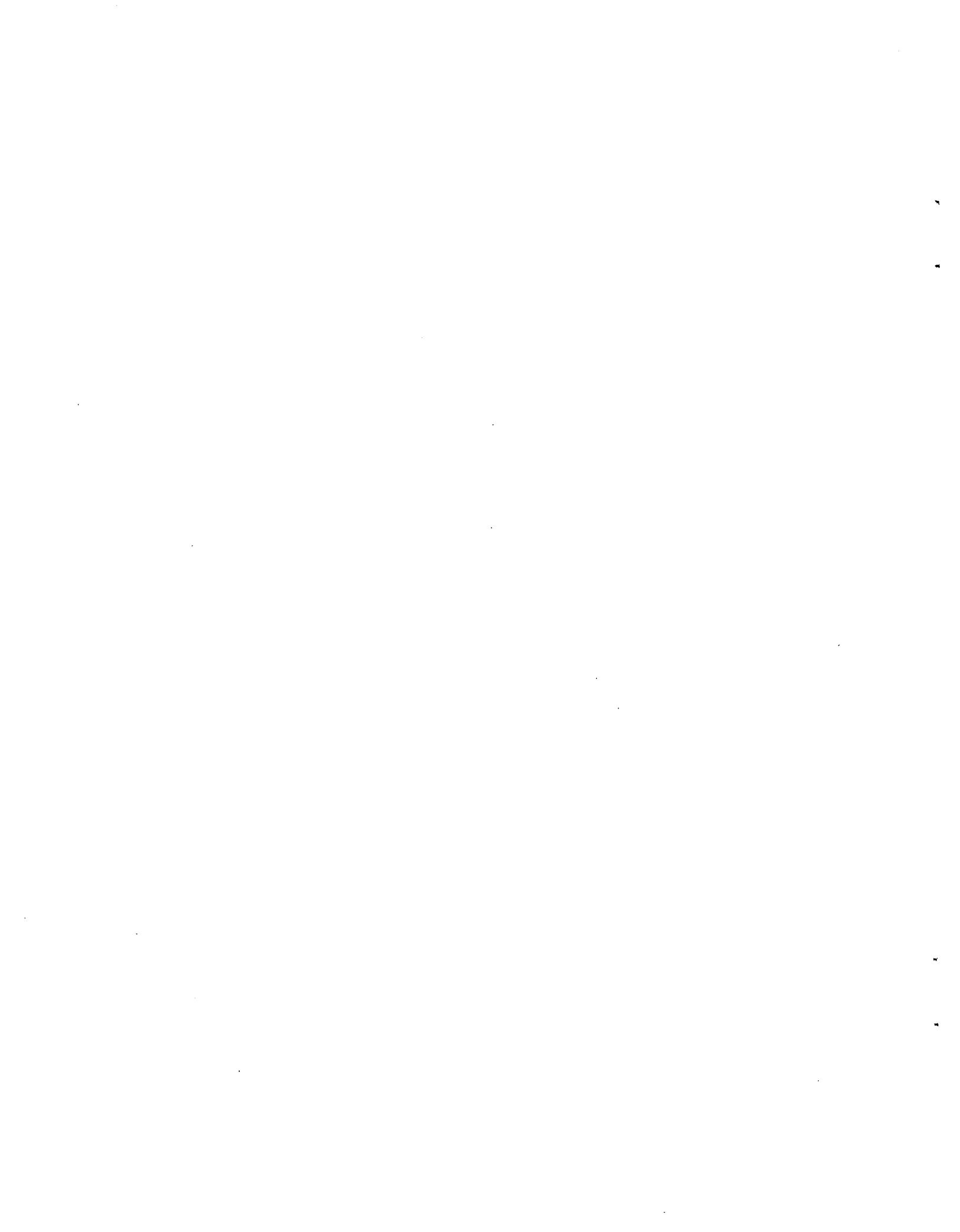


DEPARTMENT/PROGRAM NAMES AND ABBREVIATIONS

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
CMHC	CANADA MORTGAGE & HOUSING CORPORATION
CBC	CANADIAN BROADCASTING CORPORATION
CHRC	CANADIAN HUMAN RIGHTS COMMISSION
CIDA	CANADIAN INTERNATIONAL DEVELOPMENT AGENCY
CLFB	CANADIAN LIVESTOCK FEED BOARD
CSA	CANADIAN SPACE AGENCY
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
EOC	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
ISTC	INDUSTRY, SCIENCE & TECHNOLOGY CANADA
IDRC	INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
IJC	INTERNATIONAL JOINT COMMISSION
JUST	JUSTICE
JUST-ADM	- Administration
JUST-IRC	- Law Reform Commission of Canada
LAB	LABOUR
MRC	MEDICAL RESEARCH COUNCIL
M&C	MULTICULTURALISM & CITIZENSHIP - MINISTRY OF STATE
NA	NATIONAL ARCHIVES
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
PW	PUBLIC WORKS
PW-PTS	- Professional and Technical Services
RCMP	ROYAL CANADIAN MOUNTED POLICE
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 domaine 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

Information services

Feasibility studies

Testing and standardization

Museum services

Education support

Social Sciences

General purpose data collection

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 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.

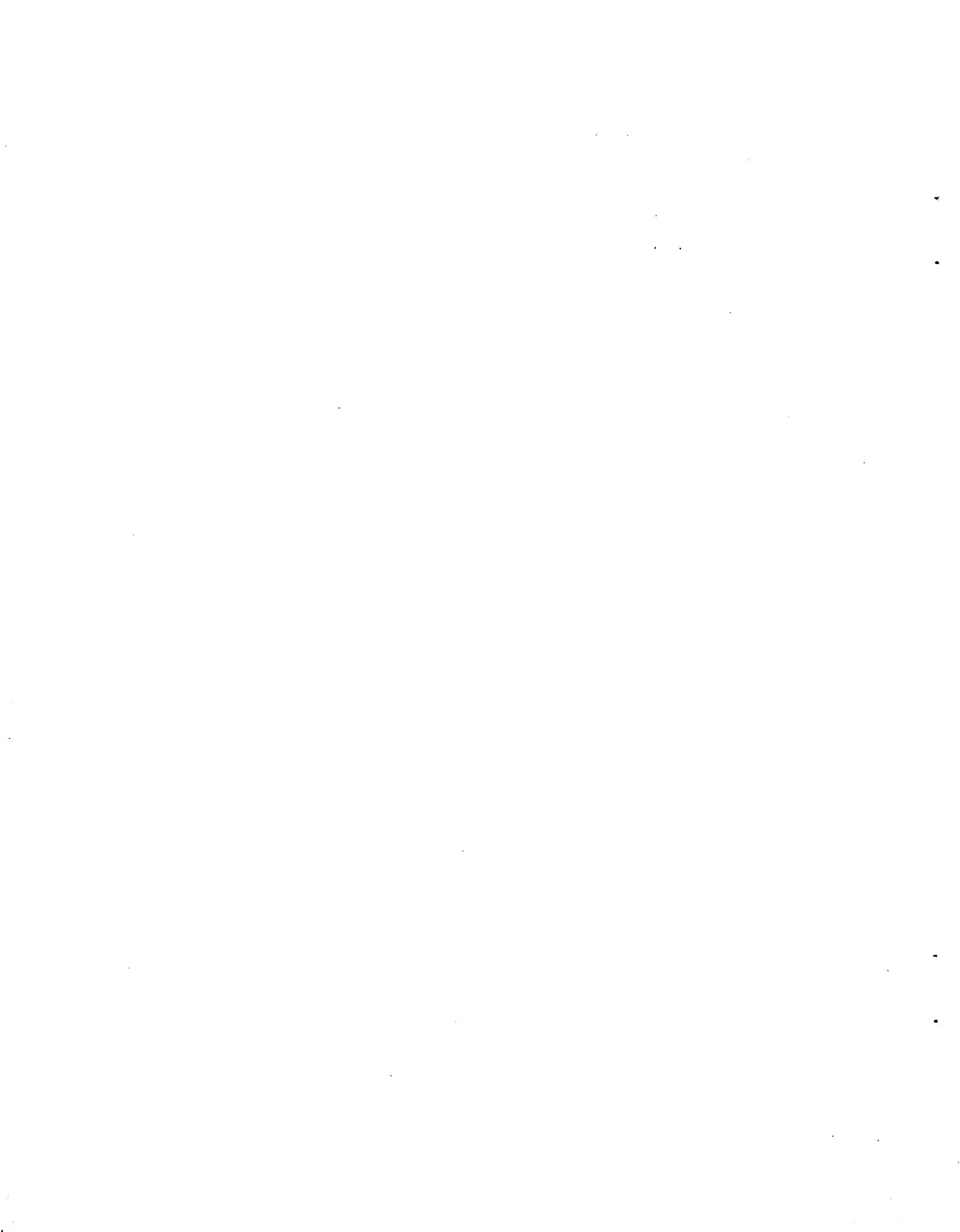


TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE,
1988-89 TO 1990-91

		YEAR								
		1988-89			1989-90			1990-91		
		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									
AGR	AGR-ADM	6600	.	6600	6050	.	6050	6153	.	6153
	AGR-AFP	316228	4100	320328	314034	3467	317501	325146	3583	328729
	AGR-GOP	10596	.	10596	12459	.	12459	12755	.	12755
	TOTAL	333424	4100	337524	332543	3467	336010	344054	3583	347637
ACOA	ACOA	.	12210	12210	.	8547	8547	.	5703	5703
AECB	AECB	3298	.	3298	6048	.	6048	7460	.	7460
AECL	AECL	125100	.	125100	139800	.	139800	123600	.	123600
CMHC	CMHC	5721	22871	28592	6038	25085	31123	6782	27470	34252
CBC	CBC	.	5668	5668	.	5733	5733	.	6107	6107
CHRC	CHRC	.	760	760	.	667	667	.	557	557
CIDA	CIDA	199488	146491	345979	186936	131632	318568	217083	152427	369510
CLFB	CLFB	.	139	139	.	143	143	.	148	148
CSA	CSA	.	.	.	61810	.	61810	113345	.	113345
COL	COL	.	3479	3479	.	4017	4017	.	4238	4238
COMM	COMM-CC	54756	2461	57217	46020	3539	49559	52204	3170	55374
CCA	CCA-ADM	.	2494	2494	.	1529	1529	.	1660	1660
	CCA-CON	.	4835	4835	.	5179	5179	.	5350	5350
	CCA-COR	15225	.	15225	17135	1254	18389	16882	1270	18152
	TOTAL	15225	7329	22554	17135	7962	25097	16882	8280	25162
ECC	ECC	.	10473	10473	.	10869	10869	.	11262	11262
E&I	E&I-ADM	.	17702	17702	.	20623	20623	.	18792	18792
	E&I-EIC	.	43804	43804	.	44299	44299	.	44492	44492
	TOTAL	.	61506	61506	.	64922	64922	.	63284	63284
EMR	EMR-ADM	12974	.	12974	16367	.	16367	.	.	.
	EMR-ENER	26204	.	26204	27840	.	27840	.	.	.
	EMR-MES	340929	.	340929	325437	.	325437	.	.	.
	EMR	.	.	.	.	.	.	516691	.	516691
	TOTAL	380107	.	380107	369644	.	369644	516691	.	516691
ENV	ENV-ADM	521	.	521	519	.	519	520	.	520
	ENV-AES	261280	.	261280	278456	.	278456	289582	.	289582
	ENV-C&P	117867	8926	126793	138531	10425	148956	174588	13208	187796
	ENV-PC	6074	56620	62694	6442	60040	66482	6789	63139	69928
	TOTAL	385742	65546	451288	423949	70465	494414	471479	76347	547827
EA	EA-CIA	.	29298	29298	.	30395	30395	.	32458	32458
FIN	FIN-FEP	.	20379	20379	.	22348	22348	.	31524	31524
F&O	F&O-FM	207644	11671	219316	236907	11957	248864	228587	11945	240532
FOR	FOR	75363	.	75363	73507	.	73507	75528	.	75528

(CONTINUED)

TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE,
1988-89 TO 1990-91

DEPARTMENT	PROGRAM	YEAR								
		1988-89			1989-90			1990-91		
		SCIENCE TYPE			SCIENCE TYPE			SCIENCE TYPE		
		NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL	NATURAL	SOCIAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
IAND	IAND	4553	2652	7205	4709	2505	7214	5625	1042	6667
ISTC	ISTC	242434	20496	262930	294433	16349	310782	262502	13658	276160
IDRC	IDRC	61466	39853	101319	68100	44200	112300	64600	41900	106500
IJC	IJC	4665	.	4665	4835	.	4835	4641	.	4641
JUST	JUST-ADM	.	7412	7412	.	6681	6681	.	4830	4830
	JUST-LRC	.	3145	3145	.	3210	3210	.	3233	3233
	TOTAL	.	10557	10557	.	9891	9891	.	8063	8063
LAB	LAB	.	1138	1138	.	1229	1229	.	1284	1284
MRC	MRC	189052	.	189052	202442	.	202442	222046	.	222046
M&C	M&C	.	4213	4213	.	4397	4397	.	4259	4259
NA	NA	.	25094	25094	.	26137	26137	.	25939	25939
NCC	NCC	194	213	407	191	413	604	141	375	516
NDEF	NDEF-SER	278089	4765	282854	279444	5015	284459	292915	5258	298173
NEB	NEB	452	1659	2111	469	1835	2304	487	2129	2616
NFB	NFB	1220	.	1220	1163	.	1163	1200	.	1200
NHW	NHW-ADM	.	15256	15256	.	17453	17453	.	16373	16373
	NHW-FAS	.	639	639	.	650	650	.	650	650
	NHW-HP	103511	.	103511	111017	.	111017	116070	.	116070
	NHW-HSP	11521	19183	30704	13590	22236	35826	13013	21629	34642
	NHW-IS	.	1457	1457	.	1627	1627	.	1627	1627
	NHW-MS	3843	743	4586	3977	772	4749	4171	803	4974
	NHW-SS	.	13322	13322	.	16394	16394	.	15682	15682
	TOTAL	118875	50600	169475	128584	59132	187716	133254	56764	190018
NL	NL	.	47153	47153	.	49472	49472	.	49949	49949
NMC	NMC-CMC	.	72749	72749	.	81360	81360	.	55775	55775
	NMC-NGC	.	37038	37038	.	40734	40734	.	41828	41828
	NMC-NMNS	24318	.	24318	24959	.	24959	26595	.	26595
	NMC-NMST	.	20654	20654	.	22178	22178	.	24017	24017
	TOTAL	24318	130440	154759	24959	144272	169231	26595	121619	148214
NRC	NRC-SIR	515324	.	515324	568283	.	568283	499644	.	499644
NREV	NREV-TAX	.	4708	4708	.	5316	5316	.	5554	5554
NSERC	NSERC	365880	.	365880	391155	.	391155	424989	.	424989
PC	PC	.	73	73	.	65	65	.	65	65
PW	PW-PTS	7394	.	7394	8344	.	8344	8221	.	8221
RCMP	RCMP	655	.	655	698	.	698	675	.	675
SC	SC	.	3175	3175	.	3230	3230	.	3499	3499
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70

(CONTINUED)

TABLE 1
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND SCIENCE TYPE,
1988-89 TO 1990-91

		YEAR								
		1988-89			1989-90			1990-91		
		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									
SECS	SECS-CIT	.	1338	1338	.	1487	1487	.	1516	1516
	SECS-ES	.	479	479	.	441	441	.	317	317
	SECS-OL	.	2427	2427	.	2550	2550	.	2580	2580
	TOTAL	.	4286	4286	.	4548	4548	.	4483	4483
SSHRC	SSHRC	.	76358	76358	.	82143	82143	.	90023	90023
SGEN	SGEN-ADM	.	9236	9236	.	9108	9108	.	9386	9386
STCAN	STCAN	.	288074	288074	.	292309	292309	.	349242	349242
SS	SS-SUPP	23071	2890	25961	14324	2838	17162	545	2693	3238
TPT	TPT-ADM	17418	481	17899	19800	561	20361	20812	581	21393
	TPT-APT	930	475	1405	611	457	1068	513	462	975
	TPT-AIR	5969	.	5969	6077	.	6077	6258	.	6258
	TPT-MAR	6590	.	6590	8505	.	8505	8525	.	8525
	TPT-SUR	706	823	1529	1119	885	2004	1227	1006	2233
	TOTAL	31613	1779	33392	36112	1903	38015	37335	2049	39384
TB	TB-ADM	.	20847	20847	.	23754	23754	.	24262	24262
WDO	WDO	6283	.	6283	34056	.	34056	28451	.	28451
TOTAL	TOTAL	3661406	1154640	4816045	3962638	1191808	5154446	4187560	1261997	5449557

TABLE 2
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	2833612	59	3009880	58	3161103	58
CANADIAN INDUSTRY	792792	16	893264	17	980345	18
CANADIAN UNIVERSITY	760699	16	804949	16	876458	16
CANADIAN NP INST	81810	2	108718	2	99689	2
PROV. & MUN. GOV'T	33934	1	33988	1	27474	1
FOREIGN PERFORMERS	252357	5	240856	5	241841	4
OTHER PERFORMERS	60841	1	62791	1	62647	1
TOTAL	4816045	100	5154446	100	5449557	100

TABLE 3-A

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	975222	.	.	.	.	.	.	975222
R&D CONTRACTS	1915	257581	36992	4421	902	7872	16546	326229
SUPPORTING CONTRACTS	36654	.	.	.	.	.	.	36654
R&D GRANTS	.	334804	545339	35187	20583	129137	28547	1093597
RESEARCH FELLOWSHIPS	20674	2361	41610	245	.	11795	111	76796
ADMIN. EXTRAMURAL R&D	101990	.	.	.	.	.	.	101990
CAPITAL - R&D	185060	.	.	.	.	.	.	185060
SUB TOTAL R&D	1321515	594746	623941	39853	21485	148804	45204	2795548
DATA COLLECTION	715623	51938	7716	8481	6058	6045	7209	803070
INFORMATION SERVICES	310330	14320	12663	19224	2514	43637	5297	407985
ECONOMIC & FEAS. STUDIES	29234	7022	1383	1260	325	12290	159	51673
OPERN'S & POLICY STUDIES	86832	14663	1015	4461	1738	12282	1337	122328
TESTING & STANDARDIZATION	47121	4609	426	940	36	1628	319	55079
FEASIBILITY STUDIES	4673	102083	1333	1380	1736	10531	802	122538
MUSEUM SERVICES	157673	184	224	579	.	.	205	158865
EDUCATIONAL SUPPORT	1905	3227	111998	5632	42	17140	309	140253
ADMIN. EXTRAMURAL RSA	34208	.	.	.	.	.	.	34208
CAPITAL - RSA	124498	.	.	.	.	.	.	124498
SUB TOTAL RSA	1512097	198046	136758	41957	12449	103553	15637	2020497
TOTAL	2833612	792792	760699	81810	33934	252357	60841	4816045

TABLE 3-B

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY ACTIVITY AND PERFORMER,
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	
ACTIVITIES								
IN-HOUSE R&D	1054995	.	.	.	.	.	.	1054995
R&D CONTRACTS	3557	306599	39847	5699	1618	6357	14233	377910
SUPPORTING CONTRACTS	38409	.	.	.	.	.	.	38409
R&D GRANTS	.	390761	582792	54772	18383	125244	31549	1203501
RESEARCH FELLOWSHIPS	19245	3300	39927	300	.	12890	117	75779
ADMIN. EXTRAMURAL R&D	110493	.	.	.	.	.	.	110493
CAPITAL - R&D	175962	.	.	.	.	.	.	175962
SUB TOTAL R&D	1402661	700660	662566	60771	20001	144491	45899	3037049
DATA COLLECTION	774314	44201	7335	9861	7951	5578	6717	855957
INFORMATION SERVICES	320775	17374	12081	20702	1056	40587	6493	419068
ECONOMIC & FEAS. STUDIES	32343	6531	1440	1447	386	9324	267	51738
OPERN'S & POLICY STUDIES	89115	14462	1048	7550	2391	10476	1685	126727
TESTING & STANDARDIZATION	45509	3430	832	1570	294	1668	319	53622
FEASIBILITY STUDIES	5357	103385	1365	1493	1842	8509	864	122815
MUSEUM SERVICES	167679	196	264	623	.	.	212	168974
EDUCATIONAL SUPPORT	1156	3025	118018	4701	67	20223	335	147525
ADMIN. EXTRAMURAL RSA	34841	.	.	.	.	.	.	34841
CAPITAL - RSA	136131	.	.	.	.	.	.	136131
SUB TOTAL RSA	1607219	192604	142383	47947	13987	96365	16892	2117397
TOTAL	3009880	893264	804949	108718	33988	240856	62791	5154446

TABLE 3-C
TOTAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY ACTIVITY AND PERFORMER, 1989-90
1990-91

SCIENCE TYPE TOTAL
AND YEAR 1990-91

	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	1074810	.	.	.	.	.	.	1074810
R&D CONTRACTS	3541	308417	44613	6641	1757	6643	14973	386585
SUPPORTING CONTRACTS	37053	.	.	.	.	.	.	37053
R&D GRANTS	.	464748	637730	47326	14021	114066	30652	1308543
RESEARCH FELLOWSHIPS	20402	2700	38306	300	.	13928	122	75758
ADMIN. EXTRAMURAL R&D	124842	.	.	.	.	.	.	124842
CAPITAL - R&D	172049	.	.	.	.	.	.	172049
SUB TOTAL R&D	1432698	775865	720649	54267	15778	134637	45747	3179641
DATA COLLECTION	873130	47080	6732	10548	8889	5753	6603	958735
INFORMATION SERVICES	356363	21690	13055	20945	1193	41604	7515	462365
ECONOMIC & FEAS. STUDIES	33959	6389	1449	1342	374	12948	167	56628
OPERN'S & POLICY STUDIES	86537	14664	1007	5175	1029	11375	1861	121648
TESTING & STANDARDIZATION	48482	3223	406	1304	185	2356	175	56131
FEASIBILITY STUDIES	4378	108055	392	236	5	10353	61	123480
MUSEUM SERVICES	163452	209	252	604	.	.	219	164736
EDUCATIONAL SUPPORT	1243	3170	132516	5268	21	22815	299	165332
ADMIN. EXTRAMURAL RSA	41300	.	.	.	.	.	.	41300
CAPITAL - RSA	119561	.	.	.	.	.	.	119561
SUB TOTAL RSA	1728406	204480	155809	45422	11696	107204	16900	2269917
TOTAL	3161103	980345	876458	99689	27474	241841	62647	5449557

TABLE 4
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

DEPARTMENT	PROGRAM	YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
AGR	AGR-ADM	6489	111	6600	5950	100	6050	6053	100	6153	
	AGR-AFP	301891	18437	320328	300105	17396	317501	311358	17371	328729	
	AGR-GOP	8406	2190	10596	10053	2406	12459	10344	2411	12755	
	TOTAL	316786	20738	337524	316108	19902	336010	327755	19882	347637	
ACOA	ACOA	.	12210	12210	.	8547	8547	.	5703	5703	
AECB	AECB	1151	2147	3298	1244	4804	6048	1352	6108	7460	
AECL	AECL	101431	23669	125100	113387	26413	139800	100220	23380	123600	
CMHC	CMHC	20829	7763	28592	22926	8197	31123	26055	8197	34252	
CBC	CBC	2269	3399	5668	2030	3703	5733	2230	3877	6107	
CHRC	CHRC	723	37	760	607	60	667	472	85	557	
CIDA	CIDA	8996	336983	345979	9054	309514	318568	9954	359556	369510	
CLFB	CLFB	139	.	139	143	.	143	128	20	148	
CSA	CSA	.	.	.	11356	50454	61810	13282	100063	113345	
COL	COL	3479	.	3479	4017	.	4017	4238	.	4238	
COMM	COMM-CC	32243	24974	57217	35331	14228	49559	40845	14529	55374	
CCA	CCA-ADM	2369	125	2494	1389	140	1529	1520	140	1660	
	CCA-CON	4835	.	4835	5179	.	5179	5350	.	5350	
	CCA-COR	15225	.	15225	18389	.	18389	18152	.	18152	
	TOTAL	22429	125	22554	24957	140	25097	25022	140	25162	
ECC	ECC	10113	360	10473	10437	432	10869	10787	475	11262	
E&I	E&I-ADM	16304	1398	17702	16709	3914	20623	16642	2150	18792	
	E&I-EIC	2503	41301	43804	2757	41542	44299	2927	41565	44492	
	TOTAL	18807	42699	61506	19466	45456	64922	19569	43715	63284	
	EMR	12974	.	12974	16367	.	16367	.	.	.	
EMR	EMR-ENER	3147	23057	26204	3373	24467	27840	.	.	.	
	EMR-MES	264873	76056	340929	276114	49323	325437	.	.	.	
	EMR	.	.	.	.	.	.	344543	172148	516691
	TOTAL	280994	99113	380107	295854	73790	369644	344543	172148	516691	
	ENV	ENV-ADM	193	328	521	149	370	519	150	370	520
ENV	ENV-AES	240617	20663	261280	257024	21432	278456	267592	21990	289582	
	ENV-C&P	105783	21010	126793	124768	24188	148956	156785	31011	187796	
	ENV-PC	61713	981	62694	65454	1028	66482	68850	1078	69928	
	TOTAL	408306	42982	451288	447396	47018	494414	493378	54449	547827	
	EA	EA-CIA	11756	17542	29298	10268	20127	30395	10866	21592	32458
FIN	FIN-FEP	20379	.	20379	22348	.	22348	31524	.	31524	
F&O	F&O-FM	207295	12021	219316	236444	12420	248864	228667	11865	240532	

(CONTINUED)

TABLE 4
FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
FOR	FOR	63422	11941	75363	62390	11117	73507	65934	9594	75528
IAND	IAND	1107	6098	7205	1346	5868	7214	1196	5471	6667
ISTC	ISTC	38034	224896	262930	35305	275477	310782	32443	243717	276160
IDRC	IDRC	33421	67898	101319	37100	75200	112300	35100	71400	106500
IJC	IJC	4498	167	4665	4328	507	4835	4067	574	4641
JUST	JUST-ADM	2451	4961	7412	2296	4385	6681	2179	2651	4830
	JUST-LRC	1593	1552	3145	1754	1456	3210	1702	1531	3233
	TOTAL	4044	6513	10557	4050	5841	9891	3881	4182	8063
LAB	LAB	1138	.	1138	1229	.	1229	1284	.	1284
MRC	MRC	5192	183860	189052	5496	196946	202442	6100	215946	222046
M&C	M&C	.	4213	4213	.	4397	4397	.	4259	4259
NA	NA	24774	320	25094	24017	2120	26137	24139	1800	25939
NCC	NCC	119	288	407	42	562	604	40	476	516
NDEF	NDEF-SER	164810	118044	282854	160831	123628	284459	164385	133788	298173
NEB	NEB	2111	.	2111	2304	.	2304	2616	.	2616
NFB	NFB	1220	.	1220	1163	.	1163	1200	.	1200
NHW	NHW-ADM	13601	1655	15256	14805	2648	17453	14826	1547	16373
	NHW-FAS	40	599	639	40	610	650	40	610	650
	NHW-HP	98912	4599	103511	106035	4982	111017	111413	4657	116070
	NHW-HSP	3236	27468	30704	3350	32476	35826	3578	31064	34642
	NHW-IS	1427	30	1457	1627	.	1627	1627	.	1627
	NHW-MS	3843	743	4586	3977	772	4749	4171	803	4974
	NHW-SS	2268	11054	13322	2362	14032	16394	2245	13437	15682
NL	TOTAL	123327	46148	169475	132196	55520	187716	137900	52118	190018
	NL	47075	78	47153	49411	61	49472	49877	72	49949
NMC	NMC-CMC	72749	.	72749	81360	.	81360	55775	.	55775
	NMC-NGC	37038	.	37038	40734	.	40734	41828	.	41828
	NMC-NMNS	24173	145	24318	24615	344	24959	26251	344	26595
	NMC-NMST	20654	.	20654	22178	.	22178	24017	.	24017
	TOTAL	154614	145	154759	168887	344	169231	147870	344	148214
NRC	NRC-SIR	333838	181486	515324	362690	205593	568283	358362	141282	499644
NREV	NREV-TAX	4708	.	4708	5316	.	5316	5554	.	5554
NSERC	NSERC	15634	350246	365880	17305	373850	391155	18282	406707	424989
PC	PC	.	73	73	.	65	65	.	65	65
PW	PW-PTS	5585	1809	7394	6153	2191	8344	6030	2191	8221
RCMP	RCMP	299	356	655	330	368	698	335	340	675

(CONTINUED)

TABLE 4

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY TOTAL

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
SC	SC	2979	196	3175	2980	250	3230	3249	250	3499	
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70	
	SECS-CIT	365	973	1338	437	1050	1487	466	1050	1516	
	SECS-ES	230	249	479	229	212	441	202	115	317	
	SECS-DL	2022	405	2427	2109	441	2550	2180	400	2580	
	TOTAL	2618	1668	4286	2775	1773	4548	2848	1635	4483	
SSHRC	SSHRC	7098	69260	76358	7148	74995	82143	7628	82395	90023	
SGEN	SGEN-ADM	3486	5750	9236	3008	6100	9108	3386	6000	9386	
STCAN	STCAN	288056	18	288074	292298	11	292309	349231	11	349242	
SS	SS-SUPP	469	25492	25961	438	16724	17162	314	2924	3238	
TPT	TPT-ADM	3610	14289	17899	4946	15415	20361	5258	16135	21393	
	TPT-APT	470	935	1405	486	582	1068	515	460	975	
	TPT-AIR	4543	1426	5969	4651	1426	6077	4775	1483	6258	
	TPT-MAR	1565	5025	6590	1105	7400	8505	1147	7378	8525	
	TPT-SUR	548	981	1529	555	1449	2004	580	1653	2233	
	TOTAL	10736	22656	33392	11743	26272	38015	12275	27109	39384	
TB	TB-ADM	20529	318	20847	23589	165	23754	24097	165	24262	
WDO	WDO	549	5734	6283	640	33416	34056	596	27855	28451	
TOTAL	TOTAL	2833612	1982433	4816045	3009880	2144566	5154446	3161103	2288454	5449557	

TABLE 5
FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	6489	6489	.	5950	5950	.	6053	6053
	AGR-AFP	277640	24251	301891	274742	25363	300105	287654	23704	311358
	AGR-GOP	4873	3533	8406	5971	4082	10053	5815	4529	10344
	TOTAL	282513	34273	316786	280713	35395	316108	293469	34286	327755
AECB	AECB	1137	14	1151	1207	37	1244	1311	41	1352
AECL	AECL	94450	6981	101431	105548	7839	113387	93318	6902	100220
CMHC	CMHC	6305	14524	20829	7081	15845	22926	7842	18213	26055
CBC	CBC	.	2269	2269	.	2030	2030	.	2230	2230
CHRC	CHRC	.	723	723	.	607	607	.	472	472
CIDA	CIDA	1349	7647	8996	1330	7724	9054	1460	8494	9954
CLFB	CLFB	112	27	139	116	27	143	96	34	128
CSA	CSA	.	.	.	11356	.	11356	13282	.	13282
COL	COL	.	3479	3479	.	4017	4017	.	4238	4238
COMM	COMM-CC	29148	3095	32243	34706	625	35331	40244	601	40845
CCA	CCA-ADM	.	2369	2369	.	1389	1389	.	1520	1520
	CCA-CON	.	4835	4835	.	5179	5179	.	5350	5350
	CCA-COR	.	15225	15225	.	18389	18389	.	18152	18152
	TOTAL	.	22429	22429	.	24957	24957	.	25022	25022
ECC	ECC	9728	385	10113	9983	454	10437	10355	432	10787
E&I	E&I-ADM	.	16304	16304	.	16709	16709	.	16642	16642
	E&I-EIC	1840	663	2503	1910	847	2757	1978	949	2927
	TOTAL	1840	16967	18807	1910	17556	19466	1978	17591	19569
EMR	EMR-ADM	.	12974	12974	.	16367	16367	.	.	.
	EMR-ENER	1383	1764	3147	1461	1912	3373	.	.	.
	EMR-MES	94732	170141	264873	92349	183764	276114	.	.	.
	EMR	.	.	.	.	.	.	108153	236390	344543
	TOTAL	96115	184879	280994	93810	202044	295854	108153	236390	344543
ENV	ENV-ADM	193	.	193	149	.	149	150	.	150
	ENV-AES	23813	216805	240617	25561	231463	257024	26184	241408	267592
	ENV-C&P	34849	70934	105783	40374	84395	124768	50365	106421	156785
	ENV-PC	.	61713	61713	.	65454	65454	.	68850	68850
	TOTAL	58855	349451	408306	66084	381312	447396	76699	416679	493378
EA	EA-CIA	.	11756	11756	.	10268	10268	.	10866	10866
FIN	FIN-FEP	.	20379	20379	.	22348	22348	.	31524	31524
F&O	F&O-FM	111162	96133	207295	127583	108862	236444	123101	105565	228667
FOR	FOR	55939	7483	63422	55342	7048	62390	58898	7036	65934

(CONTINUED)

TABLE 5
FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	211	896	1107	349	997	1346	357	839	1196
ISTC	ISTC	17837	20197	38034	18859	16446	35305	18700	13743	32443
IDRC	IDRC	22475	10946	33421	25000	12100	37100	23600	11500	35100
IJC	IJC	.	4498	4498	.	4328	4328	.	4067	4067
JUST	JUST-ADM	.	2451	2451	.	2296	2296	.	2179	2179
	JUST-LRC	986	607	1593	1100	654	1754	1049	653	1702
	TOTAL	986	3058	4044	1100	2950	4050	1049	2832	3881
LAB	LAB	.	1138	1138	.	1229	1229	.	1284	1284
MRC	MRC	4984	208	5192	5275	221	5496	5856	244	6100
NA	NA	.	24774	24774	.	24017	24017	.	24139	24139
NCC	NCC	.	119	119	.	42	42	.	40	40
NDEF	NDEF-SER	160726	4083	164810	156604	4227	160831	159655	4729	164385
NEB	NEB	.	2111	2111	.	2304	2304	.	2616	2616
NFB	NFB	879	341	1220	968	195	1163	985	215	1200
NHW	NHW-ADM	.	13601	13601	.	14805	14805	.	14826	14826
	NHW-FAS	40	.	40	40	.	40	40	.	40
	NHW-HP	17844	81068	98912	16725	89310	106035	16628	94785	111413
	NHW-HSP	2382	854	3236	2398	952	3350	2556	1022	3578
	NHW-IS	.	1427	1427	.	1627	1627	.	1627	1627
	NHW-MS	584	3259	3843	605	3372	3977	635	3536	4171
	NHW-SS	525	1743	2268	547	1815	2362	591	1654	2245
	TOTAL	21375	101951	123327	20315	111881	132196	20450	117450	137900
NL	NL	.	47075	47075	.	49411	49411	.	49877	49877
NMC	NMC-CMC	7439	65310	72749	11049	70311	81360	7513	48262	55775
	NMC-NGC	7335	29703	37038	8073	32661	40734	8291	33537	41828
	NMC-NMNS	3404	20769	24173	3755	20861	24615	3841	22410	26251
	NMC-NMST	.	20654	20654	.	22178	22178	.	24017	24017
	TOTAL	18178	136435	154614	22877	146010	168887	19645	128225	147870
NRC	NRC-SIR	281275	52563	333838	309562	53128	362690	305129	53234	358362
NREV	NREV-TAX	367	4341	4708	388	4928	5316	405	5149	5554
NSERC	NSERC	13820	1814	15634	15177	2128	17305	16052	2230	18282
PW	PW-PTS	2187	3398	5585	2476	3677	6153	2432	3598	6030
RCMP	RCMP	299	.	299	330	.	330	335	.	335
SC	SC	1580	1399	2979	1503	1477	2980	1396	1853	3249
SECS	SECS-CIT	365	.	365	437	.	437	466	.	466
	SECS-ES	.	230	230	.	229	229	.	202	202

(CONTINUED)

TABLE 5

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	2022	2022	.	2109	2109	.	2180	2180
	TOTAL	365	2253	2618	437	2338	2775	466	2382	2848
SSHRC	SSHRC	3733	3365	7098	3778	3370	7148	4020	3608	7628
SGEN	SGEN-ADM	2545	941	3486	2086	922	3008	2373	1013	3386
STCAN	STCAN	10779	277277	288056	9640	282658	292298	10214	339017	349231
SS	SS-SUPP	221	248	469	176	262	438	98	216	314
TPT	TPT-ADM	3066	544	3610	4374	572	4946	4571	687	5258
	TPT-APT	.	470	470	.	486	486	.	515	515
	TPT-AIR	2732	1811	4543	2772	1879	4651	2858	1917	4775
	TPT-MAR	1565	.	1565	1105	.	1105	1147	.	1147
	TPT-SUR	183	365	548	166	389	555	163	417	580
	TOTAL	7546	3190	10736	8418	3325	11743	8740	3535	12275
TB	TB-ADM	.	20529	20529	.	23589	23589	.	24097	24097
WDO	WDO	494	55	549	575	65	640	537	59	596
TOTAL	TOTAL	1321515	1512097	2833612	1402661	1607219	3009880	1432698	1728406	3161103

TABLE 6

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE INDUSTRY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	97	97	.	90	90	.	90	90
	AGR-AFP	2978	2742	5720	2978	1704	4682	2978	1704	4682
	AGR-GOP	2000	.	2000	2000	.	2000	2000	.	2000
	TOTAL	4978	2839	7817	4978	1794	6772	4978	1794	6772
ACOA	ACOA	11356	.	11356	7633	.	7633	5089	.	5089
AECB	AECB	844	24	868	1664	895	2559	1895	1019	2914
AECL	AECL	21117	400	21517	23636	410	24046	20869	390	21259
CMHC	CMHC	1845	2613	4458	1132	1221	2353	1132	1221	2353
CBC	CBC	.	3359	3359	.	3703	3703	.	3877	3877
CHRC	CHRC	.	37	37	.	.	.	.	.	.
CIDA	CIDA	543	120400	120943	483	111840	112323	555	133754	134309
CSA	CSA	.	.	.	25449	.	25449	86482	.	86482
COMM	COMM-CC	12985	1937	14922	11722	1243	12965	12528	745	13273
CCA	CCA-ADM	.	78	78	.	90	90	.	90	90
	TOTAL	.	78	78	.	90	90	.	90	90
ECC	ECC	5	.	5	6	.	6	7	.	7
E&I	E&I-ADM	.	1138	1138	.	2706	2706	.	2105	2105
	E&I-EIC	7786	163	7949	7786	200	7986	7786	200	7986
	TOTAL	7786	1301	9087	7786	2906	10692	7786	2305	10091
EMR	EMR-ENER	8765	6021	14786	9737	6336	16073	.	.	.
	EMR-MES	10792	14140	24932	15252	8269	23521	.	.	.
	EMR	.	.	.	.	.	.	133849	8839	142688
	TOTAL	19557	20161	39718	24989	14605	39594	133849	8839	142688
ENV	ENV-ADM	130	.	130	200	.	200	220	.	220
	ENV-AES	1902	13597	15499	1967	14028	15995	2033	14407	16440
	ENV-C&P	7008	2418	9426	8062	2789	10851	10346	3579	13925
	ENV-PC	199	303	502	209	318	527	219	335	554
	TOTAL	9239	16318	25557	10438	17135	27573	12818	18321	31139
EA	EA-CIA	.	1093	1093	.	3146	3146	.	3148	3148
F&O	F&O-FM	4642	4562	9204	5343	3735	9078	5127	3531	8658
FOR	FOR	8407	.	8407	1273	.	1273	487	.	487
IAND	IAND	149	1881	2030	163	1760	1923	847	281	1128
ISTC	ISTC	204882	5326	210208	250390	8500	258890	221166	12325	233491
IDRC	IDRC	394	.	394	300	.	300	300	.	300
IJC	IJC	.	123	123	.	215	215	.	238	238
JUST	JUST-ADM	.	929	929	.	571	571	.	552	552

(CONTINUED)

TABLE 6

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE INDUSTRY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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									
JUST	JUST-LRC	255	11	266	240	21	261	250	20	270
	TOTAL	255	940	1195	240	592	832	250	572	822
M&C	M&C	.	497	497	.	505	505	.	510	510
NCC	NCC	10	273	283	10	552	562	10	466	476
NDEF	NDEF-SER	104248	269	104517	106765	248	107013	116083	340	116423
NHW	NHW-ADM	.	550	550	.	573	573	.	472	472
	NHW-HP	915	1448	2363	930	424	1354	915	1303	2218
	NHW-HSP	752	24	776	693	29	722	829	25	854
	NHW-IS	.	30	30	.	.	.	.	.	.
	NHW-MS	.	7	7	.	.	.	.	.	.
	TOTAL	1667	2059	3726	1623	1026	2649	1744	1800	3544
NMC	NMC-NMNS	.	4	4	.	65	65	.	65	65
	TOTAL	.	4	4	.	65	65	.	65	65
NRC	NRC-SIR	139078	52	139130	159523	59	159582	95305	56	95361
NSERC	NSERC	2361	1460	3821	3300	1500	4800	2700	1760	4460
PW	PW-PTS	1161	225	1386	1409	725	2134	1429	725	2154
RCMP	RCMP	90	.	90	149	.	149	175	.	175
SC	SC	104	.	104	150	.	150	150	.	150
SECS	SECS-CIT	62	.	62	100	.	100	100	.	100
	SECS-OL	.	74	74	.	150	150	.	150	150
	TOTAL	62	74	136	100	150	250	100	150	250
SGEN	SGEN-ADM	400	100	500	400	200	600	600	200	800
SS	SS-SUPP	14056	6096	20152	10322	2268	12590	343	297	640
TPT	TPT-ADM	11921	1672	13593	13015	1920	14935	13350	2200	15550
	TPT-APT	87	827	914	40	542	582	.	460	460
	TPT-AIR	600	426	1026	600	426	1026	625	443	1068
	TPT-MAR	4914	.	4914	7400	.	7400	7378	.	7378
	TPT-SUR	180	478	658	547	467	1014	715	482	1197
	TOTAL	17702	3403	21105	21602	3355	24957	22068	3585	25653
WDO	WDO	4823	142	4965	17682	8161	25843	18993	2076	21069
TOTAL	TOTAL	594746	198046	792792	700660	192604	893264	775865	204480	980345

TABLE 7

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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	7189	160	7349	7202	141	7343	7202	141	7343
	TOTAL	7189	160	7349	7202	141	7343	7202	141	7343
ACOA	ACOA	409	.	409	471	.	471	357	.	357
AECB	AECB	326	.	326	910	93	1003	1036	106	1142
AECL	AECL	1251	.	1251	1398	.	1398	1236	.	1236
CMHC	CMHC	312	1924	2236	214	1931	2145	214	1931	2145
CBC	CBC	.	15	15	.	.	.	.	.	.
CIDA	CIDA	27116	54436	81552	24118	52778	76896	27694	62584	90278
COMM	COMM-CC	716	21	737	713	32	745	713	25	738
CCA	CCA-ADM	.	10	10	.	10	10	.	10	10
	TOTAL	.	10	10	.	10	10	.	10	10
ECC	ECC	127	.	127	152	.	152	167	.	167
E&I	E&I-ADM	.	20	20	.	20	20	.	.	.
	E&I-EIC	1725	47	1772	1725	.	1725	1725	.	1725
	TOTAL	1725	67	1792	1725	20	1745	1725	.	1725
EMR	EMR-ENER	1334	1013	2347	1077	1074	2151	.	.	.
	EMR-MES	4456	1636	6092	5672	402	6074	.	.	.
	EMR	.	.	.	.	.	.	9659	445	10104
	TOTAL	5790	2649	8439	6749	1476	8225	9659	445	10104
ENV	ENV-ADM	33	.	33	75	.	75	75	.	75
	ENV-AES	938	115	1053	957	152	1109	966	156	1122
	ENV-C&P	988	532	1520	1127	609	1736	1446	781	2227
	ENV-PC	.	59	59	.	62	62	.	65	65
	TOTAL	1959	706	2665	2159	823	2982	2487	1002	3489
EA	EA-CIA	.	12304	12304	.	12707	12707	.	13907	13907
F&O	F&O-FM	524	570	1094	1275	198	1473	1223	190	1413
FOR	FOR	1301	.	1301	1009	.	1009	260	.	260
IAND	IAND	60	671	731	65	680	745	69	873	942
ISTC	ISTC	541	664	1205	1205	1100	2305	.	1595	1595
IDRC	IDRC	5601	.	5601	6200	.	6200	5900	.	5900
IJC	IJC	.	4	4	.	.	.	.	.	.
JUST	JUST-ADM	.	686	686	.	461	461	.	426	426
	JUST-LRC	12	.	12	15	.	15	15	.	15
	TOTAL	12	686	698	15	461	476	15	426	441
MRC	MRC	169984	6000	175984	181112	6565	187677	199881	6341	206222
M&C	M&C	.	1093	1093	.	1094	1094	.	1099	1099

(CONTINUED)

TABLE 7

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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									
NA	NA	.	320	320	.	320	320	.	.	.
NCC	NCC	.	5	5	.	.	.	.	.	.
NDEF	NDEF-SER	9095	51	9146	12793	62	12855	13671	40	13711
NHW	NHW-FAS	259	.	259	260	.	260	260	.	260
	NHW-HP	470	505	975	480	1483	1963	470	569	1039
	NHW-HSP	8850	6557	15407	10465	7767	18232	10118	7457	17575
	NHW-SS	1299	599	1898	1649	761	2410	1579	728	2307
	TOTAL	10878	7661	18539	12854	10011	22865	12427	8754	21181
NRC	NRC-SIR	30002	60	30062	29700	67	29767	29565	65	29630
NSERC	NSERC	298792	34561	333353	314475	39091	353566	343254	42106	385360
PC	PC	65	.	65	65	.	65	65	.	65
PW	PW-PTS	25	.	25	25	.	25	25	.	25
RCMP	RCMP	45	.	45	50	.	50	.	.	.
SC	SC	12	.	12	10	.	10	10	.	10
SECS	SECS-CIT	.	.	.	.	.	.	25	.	25
	SECS-ES	.	23	23	.	6	6	.	6	6
	SECS-OL	.	39	39	.	87	87	.	120	120
	TOTAL	.	62	62	.	93	93	25	126	151
SSHRC	SSHRC	46351	11306	57657	50632	12162	62794	55664	13820	69484
SGEN	SGEN-ADM	650	.	650	700	.	700	600	.	600
SS	SS-SUPP	2127	730	2857	1093	433	1526	27	173	200
TPT	TPT-ADM	340	22	362	225	35	260	260	50	310
	TPT-AIR	300	.	300	300	.	300	311	.	311
	TPT-MAR	39	.	39	.	.	.	.	.	.
	TPT-SUR	58	.	58	129	.	129	121	.	121
	TOTAL	737	22	759	654	35	689	692	50	742
WDO	WDO	219	.	219	2823	.	2823	4786	.	4786
TOTAL	TOTAL	623941	136758	760699	662566	142383	804949	720649	155809	876458

TABLE 8

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1988-89			1989-90			1990-91		
		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	1706	3	1709	1706	3	1709	1706	3	1709
	AGR-GOP	184	.	184	400	.	400	400	.	400
	TOTAL	1890	3	1893	2106	3	2109	2106	3	2109
ACOA	ACOA	18	.	18	18	.	18	.	.	.
AECB	AECB	34	4	38	218	12	230	248	12	260
AECL	AECL	125	.	125	140	.	140	124	.	124
CMHC	CMHC	407	622	1029	1055	1314	2369	1055	1314	2369
CIDA	CIDA	1893	10856	12749	1683	9385	11068	1933	10469	12402
E&I	E&I-ADM	.	99	99	.	1141	1141	.	.	.
	E&I-EIC	15668	4	15672	15668	.	15668	15668	20	15688
	TOTAL	15668	103	15771	15668	1141	16809	15668	20	15688
EMR	EMR-ENER	130	1377	1507	158	1446	1604	.	.	.
	EMR-MES	2988	20	3008	4773	65	4838	.	.	.
	EMR	.	.	.	.	.	.	6722	110	6832
	TOTAL	3118	1397	4515	4931	1511	6442	6722	110	6832
ENV	ENV-ADM	21	.	21	.	.	.	.	.	.
	ENV-AES	.	334	334	.	345	345	.	357	357
	ENV-C&P	144	2893	3037	156	3336	3492	172	4282	4454
	ENV-PC	.	95	95	.	100	100	.	105	105
	TOTAL	165	3322	3487	156	3781	3937	172	4744	4916
F&O	F&O-FM	.	313	313	104	295	399	100	283	383
FOR	FOR	65	135	200	6730	520	7250	6660	520	7180
IAND	IAND	.	579	579	.	511	511	.	233	233
ISTC	ISTC	3539	420	3959	9260	420	9680	4380	420	4800
IDRC	IDRC	693	.	693	800	.	800	700	.	700
JUST	JUST-ADM	.	1317	1317	.	1359	1359	.	374	374
	JUST-LRC	2	.	2	.	.	.	.	.	.
	TOTAL	2	1317	1319	.	1359	1359	.	374	374
MRC	MRC	50	427	477	53	769	822	59	834	893
M&C	M&C	151	1241	1392	178	1250	1428	.	1255	1255
NA	NA	.	.	.	.	1800	1800	.	1800	1800
NDEF	NDEF-SER	189	.	189	841	.	841	796	.	796
NHW	NHW-ADM	.	5	5	.	5	5	.	5	5
	NHW-FAS	328	12	340	350	.	350	350	.	350
	NHW-HP	340	98	438	360	180	540	315	144	459
	NHW-HSP	4334	5485	9819	5211	6512	11723	4856	6145	11001

(CONTINUED)

TABLE 8

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1988-89			1989-90			1990-91		
		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	1887	6491	8378	2395	8239	10634	2294	7890	10184
	TOTAL	6889	12091	18980	8316	14936	23252	7815	14184	21999
NMC	NMC-NMNS	.	37	37	.	84	84	.	84	84
	TOTAL	.	37	37	.	84	84	.	84	84
NRC	NRC-SIR	217	78	295	220	78	298	219	78	297
NSERC	NSERC	537	.	537	774	.	774	813	.	813
PW	PW-PTS	56	139	195	32	.	32	12	.	12
SC	SC	9	.	9	10	.	10	10	.	10
SECS	SECS-CIT	.	871	871	.	900	900	.	900	900
	SECS-ES	.	64	64	.	66	66	.	68	68
	SECS-OL	.	285	285	.	204	204	.	130	130
	TOTAL	.	1220	1220	.	1170	1170	.	1098	1098
SSHRC	SSHRC	.	5399	5399	.	5279	5279	.	5279	5279
SGEN	SGEN-ADM	3600	.	3600	3400	.	3400	3400	.	3400
SS	SS-SUPP	84	2082	2166	38	2123	2161	.	2084	2084
TPT	TPT-ADM	48	.	48	60	.	60	65	.	65
	TPT-SUR	88	172	260	65	206	271	45	224	269
	TOTAL	136	172	308	125	206	331	110	224	334
TB	TB-ADM	318	.	318	165	.	165	165	.	165
WDO	WDO	.	-	.	3750	.	3750	1000	.	1000
	TOTAL	39853	41957	81810	60771	47947	108718	54267	45422	99689

TABLE 9

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE PROVINCIAL AND MUNICIPAL GOVERNMENT SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

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

		YEAR								
		1988-89			1989-90			1990-91		
		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	600	551	1151	600	551	1151	600	551	1151
	TOTAL	600	551	1151	600	551	1151	600	551	1151
ACOA	ACOA	427	.	427	425	.	425	257	.	257
AECB	AECB	189	.	189	101	.	101	115	.	115
CMHC	CMHC	40	.	40	990	10	1000	990	10	1000
E&I	E&I-ADM	.	10	10	.	.	.	.	.	.
	E&I-EIC	1441	.	1441	1441	.	1441	1441	.	1441
	TOTAL	1441	10	1451	1441	.	1441	1441	.	1441
EMR	EMR-ENER	39	1730	1769	41	1817	1858	.	.	.
	EMR-MES	15499	64	15563	11485	.	11485	.	.	.
	EMR	.	.	.	.	.	.	7875	.	7875
	TOTAL	15538	1794	17332	11526	1817	13343	7875	.	7875
ENV	ENV-ADM	3	.	3	.	.	.	.	.	.
	ENV-AES	5	541	546	5	560	565	5	580	585
	ENV-C&P	41	3591	3632	45	4148	4193	58	5323	5381
	ENV-PC	10	.	10	10	.	10	10	.	10
	TOTAL	59	4132	4191	60	4708	4768	73	5903	5976
F&O	F&O-FM	.	10	10	.	.	.	.	.	.
FOR	FOR	1085	.	1085	1055	.	1055	1027	.	1027
IAND	IAND	.	1436	1436	.	1196	1196	.	1040	1040
ISTC	ISTC	95	373	468	471	500	971	74	680	754
IJC	IJC	.	.	.	.	20	20	.	.	.
JUST	JUST-ADM	.	1658	1658	.	868	868	.	499	499
	JUST-LRC	15	.	15	20	.	20	18	.	18
	TOTAL	15	1658	1673	20	868	888	18	499	517
MRC	MRC	159	.	159	169	.	169	187	.	187
M&C	M&C	.	164	164	.	340	340	.	350	350
NDEF	NDEF-SER	7	.	7	180	.	180	185	.	185
NHW	NHW-ADM	.	1100	1100	.	2070	2070	.	1070	1070
	NHW-HP	30	91	121	50	510	560	30	237	267
	NHW-HSP	450	881	1331	538	1050	1588	496	992	1488
	NHW-SS	268	249	517	340	317	657	326	304	630
	TOTAL	748	2321	3069	928	3947	4875	852	2603	3455
NRC	NRC-SIR	22	.	22	25	.	25	24	.	24
SGEN	SGEN-ADM	450	.	450	900	.	900	900	.	900
TPT	TPT-ADM	60	.	60	110	.	110	160	.	160

(CONTINUED)

TABLE 9

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE PROVINCIAL AND MUNICIPAL GOVERNMENT SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

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

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	.	.	.	30	30	.	60	60
	TOTAL	60	.	60	110	30	140	160	60	220
WDO	WDO	550	.	550	1000	.	1000	1000	.	1000
TOTAL	TOTAL	21485	12449	33934	20001	13987	33988	15778	11696	27474

TABLE 10

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE FOREIGN SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR									
		1988-89			1989-90			1990-91			
		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	.	14	14	.	10	10	.	10	10	
	AGR-AFP	826	.	826	829	.	829	804	.	804	
	AGR-COP	.	6	6	.	6	6	.	11	11	
	TOTAL	826	20	846	829	16	845	804	21	825	
AECB	AECB	40	497	537	37	520	557	43	1231	1274	
AECL	AECL	250	.	250	280	.	280	247	.	247	
CMHC	CMHC	.	.	.	13	.	13	13	.	13	
CIDA	CIDA	32134	79673	111807	29778	70616	100394	32535	79888	112423	
CSA	CSA	.	.	.	25005	.	25005	13581	.	13581	
COMM	COMM-CC	8959	.	8959	204	.	204	204	.	204	
CCA	CCA-ADM	.	25	25	.	25	25	.	25	25	
	TOTAL	.	25	25	.	25	25	.	25	25	
ECC	ECC	52	.	52	62	.	62	68	.	68	
E&I	E&I-ADM	.	90	90	.	10	10	.	.	.	
	TOTAL	.	90	90	.	10	10	.	.	.	
EMR	EMR-MES	24180	299	24479	2257	35	2292	.	.	.	
	EMR	.	.	.	.	.	.	3081	39	3120	
	TOTAL	24180	299	24479	2257	35	2292	3081	39	3120	
ENV	ENV-ADM	12	.	12	.	.	.	.	.	.
	ENV-AES	.	1016	1016	.	1185	1185	.	1175	1175	
	ENV-C&P	1118	412	1530	1293	474	1767	1659	608	2267	
	ENV-PC	.	3	3	.	3	3	.	3	3	
	TOTAL	1130	1431	2561	1293	1662	2955	1659	1786	3445	
EA	EA-CIA	.	4145	4145	.	4274	4274	.	4537	4537	
F&O	F&O-FM	13	243	256	43	276	319	41	266	307	
FOR	FOR	301	.	301	285	.	285	290	.	290	
IAND	IAND	40	.	40	40	25	65	40	.	40	
ISTC	ISTC	9056	.	9056	3631	.	3631	3077	.	3077	
IDRC	IDRC	52625	7134	59759	58300	7900	66200	55500	7300	62800	
IJC	IJC	.	15	15	.	191	191	.	211	211	
JUST	JUST-LRC	21	.	21	20	.	20	18	.	18	
	TOTAL	21	.	21	20	.	20	18	.	18	
MRC	MRC	6385	171	6556	6967	195	7162	7245	189	7434	
NDEF	NDEF-SER	2505	.	2505	2739	.	2739	2573	.	2573	
NHW	NHW-HP	250	328	558	245	120	365	250	315	543	
	NHW-HSP	.	135	135	.	161	161	.	146	146	

(CONTINUED)

TABLE 10

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE FOREIGN SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	104	104	.	132	132	.	126	126
	TOTAL	230	567	797	245	413	658	230	585	815
NL	NL	.	78	78	.	61	61	.	72	72
NRC	NRC-SIR	5596	.	5596	8114	.	8114	8168	.	8168
NSERC	NSERC	2950	3865	6815	3006	4389	7395	3873	4594	8467
PW	PW-PTS	183	.	183	.	.	.	.	.	.
SC	SC	8	.	8	10	.	10	10	.	10
SECS	SECS-ES	.	.	.	.	7	7	.	.	.
	TOTAL	.	.	.	.	7	7	.	.	.
SSHRC	SSHRC	922	5282	6204	1183	5739	6922	1183	6449	7632
STCAN	STCAN	.	18	18	.	11	11	.	11	11
TPT	TPT-ADM	226	.	226	50	.	50	50	.	50
	TPT-AIR	100	.	100	100	.	100	104	.	104
	TPT-MAR	72	.	72	.	.	.	.	.	.
	TOTAL	398	.	398	150	.	150	154	.	154
TOTAL	TOTAL	148804	103553	252357	144491	96365	240856	134637	107204	241841

TABLE 11

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE OTHER SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	1677	5	1682	1677	5	1682	1677	5	1682
	TOTAL	1677	5	1682	1677	5	1682	1677	5	1682
AECB	AECB	189	.	189	354	.	354	403	.	403
AECL	AECL	526	.	526	549	.	549	514	.	514
CMHC	CMHC	.	.	.	68	249	317	68	249	317
CBC	CBC	.	25	25	.	.	.	.	.	.
CHRC	CHRC	.	.	.	.	60	60	.	85	85
CIDA	CIDA	7902	2030	9932	7028	1805	8833	8070	2074	10144
CLFB	CLFB	.	.	.	.	.	.	20	.	20
COMM	COMM-CC	356	.	356	314	.	314	314	.	314
CCA	CCA-ADM	.	12	12	.	15	15	.	15	15
	TOTAL	.	12	12	.	15	15	.	15	15
ECC	ECC	176	.	176	212	.	212	233	.	233
E&I	E&I-ADM	.	41	41	.	37	37	.	45	45
	E&I-EIC	14215	252	14467	14215	507	14722	14215	510	14725
	TOTAL	14215	293	14508	14215	544	14759	14215	555	14770
EMR	EMR-ENER	1708	940	2648	1793	988	2781	.	.	.
	EMR-MES	896	1086	1982	658	455	1113	.	.	.
	EMR	.	.	.	.	.	.	1025	504	1529
	TOTAL	2604	2026	4630	2451	1443	3894	1025	504	1529
ENV	ENV-ADM	129	.	129	95	.	95	75	.	75
	ENV-AES	174	2041	2215	180	2053	2233	187	2124	2311
	ENV-C&P	1036	829	1865	1193	956	2149	1530	1227	2757
	ENV-PC	65	247	312	68	258	326	71	270	341
	TOTAL	1404	3117	4521	1536	3267	4803	1863	3621	5484
F&O	F&O-FM	198	946	1144	329	822	1151	316	788	1104
FOR	FOR	647	.	647	245	.	245	350	.	350
IAND	IAND	5	1277	1282	.	1428	1428	.	2088	2088
IDRC	IDRC	367	1084	1451	500	1200	1700	500	1200	1700
IJC	IJC	.	25	25	.	81	81	.	125	125
JUST	JUST-ADM	.	371	371	.	1126	1126	.	800	800
	JUST-LRC	1162	74	1236	1020	120	1140	1100	110	1210
	TOTAL	1162	445	1607	1020	1246	2266	1100	910	2010
MRC	MRC	156	528	684	167	949	1116	183	1027	1210
M&C	M&C	.	1067	1067	.	1030	1030	.	1045	1045
NDEF	NDEF-SER	1599	81	1680	.	.	.	100	.	100

(CONTINUED)

TABLE 11

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE OTHER SECTOR BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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-HP	30	114	144	50	150	200	30	101	131
	NHW-HSP	.	.	.	50	.	50	.	.	.
	NHW-MS	.	736	736	.	772	772	.	803	803
	NHW-SS	.	157	157	.	199	199	.	190	190
	TOTAL	30	1007	1037	100	1121	1221	30	1094	1124
NMC	NMC-NMNS	.	104	104	20	175	195	20	175	195
	TOTAL	.	104	104	20	175	195	20	175	195
NRC	NRC-SIR	6381	.	6381	7807	.	7807	7802	.	7802
NSERC	NSERC	4813	907	5720	6286	1029	7315	6578	1029	7607
PC	PC	8	.	8	.	.	.	.	.	.
PW	PW-PTS	.	20	20	.	.	.	.	.	.
RCMP	RCMP	221	.	221	169	.	169	165	.	165
SC	SC	63	.	63	70	.	70	70	.	70
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70
	SECS-CIT	40	.	40	50	.	50	25	.	25
	SECS-ES	.	162	162	.	133	133	.	41	41
	SECS-OL	.	7	7	.	.	.	.	.	.
	TOTAL	40	210	250	50	203	253	25	111	136
SGEN	SGEN-ADM	300	250	550	300	200	500	100	200	300
SS	SS-SUPP	160	157	317	427	20	447	.	.	.
TPT	TPT-APT	.	21	21	.	.	.	.	.	.
	TPT-SUR	5	.	5	5	.	5	6	.	6
	TOTAL	5	21	26	5	.	5	6	.	6
TOTAL	TOTAL	45204	15637	60841	45899	16892	62791	45747	16900	62647

TABLE 12
TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	6600	6600	6600	6050	6050	6050	6153	6153	6153
	AGR-AFP	292616	27712	320328	289734	27767	317501	302621	26108	328729
	AGR-GOP	7057	3539	10596	8371	4088	12459	8215	4540	12755
	TOTAL	299673	37851	337524	298105	37905	336010	310836	36801	347637
ACOA	ACOA	12210	.	12210	8547	.	8547	5703	.	5703
AECB	AECB	2759	539	3298	4491	1557	6048	5051	2409	7460
AECL	AECL	117719	7381	125100	131551	8249	139800	116308	7292	123600
CMHC	CMHC	8909	19683	28592	10553	20570	31123	11314	22938	34252
CBC	CBC	.	5668	5668	.	5733	5733	.	6107	6107
CHRC	CHRC	.	760	760	.	667	667	.	557	557
CIDA	CIDA	70937	275042	345979	64420	254148	318568	72247	297263	369510
CLFB	CLFB	112	27	139	116	27	143	114	34	148
CSA	CSA	.	.	.	61810	.	61810	113345	.	113345
COL	COL	.	3479	3479	.	4017	4017	.	4238	4238
COMM	COMM-CC	52164	5053	57217	47659	1900	49559	54003	1371	55374
CCA	CCA-ADM	.	2494	2494	.	1529	1529	.	1660	1660
	CCA-CON	.	4835	4835	.	5179	5179	.	5350	5350
	CCA-COR	.	15225	15225	.	18389	18389	.	18152	18152
	TOTAL	.	22554	22554	.	25097	25097	.	25162	25162
ECC	ECC	10088	385	10473	10415	454	10869	10830	432	11262
E&I	E&I-ADM	.	17702	17702	.	20623	20623	.	18792	18792
	E&I-EIC	42675	1129	43804	42745	1554	44299	42813	1679	44492
	TOTAL	42675	18831	61506	42745	22177	64922	42813	20471	63284
EMR	EMR-ADM	.	12974	12974	.	16367	16367	.	.	.
	EMR-ENER	13359	12845	26204	14267	13573	27840	.	.	.
	EMR-MES	153543	187386	340929	132446	192990	325437	.	.	.
	EMR	.	.	.	.	.	.	270364	246327	516691
	TOTAL	166902	213205	380107	146713	222931	369644	270364	246327	516691
ENV	ENV-ADM	521	.	521	519	.	519	520	.	520
	ENV-AES	26832	234449	261280	28670	249786	278456	29375	260207	289582
	ENV-C&P	45184	81609	126793	52250	96707	148956	65576	122221	187796
	ENV-PC	274	62420	62694	287	66195	66482	300	69628	69928
	TOTAL	72811	378477	451288	81726	412688	494414	95771	452056	547827
EA	EA-CIA	.	29298	29298	.	30395	30395	.	32458	32458
FIN	FIN-FEP	.	20379	20379	.	22348	22348	.	31524	31524
F&O	F&O-FM	116539	102777	219316	134677	114188	248864	129908	110623	240532

(CONTINUED)

TABLE 12
TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
FOR	FOR	67745	7618	75363	65939	7568	73507	67972	7556	75528
IAND	IAND	465	6740	7205	617	6597	7214	1313	5354	6667
ISTC	ISTC	235950	26980	262930	283816	26966	310782	247397	28763	276160
IDRC	IDRC	82155	19164	101319	91100	21200	112300	86500	20000	106500
IJC	IJC	.	4665	4665	.	4835	4835	.	4641	4641
JUST	JUST-ADM	.	7412	7412	.	6681	6681	.	4830	4830
	JUST-LRC	2453	692	3145	2415	795	3210	2450	783	3233
	TOTAL	2453	8104	10557	2415	7476	9891	2450	5613	8063
LAB	LAB	.	1138	1138	.	1229	1229	.	1284	1284
MRC	MRC	181718	7334	189052	193743	8699	202442	213411	8635	222046
M&C	M&C	151	4062	4213	178	4219	4397	.	4259	4259
NA	NA	.	25094	25094	.	26137	26137	.	25939	25939
NCC	NCC	10	397	407	10	594	604	10	506	516
NDEF	NDEF-SER	278369	4484	282854	279922	4537	284459	293063	5109	298173
NEB	NEB	.	2111	2111	.	2304	2304	.	2616	2616
NFB	NFB	879	341	1220	968	195	1163	985	215	1200
NHW	NHW-ADM	.	15256	15256	.	17453	17453	.	16373	16373
	NHW-FAS	627	12	639	650	.	650	650	.	650
	NHW-HP	19859	83652	103511	18840	92177	111017	18618	97452	116070
	NHW-HSP	16768	13936	30704	19355	16471	35826	18855	15787	34642
	NHW-IS	.	1457	1457	.	1627	1627	.	1627	1627
	NHW-MS	584	4002	4586	605	4144	4749	635	4339	4974
	NHW-SS	3979	9343	13322	4931	11463	16394	4790	10892	15682
	TOTAL	41817	127657	169475	44381	143335	187716	43548	146470	190018
NL	NL	.	47153	47153	.	49472	49472	.	49949	49949
NMC	NMC-CMC	7439	65310	72749	11049	70311	81360	7513	48262	55775
	NMC-NGC	7335	29703	37038	8073	32661	40734	8291	33537	41828
	NMC-NMNS	3404	20914	24318	3775	21185	24959	3861	22734	26595
	NMC-NMST	.	20654	20654	.	22178	22178	.	24017	24017
	TOTAL	18178	136580	154759	22897	146334	169231	19665	128549	148214
NRC	NRC-SIR	462571	52753	515324	514951	53332	568283	446212	53433	499644
NREV	NREV-TAX	367	4341	4708	388	4928	5316	405	5149	5554
NSERC	NSERC	323273	42607	365880	343018	48137	391155	373270	51719	424989
PC	PC	73	.	73	65	.	65	65	.	65
PW	PW-PTS	3612	3782	7394	3942	4402	8344	3898	4323	8221
RCMP	RCMP	655	.	655	698	.	698	675	.	675

(CONTINUED)

TABLE 12

TOTAL FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
SC	SC	1776	1399	3175	1753	1477	3230	1646	1853	3499
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70
	SECS-CIT	467	871	1338	587	900	1487	616	900	1516
	SECS-ES	.	479	479	.	441	441	.	317	317
	SECS-OL	.	2427	2427	.	2550	2550	.	2580	2580
	TOTAL	467	3819	4286	587	3961	4548	616	3867	4483
SSHRC	SSHRC	51006	25352	76358	55593	26550	82143	60867	29156	90023
SGEN	SGEN-ADM	7945	1291	9236	7786	1322	9108	7973	1413	9386
STCAN	STCAN	10779	277295	288074	9640	282669	292309	10214	339028	349242
SS	SS-SUPP	16648	9313	25961	12056	5106	17162	468	2770	3238
TPT	TPT-ADM	15661	2238	17899	17834	2527	20361	18456	2937	21393
	TPT-APT	87	1318	1405	40	1028	1068	.	975	975
	TPT-AIR	3732	2237	5969	3772	2305	6077	3898	2360	6258
	TPT-MAR	6590	.	6590	8505	.	8505	8525	.	8525
	TPT-SUR	514	1015	1529	912	1092	2004	1050	1183	2233
	TOTAL	26584	6808	33392	31064	6951	38015	31930	7454	39384
TB	TB-ADM	318	20529	20847	165	23589	23754	165	24097	24262
WDO	WDO	6086	197	6283	25830	8226	34056	26316	2135	28451
TOTAL	TOTAL	2795548	2020497	4816045	3037049	2117397	5154446	3179641	2269917	5449557

TABLE 13
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY R&D

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	1321515	47	1402661	46	1432698	45
CANADIAN INDUSTRY	594746	21	700660	23	775865	24
CANADIAN UNIVERSITY	623941	22	662566	22	720649	23
CANADIAN NP INST	39853	1	60771	2	54267	2
PROV. & MUN. GOV'T	21485	1	20001	1	15778	0
FOREIGN PERFORMERS	148804	5	144491	5	134637	4
OTHER PERFORMERS	45204	2	45899	2	45747	1
TOTAL	2795548	100	3037049	100	3179641	100

TABLE 14

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY R&D

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
AGR	AGR-AFP	277640	14976	292616	274742	14992	289734	287654	14967	302621	
	AGR-GOP	4873	2184	7057	5971	2400	8371	5815	2400	8215	
	TOTAL	282513	17160	299673	280713	17392	298105	293469	17367	310836	
ACOA	ACOA	.	12210	12210	.	8547	8547	.	5703	5703	
AECB	AECB	1137	1622	2759	1207	3284	4491	1311	3740	5051	
AECL	AECL	94450	23269	117719	105548	26003	131551	93318	22990	116308	
CMHC	CMHC	6305	2604	8909	7081	3472	10553	7842	3472	11314	
CIDA	CIDA	1349	69588	70937	1330	63090	64420	1460	70787	72247	
CLFB	CLFB	112	.	112	116	.	116	94	20	114	
CSA	CSA	.	.	.	11356	50454	61810	13282	100063	113345	
COMM	COMM-CC	29148	23016	52164	34706	12953	47659	40244	13759	54003	
ECC	ECC	9728	360	10088	9983	432	10415	10355	475	10830	
E&I	E&I-EIC	1840	40835	42675	1910	40835	42745	1978	40835	42813	
	TOTAL	1840	40835	42675	1910	40835	42745	1978	40835	42813	
EMR	EMR-ENER	1383	11976	13359	1461	12806	14267	.	.	.	
	EMR-MES	94732	58811	153543	92349	40097	132446	.	.	.	
	EMR	.	.	.	.	.	.	108153	162211	270364	
	TOTAL	96115	70787	166902	93810	52903	146713	108153	162211	270364	
ENV	ENV-ADM	193	328	521	149	370	519	150	370	520	
	ENV-AES	23813	3019	26832	25561	3109	28670	26184	3191	29375	
	ENV-C&P	34849	10335	45184	40374	11876	52250	50365	15211	65576	
	ENV-PC	.	274	274	.	287	287	.	300	300	
	TOTAL	58855	13956	72811	66084	15642	81726	76699	19072	95771	
F&O	F&O-FM	111162	5377	116539	127583	7094	134677	123101	6807	129908	
FOR	FOR	55939	11806	67745	55342	10597	65939	58898	9074	67972	
IAND	IAND	211	254	465	349	268	617	357	956	1313	
ISTC	ISTC	17837	218113	235950	18859	264957	283816	18700	228697	247397	
IDRC	IDRC	22475	59680	82155	25000	66100	91100	23600	62900	86500	
JUST	JUST-LRC	986	1467	2453	1100	1315	2415	1049	1401	2450	
	TOTAL	986	1467	2453	1100	1315	2415	1049	1401	2450	
MRC	MRC	4984	176734	181718	5275	188468	193743	5856	207555	213411	
M&C	M&C	.	151	151	.	178	178	.	.	.	
NCC	NCC	.	10	10	.	10	10	.	10	10	
NDEF	NDEF-SER	160726	117643	278369	156604	123318	279922	159655	133408	293063	
NFB	NFB	879	.	879	968	.	968	985	.	985	
NHW	NHW-FAS	40	587	627	40	610	650	40	610	650	

(CONTINUED)

TABLE 14

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY R&D

DEPARTMENT	PROGRAM	YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
NHW	NHW-HP	17844	2015	19859	16725	2115	18840	16628	1990	18618	
	NHW-HSP	2382	14386	16768	2398	16957	19355	2556	16299	18855	
	NHW-MS	584	.	584	605	.	605	635	.	635	
	NHW-SS	525	3454	3979	547	4384	4931	591	4199	4790	
	TOTAL	21375	20442	41817	20315	24066	44381	20450	23098	43548	
NMC	NMC-CMC	7439	.	7439	11049	.	11049	7513	.	7513	
	NMC-NGC	7335	.	7335	8073	.	8073	8291	.	8291	
	NMC-NMNS	3404	.	3404	3755	20	3775	3841	20	3861	
	TOTAL	18178	.	18178	22877	20	22897	19645	20	19665	
NRC	NRC-SIR	281275	181296	462571	309562	205389	514951	305129	141083	446212	
NREV	NREV-TAX	367	.	367	388	.	388	405	.	405	
NSERC	NSERC	13820	309453	323273	15177	327841	343018	16052	357218	373270	
PC	PC	.	73	73	.	65	65	.	65	65	
PW	PW-PTS	2187	1425	3612	2476	1466	3942	2432	1466	3898	
RCMP	RCMP	299	356	655	330	368	698	335	340	675	
SC	SC	1580	196	1776	1503	250	1753	1396	250	1646	
SECS	SECS-CIT	365	102	467	437	150	587	466	150	616	
	TOTAL	365	102	467	437	150	587	466	150	616	
SSHRC	SSHRC	3733	47273	51006	3778	51815	55593	4020	56847	60867	
SGEN	SGEN-ADM	2545	5400	7945	2086	5700	7786	2373	5600	7973	
STCAN	STCAN	10779	.	10779	9640	.	9640	10214	.	10214	
SS	SS-SUPP	221	16427	16648	176	11880	12056	98	370	468	
TPT	TPT-ADM	3066	12595	15661	4374	13460	17834	4571	13885	18456	
	TPT-APT	.	87	87	.	40	40	.	.	.	
	TPT-AIR	2732	1000	3732	2772	1000	3772	2858	1040	3898	
	TPT-MAR	1565	5025	6590	1105	7400	8505	1147	7378	8525	
	TPT-SUR	183	331	514	166	746	912	163	887	1050	
	TOTAL	7546	19038	26584	8418	22646	31064	8740	23190	31930	
TB	TB-ADM	.	318	318	.	165	165	.	165	165	
WDO	WDO	.	494	5592	6086	575	25255	25830	537	25779	26316
TOTAL	TOTAL	1321515	1474033	2795548	1402661	1634388	3037049	1432698	1746943	3179641	

TABLE 15
FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	922	.	276718	868	.	273874	981	.	286673
	AGR-GOP	.	.	4873	.	.	5971	.	.	5815
	TOTAL	922	.	281591	868	.	279845	981	.	292488
AECB	AECB	.	.	1137	.	.	1207	.	.	1311
AECL	AECL	375	.	94075	419	.	105129	371	.	92947
CMHC	CMHC	.	.	6305	.	.	7081	.	.	7842
CIDA	CIDA	.	.	1349	.	.	1330	.	.	1460
CLFB	CLFB	.	.	112	.	.	116	.	.	94
CSA	CSA	.	.	.	.	.	11356	.	.	13282
COMM	COMM-CC	.	.	29148	.	.	34706	.	.	40244
ECC	ECC	.	.	9728	.	.	9983	.	.	10355
E&I	E&I-EIC	.	.	1840	.	.	1910	.	.	1978
	TOTAL	.	.	1840	.	.	1910	.	.	1978
EMR	EMR-ENER	.	363	1019	.	380	1081	.	.	.
	EMR-MES	.	.	94732	11	1479	90859	.	.	.
	EMR	.	.	.	.	.	.	12	1840	106300
	TOTAL	.	363	95752	11	1859	91940	12	1840	106300
ENV	ENV-ADM	53	.	140	.	.	149	.	.	150
	ENV-AES	314	.	23499	344	.	25217	346	.	25838
	ENV-C&P	103	.	34746	106	.	40268	103	.	50261
	TOTAL	470	.	58385	450	.	65634	449	.	76249
F&O	F&O-FM	588	.	110574	589	.	126994	591	.	122511
FOR	FOR	159	33	55747	86	33	55222	107	32	58759
IAND	IAND	.	.	211	.	.	349	.	.	357
ISTC	ISTC	.	.	17837	.	.	18859	.	.	18700
IDRC	IDRC	.	.	22475	.	.	25000	.	.	23600
JUST	JUST-LRC	.	.	986	.	.	1100	.	.	1049
	TOTAL	.	.	986	.	.	1100	.	.	1049
MRC	MRC	.	.	4984	.	.	5275	.	.	5856
NDEF	NDEF-SER	.	.	160726	.	.	156604	.	.	159655
NFB	NFB	.	.	879	.	.	968	.	.	985
NHW	NHW-FAS	.	.	40	.	.	40	.	.	40
	NHW-HP	184	.	17660	144	.	16581	145	.	16482
	NHW-HSP	.	940	1442	.	828	1570	.	899	1657
	NHW-MS	.	.	584	.	.	605	.	.	635
	NHW-SS	.	.	525	.	.	547	.	.	591

(CONTINUED)

TABLE 15

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
NHW	TOTAL	184	940	20251	144	828	19343	145	899	19405
NMC	NMC-CMC	.	226	7212	.	441	10608	.	367	7146
	NMC-NGC	.	353	6982	.	396	7678	.	403	7889
	NMC-NMNS	.	.	3404	.	.	3755	.	.	3841
	TOTAL	.	579	17599	.	837	22040	.	769	18875
NRC	NRC-SIR	17975	.	263300	16679	.	292883	17745	.	287383
NREV	NREV-TAX	.	.	367	.	.	388	.	.	405
NSERC	NSERC	.	.	13820	.	.	15177	.	.	16052
PW	PW-PTS	.	.	2187	.	.	2476	.	.	2432
RCMP	RCMP	.	.	299	.	.	330	.	.	335
SC	SC	.	.	1580	.	.	1503	.	.	1396
SECS	SECS-CIT	.	.	365	.	.	437	.	.	466
	TOTAL	.	.	365	.	.	437	.	.	466
SSHRC	SSHRC	.	.	3733	.	.	3778	.	.	4020
SGEN	SGEN-ADM	.	.	2545	.	.	2086	.	.	2373
STCAN	STCAN	.	.	10779	.	.	9640	.	.	10214
SS	SS-SUPP	.	.	221	.	.	176	.	.	98
TPT	TPT-ADM	.	.	3066	.	.	4374	.	.	4571
	TPT-AIR	.	.	2732	.	.	2772	.	.	2858
	TPT-MAR	.	.	1565	.	.	1105	.	.	1147
	TPT-SUR	.	.	183	.	.	166	.	.	163
	TOTAL	.	.	7546	.	.	8418	.	.	8740
WDO	WDO	.	.	494	.	.	575	.	.	537
TOTAL	TOTAL	20674	1915	1298926	19245	3557	1379859	20402	3541	1408754

TABLE 16

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE INDUSTRY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1148	1830	1148	1830	1148	1830
	AGR-GOP	2000	.	2000	.	2000	.
	TOTAL	3148	1830	3148	1830	3148	1830
ACOA	ACOA	11356	.	7633	.	5089	.
AECB	AECB	.	844	.	1664	.	1895
AECL	AECL	.	21117	.	23636	.	20869
CMHC	CMHC	465	1380	1	1131	1	1131
CIDA	CIDA	.	543	.	483	.	555
CSA	CSA	.	.	.	25449	.	86482
COMM	COMM-CC	9043	3942	8169	3553	8975	3553
ECC	ECC	.	5	.	6	.	7
E&I	E&I-EIC	7786	.	7786	.	7786	.
	TOTAL	7786	.	7786	.	7786	.
EMR	EMR-ENER	6831	1934	7173	2564	.	.
	EMR-MES	890	9902	5700	9552	.	.
	EMR	.	.	.	.	113794	20055
	TOTAL	7721	11836	12873	12116	113794	20055
ENV	ENV-ADM	.	130	.	200	.	220
	ENV-AES	.	1902	.	1967	.	2033
	ENV-C&P	.	7008	.	8062	.	10346
	ENV-PC	.	199	.	209	.	219
	TOTAL	.	9239	.	10438	.	12818
F&O	F&O-FM	.	4642	.	5343	.	5127
FOR	FOR	7363	1044	590	683	.	487
IAND	IAND	10	139	.	163	.	847
ISTC	ISTC	204882	.	250390	.	221166	.
IDRC	IDRC	394	.	300	.	300	.
JUST	JUST-LRC	.	255	.	240	.	250
	TOTAL	.	255	.	240	.	250
NCC	NCC	10	.	10	.	10	.
NDEF	NDEF-SER	531	103717	6000	100765	10000	106083
NHW	NHW-HP	.	915	.	930	.	915
	NHW-HSP	27	725	33	660	29	800
	TOTAL	27	1640	33	1590	29	1715
NRC	NRC-SIR	77245	61833	76146	83377	75457	19848
NSERC	NSERC	2361	.	3300	.	2700	.

(CONTINUED)

TABLE 16

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE INDUSTRY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
PW	PW-PTS	.	1161	.	1409	.	1429
RCMP	RCMP	.	90	.	149	.	175
SC	SC	.	104	.	150	.	150
SECS	SECS-CIT	.	62	.	100	.	100
	TOTAL	.	62	.	100	.	100
SGEN	SGEN-ADM	.	400	.	400	.	600
SS	SS-SUPP	.	14056	.	10322	.	343
TPT	TPT-ADM	.	11921	.	13015	.	13350
	TPT-APT	.	87	.	40	.	.
	TPT-AIR	.	600	.	600	.	625
	TPT-MAR	.	4914	.	7400	.	7378
	TPT-SUR	.	180	.	547	.	715
	TOTAL	.	17702	.	21602	.	22068
WDO	WDO	4823	.	17682	.	18993	.
TOTAL	TOTAL	337165	257581	394061	306599	467448	308417

TABLE 17

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	5607	1582	5607	1595	5607	1595
	TOTAL	5607	1582	5607	1595	5607	1595
ACOA	ACOA	409	.	471	.	357	.
AECB	AECB	.	326	.	910	.	1036
AECL	AECL	.	1251	.	1398	.	1236
CMHC	CMHC	112	200	24	190	24	190
CIDA	CIDA	15006	12110	13347	10771	15326	12368
COMM	COMM-CC	563	153	550	163	550	163
ECC	ECC	.	127	.	152	.	167
E&I	E&I-EIC	1725	.	1725	.	1725	.
	TOTAL	1725	.	1725	.	1725	.
EMR	EMR-ENER	370	964	389	688	.	.
	EMR-MES	1794	2662	2680	2992	.	.
	EMR	.	.	.	.	2769	6890
	TOTAL	2164	3626	3069	3680	2769	6890
ENV	ENV-ADM	.	33	.	75	.	75
	ENV-AES	671	267	681	276	681	285
	ENV-C&P	.	988	.	1127	.	1446
	TOTAL	671	1288	681	1478	681	1806
F&O	F&O-FM	186	338	453	822	435	788
FOR	FOR	769	532	793	216	60	200
IAND	IAND	.	60	.	65	.	69
ISTC	ISTC	541	.	1205	.	.	.
IDRC	IDRC	5601	.	6200	.	5900	.
JUST	JUST-LRC	.	12	.	15	.	15
	TOTAL	.	12	.	15	.	15
MRC	MRC	169984	.	181112	.	199881	.
NDEF	NDEF-SER	.	9095	.	12793	.	13671
NHW	NHW-FAS	259	.	260	.	260	.
	NHW-HP	.	470	.	480	.	470
	NHW-HSP	8850	.	10425	40	10068	50
	NHW-SS	1299	.	1649	.	1579	.
	TOTAL	10408	470	12334	520	11907	520
NRC	NRC-SIR	27164	2838	26510	3190	26510	3055
NSERC	NSERC	298792	.	314475	.	343254	.
PC	PC	65	.	65	.	65	.

(CONTINUED)

TABLE 17

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE UNIVERSITY SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
PW	PW-PTS	.	25	.	25	.	25
RCMP	RCMP	.	45	.	50	.	.
SC	SC	.	12	.	10	.	10
SECS	SECS-CIT	.	.	.	.	.	25
	TOTAL	.	.	.	.	.	25
SSHRC	SSHRC	46351	.	50632	.	55664	.
SGEN	SGEN-ADM	600	50	600	100	500	100
SS	SS-SUPP	.	2127	.	1093	.	27
TPT	TPT-ADM	.	340	.	225	.	260
	TPT-AIR	.	300	.	300	.	311
	TPT-MAR	.	39	.	.	.	.
	TPT-SUR	12	46	43	86	35	86
	TOTAL	12	725	43	611	35	657
WDO	WDO	219	.	2823	.	4786	.
TOTAL	TOTAL	586949	36992	622719	39847	676036	44613

TABLE 18

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1429	277	1429	277	1429	277
	AGR-GOP	184	.	400	.	400	.
	TOTAL	1613	277	1829	277	1829	277
ACOA	ACOA	18	.	18	.	.	.
AECB	AECB	.	34	.	218	.	248
AECL	AECL	.	125	.	140	.	124
CMHC	CMHC	301	106	852	203	852	203
CIDA	CIDA	.	1893	.	1683	.	1933
E&I	E&I-EIC	15668	.	15668	.	15668	.
	TOTAL	15668	.	15668	.	15668	.
EMR	EMR-ENER	100	30	126	32	.	.
	EMR-MES	1990	998	3742	1031	.	.
	EMR	.	.	.	.	4684	2038
	TOTAL	2090	1028	3868	1063	4684	2038
ENV	ENV-ADM	.	21	.	.	.	.
	ENV-C&P	100	44	100	56	100	72
	TOTAL	100	65	100	56	100	72
F&O	F&O-FM	.	.	.	104	.	100
FOR	FOR	65	.	6730	.	6660	.
ISTC	ISTC	3539	.	9260	.	4380	.
IDRC	IDRC	693	.	800	.	700	.
JUST	JUST-LRC	.	2	.	.	.	.
	TOTAL	.	2	.	.	.	.
MRC	MRC	50	.	53	.	59	.
M&C	M&C	111	40	118	60	.	.
NDEF	NDEF-SER	.	189	.	841	.	796
NHW	NHW-FAS	328	.	350	.	350	.
	NHW-HP	40	300	40	320	15	300
	NHW-HSP	4260	96	5031	180	4806	50
	NHW-SS	1887	.	2395	.	2294	.
	TOTAL	6495	394	7816	500	7465	350
NRC	NRC-SIR	194	23	194	26	194	25
NSERC	NSERC	537	.	774	.	813	.
PW	PW-PTS	52	4	32	.	12	.
SC	SC	.	9	.	10	.	10
SGEN	SGEN-ADM	3500	100	3000	400	3000	400

(CONTINUED)

TABLE 18

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
NON-PROFIT INSTITUTE SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
SS	SS-SUPP	.	84	.	38	.	.
TPT	TPT-ADM	.	48	.	60	.	65
	TPT-SUR	88	.	45	20	45	.
	TOTAL	88	48	45	80	45	65
TB	TB-ADM	318	.	165	.	165	.
WDO	WDO	.	.	3750	.	1000	.
TOTAL	TOTAL	35432	4421	55072	5699	47626	6641

TABLE 19

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT IN THE
PROVINCIAL AND MUNICIPAL GOVERNMENT SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

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

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	423	177	423	177	423	177
	TOTAL	423	177	423	177	423	177
ACOA	ACOA	427	.	425	.	257	.
AECB	AECB	.	189	.	101	.	115
CMHC	CMHC	.	40	900	90	900	90
E&I	E&I-EIC	1441	.	1441	.	1441	.
	TOTAL	1441	.	1441	.	1441	.
EMR	EMR-ENER	39	.	41	.	.	.
	EMR-MES	15469	30	10985	500	.	.
	EMR	.	.	.	.	7345	530
	TOTAL	15508	30	11026	500	7345	530
ENV	ENV-ADM	.	3	.	.	.	.
	ENV-AES	.	5	.	5	.	5
	ENV-C&P	.	41	.	45	.	58
	ENV-PC	.	10	.	10	.	10
	TOTAL	.	59	.	60	.	73
FOR	FOR	1012	73	950	105	872	155
ISTC	ISTC	95	.	471	.	74	.
JUST	JUST-LRC	.	15	.	20	.	18
	TOTAL	.	15	.	20	.	18
MRC	MRC	159	.	169	.	187	.
NDEF	NDEF-SER	.	7	.	180	.	185
NHW	NHW-HP	.	30	.	50	.	30
	NHW-HSP	450	.	538	.	496	.
	NHW-SS	268	.	340	.	326	.
	TOTAL	718	30	878	50	822	30
NRC	NRC-SIR	.	22	.	25	.	24
SGEN	SGEN-ADM	250	200	700	200	700	200
TPT	TPT-ADM	.	60	.	110	.	160
	TOTAL	.	60	.	110	.	160
WDO	WDO	550	.	1000	.	1000	.
TOTAL	TOTAL	20583	902	18383	1618	14021	1757

TABLE 20

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE FOREIGN SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER FOREIGN PERFORMERS

DEPARTMENT	PROGRAM	YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	826	.	829	.	804	.
	TOTAL	826	.	829	.	804	.
AECB	AECB	.	40	.	37	.	43
AECL	AECL	.	250	.	280	.	247
CMHC	CMHC	.	.	.	13	.	13
CIDA	CIDA	30244	1890	29309	469	31997	538
CSA	CSA	.	.	25005	.	13581	.
COMM	COMM-CC	8462	497	.	204	.	204
ECC	ECC	.	52	.	62	.	68
EMR	EMR-MES	24092	88	2149	108	.	.
	EMR	.	.	.	.	2949	132
	TOTAL	24092	88	2149	108	2949	132
ENV	ENV-ADM	.	12	.	.	.	.
	ENV-C&P	.	1118	.	1293	.	1659
	TOTAL	.	1130	.	1293	.	1659
F&O	F&O-FM	.	13	.	43	.	41
FOR	FOR	189	112	140	145	140	150
IAND	IAND	.	40	.	40	.	40
ISTC	ISTC	9056	.	3631	.	3077	.
IDRC	IDRC	52625	.	58300	.	55500	.
JUST	JUST-LRC	.	21	.	20	.	18
	TOTAL	.	21	.	20	.	18
MRC	MRC	6385	.	6967	.	7245	.
NDEF	NDEF-SER	.	2505	.	2739	.	2573
NHW	NHW-HP	55	175	55	190	55	175
	TOTAL	55	175	55	190	55	175
NRC	NRC-SIR	5126	470	7560	554	7590	578
NSERC	NSERC	2950	.	3006	.	3873	.
PW	PW-PTS	.	183	.	.	.	.
SC	SC	.	8	.	10	.	10
SSHRC	SSHRC	922	.	1183	.	1183	.
TPT	TPT-ADM	.	226	.	50	.	50
	TPT-AIR	.	100	.	100	.	104
	TPT-MAR	.	72	.	.	.	.
	TOTAL	.	398	.	150	.	154
TOTAL	TOTAL	140932	7872	138134	6357	127994	6643

TABLE 21

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE OTHER SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1342	335	1342	335	1342	335
	TOTAL	1342	335	1342	335	1342	335
AECB	AECB	.	189	.	354	.	403
AECL	AECL	.	526	.	549	.	514
CMHC	CMHC	.	.	.	68	.	68
CIDA	CIDA	.	7902	.	7028	.	8070
CLFB	CLFB	.	.	.	.	.	20
COMM	COMM-CC	141	215	150	164	150	164
ECC	ECC	.	176	.	212	.	233
E&I	E&I-EIC	14215	.	14215	.	14215	.
	TOTAL	14215	.	14215	.	14215	.
EMR	EMR-ENER	1041	667	1093	700	.	.
	EMR-MES	154	742	78	580	.	.
	EMR	.	.	.	.	25	1000
	TOTAL	1195	1409	1171	1280	25	1000
ENV	ENV-ADM	.	129	.	95	.	75
	ENV-AES	.	174	.	180	.	187
	ENV-C&P	.	1036	.	1193	.	1530
	ENV-PC	65	.	68	.	71	.
	TOTAL	65	1339	68	1468	71	1792
F&O	F&O-FM	.	198	.	329	.	316
FOR	FOR	61	586	57	188	.	350
IAND	IAND	.	5	.	.	.	.
IDRC	IDRC	367	.	500	.	500	.
JUST	JUST-LRC	.	1162	.	1020	.	1100
	TOTAL	.	1162	.	1020	.	1100
MRC	MRC	156	.	167	.	183	.
NDEF	NDEF-SER	.	1599	.	.	.	100
NHW	NHW-HP	.	30	.	50	.	30
	NHW-HSP	.	.	.	50	.	.
	TOTAL	.	30	.	100	.	30
NMC	NMC-NMNS	.	.	.	20	.	20
	TOTAL	.	.	.	20	.	20
NRC	NRC-SIR	6295	86	7710	97	7710	92
NSERC	NSERC	4813	.	6286	.	6578	.
PC	PC	8	.	.	.	.	.

(CONTINUED)

TABLE 21

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE OTHER SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
RCMP	RCMP	.	221	.	169	.	165
SC	SC	.	63	.	70	.	70
SECS	SECS-CIT	.	40	.	50	.	25
	TOTAL	.	40	.	50	.	25
SGEN	SGEN-ADM	.	300	.	300	.	100
SS	SS-SUPP	.	160	.	427	.	.
TPT	TPT-SUR	.	5	.	5	.	6
	TOTAL	.	5	.	5	.	6
TOTAL	TOTAL	28658	16546	31666	14233	30774	14973

TABLE 22
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		PAYMENT TYPE			PAYMENT TYPE			PAYMENT TYPE		
		GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER	GRANTS	CONTRACTS	OTHER
\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
AGR	AGR-AFP	11697	4201	276718	11646	4214	273874	11734	4214	286673
	AGR-GOP	2184	.	4873	2400	.	5971	2400	.	5815
	TOTAL	13881	4201	281591	14046	4214	279845	14134	4214	292488
ACOA	ACOA	12210	.	.	8547	.	.	5703	.	.
AECB	AECB	.	1622	1137	.	3284	1207	.	3740	1311
AECL	AECL	375	23269	94075	419	26003	105129	371	22990	92947
CMHC	CMHC	878	1726	6305	1777	1695	7081	1777	1695	7842
CIDA	CIDA	45250	24338	1349	42656	20434	1330	47323	23464	1460
CLFB	CLFB	.	.	112	.	.	116	.	20	94
CSA	CSA	.	.	.	25005	25449	11356	13581	86482	13282
COMM	COMM-CC	18209	4807	29148	8869	4084	34706	9675	4084	40244
ECC	ECC	.	360	9728	.	432	9983	.	475	10355
E&I	E&I-EIC	40835	.	1840	40835	.	1910	40835	.	1978
	TOTAL	40835	.	1840	40835	.	1910	40835	.	1978
EMR	EMR-ENER	8381	3958	1019	8822	4364	1081	.	.	.
	EMR-MES	44389	14422	94732	25345	16242	90859	.	.	.
	EMR	.	.	.	.	.	.	131578	32485	106300
	TOTAL	52770	18380	95752	34167	20606	91940	131578	32485	106300
ENV	ENV-ADM	53	328	140	.	370	149	.	370	150
	ENV-AES	985	2348	23499	1025	2428	25217	1027	2510	25838
	ENV-C&P	203	10235	34746	206	11776	40268	203	15111	50261
	ENV-PC	65	209	.	68	219	.	71	229	.
	TOTAL	1306	13120	58385	1299	14793	65634	1301	18220	76249
F&O	F&O-FM	774	5191	110574	1042	6641	126994	1026	6372	122511
FOR	FOR	9618	2380	55747	9346	1370	55222	7839	1374	58759
IAND	IAND	10	244	211	.	268	349	.	956	357
ISTC	ISTC	218113	.	17837	264957	.	18859	228697	.	18700
IDRC	IDRC	59680	.	22475	66100	.	25000	62900	.	23600
JUST	JUST-LRC	.	1467	986	.	1315	1100	.	1401	1049
	TOTAL	.	1467	986	.	1315	1100	.	1401	1049
MRC	MRC	176734	.	4984	188468	.	5275	207555	.	5856
M&C	M&C	111	40	.	118	60	.	.	.	.
NCC	NCC	10	.	.	10	.	.	10	.	.
NDEF	NDEF-SER	531	117112	160726	6000	117318	156604	10000	123408	159655
NFB	NFB	.	.	879	.	.	968	.	.	985
NHW	NHW-FAS	587	.	40	610	.	40	610	.	40

(CONTINUED)

TABLE 22

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
NHM	NHM-HP	279	1920	17660	239	2020	16581	215	1920	16482
	NHM-HSP	13567	1759	1442	16027	1758	1570	15399	1799	1657
	NHM-MS	.	.	584	.	.	605	.	.	635
	NHM-SS	3454	.	525	4384	.	547	4199	.	591
	TOTAL	17887	3679	20251	21260	3778	19343	20423	3719	19405
NMC	NMC-CMC	.	226	7212	.	441	10608	.	367	7146
	NMC-NGC	.	353	6982	.	396	7678	.	403	7889
	NMC-NMNS	.	.	3404	.	20	3755	.	20	3841
	TOTAL	.	579	17599	.	857	22040	.	789	18875
NRC	NRC-SIR	133999	65272	263300	134799	87269	292883	135206	23622	287383
NREV	NREV-TAX	.	.	367	.	.	388	.	.	405
NSERC	NSERC	309453	.	13820	327841	.	15177	357218	.	16052
PC	PC	73	.	.	65	.	.	65	.	.
PW	PW-PTS	52	1373	2187	32	1434	2476	12	1454	2432
RCMP	RCMP	.	356	299	.	368	330	.	340	335
SC	SC	.	196	1580	.	250	1503	.	250	1396
SECS	SECS-CIT	.	102	365	.	150	437	.	150	466
	TOTAL	.	102	365	.	150	437	.	150	466
SSHRC	SSHRC	47273	.	3733	51815	.	3778	56847	.	4020
SGEN	SGEN-ADM	4350	1050	2545	4300	1400	2086	4200	1400	2373
STCAN	STCAN	.	.	10779	.	.	9640	.	.	10214
SS	SS-SUPP	.	16427	221	.	11880	176	.	370	98
TPT	TPT-ADM	.	12595	3066	.	13460	4374	.	13885	4571
	TPT-APT	.	87	.	.	40	.	.	.	.
	TPT-AIR	.	1000	2732	.	1000	2772	.	1040	2858
	TPT-MAR	.	5025	1565	.	7400	1105	.	7378	1147
	TPT-SUR	100	231	183	88	658	166	80	807	163
	TOTAL	100	18938	7546	88	22558	8418	80	23110	8740
TB	TB-ADM	318	.	.	165	.	.	165	.	.
WDO	WDO	5592	.	494	25255	.	575	25779	.	537
TOTAL	TOTAL	1170393	326229	1298926	1279280	377910	1379859	1384301	386585	1408754

TABLE 23

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY PERFORMER, 1988-89 TO 1990-91SCIENCE TYPE TOTAL
AND ACTIVITY RSA

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	1512097	75	1607219	76	1728406	76
CANADIAN INDUSTRY	198046	10	192604	9	204480	9
CANADIAN UNIVERSITY	136758	7	142383	7	155809	7
CANADIAN NP INST	41957	2	47947	2	45422	2
PROV. & MUN. GOV'T	12449	1	13987	1	11696	1
FOREIGN PERFORMERS	103553	5	96365	5	107204	5
OTHER PERFORMERS	15637	1	16892	1	16900	1
TOTAL	2020497	100	2117397	100	2269917	100

TABLE 24
FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR									
		1988-89			1989-90			1990-91			
		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	6489	111	6600	5950	100	6050	6053	100	6153	
	AGR-AFP	24251	3461	27712	25363	2404	27767	23704	2404	26108	
	AGR-GOP	3533	6	3539	4082	6	4088	4529	11	4540	
	TOTAL	34273	3578	37851	35395	2510	37905	34286	2515	36801	
AECB	AECB	14	525	539	37	1520	1557	41	2368	2409	
AECL	AECL	6981	400	7381	7839	410	8249	6902	390	7292	
CMHC	CMHC	14524	5159	19683	15845	4725	20570	18213	4725	22938	
CBC	CBC	2269	3399	5668	2030	3703	5733	2230	3877	6107	
CHRC	CHRC	723	37	760	607	60	667	472	85	557	
CIDA	CIDA	7647	267395	275042	7724	246424	254148	8494	288769	297263	
CLFB	CLFB	27	.	27	27	.	27	34	.	34	
COL	COL	3479	.	3479	4017	.	4017	4238	.	4238	
COMM	COMM-CC	3095	1958	5053	625	1275	1900	601	770	1371	
CCA	CCA-ADM	2369	125	2494	1389	140	1529	1520	140	1660	
	CCA-CON	4835	.	4835	5179	.	5179	5350	.	5350	
	CCA-COR	15225	.	15225	18389	.	18389	18152	.	18152	
	TOTAL	22429	125	22554	24957	140	25097	25022	140	25162	
ECC	ECC	385	.	385	454	.	454	432	.	432	
E&I	E&I-ADM	16304	1398	17702	16709	3914	20623	16642	2150	18792	
	E&I-EIC	663	466	1129	847	707	1554	949	730	1679	
	TOTAL	16967	1864	18831	17556	4621	22177	17591	2880	20471	
EMR	EMR-ADM	12974	.	12974	16367	.	16367	.	.	.	
	EMR-ENER	1764	11081	12845	1912	11661	13573	.	.	.	
	EMR-MES	170141	17245	187386	183764	9226	192990	.	.	.	
	EMR	.	.	.	.	.	.	236390	9937	246327	
	TOTAL	184879	28326	213205	202044	20887	222931	236390	9937	246327	
ENV	ENV-AES	216805	17644	234449	231463	18323	249786	241408	18799	260207	
	ENV-C&P	70934	10675	81609	84395	12312	96707	106421	15800	122221	
	ENV-PC	61713	707	62420	65454	741	66195	68850	778	69628	
	TOTAL	349451	29026	378477	381312	31376	412688	416679	35377	452056	
EA	EA-CIA	11756	17542	29298	10268	20127	30395	10866	21592	32458	
FIN	FIN-FEP	20379	.	20379	22348	.	22348	31524	.	31524	
F&O	F&O-FM	96133	6644	102777	108862	5326	114188	105565	5058	110623	
FOR	FOR	7483	135	7618	7048	520	7568	7036	520	7556	
IAND	IAND	896	5844	6740	997	5600	6597	839	4515	5354	
ISTC	ISTC	20197	6783	26980	16446	10520	26966	13743	15020	26763	

(CONTINUED)

TABLE 24

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR									
		1988-89			1989-90			1990-91			
		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										
IDRC	IDRC	10946	8218	19164	12100	9100	21200	11500	8500	20000	
IJC	IJC	4498	167	4665	4328	507	4835	4067	574	4641	
JUST	JUST-ADM	2451	4961	7412	2296	4385	6681	2179	2651	4830	
	JUST-LRC	607	85	692	654	141	795	653	130	783	
	TOTAL	3058	5046	8104	2950	4526	7476	2832	2781	5613	
LAB	LAB	1138	.	1138	1229	.	1229	1284	.	1284	
MRC	MRC	208	7126	7334	221	8478	8699	244	8391	8635	
M&C	M&C	.	4062	4062	.	4219	4219	.	4259	4259	
NA	NA	24774	320	25094	24017	2120	26137	24139	1800	25939	
NCC	NCC	119	278	397	42	552	594	40	466	506	
NDEF	NDEF-SER	4083	401	4484	4227	310	4537	4729	380	5109	
NEB	NEB	2111	.	2111	2304	.	2304	2616	.	2616	
NFB	NFB	341	.	341	195	.	195	215	.	215	
NHW	NHW-ADM	13601	1655	15256	14805	2648	17453	14826	1547	16373	
	NHW-FAS	.	12	12	.	.	.	.	.	.
	NHW-HP	81068	2584	83652	89310	2867	92177	94785	2667	97452	
	NHW-HSP	854	13082	13936	952	15519	16471	1022	14765	15787	
	NHW-IS	1427	30	1457	1627	.	1627	1627	.	1627	
	NHW-MS	3259	743	4002	3372	772	4144	3536	803	4339	
	NHW-SS	1743	7600	9343	1815	9648	11463	1654	9238	10892	
	TOTAL	101951	25706	127657	111881	31454	143335	117450	29020	146470	
NL	NL	47075	78	47153	49411	61	49472	49877	72	49949	
NMC	NMC-CMC	65310	.	65310	70311	.	70311	48262	.	48262	
	NMC-NGC	29703	.	29703	32661	.	32661	33537	.	33537	
	NMC-NMNS	20769	145	20914	20861	324	21185	22410	324	22734	
	NMC-NMST	20654	.	20654	22178	.	22178	24017	.	24017	
	TOTAL	136435	145	136580	146010	324	146334	128225	324	128549	
NRC	NRC-SIR	52563	190	52753	53128	204	53332	53234	199	53433	
NREV	NREV-TAX	4341	.	4341	4928	.	4928	5149	.	5149	
NSERC	NSERC	1814	40793	42607	2128	46009	48137	2230	49489	51719	
PW	PW-PTS	3398	384	3782	3677	725	4402	3598	725	4323	
SC	SC	1399	.	1399	1477	.	1477	1853	.	1853	
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70	
	SECS-CIT	.	871	871	.	900	900	.	900	900	
	SECS-ES	230	249	479	229	212	441	202	115	317	
	SECS-OL	2022	405	2427	2109	441	2550	2180	400	2580	

(CONTINUED)

TABLE 24

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY DEPARTMENT AND INTRAMURAL/EXTRAMURAL PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND ACTIVITY RSA

		YEAR								
		1988-89			1989-90			1990-91		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
SECS	TOTAL	2253	1566	3819	2338	1623	3961	2382	1485	3867
SSHRC	SSHRC	3365	21987	25352	3370	23180	26550	3608	25548	29156
SGEN	SGEN-ADM	941	350	1291	922	400	1322	1013	400	1413
STCAN	STCAN	277277	18	277295	282658	11	282669	339017	11	339028
SS	SS-SUPP	248	9065	9313	262	4844	5106	216	2554	2770
TPT	TPT-ADM	544	1694	2238	572	1955	2527	687	2250	2937
	TPT-APT	470	848	1318	486	542	1028	515	460	975
	TPT-AIR	1811	426	2237	1879	426	2305	1917	443	2360
	TPT-SUR	365	650	1015	389	703	1092	417	766	1183
	TOTAL	3190	3618	6808	3325	3626	6951	3535	3919	7454
TB	TB-ADM	20529	.	20529	23589	.	23589	24097	.	24097
WDO	WDO	55	142	197	65	8161	8226	59	2076	2135
TOTAL	TOTAL	1512097	508400	2020497	1607219	510178	2117397	1728406	541511	2269917

TABLE 25

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND YEAR 1988-89

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	199	5385	1059	4005	1604	2615	178	15045
INTRAMURAL RSA	533	4860	2372	4055	4190	916	19	16946
ADMIN. OF EXTRAMURAL PROGRAMS	89	406	495	47	492	10	10	1550
TOTAL	821	10652	3926	8107	6286	3541	207	33541

TABLE 25

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND YEAR 1989-90

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	212	5574	1114	4172	1646	2371	184	15273
INTRAMURAL RSA	523	5061	2357	4113	3956	904	19	16933
ADMIN. OF EXTRAMURAL PROGRAMS	87	432	501	54	481	11	10	1575
TOTAL	822	11067	3972	8339	6083	3286	213	33781

TABLE 25

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE TOTAL
AND YEAR 1990-91

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	197	5573	1122	4110	1631	2254	184	15070
INTRAMURAL RSA	520	5141	2460	4102	3836	851	19	16928
ADMIN. OF EXTRAMURAL PROGRAMS	98	469	518	61	596	.	10	1753
TOTAL	815	11183	4100	8272	6063	3104	212	33751

TABLE 26-A

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	TOTAL
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	39	3	5	40	.	.	88
	AGR-AFP	47	961	119	991	318	1358	.	3794
	AGR-GOP	1	27	5	70	12	2	.	116
	TOTAL	49	1027	127	1066	370	1360	.	3998
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	19	772	.	811	290	550	.	2442
CMHC	CMHC	7	147	.	10	39	.	.	203
CBC	CBC	4	20	.	19	2	.	.	45
CHRC	CHRC	1	3	3	.	2	.	.	9
CIDA	CIDA	16	14	75	4	43	.	.	152
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	.	34	.	13	.	.	53
COMM	COMM-CC	14	144	41	156	33	.	.	387
CCA	CCA-ADM	6	25	14	2	7	.	.	54
	CCA-CON	1	12	8	36	10	3	.	70
	CCA-COR	7	130	21	1	102	.	.	261
	TOTAL	14	167	43	39	119	3	.	385
ECC	ECC	16	38	30	17	25	.	.	126
E&I	E&I-ADM	6	89	13	14	43	.	.	165
	E&I-EIC	6	19	34	3	20	.	.	82
	TOTAL	12	108	47	17	63	.	.	247
EMR	EMR-ADM	.	.	53	5	17	.	.	75
	EMR-ENER	1	21	8	.	8	.	.	38
	EMR-MES	64	1136	124	725	398	122	.	2569
	TOTAL	65	1156	185	730	423	122	.	2682
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	66	671	300	1005	314	18	.	2374
	ENV-C&P	11	376	153	321	292	82	.	1235
	ENV-PC	10	184	101	139	112	300	.	846
	TOTAL	87	1231	554	1465	719	400	.	4456
EA	EA-CIA	17	2	49	5	32	.	.	105
FIN	FIN-FEP	30	161	28	19	49	.	.	287
F&O	F&O-FM	53	720	109	827	191	370	.	2269
FOR	FOR	22	336	71	344	96	84	.	953
IAND	IAND	0	9	2	2	4	.	.	17
ISTC	ISTC	44	22	202	5	112	.	.	385
IDRC	IDRC	8	125	30	36	81	.	.	279

(CONTINUED)

TABLE 26-A

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	TOTAL
		PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
DEPARTMENT	PROGRAM								
IJC	IJC	2	12	4	4	20	.	.	42
JUST	JUST-ADM	2	15	7	.	8	.	.	32
	JUST-LRC	5	.	2	1	20	.	.	28
	TOTAL	7	15	9	1	28	.	.	60
LAB	LAB	.	7	.	2	6	.	.	14
MRC	MRC	6	.	22	.	28	.	.	56
NA	NA	8	108	17	81	80	.	.	294
NCC	NCC	.	4	.	.	.	.	.	4
NDEF	NDEF-SER	10	599	450	144	300	231	207	1940
NEB	NEB	5	17	1	3	4	.	.	30
NFB	NFB	.	4	.	1	2	.	.	7
NHW	NHW-ADM	13	88	27	14	49	.	.	191
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HP	26	786	36	249	232	52	.	1381
	NHW-HSP	2	9	13	.	9	.	.	34
	NHW-IS	1	9	9	4	1	.	.	24
	NHW-MS	1	13	1	14	7	.	.	36
	NHW-SS	2	13	5	.	8	.	.	28
	TOTAL	45	918	92	281	307	52	.	1695
NL	NL	13	190	54	55	204	.	.	516
NMC	NMC-CMC	14	45	99	88	90	30	.	366
	NMC-NGC	9	35	74	69	30	27	.	244
	NMC-NMNS	11	49	45	52	33	31	.	221
	NMC-NMST	8	6	46	49	26	38	.	173
	TOTAL	42	135	264	258	179	126	.	1004
NRC	NRC-SIR	10	1390	245	866	575	208	.	3294
NREV	NREV-TAX	2	82	.	.	.	.	.	84
NSERC	NSERC	16	.	68	.	78	1	.	163
PW	PW-PTS	.	24	10	10	2	.	.	45
RCMP	RCMP	1	2	.	.	1	.	.	4
SC	SC	.	4	7	14	.	4	.	29
SECS	SECS-CIT	.	4	.	1	1	.	.	6
	SECS-ES	.	3	.	2	.	.	.	5
	SECS-OL	.	.	38	.	5	.	.	43
	TOTAL	.	7	38	3	6	.	.	54
SSHRC	SSHRC	11	.	45	.	41	.	.	97
SGEN	SGEN-ADM	3	28	2	1	10	1	.	45

(CONTINUED)

TABLE 26-A

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
STCAN	STCAN	100	813	823	814	1646	33	.	4229
SS	SS-SUPP	1	.	4	.	5	.	.	9
TPT	TPT-ADM	2	28	6	2	13	.	.	51
	TPT-APT	.	6	0	.	.	.	.	6
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	1	4	.	2	1	.	.	9
	TOTAL	4	64	14	13	17	.	.	113
TB	TB-ADM	44	13	114	.	36	.	.	207
WDO	WDO	1	0	6	.	2	.	.	9
TOTAL	TOTAL	821	10652	3926	8107	6286	3541	207	33541

TABLE 26-B
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	TOTAL
								PY'S	PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	37	3	5	38	.	.	84
	AGR-AFP	53	1059	133	1052	361	1126	.	3784
	AGR-GOP	1	29	5	71	12	2	.	119
	TOTAL	55	1125	141	1128	411	1128	.	3987
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	19	790	.	820	295	565	.	2489
CMHC	CMHC	9	153	.	10	41	.	.	213
CBC	CBC	4	22	.	16	2	.	.	44
CHRC	CHRC	2	2	3	.	1	.	.	8
CIDA	CIDA	14	16	72	4	43	.	.	149
CLFB	CLFB	0	1	.	0	0	.	.	2
CSA	CSA	11	27	25	26	29	.	.	118
COL	COL	6	1	39	.	13	.	.	59
COMM	COMM-CC	15	153	41	115	31	.	.	355
CCA	CCA-ADM	4	11	14	1	3	.	.	33
	CCA-CON	1	12	6	38	10	3	.	70
	CCA-COR	11	142	35	2	108	.	.	298
	TOTAL	16	165	55	41	121	3	.	401
ECC	ECC	16	38	30	16	22	.	.	122
E&I	E&I-ADM	6	85	14	20	37	.	.	162
	E&I-EIC	6	21	34	3	21	.	.	85
	TOTAL	12	106	48	23	58	.	.	247
EMR	EMR-ADM	.	.	57	6	19	.	.	82
	EMR-ENER	2	21	8	.	8	.	.	38
	EMR-MES	63	1102	121	691	373	114	.	2464
	TOTAL	65	1122	186	697	400	114	.	2584
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	67	694	306	1004	321	17	.	2409
	ENV-C&P	11	399	157	341	309	84	.	1301
	ENV-PC	10	184	101	139	112	300	.	846
	TOTAL	88	1277	564	1484	743	401	.	4557
EA	EA-CIA	16	2	46	5	30	.	.	99
FIN	FIN-FEP	32	171	28	14	59	.	.	304
F&O	F&O-FM	54	736	111	845	192	380	.	2318
FOR	FOR	20	347	69	343	91	85	.	955
IAND	IAND	1	10	2	2	4	.	.	19
ISTC	ISTC	31	17	164	5	77	.	.	294

(CONTINUED)

TABLE 26-B

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	TOTAL
			PY'S	PY'S					
DEPARTMENT	PROGRAM								
IDRC	IDRC		8	137	31	38	92	.	306
IJC	IJC		2	12	5	3	20	.	42
JUST	JUST-ADM		2	16	7	.	10	.	35
	JUST-LRC		5	.	2	1	20	.	28
	TOTAL		7	16	9	1	30	.	63
LAB	LAB		.	8	.	1	5	.	14
MRC	MRC		6	.	22	.	29	.	57
NA	NA		7	113	25	83	72	.	300
NCC	NCC		.	2	.	.	.	.	2
NDEF	NDEF-SER		8	632	480	144	278	190	213
NEB	NEB		5	19	1	4	4	.	33
NFB	NFB		.	6	.	.	2	.	8
NHW	NHW-ADM		13	83	22	10	45	.	173
	NHW-FAS		.	.	1	.	.	.	1
	NHW-HP		26	829	36	240	246	48	1425
	NHW-HSP		2	9	13	.	8	.	33
	NHW-IS		1	9	9	3	1	.	23
	NHW-MS		1	13	1	14	7	.	36
	NHW-SS		2	13	5	.	8	.	28
NL	TOTAL		45	956	87	267	316	48	1719
	NL		13	196	56	54	187	.	506
NMC	NMC-CMC		15	63	110	101	99	30	418
	NMC-NGC		7	35	72	69	30	27	240
	NMC-NMNS		10	45	43	42	35	31	206
	NMC-NMST		7	7	44	51	26	41	176
	TOTAL		39	150	269	263	190	129	1040
NRC	NRC-SIR		9	1394	240	956	589	219	3407
NREV	NREV-TAX		2	83	.	.	.	.	85
NSERC	NSERC		16	.	76	.	81	.	173
PW	PW-PTS		.	24	10	10	2	.	45
RCMP	RCMP		1	2	.	.	1	.	4
SC	SC		4	7	14	.	4	.	29
SECS	SECS-CIT		.	5	.	1	1	.	7
	SECS-ES		.	3	.	2	.	.	5
	SECS-OL		.	.	38	.	5	.	43
	TOTAL		.	7	38	3	6	.	54
SSHRC	SSHRC		9	.	46	.	41	.	96

(CONTINUED)

TABLE 26-B

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
SGEN	SGEN-ADM	3	25	2	.	8	1	.	39
STCAN	STCAN	100	907	797	903	1405	24	.	4136
SS	SS-SUPP	0	.	4	.	4	.	.	8
TPT	TPT-ADM	2	29	6	2	15	.	.	52
	TPT-APT	.	6	0	.	.	.	.	6
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	1	4	1	2	1	.	.	10
	TOTAL	4	65	15	13	17	.	.	115
TB	TB-ADM	44	14	115	2	35	.	.	210
WDO	WDO	2	0	7	.	2	.	.	11
TOTAL	TOTAL	822	11067	3972	8339	6083	3286	213	33781

TABLE 26-C
FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1990-91

SCIENCE TYPE TOTAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESSIONAL	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	37	3	5	38	.	.	84
	AGR-AFP	51	1054	143	1084	373	1075	.	3780
	AGR-GOP	2	32	5	73	11	2	.	124
	TOTAL	54	1123	151	1162	422	1077	.	3988
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	20	750	.	785	295	545	.	2395
CMHC	CMHC	9	158	.	10	45	.	.	222
CBC	CBC	4	24	.	16	2	.	.	46
CHRC	CHRC	2	2	3	.	1	.	.	8
CIDA	CIDA	15	17	76	4	36	.	.	148
CLFB	CLFB	0	1	.	0	0	.	.	2
CSA	CSA	23	45	36	25	28	.	.	157
COL	COL	6	1	39	.	13	.	.	59
COMM	COMM-CC	15	160	36	117	32	.	.	360
CCA	CCA-ADM	4	11	15	1	3	.	.	34
	CCA-CON	1	13	5	38	10	3	.	70
	CCA-COR	10	132	32	1	121	.	.	296
	TOTAL	15	156	52	40	134	3	.	400
ECC	ECC	16	38	29	16	22	.	.	121
E&I	E&I-ADM	6	81	14	19	36	.	.	156
	E&I-EIC	6	23	34	4	20	.	.	87
	TOTAL	12	104	48	23	56	.	.	243
EMR	EMR	68	1193	245	730	536	112	.	2884
	TOTAL	68	1193	245	730	536	112	.	2884
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	65	721	329	969	314	17	.	2415
	ENV-C&P	11	406	158	349	315	84	.	1323
	ENV-PC	10	184	101	139	112	300	.	846
	TOTAL	86	1311	588	1457	742	401	.	4585
EA	EA-CIA	16	2	46	5	30	.	.	99
FIN	FIN-FEP	33	175	27	17	41	.	.	293
F&O	F&O-FM	41	764	138	915	183	292	.	2333
FOR	FOR	18	345	70	341	91	87	.	952
IAND	IAND	0	11	.	1	4	.	.	16
ISTC	ISTC	32	16	167	3	78	.	.	296
IDRC	IDRC	8	137	31	38	92	.	.	306
IJC	IJC	2	14	7	3	19	.	.	45

(CONTINUED)

TABLE 26-C
FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1990-91

SCIENCE TYPE TOTAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
JUST	JUST-ADM		2	16	7	.	10	.	35
	JUST-LRC		5	.	2	1	19	.	27
	TOTAL		7	16	9	1	29	.	62
LAB	LAB	.	8	.	2	4	.	.	14
MRC	MRC	6	.	24	.	31	.	.	61
NA	NA	7	122	25	83	61	.	.	298
NCC	NCC	.	1	.	.	.	.	.	1
NDEF	NDEF-SER	7	634	478	143	282	189	212	1943
NEB	NEB	5	21	1	4	4	.	.	35
NFB	NFB	.	6	.	.	2	.	.	8
NHW	NHW-ADM	13	84	22	10	46	.	.	175
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HP	26	840	39	246	251	51	.	1453
	NHW-HSP	2	9	13	.	8	.	.	32
	NHW-IS	1	8	10	4	1	.	.	23
	NHW-MS	1	13	1	14	7	.	.	36
	NHW-SS	2	10	5	.	7	.	.	24
TOTAL		45	964	91	274	319	51	.	1744
NL	NL	11	188	65	56	180	.	.	500
NMC	NMC-CMC	16	42	86	83	60	31	.	318
	NMC-NGC	7	35	73	69	30	27	.	241
	NMC-NMNS	9	45	43	42	35	31	.	205
	NMC-NMST	7	6	53	54	25	30	.	175
	TOTAL	39	128	255	248	150	119	.	939
NRC	NRC-SIR	6	1404	239	865	563	205	.	3282
NREV	NREV-TAX	2	83	.	.	.	.	.	85
NSERC	NSERC	15	.	74	.	83	.	.	172
PW	PW-PTS	.	24	10	10	2	.	.	45
RCMP	RCMP	1	2	.	.	1	.	.	4
SC	SC	4	7	14	.	4	.	.	29
SECS	SECS-CIT	.	5	.	1	1	.	.	7
	SECS-ES	.	3	.	2	.	.	.	4
	SECS-OL	.	.	38	.	5	.	.	43
	TOTAL	.	8	38	3	6	.	.	54
SSHRC	SSHRC	10	.	47	.	39	.	.	96
SGEN	SGEN-ADM	3	16	12	.	8	.	.	39
STCAN	STCAN	100	906	800	860	1338	24	.	4028

(CONTINUED)

TABLE 26-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES BY DEPARTMENT AND CATEGORY,
1990-91

SCIENCE TYPE TOTAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
SS	SS-SUPP	0	.	2	.	3	.	.	5
TPT	TPT-ADM	2	29	6	2	13	.	.	52
	TPT-APT	.	5	0	.	.	.	.	5
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	1	5	1	2	1	.	.	10
	TOTAL	4	65	15	13	17	.	.	115
TB	TB-ADM	45	23	105	3	34	.	.	210
WDO	WDO	2	0	6	.	2	.	.	10
TOTAL	TOTAL	815	11183	4100	8272	6063	3104	212	33751

TABLE 27

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	2058126	56	2202901	56	2301121	55
CANADIAN INDUSTRY	737588	20	840406	21	929145	22
CANADIAN UNIVERSITY	609611	17	650783	16	706191	17
CANADIAN NP INST	27182	1	48145	1	41947	1
PROV. & MUN. GOV'T	26943	1	24946	1	20101	0
FOREIGN PERFORMERS	163597	4	156316	4	150194	4
OTHER PERFORMERS	38359	1	39141	1	38861	1
TOTAL	3661406	100	3962638	100	4187560	100

TABLE 28-A

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	933316	.	.	.	.	.	.	933316
R&D CONTRACTS	396	254683	24548	2129	647	5894	14533	302830
SUPPORTING CONTRACTS	35740	.	.	.	.	.	.	35740
R&D GRANTS	.	315222	495053	10857	18084	108286	14199	961701
RESEARCH FELLOWSHIPS	20674	2361	33817	245	.	9912	111	67120
ADMIN. EXTRAMURAL R&D	83114	.	.	.	.	.	.	83114
CAPITAL - R&D	180664	.	.	.	.	.	.	180664
SUB TOTAL R&D	1253903	572266	553418	13231	18731	124092	28843	2564484
DATA COLLECTION	459923	44135	4928	4469	4284	3106	5737	526582
INFORMATION SERVICES	171417	12772	3562	4134	2156	17098	2508	213647
TESTING & STANDARDIZATION	47121	4609	426	940	36	1628	319	55079
FEASIBILITY STUDIES	4673	102083	1333	1380	1736	10531	802	122538
MUSEUM SERVICES	15565	.	.	234	.	.	.	15799
EDUCATIONAL SUPPORT	.	1723	45944	2794	.	7142	150	57753
ADMIN. EXTRAMURAL RSA	19705	.	.	.	.	.	.	19705
CAPITAL - RSA	85818	.	.	.	.	.	.	85818
SUB TOTAL RSA	804223	165322	56193	13951	8212	39505	9516	1096922
TOTAL	2058126	737588	609611	27182	26943	163597	38359	3661406

TABLE 28-B

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	1008180	.	.	.	.	.	.	1008180
R&D CONTRACTS	1892	303768	28583	3103	1308	5775	12149	356578
SUPPORTING CONTRACTS	37283	.	.	.	.	.	.	37283
R&D GRANTS	.	375315	526621	29736	14441	101776	17234	1065123
RESEARCH FELLOWSHIPS	19245	3300	32392	300	.	10607	117	65961
ADMIN. EXTRAMURAL R&D	91088	.	.	.	.	.	.	91088
CAPITAL - R&D	171952	.	.	.	.	.	.	171952
SUB TOTAL R&D	1329641	682383	587596	33139	15749	118158	29500	2796166
DATA COLLECTION	503450	33972	4124	5340	6091	2836	5197	561010
INFORMATION SERVICES	184507	15502	3791	3868	970	16418	3152	228208
TESTING & STANDARDIZATION	45509	3430	832	1570	294	1668	319	53622
FEASIBILITY STUDIES	5357	103385	1365	1493	1842	8509	864	122815
MUSEUM SERVICES	15167	.	.	225	.	.	.	15392
EDUCATIONAL SUPPORT	12	1734	53075	2510	.	8727	109	66167
ADMIN. EXTRAMURAL RSA	20083	.	.	.	.	.	.	20083
CAPITAL - RSA	99175	.	.	.	.	.	.	99175
SUB TOTAL RSA	873260	158023	63187	15006	9197	38158	9641	1166472
TOTAL	2202901	840406	650783	48145	24946	156316	39141	3962638

TABLE 28-C

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY ACTIVITY AND PERFORMER,
1990-91

SCIENCE TYPE NATURAL
AND YEAR 1990-91

	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	1027172	.	.	.	.	.	.	1027172
R&D CONTRACTS	1872	304958	31702	4000	1449	5986	12955	362922
SUPPORTING CONTRACTS	35989	.	.	.	.	.	.	35989
R&D GRANTS	.	451848	577004	22632	10271	90699	16337	1168791
RESEARCH FELLOWSHIPS	20402	2700	30789	300	.	11745	122	66058
ADMIN. EXTRAMURAL R&D	105113	.	.	.	.	.	.	105113
CAPITAL - R&D	170175	.	.	.	.	.	.	170175
SUB TOTAL R&D	1360723	759506	639495	26932	11720	108430	29414	2936220
DATA COLLECTION	550996	36510	3572	6252	7069	3002	5056	612457
INFORMATION SERVICES	205261	19822	4348	4134	1122	16325	4046	255058
TESTING & STANDARDIZATION	48482	3223	406	1304	185	2356	175	56131
FEASIBILITY STUDIES	4378	108055	392	236	5	10353	61	123480
MUSEUM SERVICES	16525	.	.	216	.	.	.	16741
EDUCATIONAL SUPPORT	13	2029	57978	2873	.	9728	109	72730
ADMIN. EXTRAMURAL RSA	26951	.	.	.	.	.	.	26951
CAPITAL - RSA	87791	.	.	.	.	.	.	87791
SUB TOTAL RSA	940397	169639	66696	15015	8381	41764	9447	1251339
TOTAL	2301121	929145	706191	41947	20101	150194	38861	4167560

TABLE 29

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
AGR	AGR-ADM	6489	111	6600	5950	100	6050	6053	100	6153	
	AGR-AFP	298080	18148	316228	296728	17306	314034	307865	17281	325146	
	AGR-GOP	8406	2190	10596	10053	2406	12459	10344	2411	12755	
	TOTAL	312975	20449	333424	312731	19812	332543	324262	19792	344054	
AECB	AECB	1151	2147	3298	1244	4804	6048	1352	6108	7460	
AECL	AECL	101431	23669	125100	113387	26413	139800	100220	23380	123600	
CMHC	CMHC	3998	1723	5721	4399	1639	6038	5143	1639	6782	
CIDA	CIDA	4891	194597	199488	4941	181995	186936	5460	211623	217083	
CSA	CSA	.	.	.	11356	50454	61810	13282	100063	113345	
COMM	COMM-CC	30353	24403	54756	33035	12985	46020	38420	13784	52204	
CCA	CCA-COR	15225	.	15225	17135	.	17135	16882	.	16882	
	TOTAL	15225	.	15225	17135	.	17135	16882	.	16882	
EMR	EMR-ADM	12974	.	12974	16367	.	16367	.	.	.	.
	EMR-ENER	3147	23057	26204	3373	24467	27840	.	.	.	.
	EMR-MES	264873	76056	340929	276114	49323	325437	.	.	.	.
	EMR	.	.	.	.	.	.	344543	172148	516691	
	TOTAL	280994	99113	380107	295854	73790	369644	344543	172148	516691	
ENV	ENV-ADM	193	328	521	149	370	519	150	370	520	
	ENV-AES	240617	20663	261280	257024	21432	278456	267592	21990	289582	
	ENV-C&P	98198	19669	117867	115888	22643	138531	145558	29030	174588	
	ENV-PC	5653	421	6074	6002	440	6442	6328	461	6789	
	TOTAL	344661	41081	385742	379064	46885	423949	419628	51851	471479	
F&O	F&O-FM	196042	11602	207644	224920	11987	236907	217085	11502	228587	
FOR	FOR	63422	11941	75363	62390	11117	73507	65934	9594	75528	
IAND	IAND	847	3706	4553	1065	3644	4709	1046	4579	5625	
ISTC	ISTC	18058	224376	242434	19476	274957	294433	19305	243197	262502	
IDRC	IDRC	18718	42748	61466	20800	47300	68100	19600	45000	64600	
IJC	IJC	4498	167	4665	4328	507	4835	4067	574	4641	
MRC	MRC	5192	183860	189052	5496	196946	202442	6100	215946	222046	
NCC	NCC	50	144	194	12	179	191	35	106	141	
NDEF	NDEF-SER	160100	117989	278089	155908	123536	279444	159207	133708	292915	
NEB	NEB	452	.	452	469	.	469	487	.	487	
NFB	NFB	1220	.	1220	1163	.	1163	1200	.	1200	
NHW	NHW-HP	98912	4599	103511	106035	4982	111017	111413	4657	116070	
	NHW-HSP	783	10738	11521	864	12726	13590	928	12085	13013	
	NHW-MS	3843	.	3843	3977	.	3977	4171	.	4171	

(CONTINUED)

TABLE 29

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		PERFORMER			PERFORMER			PERFORMER		
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM									
NHW	TOTAL	103538	15337	118875	110876	17708	128584	116512	16742	133254
NMC	NMC-NMNS	24173	145	24318	24615	344	24959	26251	344	26595
	TOTAL	24173	145	24318	24615	344	24959	26251	344	26595
NRC	NRC-SIR	333838	181486	515324	362690	205593	568283	358362	141282	499644
NSERC	NSERC	15634	350246	365880	17305	373850	391155	18282	406707	424989
PW	PW-PTS	5585	1809	7394	6153	2191	8344	6030	2191	8221
RCMP	RCMP	299	356	655	330	368	698	335	340	675
SS	SS-SUPP	307	22764	23071	235	14089	14324	114	431	545
TPT	TPT-ADM	3512	13906	17418	4830	14970	19800	5142	15670	20812
	TPT-APT	122	808	930	129	482	611	143	370	513
	TPT-AIR	4543	1426	5969	4651	1426	6077	4775	1483	6258
	TPT-MAR	1565	5025	6590	1105	7400	8505	1147	7378	8525
	TPT-SUR	183	523	706	169	950	1119	175	1052	1227
	TOTAL	9925	21688	31613	10884	25228	36112	11382	25953	37335
MDO	MDO	549	5734	6283	640	33416	34056	596	27855	28451
TOTAL	TOTAL	2058126	1603280	3661406	2202901	1759737	3962638	2301121	1886439	4187560

TABLE 30

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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		6489	6489		5950	5950		6053	6053
	AGR-AFP	277640	20440	298080	274742	21986	296728	287654	20211	307865
	AGR-GOP	4873	3533	8406	5971	4082	10053	5815	4529	10344
	TOTAL	282513	30462	312975	280713	32018	312731	293469	30793	324262
AECB	AECB	1137	14	1151	1207	37	1244	1311	41	1352
AECL	AECL	94450	6981	101431	105548	7839	113387	93318	6902	100220
CMHC	CMHC	1904	2094	3998	2096	2303	4399	2396	2747	5143
CIDA	CIDA	731	4160	4891	722	4219	4941	803	4657	5460
CSA	CSA	.	.	.	11356	.	11356	13282	.	13282
COMM	COMM-CC	27404	2949	30353	32626	409	33035	37988	432	38420
CCA	CCA-COR	.	15225	15225	.	17135	17135	.	16882	16882
	TOTAL	.	15225	15225	.	17135	17135	.	16882	16882
EMR	EMR-ADM	.	12974	12974	.	16367	16367	.	.	.
	EMR-ENER	1383	1764	3147	1461	1912	3373	.	.	.
	EMR-MES	94732	170141	264873	92349	183764	276114	.	.	.
	EMR	.	.	.	.	.	.	108153	236390	344543
	TOTAL	96115	184879	280994	93810	202044	295854	108153	236390	344543
ENV	ENV-ADM	193	.	193	149	.	149	150	.	150
	ENV-AES	23813	216805	240617	25561	231463	257024	26184	241408	267592
	ENV-C&P	33546	64652	98198	38848	77040	115888	48424	97134	145558
	ENV-PC	.	5653	5653	.	6002	6002	.	6328	6328
	TOTAL	57551	287109	344661	64558	314506	379064	74758	344871	419628
F&O	F&O-FM	111162	84880	196042	127583	97338	224920	123101	93983	217085
FOR	FOR	55939	7483	63422	55342	7048	62390	58898	7036	65934
IAND	IAND	211	636	847	349	716	1065	357	689	1046
ISTC	ISTC	17837	221	18058	18859	618	19476	18700	605	19305
IDRC	IDRC	14492	4226	18718	16100	4700	20800	15200	4400	19600
IJC	IJC	.	4498	4498	.	4328	4328	.	4067	4067
MRC	MRC	4984	208	5192	5275	221	5496	5856	244	6100
NCC	NCC	.	50	50	.	12	12	.	35	35
NDEF	NDEF-SER	158584	1515	160100	154353	1555	155908	157297	1909	159207
NEB	NEB	.	452	452	.	469	469	.	487	487
NFB	NFB	879	341	1220	968	195	1163	985	215	1200
NHW	NHW-HP	17844	81068	98912	16725	89310	106035	16628	94785	111413
	NHW-HSP	477	306	783	527	337	864	566	362	928
	NHW-MS	584	3259	3843	605	3372	3977	635	3536	4171

(CONTINUED)

TABLE 30

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	TOTAL	18905	84632	103538	17857	93019	110876	17829	98683	116512
NMC	NMC-NMNS	3404	20769	24173	3755	20861	24615	3841	22410	26251
	TOTAL	3404	20769	24173	3755	20861	24615	3841	22410	26251
NRC	NRC-SIR	281275	52563	333838	309562	53128	362690	305129	53234	358362
NSERC	NSERC	13820	1814	15634	15177	2128	17305	16052	2230	18282
PW	PW-PTS	2187	3398	5585	2476	3677	6153	2432	3598	6030
RCMP	RCMP	299	.	299	330	.	330	335	.	335
SS	SS-SUPP	221	86	307	176	59	235	98	16	114
TPT	TPT-ADM	2999	513	3512	4302	528	4830	4505	637	5142
	TPT-APT	.	122	122	.	129	129	.	143	143
	TPT-AIR	2732	1811	4543	2772	1879	4651	2858	1917	4775
	TPT-MAR	1565	.	1565	1105	.	1105	1147	.	1147
	TPT-SUR	107	76	183	90	79	169	89	86	175
	TOTAL	7404	2521	9925	8269	2615	10884	8599	2783	11382
WDO	WDO	494	55	549	575	65	640	537	59	596
TOTAL	TOTAL	1253903	804223	2058126	1329641	873260	2202901	1360723	940397	2301121

TABLE 31

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	97	97	.	90	90	.	90	90
	AGR-AFP	2978	2480	5458	2978	1624	4602	2978	1624	4602
	AGR-GOP	2000	.	2000	2000	.	2000	2000	.	2000
	TOTAL	4978	2577	7555	4978	1714	6692	4978	1714	6692
AECB	AECB	844	24	868	1664	895	2559	1895	1019	2914
AECL	AECL	21117	400	21517	23636	410	24046	20869	390	21259
CMHC	CMHC	922	639	1561	809	495	1304	809	495	1304
CIDA	CIDA	470	102125	102595	418	95230	95648	480	114283	114763
CSA	CSA	.	.	.	25449	.	25449	86482	.	86482
COMM	COMM-CC	12985	1374	14359	11722	.	11722	12528	.	12528
EMR	EMR-ENER	8765	6021	14786	9737	6336	16073	.	.	.
	EMR-MES	10792	14140	24932	15252	8269	23521	.	.	.
	EMR	.	.	.	.	.	.	133849	8839	142688
	TOTAL	19557	20161	39718	24989	14605	39594	133849	8839	142688
ENV	ENV-ADM	130	.	130	200	.	200	220	.	220
	ENV-AES	1902	13597	15499	1967	14028	15995	2033	14407	16440
	ENV-C&P	6604	1964	8568	7597	2266	9863	9750	2907	12657
	ENV-PC	136	119	255	143	122	265	150	126	276
	TOTAL	8772	15680	24452	9907	16416	26323	12153	17440	29593
F&O	F&O-FM	4642	4206	8848	5343	3302	8645	5127	3168	8295
FOR	FOR	8407	.	8407	1273	.	1273	487	.	487
IAND	IAND	149	271	420	163	212	375	847	281	1128
ISTC	ISTC	204882	5326	210208	250390	8500	258890	221166	12325	233491
IDRC	IDRC	394	.	394	300	.	300	300	.	300
IJC	IJC	.	123	123	.	215	215	.	238	238
NCC	NCC	.	139	139	.	179	179	.	106	106
NDEF	NDEF-SER	104248	265	104513	106765	218	106983	116083	300	116383
NHW	NHW-HP	915	1448	2363	930	424	1354	915	1303	2218
	NHW-HSP	14	.	14	17	.	17	15	.	15
	TOTAL	929	1448	2377	947	424	1371	930	1303	2233
NMC	NMC-NMNS	.	4	4	.	65	65	.	65	65
	TOTAL	.	4	4	.	65	65	.	65	65
NRC	NRC-SIR	139078	52	139130	159523	59	159582	95305	56	95361
NSERC	NSERC	2361	1460	3821	3300	1500	4800	2700	1760	4460
PW	PW-PTS	1161	225	1386	1409	725	2134	1429	725	2154
RCMP	RCMP	90	.	90	149	.	149	175	.	175

(CONTINUED)

TABLE 31

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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	14056	5758	19814	10322	1883	12205	343	13	356
TPT	TPT-ADM	11719	1544	13263	12780	1780	14560	13110	2050	15160
	TPT-APT	.	808	808	.	482	482	.	370	370
	TPT-AIR	600	426	1026	600	426	1026	625	443	1068
	TPT-MAR	4914	.	4914	7400	-	7400	7378	.	7378
	TPT-SUR	168	145	313	465	127	592	465	180	645
	TOTAL	17401	2923	20324	21245	2815	24060	21578	3043	24621
WDO	WDO	4823	142	4965	17682	8161	25843	18993	2076	21069
TOTAL	TOTAL	572266	165322	737588	682383	158023	860406	759506	169639	929145

TABLE 32

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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	7189	133	7322	7202	131	7333	7202	131	7333
	TOTAL	7189	133	7322	7202	131	7333	7202	131	7333
AECB	AECB	326	.	326	910	93	1003	1036	106	1142
AECL	AECL	1251	.	1251	1398	.	1398	1236	.	1236
CMHC	CMHC	82	.	82	24	.	24	24	.	24
CIDA	CIDA	14386	7455	21841	12795	9044	21839	14692	11481	26173
COMM	COMM-CC	716	13	729	713	32	745	713	25	738
EMR	EMR-ENER	1334	1013	2347	1077	1074	2151	.	.	.
	EMR-MES	4456	1636	6092	5672	402	6074	.	.	.
	EMR	.	.	.	.	.	.	9659	445	10104
	TOTAL	5790	2649	8439	6749	1476	8225	9659	445	10104
ENV	ENV-ADM	33	.	33	75	.	75	75	.	75
	ENV-AES	938	115	1053	957	152	1109	966	156	1122
	ENV-C&P	988	532	1520	1127	609	1736	1446	781	2227
	ENV-PC	.	46	46	.	48	48	.	50	50
	TOTAL	1959	693	2652	2159	809	2968	2487	987	3474
F&O	F&O-FM	524	570	1094	1275	198	1473	1223	190	1413
FOR	FOR	1301	.	1301	1009	.	1009	260	.	260
IAND	IAND	60	671	731	65	660	725	69	575	644
ISTC	ISTC	541	664	1205	1205	1100	2305	.	1595	1595
IDRC	IDRC	3981	.	3981	4400	.	4400	4200	.	4200
IJC	IJC	.	4	4	.	.	.	.	.	.
MRC	MRC	169984	6000	175984	181112	6565	187677	199881	6341	206222
NCC	NCC	.	5	5	.	.	.	.	.	.
NDEF	NDEF-SER	9095	.	9095	12793	.	12793	13671	.	13671
NHW	NHW-HP	470	505	975	480	1483	1963	470	569	1039
	NHW-HSP	3824	1766	5590	4515	2097	6612	4343	1982	6325
	TOTAL	4294	2271	6565	4995	3580	8575	4813	2551	7364
NRC	NRC-SIR	30002	60	30062	29700	67	29767	29565	65	29630
NSERC	NSERC	298792	34561	333353	314475	39091	353566	343254	42106	385360
PW	PW-PTS	25	.	25	25	.	25	25	.	25
RCMP	RCMP	45	.	45	50	.	50	.	.	.
SS	SS-SUPP	2127	422	2549	1093	306	1399	27	48	75
TPT	TPT-ADM	335	22	357	215	35	250	250	50	300
	TPT-AIR	500	.	300	500	.	500	511	.	311
	TPT-MAR	39	.	39	.	.	.	.	.	.

(CONTINUED)

TABLE 32

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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	55	.	55	111	.	111	111	.	111
	TOTAL	729	22	751	626	35	661	672	50	722
WDO	WDO	219	.	219	2823	.	2823	4786	.	4786
TOTAL	TOTAL	553418	56193	609611	587596	63187	650783	639495	66696	706191

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, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1988-89			1989-90			1990-91		
		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	1706	3	1709	1706	3	1709	1706	3	1709
	AGR-GOP	184	.	184	400	.	400	400	.	400
	TOTAL	1890	3	1893	2106	3	2109	2106	3	2109
AECB	AECB	34	4	38	218	12	230	248	12	260
AECL	AECL	125	.	125	140	.	140	124	.	124
CMHC	CMHC	.	80	80	20	223	243	20	223	243
CIDA	CIDA	.	5369	5369	.	4489	4489	.	5088	5088
EMR	EMR-ENER	130	1377	1507	158	1446	1604	.	.	.
	EMR-MES	2988	20	3008	4773	65	4838	.	.	.
	EMR	.	.	.	.	.	.	6722	110	6832
	TOTAL	3118	1397	4515	4931	1511	6442	6722	110	6832
ENV	ENV-ADM	21	.	21	.	.	.	.	.	.
	ENV-AES	.	334	334	.	345	345	.	357	357
	ENV-C&P	144	2893	3037	156	3336	3492	172	4282	4454
	TOTAL	165	3227	3392	156	3681	3837	172	4639	4811
F&O	F&O-FM	.	307	307	104	295	399	100	283	383
FOR	FOR	65	135	200	6730	520	7250	6660	520	7180
IAND	IAND	.	51	51	.	60	60	.	78	78
ISTC	ISTC	3539	.	3539	9260	.	9260	4380	.	4380
IDRC	IDRC	474	.	474	600	.	600	500	.	500
MRC	MRC	50	427	477	53	769	822	59	834	893
NDEF	NDEF-SER	189	.	189	841	.	841	796	.	796
NHW	NHW-HP	340	98	438	360	180	540	315	144	459
	NHW-HSP	2347	2450	4797	2786	2909	5695	2666	2709	5375
	TOTAL	2687	2548	5235	3146	3089	6235	2981	2853	5834
NMC	NMC-NMNS	.	37	37	.	84	84	.	84	84
	TOTAL	.	37	37	.	84	84	.	84	84
NRC	NRC-SIR	217	78	295	220	78	298	219	78	297
NSERC	NSERC	537	.	537	774	.	774	813	.	813
PW	PW-PTS	56	139	195	32	.	32	12	.	12
SS	SS-SUPP	84	.	84	38	.	38	.	.	.
TPT	TPT-SUR	1	149	150	20	192	212	20	210	230
	TOTAL	1	149	150	20	192	212	20	210	230
WDO	WDO	.	.	.	3750	.	3750	1000	.	1000
TOTAL	TOTAL	13231	13951	27182	33139	15006	48145	26932	15015	41947

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,
 1988-89 TO 1990-91

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

		YEAR								
		1988-89			1989-90			1990-91		
		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	600	551	1151	600	551	1151	600	551	1151
	TOTAL	600	551	1151	600	551	1151	600	551	1151
AECB	AECB	189	.	189	101	.	101	115	.	115
CMHC	CMHC	.	.	.	.	10	10	.	10	10
EMR	EMR-ENER	39	1730	1769	41	1817	1858	.	.	.
	EMR-MES	15499	64	15563	11485	.	11485	.	.	.
	EMR	.	.	.	.	.	.	7875	.	7875
	TOTAL	15538	1794	17332	11526	1817	13343	7875	.	7875
ENV	ENV-ADM	3	.	3	.	.	.	.	.	.
	ENV-AES	5	541	546	5	560	565	5	580	585
	ENV-C&P	41	3591	3652	45	4148	4193	58	5323	5381
	ENV-PC	10	.	10	10	.	10	10	.	10
	TOTAL	59	4132	4191	60	4708	4768	73	5903	5976
FOR	FOR	1085	.	1085	1055	.	1055	1027	.	1027
IAND	IAND	.	1371	1371	.	1151	1151	.	1040	1040
ISTC	ISTC	95	273	368	471	400	871	74	580	654
IJC	IJC	.	.	.	.	20	20	.	.	.
MRC	MRC	159	.	159	169	.	169	187	.	187
NDEF	NDEF-SER	7	.	7	180	.	180	185	.	185
NHW	NHW-HP	30	91	121	50	510	560	30	237	267
	NHW-HSP	337	.	337	402	.	402	370	.	370
	TOTAL	367	91	458	452	510	962	400	237	637
NRC	NRC-SIR	22	.	22	25	.	25	24	.	24
TPT	TPT-ADM	60	.	60	110	.	110	160	.	160
	TPT-SUR	.	.	.	.	30	30	.	60	60
	TOTAL	60	.	60	110	30	140	160	60	220
WDO	WDO	550	.	550	1000	.	1000	1000	.	1000
TOTAL	TOTAL	18731	8212	26943	15749	9197	24946	11720	8381	20101

TABLE 35

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE NATURAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
 AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	14	14	.	10	10	.	10	10
	AGR-AFP	826	.	826	829	.	829	804	.	804
	AGR-GOP	.	6	6	.	6	6	.	11	11
	TOTAL	826	20	846	829	16	845	804	21	825
AECB	AECB	40	497	537	37	520	557	43	1231	1274
AECL	AECL	250	.	250	280	.	280	247	.	247
CIDA	CIDA	27665	28751	56416	26141	26429	52570	27930	29114	57044
CSA	CSA	.	.	.	25005	.	25005	13581	.	13581
COMM	COMM-CC	8959	.	8959	204	.	204	204	.	204
EMR	EMR-MES	24180	299	24479	2257	35	2292	.	.	.
	EMR	.	.	.	.	.	.	3081	39	3120
	TOTAL	24180	299	24479	2257	35	2292	3081	39	3120
ENV	ENV-ADM	12	.	12	.	.	.	.	.	.
	ENV-AES	.	1016	1016	.	1185	1185	.	1175	1175
	ENV-C&P	1111	412	1523	1285	474	1759	1649	608	2257
	ENV-PC	.	3	3	.	3	3	.	3	3
	TOTAL	1123	1431	2554	1285	1662	2947	1649	1786	3435
F&O	F&O-FM	13	226	239	43	276	319	41	266	307
FOR	FOR	301	.	301	285	.	285	290	.	290
IAND	IAND	40	.	40	40	25	65	40	.	40
ISTC	ISTC	9056	.	9056	3631	.	3631	3077	.	3077
IDRC	IDRC	33392	3902	37294	36900	4300	41200	35200	4000	39200
IJC	IJC	.	15	15	.	191	191	.	211	211
MRC	MRC	6385	171	6556	6967	195	7162	7245	189	7434
NDEF	NDEF-SER	2505	.	2505	2739	.	2739	2573	.	2573
NHW	NHW-HP	230	328	558	245	120	365	230	313	543
	TOTAL	230	328	558	245	120	365	230	313	543
NRC	NRC-SIR	5596	.	5596	8114	.	8114	8168	.	8168
NSERC	NSERC	2950	3865	6815	3006	4389	7395	3873	4594	8467
PW	PW-PTS	183	.	183	.	.	.	.	.	.
TPT	TPT-ADM	226	.	226	50	.	50	50	.	50
	TPT-AIR	100	.	100	100	.	100	104	.	104
	TPT-MAR	72	.	72	.	.	.	.	.	.
	TOTAL	398	.	398	150	.	150	154	.	154
TOTAL	TOTAL	124092	39505	163597	118158	38158	156316	108430	41764	150194

TABLE 36

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	1677	5	1682	1677	5	1682	1677	5	1682
	TOTAL	1677	5	1682	1677	5	1682	1677	5	1682
AECB	AECB	189	.	189	354	.	354	403	.	403
AECL	AECL	526	.	526	549	.	549	514	.	514
CMHC	CMHC	.	.	.	.	58	58	.	58	58
CIDA	CIDA	7902	474	8376	7028	421	7449	8070	485	8555
COMM	COMM-CC	356	.	356	314	.	314	314	.	314
EMR	EMR-ENER	1708	940	2648	1793	988	2781	.	.	.
	EMR-MES	896	1086	1982	658	455	1113	.	.	.
	EMR	.	.	.	.	.	.	1025	504	1529
	TOTAL	2604	2026	4630	2451	1443	3894	1025	504	1529
ENV	ENV-ADM	129	.	129	95	.	95	75	.	75
	ENV-AES	174	2041	2215	180	2053	2233	187	2124	2311
	ENV-C&P	764	625	1389	879	721	1600	1128	926	2054
	ENV-PC	65	42	107	68	46	114	71	51	122
	TOTAL	1132	2708	3840	1222	2820	4042	1461	3101	4562
F&O	F&O-FM	198	916	1114	329	822	1151	316	788	1104
FOR	FOR	647	.	647	245	.	245	350	.	350
IAND	IAND	5	1088	1093	.	1268	1268	.	1649	1649
IDRC	IDRC	242	363	605	400	400	800	400	400	800
IJC	IJC	.	25	25	.	81	81	.	125	125
MRC	MRC	156	528	684	167	949	1116	183	1027	1210
NDEF	NDEF-SER	1599	81	1680	.	.	.	100	.	100
NHW	NHW-HP	30	114	144	50	150	200	30	101	131
	TOTAL	30	114	144	50	150	200	30	101	131
NMC	NMC-NMNS	.	104	104	20	175	195	20	175	195
	TOTAL	.	104	104	20	175	195	20	175	195
NRC	NRC-SIR	6381	.	6381	7807	.	7807	7802	.	7802
NSERC	NSERC	4813	907	5720	6286	1029	7315	6578	1029	7607
PW	PW-PTS	.	20	20	.	.	.	.	.	.
RCMP	RCMP	221	.	221	169	.	169	165	.	165
SS	SS-SUPP	160	157	317	427	20	447	.	.	.
TPT	TPT-SUR	5	.	5	5	.	5	6	.	6
	TOTAL	5	.	5	5	.	5	6	.	6
TOTAL	TOTAL	28843	9516	38359	29500	9641	39141	29414	9447	38861

TABLE 37

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	6600	6600	6600	6050	6050	6050	6153	6153	6153
	AGR-AFP	292616	23612	316228	289734	24300	314034	302621	22525	325146
	AGR-GOP	7057	3539	10596	8371	4088	12459	8215	4540	12755
	TOTAL	299673	33751	333424	298105	34438	332543	310836	33218	344054
AECB	AECB	2759	539	3298	4491	1557	6048	5051	2409	7460
AECL	AECL	117719	7381	125100	131551	8249	139800	116308	7292	123600
CMHC	CMHC	2908	2813	5721	2949	3089	6038	3249	3533	6782
CIDA	CIDA	51154	148334	199488	47104	139832	186936	51975	165108	217083
CSA	CSA	.	.	.	61810	.	61810	113345	.	113345
COMM	COMM-CC	50420	4336	54756	45579	441	46020	51747	457	52204
CCA	CCA-COR	.	15225	15225	.	17135	17135	.	16882	16882
	TOTAL	.	15225	15225	.	17135	17135	.	16882	16882
EMR	EMR-ADM	.	12974	12974	.	16367	16367	.	.	.
	EMR-ENER	13359	12845	26204	14267	13573	27840	.	.	.
	EMR-MES	153543	187386	340929	132446	192990	325437	.	.	.
	EMR	.	.	.	.	.	.	270364	246327	516691
	TOTAL	166902	213205	380107	146713	222931	369644	270364	246327	516691
ENV	ENV-ADM	521	.	521	519	.	519	520	.	520
	ENV-AES	26832	234449	261280	28670	249786	278456	29375	260207	289582
	ENV-C&P	43198	74669	117867	49937	88594	138531	62627	111961	174588
	ENV-PC	211	5863	6074	221	6221	6442	231	6558	6789
	TOTAL	70761	314980	385742	79347	344602	423949	92753	378727	471479
F&O	F&O-FM	116539	91105	207644	134677	102231	236907	129908	98678	228587
FOR	FOR	67745	7618	75363	65939	7568	73507	67972	7556	75528
IAND	IAND	465	4088	4553	617	4092	4709	1313	4312	5625
ISTC	ISTC	235950	6484	262434	283816	10618	294433	247397	15105	262502
IDRC	IDRC	52975	8491	61466	58700	9400	68100	55800	8800	64600
IJC	IJC	.	4665	4665	.	4835	4835	.	4641	4641
MRC	MRC	181718	7334	189052	193743	8699	202442	213411	8635	222046
NCC	NCC	.	194	194	.	191	191	.	141	141
NDEF	NDEF-SER	276227	1861	278089	277671	1773	279444	290705	2209	292915
NEB	NEB	.	452	452	.	469	469	.	487	487
NFB	NFB	879	341	1220	968	195	1163	985	215	1200
NHW	NHW-HP	19859	83652	103511	18840	92177	111017	18618	97452	116070
	NHW-HSP	6999	4522	11521	8247	5343	13590	7960	5053	13013
	NHW-MS	584	3259	3843	605	3372	3977	635	3536	4171

(CONTINUED)

TABLE 37

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE NATURAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	TOTAL	27442	91432	118875	27692	100892	128584	27213	106041	133254
NMC	NMC-NMNS	3404	20914	24318	3775	21185	24959	3861	22734	26595
	TOTAL	3404	20914	24318	3775	21185	24959	3861	22734	26595
NRC	NRC-SIR	462571	52753	515324	514951	53332	568283	446212	53433	499644
NSERC	NSERC	323273	42607	365880	343018	48137	391155	373270	51719	424989
PW	PW-PTS	3612	3782	7394	3942	4402	8344	3898	4323	8221
RCMP	RCMP	655	.	655	698	.	698	675	.	675
SS	SS-SUPP	16648	6423	23071	12056	2268	14324	468	77	545
TPT	TPT-ADM	15339	2079	17418	17457	2343	19800	18075	2737	20812
	TPT-APT	.	930	930	.	611	611	.	513	513
	TPT-AIR	3732	2237	5969	3772	2305	6077	3898	2360	6258
	TPT-MAR	6590	.	6590	8505	.	8505	8525	.	8525
	TPT-SUR	336	370	706	691	428	1119	691	536	1227
	TOTAL	25998	5615	31613	30425	5687	36112	31189	6146	37335
WDO	WDO	6086	197	6283	25830	8226	34056	26316	2135	28451
TOTAL	TOTAL	2564484	1096922	3661406	2796166	1166472	3962638	2936220	1251339	4187560

TABLE 38

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	1253903	49	1329641	48	1360723	46
CANADIAN INDUSTRY	572266	22	682383	24	759506	26
CANADIAN UNIVERSITY	553418	22	587596	21	639495	22
CANADIAN NP INST	13231	1	33139	1	26932	1
PROV. & MUN. GOV'T	18731	1	15749	1	11720	0
FOREIGN PERFORMERS	124092	5	118158	4	108430	4
OTHER PERFORMERS	28843	1	29500	1	29414	1
TOTAL	2564484	100	2796166	100	2936220	100

TABLE 39
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

		YEAR								
		1988-89			1989-90			1990-91		
		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	277640	14976	292616	274742	14992	289734	287654	14967	302621
	AGR-GOP	4873	2184	7057	5971	2400	8371	5815	2400	8215
	TOTAL	282513	17160	299673	280713	17392	298105	293469	17367	310836
AECB	AECB	1137	1622	2759	1207	3284	4491	1311	3740	5051
AECL	AECL	94450	23269	117719	105548	26003	131551	93318	22990	116308
CMHC	CMHC	1904	1004	2908	2096	853	2949	2396	853	3249
CIDA	CIDA	731	50423	51154	722	46382	47104	803	51172	51975
CSA	CSA	.	.	.	11356	50454	61810	13282	100063	113345
COMM	COMM-CC	27404	23016	50420	32626	12953	45579	37988	13759	51747
EMR	EMR-ENER	1383	11976	13359	1461	12806	14267	.	.	.
	EMR-MES	94732	58811	153543	92349	40097	132446	.	.	.
	EMR	.	.	.	.	.	.	108153	162211	270364
	TOTAL	96115	70787	166902	93810	52903	146713	108153	162211	270364
ENV	ENV-ADM	193	328	521	149	370	519	150	370	520
	ENV-AES	23813	3019	26832	25561	3109	28670	26184	3191	29375
	ENV-C&P	33546	9652	43198	38848	11089	49937	48424	14203	62627
	ENV-PC	.	211	211	.	221	221	.	231	231
	TOTAL	57551	13210	70761	64558	14789	79347	74758	17995	92753
F&O	F&O-FM	111162	5377	116539	127583	7094	134677	123101	6807	129908
FOR	FOR	55939	11806	67745	55342	10597	65939	58898	9074	67972
IAND	IAND	211	254	465	349	268	617	357	956	1313
ISTC	ISTC	17837	218113	235950	18859	264957	283816	18700	228697	247397
IDRC	IDRC	14492	38483	52975	16100	42600	58700	15200	40600	55800
MRC	MRC	4984	176734	181718	5275	188468	193743	5856	207555	213411
NDEF	NDEF-SER	158584	117643	276227	154353	123318	277671	157297	133408	290705
NFB	NFB	879	.	879	968	.	968	985	.	985
NHW	NHW-HP	17844	2015	19859	16725	2115	18840	16628	1990	18618
	NHW-HSP	477	6522	6999	527	7720	8247	566	7394	7960
	NHW-MS	584	.	584	605	.	605	635	.	635
	TOTAL	18905	8537	27442	17857	9835	27692	17829	9384	27213
NMC	NMC-NMNS	3404	.	3404	3755	20	3775	3841	20	3861
	TOTAL	3404	.	3404	3755	20	3775	3841	20	3861
NRC	NRC-SIR	281275	181296	462571	309562	205389	514951	305129	141083	446212
NSERC	NSERC	13820	309453	323273	15177	327841	343018	16052	357218	373270
PW	PW-PTS	2187	1425	3612	2476	1466	3942	2432	1466	3898
RCMP	RCMP	299	356	655	330	368	698	335	340	675

(CONTINUED)

TABLE 39

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY R&D

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
SS	SS-SUPP	221	16427	16648	176	11880	12056	98	370	468	
TPT	TPT-ADM	2999	12340	15339	4302	13155	17457	4505	13570	18075	
	TPT-AIR	2732	1000	3732	2772	1000	3772	2858	1040	3898	
	TPT-MAR	1565	5025	6590	1105	7400	8505	1147	7378	8525	
	TPT-SUR	107	229	336	90	601	691	89	602	691	
	TOTAL	7404	18594	25998	8269	22156	30425	8599	22590	31189	
WDO	WDO	494	5592	6086	575	25255	25830	537	25779	26316	
TOTAL	TOTAL	1253903	1310581	2564484	1329641	1466525	2796166	1360723	1575497	2936220	

TABLE 40
FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

DEPARTMENT	PROGRAM	YEAR								
		1988-89			1989-90			1990-91		
		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	922	.	276718	868	.	273874	981	.	286673
	AGR-GOP	.	.	4873	.	.	5971	.	.	5815
	TOTAL	922	.	281591	868	.	279845	981	.	292488
AECB	AECB	.	.	1137	.	.	1207	.	.	1311
AECL	AECL	375	.	94075	419	.	105129	371	.	92947
CMHC	CMHC	.	.	1904	.	.	2096	.	.	2396
CIDA	CIDA	.	.	731	.	.	722	.	.	803
CSA	CSA	.	.	.	.	.	11356	.	.	13282
COMM	COMM-CC	.	.	27404	.	.	32626	.	.	37988
EMR	EMR-ENER	.	363	1019	.	380	1081	.	.	.
	EMR-MES	.	.	94732	11	1479	90859	.	.	.
	EMR	.	.	.	.	.	.	12	1840	106300
	TOTAL	.	363	95752	11	1859	91940	12	1840	106300
ENV	ENV-ADM	53	.	140	.	.	149	.	.	150
	ENV-AES	314	.	23499	344	.	25217	346	.	25838
	ENV-C&P	103	.	33443	106	.	38742	103	.	48320
	TOTAL	470	.	57082	450	.	64108	449	.	74308
F&O	F&O-FM	588	.	110574	589	.	126994	591	.	122511
FOR	FOR	159	33	55747	86	33	55222	107	32	58759
IAND	IAND	.	.	211	.	.	349	.	.	357
ISTC	ISTC	.	.	17837	.	.	18859	.	.	18700
IDRC	IDRC	.	.	14492	.	.	16100	.	.	15200
MRC	MRC	.	.	4984	.	.	5275	.	.	5856
NDEF	NDEF-SER	.	.	158584	.	.	154353	.	.	157297
NFB	NFB	.	.	879	.	.	968	.	.	985
NHW	NHW-HP	184	.	17660	144	.	16581	145	.	16482
	NHW-HSP	.	.	477	.	.	527	.	.	566
	NHW-MS	.	.	584	.	.	605	.	.	635
	TOTAL	184	.	18721	144	.	17713	145	.	17684
NMC	NMC-NMNS	.	.	3404	.	.	3755	.	.	3841
	TOTAL	.	.	3404	.	.	3755	.	.	3841
NRC	NRC-SIR	17975	.	263300	16679	.	292883	17745	.	287383
NSERC	NSERC	.	.	13820	.	.	15177	.	.	16052
PW	PW-PTS	.	.	2187	.	.	2476	.	.	2432
RCMP	RCMP	.	.	299	.	.	330	.	.	335
SS	SS-SUPP	.	.	221	.	.	176	.	.	98

(CONTINUED)

TABLE 40

FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	.	2999	.	.	4302	.	.	4505
	TPT-AIR	.	.	2732	.	.	2772	.	.	2858
	TPT-MAR	.	.	1565	.	.	1105	.	.	1147
	TPT-SUR	.	.	107	.	.	90	.	.	89
	TOTAL	.	.	7404	.	.	8269	.	.	8599
WDO	WDO	.	.	494	.	.	575	.	.	537
TOTAL	TOTAL	20674	396	1232834	19245	1892	1308503	20402	1872	1338449

TABLE 41

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1148	1830	1148	1830	1148	1830
	AGR-GOP	2000	.	2000	.	2000	.
	TOTAL	3148	1830	3148	1830	3148	1830
AECB	AECB	.	844	.	1664	.	1895
AECL	AECL	.	21117	.	23636	.	20869
CMHC	CMHC	48	874	.	809	.	809
CIDA	CIDA	.	470	.	418	.	480
CSA	CSA	.	.	.	25449	.	86482
COMM	COMM-CC	9043	3942	8169	3553	8975	3553
EMR	EMR-ENER	6831	1934	7173	2564	.	.
	EMR-MES	890	9902	5700	9552	.	.
	EMR	.	.	.	.	113794	20055
	TOTAL	7721	11836	12873	12116	113794	20055
ENV	ENV-ADM	.	130	.	200	.	220
	ENV-AES	.	1902	.	1967	.	2033
	ENV-C&P	.	6604	.	7597	.	9750
	ENV-PC	.	136	.	143	.	150
	TOTAL	.	8772	.	9907	.	12153
F&D	F&D-FM	.	4642	.	5343	.	5127
FOR	FOR	7363	1044	590	683	.	487
IAND	IAND	10	139	.	163	.	847
ISTC	ISTC	204882	.	250390	.	221166	.
IDRC	IDRC	394	.	300	.	300	.
NDEF	NDEF-SER	531	103717	6000	100765	10000	106083
NHW	NHW-HP	.	915	.	930	.	915
	NHW-HSP	14	.	17	.	15	.
	TOTAL	14	915	17	930	15	915
NRC	NRC-SIR	77245	61833	76146	83377	75457	19848
NSERC	NSERC	2361	.	3300	.	2700	.
PW	PW-PTS	.	1161	.	1409	.	1429
RCMP	RCMP	.	90	.	149	.	175
SS	SS-SUPP	.	14056	.	10322	.	343
TPT	TPT-ADM	.	11719	.	12780	.	13110
	TPT-AIR	.	600	.	600	.	625
	TPT-MAR	.	4914	.	7400	.	7378
	TPT-SUR	.	168	.	465	.	465

(CONTINUED)

TABLE 41

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
 IN THE NATURAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
 AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
 AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
TPT	TOTAL		17401		21245		21578
WDO	WDO	4823	.	17682	.	18993	.
TOTAL	TOTAL	317583	254683	378615	303768	454548	304958

TABLE 42

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN UNIVERSITY

DEPARTMENT	PROGRAM	YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	5607	1582	5607	1595	5607	1595
	TOTAL	5607	1582	5607	1595	5607	1595
AECB	AECB	.	326	.	910	.	1036
AECL	AECL	.	1251	.	1398	.	1236
CMHC	CMHC	10	72	.	24	.	24
CIDA	CIDA	14386	.	12795	.	14692	.
COMM	COMM-CC	563	153	550	163	550	163
EMR	EMR-ENER	370	964	389	688	.	.
	EMR-MES	1794	2662	2680	2992	.	.
	EMR	.	.	.	.	2769	6890
	TOTAL	2164	3626	3069	3680	2769	6890
ENV	ENV-ADM	.	33	.	75	.	75
	ENV-AES	671	267	681	276	681	285
	ENV-C&P	.	988	.	1127	.	1446
	TOTAL	671	1288	681	1478	681	1806
F&O	F&O-FM	186	338	453	822	435	788
FOR	FOR	769	532	793	216	60	200
IAND	IAND	.	60	.	65	.	69
ISTC	ISTC	541	.	1205	.	.	.
IDRC	IDRC	3981	.	4400	.	4200	.
MRC	MRC	169984	.	181112	.	199881	.
NDEF	NDEF-SER	.	9095	.	12793	.	13671
NHW	NHW-HP	.	470	.	480	.	470
	NHW-HSP	3824	.	4515	.	4343	.
	TOTAL	3824	470	4515	480	4343	470
NRC	NRC-SIR	27164	2838	26510	3190	26510	3055
NSERC	NSERC	298792	.	314475	.	343254	.
PW	PW-PTS	.	25	.	25	.	25
RCMP	RCMP	.	45	.	50	.	.
SS	SS-SUPP	.	2127	.	1093	.	27
TPT	TPT-ADM	.	335	.	215	.	250
	TPT-AIR	.	500	.	300	.	311
	TPT-MAR	.	39	.	.	.	.
	TPT-SUR	9	46	25	86	25	86
	TOTAL	9	720	25	601	25	647
WDO	WDO	219	.	2823	.	4786	.

(CONTINUED)

TABLE 42

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
TOTAL	TOTAL	528870	24548	559013	28583	607793	31702

TABLE 43

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR
BY DEPARTMENT AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1429	277	1429	277	1429	277
	AGR-GOP	184	.	400	.	400	.
	TOTAL	1613	277	1829	277	1829	277
AECB	AECB	.	34	.	218	.	248
AECL	AECL	.	125	.	140	.	124
CMHC	CMHC	.	.	.	20	.	20
EMR	EMR-ENER	100	30	126	32	.	.
	EMR-MES	1990	998	3742	1031	.	.
	EMR	.	.	.	.	4684	2038
	TOTAL	2090	1028	3868	1063	4684	2038
ENV	ENV-ADM	.	21	.	.	.	.
	ENV-C&P	100	44	100	56	100	72
	TOTAL	100	65	100	56	100	72
F&O	F&O-FM	.	.	.	104	.	100
FOR	FOR	65	.	6730	.	6660	.
ISTC	ISTC	3539	.	9260	.	4380	.
IDRC	IDRC	474	.	600	.	500	.
MRC	MRC	50	.	53	.	59	.
NDEF	NDEF-SER	.	189	.	841	.	796
NHW	NHW-HP	40	300	40	320	15	300
	NHW-HSP	2347	.	2786	.	2666	.
	TOTAL	2387	300	2826	320	2681	300
NRC	NRC-SIR	194	23	194	26	194	25
NSERC	NSERC	537	.	774	.	813	.
PW	PW-PTS	52	4	32	.	12	.
SS	SS-SUPP	.	84	.	38	.	.
TPT	TPT-SUR	1	.	20	.	20	.
	TOTAL	1	.	20	.	20	.
WDO	WDO	.	.	3750	.	1000	.
TOTAL	TOTAL	11102	2129	30036	3103	22932	4000

TABLE 44

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
GOVERNMENT SECTOR BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

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

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	423	177	423	177	423	177
	TOTAL	423	177	423	177	423	177
AECB	AECB	.	189	.	101	.	115
EMR	EMR-ENER	39	.	41	.	.	.
	EMR-MES	15469	30	10985	500	.	.
	EMR	.	.	.	.	7345	530
	TOTAL	15508	30	11026	500	7345	530
ENV	ENV-ADM	.	3	.	.	.	.
	ENV-AES	.	5	.	5	.	5
	ENV-C&P	.	41	.	45	.	58
	ENV-PC	.	10	.	10	.	10
	TOTAL	.	59	.	60	.	73
FOR	FOR	1012	73	950	105	872	155
ISTC	ISTC	95	.	471	.	74	.
MRC	MRC	159	.	169	.	187	.
NDEF	NDEF-SER	.	7	.	180	.	185
NHW	NHW-HP	.	30	.	50	.	30
	NHW-HSP	337	.	402	.	370	.
	TOTAL	337	30	402	50	370	30
NRC	NRC-SIR	.	22	.	25	.	24
TPT	TPT-ADM	.	60	.	110	.	160
	TOTAL	.	60	.	110	.	160
WDO	WDO	550	.	1000	.	1000	.
TOTAL	TOTAL	18084	647	14441	1308	10271	1449

TABLE 45

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
\$,000		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	826		829		804	
	TOTAL	826		829		804	
AECB	AECB	.		40		37	
AECL	AECL	.		250		280	
CIDA	CIDA	27665		26141		27930	
CSA	CSA	.		25005		13581	
COMM	COMM-CC	8462		497		204	
EMR	EMR-MES	24092		88		2149	
	EMR	.		.		2949	
	TOTAL	24092		88		2149	
ENV	ENV-ADM	.		12		.	
	ENV-C&P	.		1111		1285	
	TOTAL	.		1123		1285	
F&O	F&O-FM	.		13		43	
FOR	FOR	189		112		140	
IAND	IAND	.		40		40	
ISTC	ISTC	9056		.		3631	
IDRC	IDRC	33392		.		36900	
MRC	MRC	6385		.		6967	
NDEF	NDEF-SER	.		2505		2739	
NHW	NHW-HP	55		175		55	
	TOTAL	55		175		55	
NRC	NRC-SIR	5126		470		7560	
NSERC	NSERC	2950		.		3006	
PW	PW-PTS	.		183		.	
TPT	TPT-ADM	.		226		50	
	TPT-AIR	.		100		100	
	TPT-MAR	.		72		.	
	TOTAL	.		398		150	
TOTAL	TOTAL	118198		5894		112383	
				5775		102444	
				5986			

TABLE 46

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
AGR	AGR-AFP	1342	335	1342	335	1342	335
	TOTAL	1342	335	1342	335	1342	335
AECB	AECB	.	189	.	354	.	403
AECL	AECL	.	526	.	549	.	514
CIDA	CIDA	.	7902	.	7028	.	8070
COMM	COMM-CC	141	215	150	164	150	164
EMR	EMR-ENER	1041	667	1093	700	.	.
	EMR-MES	154	742	78	580	.	.
	EMR	.	.	.	.	25	1000
	TOTAL	1195	1409	1171	1280	25	1000
ENV	ENV-ADM	.	129	.	95	.	75
	ENV-AES	.	174	.	180	.	187
	ENV-C&P	.	764	.	879	.	1128
	ENV-PC	65	.	68	.	71	.
	TOTAL	65	1067	68	1154	71	1390
F&D	F&D-FM	.	198	.	329	.	316
FOR	FOR	61	586	57	188	.	350
IAND	IAND	.	5	.	.	.	.
IDRC	IDRC	242	.	400	.	400	.
MRC	MRC	156	.	167	.	183	.
NDEF	NDEF-SER	.	1599	.	.	.	100
NHW	NHW-HP	.	30	.	50	.	30
	TOTAL	.	30	.	50	.	30
NMC	NMC-NMNS	.	.	.	20	.	20
	TOTAL	.	.	.	20	.	20
NRC	NRC-SIR	6295	86	7710	97	7710	92
NSERC	NSERC	4813	.	6286	.	6578	.
RCMP	RCMP	.	221	.	169	.	165
SS	SS-SUPP	.	160	.	427	.	.
TPT	TPT-SUR	.	5	.	5	.	6
	TOTAL	.	5	.	5	.	6
TOTAL	TOTAL	14310	14533	17351	12149	16459	12955

TABLE 47
FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	11697	4201	276718	11646	4214	273874	11734	4214	286673
	AGR-GOP	2184	.	4873	2400	.	5971	2400	.	5815
	TOTAL	13881	4201	281591	14046	4214	279845	14134	4214	292488
AECB	AECB	.	1622	1137	.	3284	1207	.	3740	1311
AECL	AECL	375	23269	94075	419	26003	105129	371	22990	92947
CMHC	CMHC	58	946	1904	.	853	2096	.	853	2396
CIDA	CIDA	42051	8372	731	38936	7446	722	42622	8550	803
CSA	CSA	.	.	.	25005	25449	11356	13581	86482	13282
COMM	COMM-CC	18209	4807	27404	8869	4084	32626	9675	4084	37988
EMR	EMR-ENER	8381	3958	1019	8822	4364	1081	.	.	.
	EMR-MES	44389	14422	94732	25345	16242	90859	.	.	.
	EMR	.	.	.	.	.	.	131578	32485	106300
	TOTAL	52770	18380	95752	34167	20606	91940	131578	32485	106300
ENV	ENV-ADM	53	328	140	.	370	149	.	370	150
	ENV-AES	985	2348	23499	1025	2428	25217	1027	2510	25838
	ENV-C&P	203	9552	33443	206	10989	38742	203	14103	48320
	ENV-PC	65	146	.	68	153	.	71	160	.
	TOTAL	1306	12374	57082	1299	13940	64108	1301	17143	74308
F&O	F&O-FM	774	5191	110574	1042	6641	126994	1026	6372	122511
FOR	FOR	9618	2380	55747	9346	1370	55222	7839	1374	58759
IAND	IAND	10	244	211	.	268	349	.	956	357
ISTC	ISTC	218113	.	17837	264957	.	18859	228697	.	18700
IDRC	IDRC	38483	.	14492	42600	.	16100	40600	.	15200
MRC	MRC	176734	.	4984	188468	.	5275	207555	.	5856
NDEF	NDEF-SER	531	117112	158584	6000	117318	154353	10000	123408	157297
NFB	NFB	.	.	879	.	.	968	.	.	985
NHW	NHW-HP	279	1920	17660	239	2020	16581	215	1920	16482
	NHW-HSP	6522	.	477	7720	.	527	7394	.	566
	NHW-MS	.	.	584	.	.	605	.	.	635
	TOTAL	6801	1920	18721	7959	2020	17713	7609	1920	17684
NMC	NMC-NMNS	.	.	3404	.	20	3755	.	20	3841
	TOTAL	.	.	3404	.	20	3755	.	20	3841
MRC	MRC-SIR	133999	65272	263300	134799	87269	292883	135206	23622	287383
NSERC	NSERC	309453	.	13820	327841	.	15177	357218	.	16052
PW	PW-PTS	52	1373	2187	32	1434	2476	12	1454	2432
RCMP	RCMP	.	356	299	.	368	330	.	340	335

(CONTINUED)

TABLE 47

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE NATURAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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									
SS	SS-SUPP	.	16427	221	.	11880	176	.	370	98
TPT	TPT-ADM	.	12340	2999	.	13155	4302	.	13570	4505
	TPT-AIR	.	1000	2732	.	1000	2772	.	1040	2858
	TPT-MAR	.	5025	1565	.	7400	1105	.	7378	1147
	TPT-SUR	10	219	107	45	556	90	45	557	89
	TOTAL	10	18584	7404	45	22111	8269	45	22545	8599
WDO	WDO	5592	.	494	25255	.	575	25779	.	537
TOTAL	TOTAL	1028821	302830	1232834	1131084	356578	1308503	1234849	362922	1338449

TABLE 48

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

PERFORMER	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
INTRAMURAL	804223	73	873260	75	940397	75
CANADIAN INDUSTRY	165322	15	158023	14	169639	14
CANADIAN UNIVERSITY	56193	5	63187	5	66696	5
CANADIAN NP INST	13951	1	15006	1	15015	1
PROV. & MUN. GOV'T	8212	1	9197	1	8381	1
FOREIGN PERFORMERS	39505	4	38158	3	41764	3
OTHER PERFORMERS	9516	1	9641	1	9447	1
TOTAL	1096922	100	1166472	100	1251339	100

TABLE 49
FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	\$,000
DEPARTMENT	PROGRAM										
AGR	AGR-ADM	6489	111	6600	5950	100	6050	6053	100	6153	
	AGR-AFP	20440	3172	23612	21986	2314	24300	20211	2314	22525	
	AGR-GOP	3533	6	3539	4082	6	4088	4529	11	4540	
	TOTAL	30462	3289	33751	32018	2420	34458	30793	2425	33218	
AECB	AECB	14	525	539	37	1520	1557	41	2368	2409	
AECL	AECL	6981	400	7381	7839	410	8249	6902	390	7292	
CMHC	CMHC	2094	719	2813	2303	786	3089	2747	786	3533	
CIDA	CIDA	4160	144174	148334	4219	135613	139832	4657	160451	165108	
COMM	COMM-CC	2949	1387	4336	409	32	441	432	25	457	
CCA	CCA-COR	15225	.	15225	17135	.	17135	16882	.	16882	
	TOTAL	15225	.	15225	17135	.	17135	16882	.	16882	
EMR	EMR-ADM	12974	.	12974	16367	.	16367	.	.	.	.
	EMR-ENER	1764	11081	12845	1912	11661	13573	.	.	.	.
	EMR-MES	170141	17245	187386	183764	9226	192990	.	.	.	.
	EMR	.	.	.	.	.	.	236390	9937	246327	
	TOTAL	184879	28326	213205	202044	20887	222931	236390	9937	246327	
ENV	ENV-AES	216805	17644	234449	231463	18323	249786	241408	18799	260207	
	ENV-C&P	64652	10017	74669	77040	11554	88594	97134	14827	111961	
	ENV-PC	5653	210	5863	6002	219	6221	6328	230	6558	
	TOTAL	287109	27871	314980	314506	30096	344602	344871	33856	378727	
F&O	F&O-FM	84880	6225	91105	97338	4893	102231	93983	4695	98678	
FOR	FOR	7483	135	7618	7048	520	7568	7036	520	7556	
IAND	IAND	636	3452	4088	716	3376	4092	689	3623	4312	
ISTC	ISTC	221	6263	6484	618	10000	10618	605	14500	15105	
IDRC	IDRC	4226	4265	8491	4700	4700	9400	4400	4400	8800	
IJC	IJC	4498	167	4665	4328	507	4835	4067	574	4641	
MRC	MRC	208	7126	7334	221	8478	8699	244	8391	8635	
NCC	NCC	50	144	194	12	179	191	35	106	141	
NDEF	NDEF-SER	1515	346	1861	1555	218	1773	1909	300	2209	
NEB	NEB	452	.	452	469	.	469	487	.	487	
NFB	NFB	341	.	341	195	.	195	215	.	215	
NHW	NHW-HP	81068	2584	83652	89310	2867	92177	94785	2667	97452	
	NHW-HSP	306	4216	4522	337	5006	5343	362	4691	5053	
	NHW-MS	3259	.	3259	3372	.	3372	3536	.	3536	
	TOTAL	84632	6800	91432	93019	7873	100892	98683	7358	106041	
NMC	NMC-NMNS	20769	145	20914	20861	324	21185	22410	324	22734	

(CONTINUED)

TABLE 49

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE NATURAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND ACTIVITY RSA

		YEAR								
		1988-89			1989-90			1990-91		
		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	20769	145	20914	20861	324	21185	22410	324	22734
NRC	NRC-SIR	52563	190	52753	53128	204	53332	53234	199	53433
NSERC	NSERC	1814	40793	42607	2128	46009	48137	2230	49489	51719
PW	PW-PTS	3398	384	3782	3677	725	4402	3598	725	4323
SS	SS-SUPP	86	6337	6423	59	2209	2268	16	61	77
TPT	TPT-ADM	513	1566	2079	528	1815	2343	637	2100	2737
	TPT-APT	122	808	930	129	482	611	143	370	513
	TPT-AIR	1811	426	2237	1879	426	2305	1917	443	2360
	TPT-SUR	76	294	370	79	349	428	86	450	536
	TOTAL	2521	3094	5615	2615	3072	5687	2783	3363	6146
WDO	WDO	55	142	197	65	8161	8226	59	2076	2135
TOTAL	TOTAL	804223	292699	1096922	873260	293212	1166472	940397	310942	1251339

TABLE 50

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE NATURAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND YEAR 1988-89

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	166	5198	980	3917	1506	2603	153	14523
INTRAMURAL RSA	177	2825	753	2615	1629	495	5	8498
ADMIN. OF EXTRAMURAL PROGRAMS	56	292	350	32	336	10	10	1086
TOTAL	398	8316	2083	6564	3471	3107	168	24107

TABLE 50

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE NATURAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND YEAR 1989-90

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	179	5393	1037	4083	1552	2359	159	14761
INTRAMURAL RSA	178	2889	765	2571	1684	489	5	8579
ADMIN. OF EXTRAMURAL PROGRAMS	56	307	357	39	320	11	10	1100
TOTAL	413	8589	2158	6693	3556	2858	174	24441

TABLE 50

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE NATURAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE NATURAL
AND YEAR 1990-91

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	164	5395	1050	4023	1543	2242	159	14575
INTRAMURAL RSA	174	2969	871	2607	1698	446	5	8770
ADMIN. OF EXTRAMURAL PROGRAMS	66	355	362	47	444	.	10	1284
TOTAL	403	8719	2283	6677	3685	2688	173	24629

TABLE 51-A

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	39	3	5	40	.	.	88
	AGR-AFP	46	928	117	989	306	1358	.	3744
	AGR-GOP	1	27	5	70	12	2	.	116
	TOTAL	48	994	125	1064	358	1360	.	3948
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	19	772	.	811	290	550	.	2442
CMHC	CMHC	1	27	.	2	11	.	.	41
CIDA	CIDA	10	7	38	.	26	.	.	81
COMM	COMM-CC	14	143	41	134	32	.	.	363
CCA	CCA-COR	7	130	21	1	102	.	.	261
	TOTAL	7	130	21	1	102	.	.	261
EMR	EMR-ADM	.	.	53	5	17	.	.	75
	EMR-ENER	1	21	8	.	8	.	.	38
	EMR-MES	64	1136	124	725	398	122	.	2569
	TOTAL	65	1156	185	730	423	122	.	2682
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	66	671	300	1005	314	18	.	2374
	ENV-C&P	10	356	146	301	279	81	.	1173
	ENV-PC	.	50	10	17	10	.	.	87
	TOTAL	76	1077	456	1323	604	99	.	3635
F&O	F&O-FM	43	663	88	785	146	370	.	2095
FOR	FOR	22	336	71	344	96	84	.	953
IAND	IAND	0	7	.	1	4	.	.	12
ISTC	ISTC	1	3	137	.	60	.	.	201
IDRC	IDRC	4	62	16	18	30	.	.	129
IJC	IJC	2	12	4	4	20	.	.	42
MRC	MRC	6	.	22	.	28	.	.	56
NCC	NCC	.	2	.	.	.	.	.	2
NDEF	NDEF-SER	8	584	445	144	286	231	168	1864
NEB	NEB	.	5	1	.	.	.	.	6
NFB	NFB	.	4	.	1	2	.	.	7
NHW	NHW-HP	26	786	36	249	232	52	.	1381
	NHW-HSP	1	0	5	.	4	.	.	10
	NHW-MS	1	13	1	14	7	.	.	36
	TOTAL	28	799	42	263	243	52	.	1427
NMC	NMC-NMNS	11	49	45	52	33	31	.	221
	TOTAL	11	49	45	52	33	31	.	221

(CONTINUED)

TABLE 51-A

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
NRC	NRC-SIR	10	1390	245	866	575	208	.	3294
NSERC	NSERC	16	.	68	.	78	1	.	163
PW	PW-PTS	.	24	10	10	2	.	.	45
RCMP	RCMP	1	2	.	.	1	.	.	4
SS	SS-SUPP	1	.	3	.	4	.	.	7
TPT	TPT-ADM	2	27	6	2	13	.	.	50
	TPT-APT	.	2	0	.	.	.	.	2
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	0	2	.	1	.	.	.	3
	TOTAL	3	56	14	12	16	.	.	102
WDO	WDO	1	0	6	.	2	.	.	9
TOTAL	TOTAL	398	8316	2083	6564	3471	3107	168	24107

TABLE 51-B

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							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	37	3	5	38	.	.	84
	AGR-AFP	52	1026	130	1050	349	1126	.	3733
	AGR-GOP	1	29	5	71	12	2	.	119
	TOTAL	54	1092	138	1126	399	1128	.	3936
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	19	790	.	820	295	565	.	2489
CMHC	CMHC	1	29	.	2	11	.	.	43
CIDA	CIDA	9	8	38	.	26	.	.	81
CSA	CSA	11	27	25	26	29	.	.	118
COMM	COMM-CC	15	151	41	91	30	.	.	327
CCA	CCA-COR	8	130	24	1	102	.	.	265
	TOTAL	8	130	24	1	102	.	.	265
EMR	EMR-ADM	.	.	57	6	19	.	.	82
	EMR-ENER	2	21	8	.	8	.	.	38
	EMR-MES	63	1102	121	691	373	114	.	2464
	TOTAL	65	1122	186	697	400	114	.	2584
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	67	694	306	1004	321	17	.	2409
	ENV-C&P	10	377	150	321	295	83	.	1236
	ENV-PC	.	50	10	17	10	.	.	87
	TOTAL	77	1121	466	1342	627	100	.	3733
F&O	F&O-FM	45	679	90	805	150	380	.	2148
FOR	FOR	20	347	69	343	91	85	.	955
IAND	IAND	0	9	.	1	4	.	.	14
ISTC	ISTC	1	3	127	.	56	.	.	187
IDRC	IDRC	4	66	17	19	36	.	.	141
IJC	IJC	2	12	5	3	20	.	.	42
MRC	MRC	6	.	22	.	29	.	.	57
NCC	NCC	.	1	.	.	.	.	.	1
NDEF	NDEF-SER	7	616	475	144	264	189	174	1867
NEB	NEB	.	5	1	.	.	.	.	6
NFB	NFB	.	6	.	.	2	.	.	8
NHW	NHW-HP	26	829	36	240	246	48	.	1425
	NHW-HSP	1	0	5	.	3	.	.	10
	NHW-MS	1	13	1	14	7	.	.	36
	TOTAL	28	842	42	254	256	48	.	1471
NMC	NMC-NMNS	10	45	43	42	35	31	.	206

(CONTINUED)

TABLE 51-B

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							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
NMC	TOTAL	10	45	43	42	35	31	.	206
NRC	NRC-SIR	9	1394	240	956	589	219	.	3407
NSERC	NSERC	16	.	76	.	81	.	.	173
PW	PW-PTS	.	24	10	10	2	.	.	45
RCMP	RCMP	1	2	.	.	1	.	.	4
SS	SS-SUPP	0	.	3	.	3	.	.	6
TPT	TPT-ADM	2	28	6	2	13	.	.	51
	TPT-APT	.	2	0	.	.	.	.	2
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	0	2	.	1	.	.	.	3
	TOTAL	3	57	14	12	16	.	.	103
WDO	WDO	2	0	7	.	2	.	.	11
TOTAL	TOTAL	413	8589	2158	6693	3556	2858	174	24441

TABLE 51-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1990-91

SCIENCE TYPE NATURAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-ADM	1	37	3	5	38	.	.	84
	AGR-AFP	50	1021	140	1082	361	1075	.	3729
	AGR-GOP	2	32	5	73	11	2	.	124
	TOTAL	53	1090	148	1160	410	1077	.	3937
AECB	AECB	1	12	1	.	.	.	.	14
AECL	AECL	20	750	.	785	295	545	.	2395
CMHC	CMHC	1	29	.	2	12	.	.	44
CIDA	CIDA	9	8	41	.	22	.	.	80
CSA	CSA	23	45	36	25	28	.	.	157
COMM	COMM-CC	15	159	36	91	31	.	.	332
CCA	CCA-COR	7	120	21	.	115	.	.	263
	TOTAL	7	120	21	.	115	.	.	263
EMR	EMR	68	1193	245	730	536	112	.	2884
	TOTAL	68	1193	245	730	536	112	.	2884
ENV	ENV-ADM	0	.	.	.	1	.	.	1
	ENV-AES	65	721	329	969	314	17	.	2415
	ENV-C&P	10	384	151	328	301	83	.	1257
	ENV-PC	.	50	10	17	10	.	.	87
	TOTAL	75	1155	490	1314	626	100	.	3760
F&O	F&O-FM	31	706	118	875	141	292	.	2163
FOR	FOR	18	345	70	341	91	87	.	952
IAND	IAND	0	9	.	1	4	.	.	15
ISTC	ISTC	1	3	124	.	55	.	.	183
IDRC	IDRC	4	66	17	19	36	.	.	141
IJC	IJC	2	14	7	3	19	.	.	45
MRC	MRC	6	.	24	.	31	.	.	61
NCC	NCC	.	1	.	.	.	.	.	1
NDEF	NDEF-SER	5	618	473	143	268	189	173	1867
NEB	NEB	.	5	1	.	.	.	.	6
NFB	NFB	.	6	.	.	2	.	.	8
NHW	NHW-HP	26	840	39	246	251	51	.	1453
	NHW-HSP	1	0	5	.	3	.	.	10
	NHW-MS	1	13	1	14	7	.	.	36
	TOTAL	28	853	45	260	261	51	.	1499
NMC	NMC-NMNS	9	45	43	42	35	31	.	205
	TOTAL	9	45	43	42	35	31	.	205
NRC	NRC-SIR	6	1404	239	865	563	205	.	3282

(CONTINUED)

TABLE S1-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE NATURAL SCIENCES BY DEPARTMENT AND CATEGORY
1990-91

SCIENCE TYPE NATURAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
NSERC	NSERC	15	.	74	.	83	.	.	172
PW	PW-PTS	.	24	10	10	2	.	.	45
RCMP	RCMP	1	2	.	.	1	.	.	4
SS	SS-SUPP	0	.	1	.	2	.	.	3
TPT	TPT-ADM	2	28	6	2	13	.	.	51
	TPT-APT	.	1	0	.	.	.	.	1
	TPT-AIR	1	23	3	7	.	.	.	34
	TPT-MAR	.	3	5	2	3	.	.	13
	TPT-SUR	.	2	.	1	.	.	.	3
TOTAL		3	57	14	12	16	.	.	102
WDO	WDO	2	0	6	.	2	.	.	10
TOTAL	TOTAL	403	8719	2283	6677	3685	2688	173	24629

TABLE 52

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY TOTAL

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	775487	67	806979	68	859982	68
CANADIAN INDUSTRY	55204	5	52858	4	51200	4
CANADIAN UNIVERSITY	151088	13	154166	13	170267	13
CANADIAN NP INST	54628	5	60573	5	57742	5
PROV. & MUN. GOV'T	6991	1	9042	1	7373	1
FOREIGN PERFORMERS	88760	8	84540	7	91647	7
OTHER PERFORMERS	22482	2	23650	2	23786	2
TOTAL	1154640	100	1191808	100	1261997	100

TABLE 53-A

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

SCIENCE TYPE SOCIAL
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	41906	.	.	.	.	.	.	41906
R&D CONTRACTS	1519	2898	12444	2292	255	1978	2013	23399
SUPPORTING CONTRACTS	914	.	.	.	.	.	.	914
R&D GRANTS	.	19582	50286	24330	2499	20851	14348	131896
RESEARCH FELLOWSHIPS	.	.	7793	.	.	1883	.	9676
ADMIN. EXTRAMURAL R&D	18877	.	.	.	.	.	.	18877
CAPITAL - R&D	4396	.	.	.	.	.	.	4396
SUB TOTAL R&D	67612	22480	70523	26622	2754	24712	16361	231064
DATA COLLECTION	255700	7803	2788	4012	1774	2939	1472	276488
INFORMATION SERVICES	138913	1548	9101	15090	358	26539	2789	194338
ECONOMIC & FEAS. STUDIES	29234	7022	1383	1260	325	12290	159	51673
OPERN'S & POLICY STUDIES	86832	14663	1015	4461	1738	12282	1337	122328
MUSEUM SERVICES	142108	184	224	345	.	.	205	143066
EDUCATIONAL SUPPORT	1905	1504	66054	2838	42	9998	159	82500
ADMIN. EXTRAMURAL RSA	14503	.	.	.	.	.	.	14503
CAPITAL - RSA	38680	.	.	.	.	.	.	38680
SUB TOTAL RSA	707875	32724	80565	28006	4237	64048	6121	923576
TOTAL	775487	55204	151088	54628	6991	88760	22482	1154640

TABLE 53-B

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	46815	.	.	.	.	.	.	46815
R&D CONTRACTS	1665	2831	11264	2596	310	582	2084	21332
SUPPORTING CONTRACTS	1126	.	.	.	.	.	.	1126
R&D GRANTS	.	15446	56171	25036	3942	23468	14315	138378
RESEARCH FELLOWSHIPS	.	.	7535	.	.	2283	.	9818
ADMIN. EXTRAMURAL R&D	19405	.	.	.	.	.	.	19405
CAPITAL - R&D	4010	.	.	.	.	.	.	4010
SUB TOTAL R&D	73020	18277	74970	27632	4252	26333	16399	240883
DATA COLLECTION	270863	10229	3211	4521	1860	2742	1520	294946
INFORMATION SERVICES	136268	1872	8290	16834	86	24169	3341	190860
ECONOMIC & FEAS. STUDIES	32343	6531	1440	1447	386	9324	267	51738
OPERN'S & POLICY STUDIES	89115	14462	1048	7550	2391	10476	1685	126727
MUSEUM SERVICES	152512	196	264	398	.	.	212	153582
EDUCATIONAL SUPPORT	1144	1291	64943	2191	67	11496	226	81358
ADMIN. EXTRAMURAL RSA	14758	.	.	.	.	.	.	14758
CAPITAL - RSA	36956	.	.	.	.	.	.	36956
SUB TOTAL RSA	733959	34581	79196	32941	4790	58207	7251	950925
TOTAL	806979	52858	154166	60573	9042	84540	23650	1191808

TABLE 53-C

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY ACTIVITY AND PERFORMER,
1990-91

SCIENCE TYPE SOCIAL
AND YEAR 1990-91

	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	47638	.	.	.	.	.	.	47638
R&D CONTRACTS	1669	3459	12911	2641	308	657	2018	23663
SUPPORTING CONTRACTS	1064	.	.	.	.	.	.	1064
R&D GRANTS	.	12900	60726	24694	3750	23367	14315	139752
RESEARCH FELLOWSHIPS	.	.	7517	.	.	2183	.	9700
ADMIN. EXTRAMURAL R&D	19730	.	.	.	.	.	.	19730
CAPITAL - R&D	1874	.	.	.	.	.	.	1874
SUB TOTAL R&D	71974	16359	81154	27335	4058	26207	16333	243420
DATA COLLECTION	322134	10570	3160	4296	1820	2751	1547	346278
INFORMATION SERVICES	151103	1868	8707	16811	71	25279	3469	207308
ECONOMIC & FEAS. STUDIES	33959	6389	1449	1342	374	12948	167	56628
OPERN'S & POLICY STUDIES	86537	14664	1007	5175	1029	11375	1861	121648
MUSEUM SERVICES	146927	209	252	388	.	.	219	147995
EDUCATIONAL SUPPORT	1230	1141	74538	2395	21	13087	190	92602
ADMIN. EXTRAMURAL RSA	14349	.	.	.	.	.	.	14349
CAPITAL - RSA	31770	.	.	.	.	.	.	31770
SUB TOTAL RSA	788008	34841	89113	30407	3315	65440	7453	1018577
TOTAL	859982	51200	170267	57742	7373	91647	23786	1261997

TABLE 54

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY TOTAL

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
DEPARTMENT	PROGRAM	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
AGR	AGR-AFP	3811	289	4100	3377	90	3467	3493	90	3583	
	TOTAL	3811	289	4100	3377	90	3467	3493	90	3583	
ACOA	ACOA	.	12210	12210	.	8547	8547	.	5703	5703	
CMHC	CMHC	16831	6040	22871	18527	6558	25085	20912	6558	27470	
CBC	CBC	2269	3399	5668	2030	3703	5733	2230	3877	6107	
CHRC	CHRC	723	37	760	607	60	667	472	85	557	
CIDA	CIDA	4105	142386	146491	4113	127519	131632	4494	147933	152427	
CLFB	CLFB	139	.	139	143	.	143	128	20	148	
COL	COL	3479	.	3479	4017	.	4017	4238	.	4238	
COMM	COMM-CC	1890	571	2461	2296	1243	3539	2425	745	3170	
CCA	CCA-ADM	2369	125	2494	1389	140	1529	1520	140	1660	
	CCA-CON	4835	.	4835	5179	.	5179	5350	.	5350	
	CCA-COR	.	.	.	1254	.	1254	1270	.	1270	
	TOTAL	7204	125	7329	7822	140	7962	8140	140	8280	
ECC	ECC	10113	360	10473	10437	432	10869	10787	475	11262	
E&I	E&I-ADM	16304	1398	17702	16709	3914	20623	16642	2150	18792	
	E&I-EIC	2503	41301	43804	2757	41542	44299	2927	41565	44492	
	TOTAL	18807	42699	61506	19466	45456	64922	19569	43715	63284	
ENV	ENV-C&P	7585	1341	8926	8880	1545	10425	11227	1981	13208	
	ENV-PC	56060	560	56620	59452	588	60040	62522	617	63139	
	TOTAL	63645	1901	65546	68332	2133	70465	73749	2598	76347	
EA	EA-CIA	11756	17542	29298	10268	20127	30395	10866	21592	32458	
FIN	FIN-FEP	20379	.	20379	22348	.	22348	31524	.	31524	
F&O	F&O-FM	11252	419	11671	11524	433	11957	11582	363	11945	
IAND	IAND	260	2392	2652	281	2224	2505	150	892	1042	
ISTC	ISTC	19976	520	20496	15829	520	16349	13138	520	13658	
IDRC	IDRC	14703	25150	39853	16300	27900	44200	15500	26400	41900	
JUST	JUST-ADM	2451	4961	7412	2296	4385	6681	2179	2651	4830	
	JUST-LRC	1593	1552	3145	1754	1456	3210	1702	1531	3233	
	TOTAL	4044	6513	10557	4050	5841	9891	3881	4182	8063	
LAB	LAB	1138	.	1138	1229	.	1229	1284	.	1284	
M&C	M&C	.	4213	4213	.	4397	4397	.	4259	4259	
NA	NA	24774	320	25094	24017	2120	26137	24139	1800	25939	
NCC	NCC	69	144	213	30	383	413	5	370	375	
NDEF	NDEF-SER	4710	55	4765	4923	92	5015	5178	60	5258	
NEB	NEB	1659	.	1659	1835	.	1835	2129	.	2129	

(CONTINUED)

TABLE 54

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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-ADM	13601	1655	15256	14805	2648	17453	14826	1547	16373
	NHW-FAS		40	599	639	40	610	650	40	610
	NHW-HSP	2453	16730	19183	2486	19750	22236	2650	18979	21629
	NHW-IS	1427	30	1457	1627	.	1627	1627	.	1627
	NHW-MS	.	743	743	.	772	772	.	803	803
	NHW-SS	2268	11054	13322	2362	14032	16394	2245	13437	15682
	TOTAL	19789	30811	50600	21320	37812	59132	21388	35376	56764
NL	NL	47075	78	47153	49411	61	49472	49877	72	49949
NMC	NMC-CMC	72749	.	72749	81360	.	81360	55775	.	55775
	NMC-NGC	37038	.	37038	40734	.	40734	41828	.	41828
	NMC-NMST	20654	.	20654	22178	.	22178	24017	.	24017
	TOTAL	130440	.	130440	144272	.	144272	121619	.	121619
NREV	NREV-TAX	4708	.	4708	5316	.	5316	5554	.	5554
PC	PC	.	73	73	.	65	65	.	65	65
SC	SC	2979	196	3175	2980	250	3230	3249	250	3499
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70
	SECS-CIT	365	973	1338	437	1050	1487	466	1050	1516
	SECS-ES	230	249	479	229	212	441	202	115	317
	SECS-OL	2022	405	2427	2109	441	2550	2180	400	2580
	TOTAL	2618	1668	4286	2775	1773	4548	2848	1635	4483
SSHRC	SSHRC	7098	69260	76358	7148	74995	82143	7628	82395	90023
SGEN	SGEN-ADM	3486	5750	9236	3008	6100	9108	3386	6000	9386
STCAN	STCAN	288056	18	288074	292298	11	292309	349231	11	349242
SS	SS-SUPP	162	2728	2890	203	2635	2838	200	2493	2693
TPT	TPT-ADM	98	383	481	116	445	561	116	465	581
	TPT-APT	348	127	475	357	100	457	372	90	462
	TPT-SUR	365	458	823	386	499	885	405	601	1006
	TOTAL	811	968	1779	859	1044	1903	893	1156	2049
TB	TB-ADM	20529	318	20847	23589	165	23754	24097	165	24262
TOTAL	TOTAL	775487	379153	1154640	806979	384829	1191808	859982	402015	1261997

TABLE 55
FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

DEPARTMENT	PROGRAM	YEAR								
		1988-89			1989-90			1990-91		
		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	.	3811	3811	.	3377	3377	.	3493	3493
	TOTAL	.	3811	3811	.	3377	3377	.	3493	3493
CMHC	CMHC	4401	12430	16831	4985	13542	18527	5446	15466	20912
CBC	CBC	.	2269	2269	.	2030	2030	.	2230	2230
CHRC	CHRC	.	723	723	.	607	607	.	472	472
CIDA	CIDA	619	3486	4105	608	3505	4113	657	3837	4494
CLFB	CLFB	112	27	139	116	27	143	94	34	128
COL	COL	.	3479	3479	.	4017	4017	.	4238	4238
COMM	COMM-CC	1744	146	1890	2081	215	2296	2256	169	2425
CCA	CCA-ADM	.	2369	2369	.	1389	1389	.	1520	1520
	CCA-CON	.	4835	4835	.	5179	5179	.	5350	5350
	CCA-COR	.	.	.	.	1254	1254	.	1270	1270
	TOTAL	.	7204	7204	.	7822	7822	.	8140	8140
ECC	ECC	9728	385	10113	9983	454	10437	10355	432	10787
E&I	E&I-ADM	.	16304	16304	.	16709	16709	.	16642	16642
	E&I-EIC	1840	663	2503	1910	847	2757	1978	949	2927
	TOTAL	1840	16967	18807	1910	17556	19466	1978	17591	19569
ENV	ENV-C&P	1304	6281	7585	1526	7354	8880	1941	9286	11227
	ENV-PC	.	56060	56060	.	59452	59452	.	62522	62522
	TOTAL	1304	62341	63645	1526	66806	68332	1941	71808	73749
EA	EA-CIA	.	11756	11756	.	10268	10268	.	10866	10866
FIN	FIN-FEP	.	20379	20379	.	22348	22348	.	31524	31524
F&O	F&O-FM	.	11252	11252	.	11524	11524	.	11582	11582
IAND	IAND	.	260	260	.	281	281	.	150	150
ISTC	ISTC	.	19976	19976	.	15829	15829	.	13138	13138
IDRC	IDRC	7983	6720	14703	8900	7400	16300	8400	7100	15500
JUST	JUST-ADM	.	2451	2451	.	2296	2296	.	2179	2179
	JUST-LRC	986	607	1593	1100	654	1754	1049	653	1702
	TOTAL	986	3058	4044	1100	2950	4050	1049	2832	3881
LAB	LAB	.	1138	1138	.	1229	1229	.	1284	1284
NA	NA	.	24774	24774	.	24017	24017	.	24139	24139
NCC	NCC	.	69	69	.	30	30	.	5	5
NDEF	NDEF-SER	2142	2568	4710	2251	2672	4923	2358	2820	5178
NEB	NEB	.	1659	1659	.	1835	1835	.	2129	2129
NHW	NHW-ADM	.	13601	13601	.	14805	14805	.	14826	14826
	NHW-FAS	40	.	40	40	.	40	40	.	40

(CONTINUED)

TABLE 55

FEDERAL INTRAMURAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	1905	548	2453	1871	615	2486	1990	660	2650
	NHW-IS	.	1427	1427	.	1627	1627	.	1627	1627
	NHW-SS	525	1743	2268	547	1815	2362	591	1654	2245
	TOTAL	2470	17319	19789	2458	18862	21320	2621	18767	21388
NL	NL	.	47075	47075	.	49411	49411	.	49877	49877
NMC	NMC-CMC	7439	65310	72749	11049	70311	81360	7513	48262	55775
	NMC-NGC	7335	29703	37038	8073	32661	40734	8291	33537	41828
	NMC-NMST	.	20654	20654	.	22178	22178	.	24017	24017
	TOTAL	14774	115666	130440	19122	125149	144272	15804	105816	121619
NREV	NREV-TAX	367	4341	4708	388	4928	5316	405	5149	5554
SC	SC	1580	1399	2979	1503	1477	2980	1396	1853	3249
SECS	SECS-CIT	365	.	365	437	.	437	466	.	466
	SECS-ES	.	230	230	.	229	229	.	202	202
	SECS-OL	.	2022	2022	.	2109	2109	.	2180	2180
	TOTAL	365	2253	2618	437	2338	2775	466	2382	2848
SSHRC	SSHRC	3733	3365	7098	3778	3370	7148	4020	3608	7628
SGEN	SGEN-ADM	2545	941	3486	2086	922	3008	2373	1013	3386
STCAN	STCAN	10779	277277	288056	9640	282658	292298	10214	339017	349231
SS	SS-SUPP	.	162	162	.	203	203	.	200	200
TPT	TPT-ADM	67	31	98	72	44	116	66	50	116
	TPT-APT	.	348	348	.	357	357	.	372	372
	TPT-SUR	75	290	365	76	310	386	74	331	405
	TOTAL	142	669	811	148	711	859	141	752	893
TB	TB-ADM	.	20529	20529	.	23589	23589	.	24097	24097
TOTAL	TOTAL	67612	707875	775487	73020	733959	806979	71974	788008	859982

TABLE 56

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	262	262	.	80	80	.	80	80
	TOTAL	.	262	262	.	80	80	.	80	80
ACOA	ACOA	11356	.	11356	7633	.	7633	5089	.	5089
CMHC	CMHC	923	1974	2897	323	726	1049	323	726	1049
CBC	CBC	.	3359	3359	.	3703	3703	.	3877	3877
CHRC	CHRC	.	37	37	.	.	.	.	.	.
CIDA	CIDA	73	18275	18348	65	16610	16675	75	19471	19546
COMM	COMM-CC	.	563	563	.	1243	1243	.	745	745
CCA	CCA-ADM	.	78	78	.	90	90	.	90	90
	TOTAL	.	78	78	.	90	90	.	90	90
ECC	ECC	5	.	5	6	.	6	7	.	7
E&I	E&I-ADM	.	1138	1138	.	2706	2706	.	2105	2105
	E&I-EIC	7786	163	7949	7786	200	7986	7786	200	7986
	TOTAL	7786	1301	9087	7786	2906	10692	7786	2305	10091
ENV	ENV-C&P	404	454	858	465	523	988	596	672	1268
	ENV-PC	63	184	247	66	196	262	69	209	278
	TOTAL	467	638	1105	531	719	1250	665	881	1546
EA	EA-CIA	.	1093	1093	.	3146	3146	.	3148	3148
FAO	FAO-FM	.	356	356	.	433	433	.	363	363
IAND	IAND	.	1610	1610	.	1548	1548	.	.	.
JUST	JUST-ADM	.	929	929	.	571	571	.	552	552
	JUST-LRC	255	11	266	240	21	261	250	20	270
	TOTAL	255	960	1195	240	592	832	250	572	822
M&C	M&C	.	497	497	.	505	505	.	510	510
NCC	NCC	10	134	144	10	373	383	10	360	370
NDEF	NDEF-SER	.	4	4	.	30	30	.	40	40
NHW	NHW-ADM	.	550	550	.	573	573	.	472	472
	NHW-HSP	738	24	762	676	29	705	814	25	839
	NHW-IS	.	30	30	.	.	.	.	.	.
	NHW-MS	.	7	7	.	.	.	.	.	.
	TOTAL	738	611	1349	676	602	1278	814	497	1311
SC	SC	104	.	104	150	.	150	150	.	150
SECS	SECS-CIT	62	.	62	100	.	100	100	.	100
	SECS-OL	.	74	74	.	150	150	.	150	150
	TOTAL	62	74	136	100	150	250	100	150	250
SGEN	SGEN-ADM	400	100	500	400	200	600	600	200	800

(CONTINUED)

TABLE 56

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
 IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
 AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
 AND PERFORMER CANADIAN INDUSTRY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	338	338	.	385	385	.	284	284
TPT	TPT-ADM	202	128	330	235	140	375	240	150	390
	TPT-APT	87	19	106	40	60	100	.	90	90
	TPT-SUR	12	333	345	82	340	422	250	302	552
	TOTAL	301	480	781	357	540	897	490	542	1032
TOTAL	TOTAL	22480	32724	55204	18277	34581	52858	16359	34841	51200

TABLE 57

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	27	27	.	10	10	.	10	10
	TOTAL	.	27	27	.	10	10	.	10	10
ACOA	ACOA	409	.	409	471	.	471	357	.	357
CMHC	CMHC	230	1924	2154	190	1931	2121	190	1931	2121
CBC	CBC	.	15	15	.	.	.	.	.	.
CIDA	CIDA	12730	46981	59711	11323	43734	55057	13002	51103	64105
COMM	COMM-CC	.	8	8	.	.	.	.	.	.
CCA	CCA-ADM	.	10	10	.	10	10	.	10	10
	TOTAL	.	10	10	.	10	10	.	10	10
ECC	ECC	127	.	127	152	.	152	167	.	167
E&I	E&I-ADM	.	20	20	.	20	20	.	.	.
	E&I-EIC	1725	47	1772	1725	.	1725	1725	.	1725
	TOTAL	1725	67	1792	1725	20	1745	1725	.	1725
ENV	ENV-PC	.	13	13	.	14	14	.	15	15
	TOTAL	.	13	13	.	14	14	.	15	15
EA	EA-CIA	.	12304	12304	.	12707	12707	.	13907	13907
IAND	IAND	.	.	.	.	20	20	.	298	298
IDRC	IDRC	1620	.	1620	1800	.	1800	1700	.	1700
JUST	JUST-ADM	.	686	686	.	461	461	.	426	426
	JUST-LRC	12	.	12	15	.	15	15	.	15
	TOTAL	12	686	698	15	461	476	15	426	441
M&C	M&C	.	1093	1093	.	1094	1094	.	1099	1099
NA	NA	.	320	320	.	320	320	.	.	.
NDEF	NDEF-SER	.	51	51	.	62	62	.	40	40
NHW	NHW-FAS	259	.	259	260	.	260	260	.	260
	NHW-HSP	5026	4791	9817	5950	5670	11620	5775	5475	11250
	NHW-SS	1299	599	1898	1649	761	2410	1579	728	2307
	TOTAL	6584	5390	11974	7859	6431	14290	7614	6203	13817
PC	PC	65	.	65	65	.	65	65	.	65
SC	SC	12	.	12	10	.	10	10	.	10
SECS	SECS-CIT	.	.	.	.	.	.	25	.	25
	SECS-ES	.	23	23	.	6	6	.	6	6
	SECS-OL	.	39	39	.	87	87	.	120	120
	TOTAL	.	62	62	.	93	93	25	126	151
SSHRC	SSHRC	46351	11306	57657	50632	12162	62794	55664	13620	69484
SGEN	SGEN-ADM	650	.	650	700	.	700	600	.	600

(CONTINUED)

TABLE 57

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	308	308	.	127	127	.	125	125
TPT	TPT-ADM	5	.	5	10	.	10	10	.	10
	TPT-SUR	3	.	3	18	.	18	10	.	10
	TOTAL	8	.	8	28	.	28	20	.	20
TOTAL	TOTAL	70523	80565	151088	74970	79196	154166	81154	89113	170267

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, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN NP INST

		YEAR								
		1988-89			1989-90			1990-91		
		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	18	.	18	18	.	18	.	.	.
CMHC	CMHC	407	542	949	1035	1091	2126	1035	1091	2126
CIDA	CIDA	1893	5487	7380	1683	4896	6579	1933	5381	7314
E&I	E&I-ADM	.	99	99	.	1141	1141	.	.	.
	E&I-EIC	15668	4	15672	15668	.	15668	15668	20	15688
	TOTAL	15668	103	15771	15668	1141	16809	15668	20	15688
ENV	ENV-PC	.	95	95	.	100	100	.	105	105
	TOTAL	.	95	95	.	100	100	.	105	105
F&O	F&O-FM	.	6	6	.	.	.	.	.	.
IAND	IAND	.	528	528	.	451	451	.	155	155
ISTC	ISTC	.	420	420	.	420	420	.	420	420
IDRC	IDRC	219	.	219	200	.	200	200	.	200
JUST	JUST-ADM	.	1317	1317	.	1359	1359	.	374	374
	JUST-LRC	2	.	2	.	.	.	.	.	.
	TOTAL	2	1317	1319	.	1359	1359	.	374	374
M&C	M&C	151	1241	1392	178	1250	1428	.	1255	1255
NA	NA	.	.	.	.	1800	1800	.	1800	1800
NHW	NHW-ADM	.	5	5	.	5	5	.	5	5
	NHW-FAS	328	12	340	350	.	350	350	.	350
	NHW-HSP	1987	3035	5022	2425	3603	6028	2190	3436	5626
	NHW-SS	1887	6491	8378	2395	8239	10634	2294	7890	10184
	TOTAL	4202	9543	13745	5170	11847	17017	4834	11331	16165
SC	SC	9	.	9	10	.	10	10	.	10
SECS	SECS-CIT	.	871	871	.	900	900	.	900	900
	SECS-ES	.	64	64	.	66	66	.	68	68
	SECS-OL	.	285	285	.	204	204	.	130	130
	TOTAL	.	1220	1220	.	1170	1170	.	1098	1098
SSHRC	SSHRC	.	5399	5399	.	5279	5279	.	5279	5279
SGEN	SGEN-ADM	3600	.	3600	3400	.	3400	3400	.	3400
SS	SS-SUPP	.	2082	2082	.	2123	2123	.	2084	2084
TPT	TPT-ADM	48	.	48	60	.	60	65	.	65
	TPT-SUR	87	23	110	45	14	59	25	14	39
	TOTAL	135	23	158	105	14	119	90	14	104
TB	TB-ADM	318	.	318	165	.	165	165	.	165
TOTAL	TOTAL	26622	28006	54628	27632	32941	60573	27335	50407	57742

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,
 1988-89 TO 1990-91

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

DEPARTMENT	PROGRAM	YEAR								
		1988-89			1989-90			1990-91		
		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	427	.	427	425	.	425	257	.	257
CMHC	CMHC	40	.	40	990	.	990	990	.	990
E&I	E&I-ADM	.	10	10	.	.	.	.	.	.
	E&I-EIC	1441	.	1441	1441	.	1441	1441	.	1441
	TOTAL	1441	10	1451	1441	.	1441	1441	.	1441
F&O	F&O-FM	.	10	10	.	.	.	.	.	.
IAND	IAND	.	65	65	.	45	45	.	.	.
ISTC	ISTC	.	100	100	.	100	100	.	100	100
JUST	JUST-ADM	.	1658	1658	.	868	868	.	499	499
	JUST-LRC	15	.	15	20	.	20	18	.	18
	TOTAL	15	1658	1673	20	868	888	18	499	517
M&C	M&C	.	164	164	.	340	340	.	350	350
NHW	NHW-ADM	.	1100	1100	.	2070	2070	.	1070	1070
	NHW-HSP	113	881	994	136	1050	1186	126	992	1118
	NHW-SS	268	249	517	340	317	657	326	304	630
	TOTAL	381	2230	2611	476	3437	3913	452	2366	2818
SGEN	SGEN-ADM	450	.	450	900	.	900	900	.	900
TOTAL	TOTAL	2754	4237	6991	4252	4790	9042	4058	3315	7373

TABLE 60

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	.	.	13	.	13	13	.	13
CIDA	CIDA	4469	50922	55391	3637	44187	47824	4605	50774	55379
CCA	CCA-ADM	.	25	25	.	25	25	.	25	25
	TOTAL	.	25	25	.	25	25	.	25	25
ECC	ECC	52	.	52	62	.	62	68	.	68
E&I	E&I-ADM	.	90	90	.	10	10	.	.	.
	TOTAL	.	90	90	.	10	10	.	.	.
ENV	ENV-C&P	7	.	7	8	.	8	10	.	10
	TOTAL	7	.	7	8	.	8	10	.	10
EA	EA-CIA	.	4145	4145	.	4274	4274	.	4537	4537
F&O	F&O-FM	.	17	17	.	.	.	.	.	.
IDRC	IDRC	19233	3232	22465	21400	3600	25000	20300	3300	23600
JUST	JUST-LRC	21	.	21	20	.	20	18	.	18
	TOTAL	21	.	21	20	.	20	18	.	18
NHW	NHW-HSP	.	135	135	.	161	161	.	146	146
	NHW-SS	.	104	104	.	132	132	.	126	126
	TOTAL	.	239	239	.	293	293	.	272	272
NL	NL	.	78	78	.	61	61	.	72	72
SC	SC	8	.	8	10	.	10	10	.	10
SECS	SECS-ES	.	.	.	.	7	7	.	.	.
	TOTAL	.	.	.	.	7	7	.	.	.
SSHRC	SSHRC	922	5282	6204	1183	5739	6922	1183	6449	7632
STCAN	STCAN	.	18	18	.	11	11	.	11	11
TOTAL	TOTAL	24712	64048	88760	26333	58207	84540	26207	65440	91647

TABLE 61

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
R&D/RSA ACTIVITY, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER OTHER PERFORMERS

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	.	.	68	191	259	68	191	259
CBC	CBC	.	25	25	.	.	.	.	.	.
CHRC	CHRC	.	.	.	.	60	60	.	85	85
CIDA	CIDA	.	1556	1556	.	1384	1384	.	1589	1589
CLFB	CLFB	.	.	.	.	.	.	20	.	20
CCA	CCA-ADM	.	12	12	.	15	15	.	15	15
	TOTAL	.	12	12	.	15	15	.	15	15
ECC	ECC	176	.	176	212	.	212	233	.	233
E&I	E&I-ADM	.	41	41	.	37	37	.	45	45
	E&I-EIC	14215	252	14467	14215	507	14722	14215	510	14725
	TOTAL	14215	293	14508	14215	544	14759	14215	555	14770
ENV	ENV-C&P	272	204	476	314	235	549	402	301	703
	ENV-PC	.	205	205	.	212	212	.	219	219
	TOTAL	272	409	681	314	447	761	402	520	922
F&O	F&O-FM	.	30	30	.	.	.	.	.	.
IAND	IAND	.	189	189	.	160	160	.	439	439
IDRC	IDRC	125	721	846	100	800	900	100	800	900
JUST	JUST-ADM	.	371	371	.	1126	1126	.	800	800
	JUST-LRC	1162	74	1236	1020	120	1140	1100	110	1210
	TOTAL	1162	445	1607	1020	1246	2266	1100	910	2010
M&C	M&C	.	1067	1067	.	1030	1030	.	1045	1045
NHW	NHW-HSP	.	.	.	50	.	50	.	.	.
	NHW-MS	.	736	736	.	772	772	.	803	803
	NHW-SS	.	157	157	.	199	199	.	190	190
	TOTAL	.	893	893	50	971	1021	.	993	993
PC	PC	8	.	8	.	.	.	.	.	.
SC	SC	63	.	63	70	.	70	70	.	70
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70
	SECS-CIT	40	.	40	50	.	50	25	.	25
	SECS-ES	.	162	162	.	133	133	.	41	41
	SECS-OL	.	7	7	.	.	.	.	.	.
	TOTAL	40	210	250	50	203	253	25	111	136
SGEN	SGEN-ADM	300	250	550	300	200	500	100	200	300
TPT	TPT-APT	.	21	21	.	.	.	.	.	.
	TOTAL	.	21	21	.	.	.	.	.	.
TOTAL	TOTAL	16361	6121	22482	16399	7251	23650	16333	7453	23786

TABLE 62

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	4100	4100	.	3467	3467	.	3583	3583
	TOTAL	.	4100	4100	.	3467	3467	.	3583	3583
ACOA	ACOA	12210	.	12210	8547	.	8547	5703	.	5703
CMHC	CMHC	6001	16870	22871	7604	17481	25085	8065	19405	27470
CBC	CBC	.	5668	5668	.	5733	5733	.	6107	6107
CHRC	CHRC	.	760	760	.	667	667	.	557	557
CIDA	CIDA	19784	126707	146491	17316	114316	131632	20272	132155	152427
CLFB	CLFB	112	27	139	116	27	143	114	34	148
COL	COL	.	3479	3479	.	4017	4017	.	4238	4238
COMM	COMM-CC	1744	717	2461	2081	1458	3539	2256	914	3170
CCA	CCA-ADM	.	2494	2494	.	1529	1529	.	1660	1660
	CCA-CON	.	4835	4835	.	5179	5179	.	5350	5350
	CCA-COR	.	.	.	.	1254	1254	.	1270	1270
	TOTAL	.	7329	7329	.	7962	7962	.	8280	8280
ECC	ECC	10088	385	10473	10415	454	10869	10830	432	11262
E&I	E&I-ADM	.	17702	17702	.	20623	20623	.	18792	18792
	E&I-EIC	42675	1129	43804	42745	1554	44299	42813	1679	44492
	TOTAL	42675	18831	61506	42745	22177	64922	42813	20471	63284
ENV	ENV-C&P	1987	6939	8926	2313	8112	10425	2949	10259	13208
	ENV-PC	63	56557	56620	66	59974	60040	69	63070	63139
	TOTAL	2050	63496	65546	2379	68086	70465	3018	73329	76347
EA	EA-CIA	.	29298	29298	.	30395	30395	.	32458	32458
FIN	FIN-FEP	.	20379	20379	.	22348	22348	.	31524	31524
F&O	F&O-FM	.	11671	11671	.	11957	11957	.	11945	11945
IAND	IAND	.	2652	2652	.	2505	2505	.	1042	1042
ISTC	ISTC	.	20496	20496	.	16349	16349	.	13658	13658
IDRC	IDRC	29180	10673	39853	32400	11800	44200	30700	11200	41900
JUST	JUST-ADM	.	7412	7412	.	6681	6681	.	4830	4830
	JUST-LRC	2453	692	3145	2415	795	3210	2450	783	3233
	TOTAL	2453	8104	10557	2415	7476	9891	2450	5613	8063
LAB	LAB	.	1138	1138	.	1229	1229	.	1284	1284
M&C	M&C	151	4062	4213	178	4219	4397	.	4259	4259
NA	NA	.	25094	25094	.	26137	26137	.	25939	25939
NCC	NCC	10	203	213	10	403	413	10	365	375
NDEF	NDEF-SER	2142	2623	4765	2251	2764	5015	2358	2900	5258
NEB	NEB	.	1659	1659	.	1835	1835	.	2129	2129

(CONTINUED)

TABLE 62

FEDERAL EXPENDITURES ON SCIENCE AND TECHNOLOGY
IN THE SOCIAL SCIENCES BY DEPARTMENT AND R&D/RSA ACTIVITY,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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-ADM	. .	15256	15256	. .	17453	17453	. .	16373	16373
	NHW-FAS	627	12	639	650	. .	650	650	. .	650
	NHW-HSP	9769	9414	19183	11108	11128	22236	10895	10734	21629
	NHW-IS	. .	1457	1457	. .	1627	1627	. .	1627	1627
	NHW-MS	. .	743	743	. .	772	772	. .	803	803
	NHW-SS	3979	9343	13322	4931	11463	16394	4790	10892	15682
	TOTAL	14375	36225	50600	16689	42443	59132	16335	40429	56764
NL	NL	. .	47153	47153	. .	49472	49472	. .	49949	49949
NMC	NMC-CMC	7439	65310	72749	11049	70311	81360	7513	48262	55775
	NMC-NGC	7335	29703	37038	8073	32661	40734	8291	33537	41828
	NMC-NMST	. .	20654	20654	. .	22178	22178	. .	24017	24017
	TOTAL	14774	115666	130440	19122	125149	144272	15804	105816	121619
NREV	NREV-TAX	367	4341	4708	388	4928	5316	405	5149	5554
PC	PC	73	. .	73	65	. .	65	65	. .	65
SC	SC	1776	1399	3175	1753	1477	3230	1646	1853	3499
SECS	SECS-ADM	. .	41	41	. .	70	70	. .	70	70
	SECS-CIT	467	871	1338	587	900	1487	616	900	1516
	SECS-ES	. .	479	479	. .	441	441	. .	317	317
	SECS-OL	. .	2427	2427	. .	2550	2550	. .	2580	2580
	TOTAL	467	3819	4286	587	3961	4548	616	3867	4483
SSHRC	SSHRC	51006	25352	76358	55593	26550	82143	60867	29156	90023
SGEN	SGEN-ADM	7945	1291	9236	7786	1322	9108	7973	1413	9386
STCAN	STCAN	10779	277295	288074	9640	282669	292309	10214	339028	349242
SS	SS-SUPP	. .	2890	2890	. .	2838	2838	. .	2693	2693
TPT	TPT-ADM	322	159	481	377	184	561	381	200	581
	TPT-APT	87	388	475	40	417	457	. .	462	462
	TPT-SUR	177	646	823	221	664	885	359	647	1006
	TOTAL	586	1193	1779	638	1265	1903	741	1308	2049
TB	TB-ADM	318	20529	20847	165	23589	23754	165	24097	24262
TOTAL	TOTAL	231064	923576	1154640	240883	950925	1191808	243420	1018577	1261997

TABLE 63

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	67612	29	73020	30	71974	30
CANADIAN INDUSTRY	22480	10	18277	8	16359	7
CANADIAN UNIVERSITY	70523	31	74970	31	81154	33
CANADIAN NP INST	26622	12	27632	11	27335	11
PROV. & MUN. GOV'T	2754	1	4252	2	4058	2
FOREIGN PERFORMERS	24712	11	26333	11	26207	11
OTHER PERFORMERS	16361	7	16399	7	16333	7
TOTAL	231064	100	240883	100	243420	100

TABLE 64

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
DEPARTMENT	PROGRAM	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	
ACOA	ACOA	.	12210	12210	.	8547	8547	.	5703	5703	
CMHC	CMHC	4401	1600	6001	4985	2619	7604	5446	2619	8065	
CIDA	CIDA	619	19165	19784	608	16708	17316	657	19615	20272	
CLFB	CLFB	112	.	112	116	.	116	94	20	114	
COMM	COMM-CC	1744	.	1744	2081	.	2081	2256	.	2256	
ECC	ECC	9728	360	10088	9983	432	10415	10355	475	10830	
E&I	E&I-EIC	1840	40835	42675	1910	40835	42745	1978	40835	42813	
	TOTAL	1840	40835	42675	1910	40835	42745	1978	40835	42813	
ENV	ENV-C&P	1304	683	1987	1526	787	2313	1941	1008	2949	
	ENV-PC	.	63	63	.	66	66	.	69	69	
	TOTAL	1304	746	2050	1526	853	2379	1941	1077	3018	
IDRC	IDRC	7983	21197	29180	8900	23500	32400	8400	22300	30700	
JUST	JUST-LRC	986	1467	2453	1100	1315	2415	1049	1401	2450	
	TOTAL	986	1467	2453	1100	1315	2415	1049	1401	2450	
M&C	M&C	.	151	151	.	178	178	.	.	.	
NCC	NCC	.	10	10	.	10	10	.	10	10	
NDEF	NDEF-SER	2142	.	2142	2251	.	2251	2358	.	2358	
NHW	NHW-FAS	40	587	627	40	610	650	40	610	650	
	NHW-HSP	1905	7864	9769	1871	9237	11108	1990	8905	10895	
	NHW-SS	525	3454	3979	547	4384	4931	591	4199	4790	
	TOTAL	2470	11905	14375	2458	14231	16689	2621	13714	16335	
NMC	NMC-CMC	7439	.	7439	11049	.	11049	7513	.	7513	
	NMC-MGC	7335	.	7335	8073	.	8073	8291	.	8291	
	TOTAL	14774	.	14774	19122	.	19122	15804	.	15804	
NREV	NREV-TAX	367	.	367	388	.	388	405	.	405	
PC	PC	.	73	73	.	65	65	.	65	65	
SC	SC	1580	196	1776	1503	250	1753	1396	250	1646	
SECS	SECS-CIT	365	102	467	437	150	587	466	150	616	
	TOTAL	365	102	467	437	150	587	466	150	616	
SSHRC	SSHRC	3733	47273	51006	3778	51815	55593	4020	56847	60867	
SGEN	SGEN-ADM	2545	5400	7945	2086	5700	7786	2373	5600	7973	
STCAN	STCAN	10779	.	10779	9640	.	9640	10214	.	10214	
TPT	TPT-ADM	67	255	322	72	305	377	66	315	381	
	TPT-APT	.	87	87	.	40	40	.	.	.	
	TPT-SUR	75	102	177	76	145	221	74	285	359	
	TOTAL	142	444	586	148	490	638	141	600	741	

(CONTINUED)

TABLE 64

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY R&D

		YEAR								
		1988-89			1989-90			1990-91		
		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	.	318	318	.	165	165	.	165	165
TOTAL	TOTAL	67612	163452	231064	73020	167863	240883	71974	171446	243420

TABLE 65
FEDERAL INTRAMURAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER INTRAMURAL

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		CONTRACTS	OTHER	CONTRACTS	OTHER	CONTRACTS	OTHER
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
CMHC	CMHC	.	4401	.	4985	.	5446
CIDA	CIDA	.	619	.	608	.	657
CLFB	CLFB	.	112	.	116	.	94
COMM	COMM-CC	.	1744	.	2081	.	2256
ECC	ECC	.	9728	.	9983	.	10355
E&I	E&I-EIC	.	1840	.	1910	.	1978
	TOTAL	.	1840	.	1910	.	1978
ENV	ENV-C&P	.	1304	.	1526	.	1941
	TOTAL	.	1304	.	1526	.	1941
IDRC	IDRC	.	7983	.	8900	.	8400
JUST	JUST-LRC	.	986	.	1100	.	1049
	TOTAL	.	986	.	1100	.	1049
NDEF	NDEF-SER	.	2142	.	2251	.	2358
NHW	NHW-FAS	.	40	.	40	.	40
	NHW-HSP	940	965	828	1043	899	1091
	NHW-SS	.	525	.	547	.	591
	TOTAL	940	1530	828	1630	899	1721
NMC	NMC-CMC	226	7212	441	10608	367	7146
	NMC-NGC	353	6982	396	7678	403	7889
	TOTAL	579	14195	837	18285	769	15034
NREV	NREV-TAX	.	367	.	388	.	405
SC	SC	.	1580	.	1503	.	1396
SECS	SECS-CIT	.	365	.	437	.	466
	TOTAL	.	365	.	437	.	466
SSHRC	SSHRC	.	3733	.	3778	.	4020
SGEN	SGEN-ADM	.	2545	.	2086	.	2373
STCAN	STCAN	.	10779	.	9640	.	10214
TPT	TPT-ADM	.	67	.	72	.	66
	TPT-SUR	.	75	.	76	.	74
	TOTAL	.	142	.	148	.	141
TOTAL	TOTAL	1519	66093	1665	71356	1669	70305

TABLE 66

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE INDUSTRY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN INDUSTRY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	11356	.	7633	.	5089	.
CMHC	CMHC	417	506	1	322	1	322
CIDA	CIDA	.	73	.	65	.	75
ECC	ECC	.	5	.	6	.	7
E&I	E&I-EIC	7786	-	7786	-	7786	-
	TOTAL	7786	.	7786	.	7786	.
ENV	ENV-C&P	.	404	.	465	.	596
	ENV-PC	.	63	.	66	.	69
	TOTAL	.	467	.	531	.	665
JUST	JUST-LRC	.	255	.	240	.	250
	TOTAL	.	255	.	240	.	250
NCC	NCC	10	.	10	.	10	.
NHW	NHW-HSP	13	725	16	660	14	800
	TOTAL	13	725	16	660	14	800
SC	SC	.	104	.	150	.	150
SECS	SECS-CIT	.	62	.	100	.	100
	TOTAL	.	62	.	100	.	100
SGEN	SGEN-ADM	.	400	.	400	.	600
TPT	TPT-ADM	.	202	.	235	.	240
	TPT-APT	.	87	.	40	.	.
	TPT-SUR	.	12	.	82	.	250
	TOTAL	.	301	.	357	.	490
	TOTAL	19582	2898	15446	2831	12900	3459

TABLE 67

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE UNIVERSITY SECTOR BY DEPARTMENT
AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN UNIVERSITY

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	409	.	471	.	357	.
CMHC	CMHC	102	128	24	166	24	166
CIDA	CIDA	620	12110	552	10771	634	12368
ECC	ECC	.	127	.	152	.	167
E&I	E&I-EIC	1725	.	1725	.	1725	.
	TOTAL	1725	.	1725	.	1725	.
IDRC	IDRC	1620	.	1800	.	1700	.
JUST	JUST-LRC	.	12	.	15	.	15
	TOTAL	.	12	.	15	.	15
NHW	NHW-FAS	259	.	260	.	260	.
	NHW-HSP	5026	.	5910	40	5725	50
	NHW-SS	1299	.	1649	.	1579	.
	TOTAL	6584	.	7819	40	7564	50
PC	PC	65	.	65	.	65	.
SC	SC	.	12	.	10	.	10
SECS	SECS-CIT	.	.	.	.	.	25
	TOTAL	.	.	.	.	.	25
SSHRC	SSHRC	46351	.	50632	.	55664	.
SGEN	SGEN-ADM	600	50	600	100	500	100
TPT	TPT-ADM	.	5	.	10	.	10
	TPT-SUR	3	.	18	.	10	.
	TOTAL	3	5	18	10	10	10
	TOTAL	58079	12444	63706	11264	68243	12911

TABLE 68

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE NON-PROFIT INSTITUTE SECTOR
BY DEPARTMENT AND PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER CANADIAN NP INST

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	18	.	18	.	.	.
CMHC	CMHC	301	106	852	183	852	183
CIDA	CIDA	.	1893	.	1683	.	1933
E&I	E&I-EIC	15668	.	15668	.	15668	.
	TOTAL	15668	.	15668	.	15668	.
IDRC	IDRC	219	.	200	.	200	.
JUST	JUST-LRC	.	2	.	.	.	.
	TOTAL	.	2	.	.	.	.
M&C	M&C	111	40	118	60	.	.
NHW	NHW-FAS	328	.	350	.	350	.
	NHW-HSP	1893	94	2245	180	2140	50
	NHW-SS	1887	.	2395	.	2294	.
	TOTAL	4108	94	4990	180	4784	50
SC	SC	.	9	.	10	.	10
SGEN	SGEN-ADM	3500	100	3000	400	3000	400
TPT	TPT-ADM	.	48	.	60	.	65
	TPT-SUR	87	.	25	20	25	.
	TOTAL	87	48	25	80	25	65
TB	TB-ADM	318	.	165	.	165	.
	TOTAL	24330	2292	25036	2596	24694	2641

TABLE 69

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
 IN THE SOCIAL SCIENCES, IN THE PROVINCIAL AND MUNICIPAL
 GOVERNMENT SECTOR BY DEPARTMENT AND PAYMENT TYPE,
 1988-89 TO 1990-91

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

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
ACOA	ACOA	427	.	425	.	257	.
CMHC	CMHC	.	40	900	90	900	90
E&I	E&I-EIC	1441	.	1441	.	1441	.
	TOTAL	1441	.	1441	.	1441	.
JUST	JUST-LRC	.	15	.	20	.	18
	TOTAL	.	15	.	20	.	18
NHW	NHW-HSP	113	.	136	.	126	.
	NHW-SS	268	.	340	.	326	.
	TOTAL	381	.	476	.	452	.
SGEN	SGEN-ADM	250	200	700	200	700	200
	TOTAL	2499	255	3942	310	3750	308

TABLE 70

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE FOREIGN SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER FOREIGN PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
CMHC	CMHC	.	.	.	13	.	13
CIDA	CIDA	2579	1890	3168	469	4067	538
ECC	ECC	.	52	.	62	.	68
ENV	ENV-C&P	.	7	.	8	.	10
	TOTAL	.	7	.	8	.	10
IDRC	IDRC	19233	.	21400	.	20300	.
JUST	JUST-LRC	.	21	.	20	.	18
	TOTAL	.	21	.	20	.	18
SC	SC	.	8	.	10	.	10
SSHRC	SSHRC	922	.	1183	.	1183	.
TOTAL	TOTAL	22734	1978	25751	582	25550	657

TABLE 71

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES, IN THE OTHER SECTOR BY DEPARTMENT AND
PAYMENT TYPE, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER OTHER PERFORMERS

		YEAR					
		1988-89		1989-90		1990-91	
		PAYMENT TYPE		PAYMENT TYPE		PAYMENT TYPE	
		GRANTS	CONTRACTS	GRANTS	CONTRACTS	GRANTS	CONTRACTS
		\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
DEPARTMENT	PROGRAM						
CMHC	CMHC	.	.	.	68	.	68
CLFB	CLFB	.	.	.	.	.	20
ECC	ECC	.	176	.	212	.	233
E&I	E&I-EIC	14215	.	14215	.	14215	.
	TOTAL	14215	.	14215	.	14215	.
ENV	ENV-C&P	.	272	.	314	.	402
	TOTAL	.	272	.	314	.	402
IDRC	IDRC	125	.	100	.	100	.
JUST	JUST-LRC	.	1162	.	1020	.	1100
	TOTAL	.	1162	.	1020	.	1100
NHW	NHW-HSP	.	.	.	50	.	.
	TOTAL	.	.	.	50	.	.
PC	PC	8	.	.	.	.	.
SC	SC	.	63	.	70	.	70
SECS	SECS-CIT	.	40	.	50	.	25
	TOTAL	.	40	.	50	.	25
SGEN	SGEN-ADM	.	300	.	300	.	100
TOTAL	TOTAL	14348	2013	14315	2084	14315	2018

TABLE 72

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	12210	.	.	8547	.	.	5703	.	.
CMHC	CMHC	820	780	4401	1777	842	4985	1777	842	5446
CIDA	CIDA	3199	15966	619	3720	12988	608	4701	14914	657
CLFB	CLFB	.	.	112	.	.	116	.	20	94
COMM	COMM-CC	.	.	1744	.	.	2081	.	.	2256
ECC	ECC	.	360	9728	.	432	9983	.	475	10355
E&I	E&I-EIC	40835	.	1840	40835	.	1910	40835	.	1978
	TOTAL	40835	.	1840	40835	.	1910	40835	.	1978
ENV	ENV-C&P	.	683	1304	.	787	1526	.	1008	1941
	ENV-PC	.	63	.	.	66	.	.	69	.
	TOTAL	.	746	1304	.	853	1526	.	1077	1941
IDRC	IDRC	21197	.	7983	23500	.	8900	22300	.	8400
JUST	JUST-LRC	.	1467	986	.	1315	1100	.	1401	1049
	TOTAL	.	1467	986	.	1315	1100	.	1401	1049
M&C	M&C	111	40	.	118	60	.	.	.	.
NCC	NCC	10	.	.	10	.	.	10	.	.
NDEF	NDEF-SER	.	.	2142	.	.	2251	.	.	2358
NHW	NHW-FAS	587	.	40	610	.	40	610	.	40
	NHW-HSP	• 7045	1759	965	8307	1758	1043	8005	1799	1091
	NHW-SS	3454	.	525	4384	.	547	4199	.	591
	TOTAL	11086	1759	1530	13301	1758	1630	12814	1799	1721
NMC	NMC-CMC	.	226	7212	.	441	10608	.	367	7146
	NMC-NGC	.	353	6982	.	396	7678	.	403	7889
	TOTAL	.	579	14195	.	837	18285	.	769	15034
NREV	NREV-TAX	.	.	367	.	.	388	.	.	405
PC	PC	73	.	.	65	.	.	65	.	.
SC	SC	.	196	1580	.	250	1503	.	250	1396
SECS	SECS-CIT	.	102	365	.	150	437	.	150	466
	TOTAL	.	102	365	.	150	437	.	150	466
SSHRC	SSHRC	47273	.	3733	51815	.	3778	56847	.	4020
SGEN	SGEN-ADM	4350	1050	2545	4300	1400	2086	4200	1400	2373
STCAN	STCAN	.	.	10779	.	.	9640	.	.	10214
TPT	TPT-ADM	.	255	67	.	305	72	.	315	66
	TPT-APT	.	87	.	.	40	.	.	.	.
	TPT-SUR	90	12	75	43	102	76	35	250	74
	TOTAL	90	354	142	43	447	148	35	565	141

(CONTINUED)

TABLE 72

FEDERAL EXPENDITURES ON RESEARCH AND DEVELOPMENT
IN THE SOCIAL SCIENCES BY DEPARTMENT AND PAYMENT TYPE,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND PERFORMER TOTAL

		YEAR								
		1988-89			1989-90			1990-91		
		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	318			165			165		
TOTAL	TOTAL	141572	23399	66093	148196	21332	71356	149452	23663	70305

TABLE 73

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY PERFORMER,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

	YEAR					
	1988-89		1989-90		1990-91	
	\$,000		\$,000		\$,000	
	\$	%	\$	%	\$	%
PERFORMER						
INTRAMURAL	707875	77	733959	77	788008	77
CANADIAN INDUSTRY	32724	4	34581	4	34841	3
CANADIAN UNIVERSITY	80565	9	79196	8	89113	9
CANADIAN NP INST	28006	3	32941	3	30407	3
PROV. & MUN. GOV'T	4237	0	4790	1	3315	0
FOREIGN PERFORMERS	64048	7	58207	6	65440	6
OTHER PERFORMERS	6121	1	7251	1	7453	1
TOTAL	923576	100	950925	100	1018577	100

TABLE 74

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

		YEAR									
		1988-89			1989-90			1990-91			
		PERFORMER			PERFORMER			PERFORMER			
		INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	INTRAMURAL	EXTRAMURAL	TOTAL	
DEPARTMENT	PROGRAM	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000	\$,000
AGR	AGR-AFP	3811	289	4100	3377	90	3467	3493	90	3583	
	TOTAL	3811	289	4100	3377	90	3467	3493	90	3583	
CMHC	CMHC	12430	4440	16870	13542	3939	17481	15466	3939	19405	
CBC	CBC	2269	3399	5668	2030	3703	5733	2230	3877	6107	
CHRC	CHRC	723	37	760	607	60	667	472	85	557	
CIDA	CIDA	3486	123221	126707	3505	110811	114316	3837	128318	132155	
CLFB	CLFB	27	.	27	27	.	27	34	.	34	
COL	COL	3479	.	3479	4017	.	4017	4238	.	4238	
COMM	COMM-CC	146	571	717	215	1243	1458	169	745	914	
CCA	CCA-ADM	2369	125	2494	1389	140	1529	1520	140	1660	
	CCA-CON	4835	.	4835	5179	.	5179	5350	.	5350	
	CCA-COR	.	.	.	1254	.	1254	1270	.	1270	
	TOTAL	7204	125	7329	7822	140	7962	8140	140	8280	
ECC	ECC	385	.	385	454	.	454	432	.	432	
E&I	E&I-ADM	16304	1398	17702	16709	3914	20623	16642	2150	18792	
	E&I-EIC	663	466	1129	847	707	1554	949	730	1679	
	TOTAL	16967	1864	18831	17556	4621	22177	17591	2880	20471	
ENV	ENV-C&P	6281	658	6939	7354	758	8112	9286	973	10259	
	ENV-PC	56060	497	56557	59452	522	59974	62522	548	63070	
	TOTAL	62341	1155	63496	66806	1280	68086	71808	1521	73329	
EA	EA-CIA	11756	17542	29298	10268	20127	30395	10866	21592	32458	
FIN	FIN-FEP	20379	.	20379	22348	.	22348	31524	.	31524	
F&O	F&O-FM	11252	419	11671	11524	433	11957	11582	363	11945	
IAND	IAND	260	2392	2652	281	2224	2505	150	892	1042	
ISTC	ISTC	19976	520	20496	15829	520	16349	13138	520	13658	
IDRC	IDRC	6720	3953	10673	7400	4400	11800	7100	4100	11200	
JUST	JUST-ADM	2451	4961	7412	2296	4385	6681	2179	2651	4830	
	JUST-LRC	607	85	692	654	141	795	653	130	783	
	TOTAL	3058	5046	8104	2950	4526	7476	2832	2781	5613	
LAB	LAB	1138	.	1138	1229	.	1229	1284	.	1284	
M&C	M&C	.	4062	4062	.	4219	4219	.	4259	4259	
NA	NA	24774	320	25094	24017	2120	26137	24139	1800	25939	
NCC	NCC	69	134	203	30	373	403	5	360	365	
NDEF	NDEF-SER	2568	55	2623	2672	92	2764	2820	80	2900	
NEB	NEB	1659	.	1659	1835	.	1835	2129	.	2129	
NHW	NHW-ADM	13601	1655	15256	14805	2648	17453	14826	1547	16373	

(CONTINUED)

TABLE 74

FEDERAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
IN THE SOCIAL SCIENCES BY DEPARTMENT AND
INTRAMURAL/EXTRAMURAL PERFORMER, 1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND ACTIVITY RSA

SCIENCE TYPE SOCIAL AND ACTIVITY RSA		YEAR								
		1988-89			1989-90			1990-91		
		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-FAS		12	12						
	NHW-HSP	548	8866	9414	615	10513	11128	660	10074	10734
	NHW-IS	1427	30	1457	1627	.	1627	1627	.	1627
	NHW-MS	.	743	743	.	772	772	.	803	803
	NHW-SS	1743	7600	9343	1815	9648	11463	1654	9238	10892
	TOTAL	17319	18906	36225	18862	23581	42443	18767	21662	40429
NL	NL	47075	78	47153	49411	61	49472	49877	72	49949
NMC	NMC-CMC	65310	.	65310	70311	.	70311	48262	.	48262
	NMC-NGC	29703	.	29703	32661	.	32661	33537	.	33537
	NMC-NMST	20654	.	20654	22178	.	22178	24017	.	24017
	TOTAL	115666	.	115666	125149	.	125149	105816	.	105816
NREV	NREV-TAX	4341	.	4341	4928	.	4928	5149	.	5149
SC	SC	1399	.	1399	1477	.	1477	1853	.	1853
SECS	SECS-ADM	.	41	41	.	70	70	.	70	70
	SECS-CIT	.	871	871	.	900	900	.	900	900
	SECS-ES	230	249	479	229	212	441	202	115	317
	SECS-OL	2022	405	2427	2109	441	2550	2180	400	2580
	TOTAL	2253	1566	3819	2338	1623	3961	2382	1485	3867
SSHRC	SSHRC	3365	21987	25352	3370	23180	26550	3608	25548	29156
SGEN	SGEN-ADM	941	350	1291	922	400	1322	1013	400	1413
STCAN	STCAN	277277	18	277295	282658	11	282669	339017	11	339028
SS	SS-SUPP	162	2728	2890	203	2635	2838	200	2493	2693
TPT	TPT-ADM	31	128	159	44	140	184	50	150	200
	TPT-APT	348	40	388	357	60	417	372	90	462
	TPT-SUR	290	356	646	310	354	664	331	316	647
	TOTAL	669	524	1193	711	554	1265	752	556	1308
TB	TB-ADM	20529	.	20529	23589	.	23589	24097	.	24097
	TOTAL	707875	215701	923576	733959	216966	950925	788008	230569	1018577

TABLE 75

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE SOCIAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND YEAR 1988-89

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	33	187	79	88	98	12	25	522
INTRAMURAL RSA	356	2035	1620	1440	2561	422	14	8448
ADMIN. OF EXTRAMURAL PROGRAMS	34	114	145	15	156	.	.	463
TOTAL	423	2336	1843	1543	2815	434	39	9433

TABLE 75

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE SOCIAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND YEAR 1989-90

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	33	182	77	89	94	12	25	512
INTRAMURAL RSA	345	2172	1593	1542	2272	416	14	8353
ADMIN. OF EXTRAMURAL PROGRAMS	31	124	144	15	160	.	.	475
TOTAL	409	2478	1814	1646	2527	428	39	9340

TABLE 75

PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNICAL ACTIVITIES
IN THE SOCIAL SCIENCES BY ACTIVITY AND CATEGORY,
1988-89 TO 1990-91

SCIENCE TYPE SOCIAL
AND YEAR 1990-91

	CATEGORY							
	EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S	PY'S
ACTIVITY								
INTRAMURAL R&D	33	178	72	87	88	12	25	495
INTRAMURAL RSA	347	2172	1589	1494	2138	405	14	8158
ADMIN. OF EXTRAMURAL PROGRAMS	33	114	156	15	152	.	.	469
TOTAL	412	2464	1817	1595	2378	417	39	9122

TABLE 76-A

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
AGR	AGR-AFP	1	33	2	2	12	.	.	50
	TOTAL	1	33	2	2	12	.	.	50
CMHC	CMHC	6	120	.	8	28	.	.	162
CBC	CBC	4	20	.	19	2	.	.	45
CHRC	CHRC	1	3	3	.	2	.	.	9
CIDA	CIDA	6	7	37	4	17	.	.	71
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	.	34	.	13	.	.	53
COMM	COMM-CC	0	1	.	22	1	.	.	24
CCA	CCA-ADM	6	25	14	2	7	.	.	54
	CCA-CON	1	12	8	36	10	3	.	70
	TOTAL	7	37	22	38	17	3	.	124
ECC	ECC	16	38	30	17	25	.	.	126
E&I	E&I-ADM	6	89	13	14	43	.	.	165
	E&I-EIC	6	19	34	3	20	.	.	82
	TOTAL	12	108	47	17	63	.	.	247
ENV	ENV-C&P	1	20	7	20	13	1	.	62
	ENV-PC	10	134	91	122	102	300	.	759
	TOTAL	11	154	98	142	115	301	.	821
EA	EA-CIA	17	2	49	5	32	.	.	105
FIN	FIN-FEP	30	161	28	19	49	.	.	287
F&O	F&O-FM	10	57	21	42	45	.	.	174
IAND	IAND	0	2	2	1	0	.	.	5
ISTC	ISTC	43	19	65	5	52	.	.	184
IDRC	IDRC	5	62	15	18	50	.	.	150
JUST	JUST-ADM	2	15	7	.	8	.	.	32
	JUST-LRC	5	.	2	1	20	.	.	28
	TOTAL	7	15	9	1	28	.	.	60
LAB	LAB	.	7	.	2	6	.	.	14
NA	NA	8	108	17	81	80	.	.	294
NCC	NCC	.	2	.	.	.	.	.	2
NDEF	NDEF-SER	2	16	5	.	14	1	39	76
NEB	NEB	5	12	.	3	4	.	.	24
NHW	NHW-ADM	13	88	27	14	49	.	.	191
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HSP	1	9	8	.	6	.	.	24
	NHW-IS	1	9	9	4	1	.	.	24

(CONTINUED)

TABLE 76-A

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	TOTAL
			PY'S	PY'S			PY'S	PY'S	PY'S
DEPARTMENT	PROGRAM								
NNW	NNW-SS		2	13	5	.	8	.	28
	TOTAL		18	119	50	18	64	.	268
NL	NL		13	190	54	55	204	.	516
NMC	NMC-CMC		14	45	99	88	90	30	366
	NMC-NGC		9	35	74	69	30	27	244
	NMC-NMST		8	6	46	49	26	38	173
	TOTAL		31	86	219	206	146	95	783
NREV	NREV-TAX		2	82	.	.	.	.	84
SC	SC		4	7	14	.	4	.	29
SECS	SECS-CIT		.	4	.	1	1	.	6
	SECS-ES		.	3	.	2	.	.	5
	SECS-OL		.	.	38	.	5	.	43
	TOTAL		.	7	38	3	6	.	54
SSHRC	SSHRC		11	.	45	.	41	.	97
SGEN	SGEN-ADM		3	28	2	1	10	1	45
STCAN	STCAN		100	813	823	814	1646	33	4229
SS	SS-SUPP		.	.	1	.	1	.	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		423	2336	1843	1543	2815	434	9433

TABLE 76-B

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	TOTAL
DEPARTMENT	PROGRAM								
AGR	AGR-AFP	1	33	3	2	12	.	.	51
	TOTAL	1	33	3	2	12	.	.	51
CMHC	CMHC	8	124	.	8	30	.	.	170
CBC	CBC	4	22	.	16	2	.	.	44
CHRC	CHRC	2	2	3	.	1	.	.	8
CIDA	CIDA	5	8	34	4	17	.	.	68
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	1	39	.	13	.	.	59
COMM	COMM-CC	0	2	.	24	1	.	.	26
CCA	CCA-ADM	4	11	14	1	3	.	.	33
	CCA-CON	1	12	6	38	10	3	.	70
	CCA-COR	3	12	11	1	6	.	.	33
	TOTAL	8	35	31	40	19	3	.	136
ECC	ECC	16	38	30	16	22	.	.	122
E&I	E&I-ADM	6	85	14	20	37	.	.	162
	E&I-EIC	6	21	34	3	21	.	.	85
	TOTAL	12	106	48	23	58	.	.	247
ENV	ENV-C&P	1	22	7	20	14	1	.	65
	ENV-PC	10	134	91	122	102	300	.	759
	TOTAL	11	156	98	142	116	301	.	824
EA	EA-CIA	16	2	46	5	30	.	.	99
FIN	FIN-FEP	32	171	28	14	59	.	.	304
F&O	F&O-FM	10	58	21	40	42	.	.	170
IAND	IAND	0	1	2	1	0	.	.	5
ISTC	ISTC	30	14	37	5	21	.	.	107
IDRC	IDRC	5	71	15	19	56	.	.	165
JUST	JUST-ADM	2	16	7	.	10	.	.	35
	JUST-LRC	5	.	2	1	20	.	.	28
	TOTAL	7	16	9	1	30	.	.	63
LAB	LAB	.	8	.	1	5	.	.	14
NA	NA	7	113	25	83	72	.	.	300
NCC	NCC	.	1	.	.	.	.	.	1
NDEF	NDEF-SER	2	16	5	.	14	1	39	76
NEB	NEB	5	14	.	4	4	.	.	27
NHW	NHW-ADM	13	83	22	10	45	.	.	173
	NHW-FAS	.	.	1	.	.	.	.	1
	NHW-HSP	1	9	8	.	5	.	.	23

(CONTINUED)

TABLE 76-B

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	TOTAL
									PY'S
DEPARTMENT	PROGRAM								
NHW	NHW-IS	1	9	9	3	1	.	.	23
	NHW-SS	2	13	5	.	8	.	.	28
	TOTAL	18	113	45	13	59	.	.	248
NL	NL	13	196	56	54	187	.	.	506
NMC	NMC-CMC	15	63	110	101	99	30	.	418
	NMC-NGC	7	35	72	69	30	27	.	240
	NMC-NMST	7	7	44	51	26	41	.	176
	TOTAL	29	105	226	221	155	98	.	834
NREV	NREV-TAX	2	83	.	.	.	.	.	85
SC	SC	4	7	14	.	4	.	.	29
SECS	SECS-CIT	.	5	.	1	1	.	.	7
	SECS-ES	.	3	.	2	.	.	.	5
	SECS-DL	.	.	38	.	5	.	.	43
	TOTAL	.	7	38	3	6	.	.	54
SSHRC	SSHRC	9	.	46	.	41	.	.	96
SGEN	SGEN-ADM	3	25	2	.	8	1	.	39
STCAN	STCAN	100	907	797	903	1405	24	.	4136
SS	SS-SUPP	.	.	1	.	1	.	.	2
TPT	TPT-ADM	.	1	.	.	.	.	.	1
	TPT-APT	.	4	.	.	.	.	.	4
	TPT-SUR	1	3	1	2	1	.	.	7
	TOTAL	1	7	1	2	1	.	.	12
TB	TB-ADM	44	14	115	2	35	.	.	210
TOTAL	TOTAL	409	2478	1814	1646	2527	428	39	9340

TABLE 76-C
FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL
ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY
1990-91

SCIENCE TYPE SOCIAL
AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
DEPARTMENT	PROGRAM								
AGR	AGR-AFP	1	33	3	2	12	.	.	51
	TOTAL	1	33	3	2	12	.	.	51
CMHC	CMHC	8	129	.	8	33	.	.	178
CBC	CBC	4	24	.	16	2	.	.	46
CHRC	CHRC	2	2	3	.	1	.	.	8
CIDA	CIDA	6	9	35	4	14	.	.	68
CLFB	CLFB	0	1	.	0	0	.	.	2
COL	COL	6	1	39	.	13	.	.	59
COMM	COMM-CC	0	1	.	26	1	.	.	28
CCA	CCA-ADM	4	11	15	1	3	.	.	34
	CCA-CON	1	13	5	38	10	3	.	70
	CCA-COR	3	12	11	1	6	.	.	33
	TOTAL	8	36	31	40	19	3	.	137
ECC	ECC	16	38	29	16	22	.	.	121
E&I	E&I-ADM	6	81	14	19	36	.	.	156
	E&I-EIC	6	23	34	4	20	.	.	87
	TOTAL	12	104	48	23	56	.	.	243
ENV	ENV-C&P	1	22	7	21	14	1	.	66
	ENV-PC	10	134	91	122	102	300	.	759
	TOTAL	11	156	98	143	116	301	.	825
EA	EA-CIA	16	2	46	5	30	.	.	99
FIN	FIN-FEP	33	175	27	17	41	.	.	293
F&O	F&O-FM	10	58	21	40	42	.	.	170
IAND	IAND	0	1	.	.	0	.	.	2
ISTC	ISTC	31	13	43	3	23	.	.	113
IDRC	IDRC	5	71	15	19	56	.	.	165
JUST	JUST-ADM	2	16	7	.	10	.	.	35
	JUST-LRC	5	.	2	1	19	.	.	27
	TOTAL	7	16	9	1	29	.	.	62
LAB	LAB	.	8	.	2	4	.	.	14
NA	NA	7	122	25	83	61	.	.	298
NDEF	NDEF-SER	2	16	5	.	14	1	39	76
NEB	NEB	5	16	.	4	4	.	.	29
NHW	NHW-ADM	13	84	22	10	46	.	.	175
	NHW-FAS	.	.	1	1
	NHW-HSP	1	9	8	.	5	.	.	22
	NHW-IS	1	8	10	4	1	.	.	23

(CONTINUED)

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TABLE 76-C

FEDERAL PERSONNEL ENGAGED IN SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES IN THE SOCIAL SCIENCES BY DEPARTMENT AND CATEGORY 1990-91

SCIENCE TYPE SOCIAL AND YEAR 1990-91

		CATEGORY							
		EXECUTIVE	SCIENTIFIC AND PROFESS.	ADMIN. AND FOREIGN SERVICE	TECHNICAL	ADMIN. SUPPORT	OPERN'S	MILITARY	TOTAL
								PY'S	PY'S
DEPARTMENT	PROGRAM								
NHW	NHW-SS	2	10	5	.	7	.	.	24
	TOTAL	18	111	46	14	58	.	.	246
NL	NL	11	188	65	56	180	.	.	500
NMC	NMC-CMC	16	42	86	83	60	31	.	318
	NMC-NGC	7	35	73	69	30	27	.	241
	NMC-NMST	7	6	53	54	25	30	.	175
	TOTAL	30	83	212	206	115	88	.	734
NREV	NREV-TAX	2	83	.	.	.	.	.	85
SC	SC	4	7	14	.	4	.	.	29
SECS	SECS-CIT	.	5	.	1	1	.	.	7
	SECS-ES	.	3	.	2	.	.	.	4
	SECS-OL	.	.	38	.	5	.	.	43
	TOTAL	.	8	38	3	6	.	.	54
SSHRC	SSHRC	10	.	47	.	39	.	.	96
SGEN	SGEN-ADM	3	16	12	.	8	.	.	39
STCAN	STCAN	100	906	800	860	1338	24	.	4028
SS	SS-SUPP	.	.	1	.	1	.	.	2
TPT	TPT-ADM	.	1	.	.	.	.	.	1
	TPT-APT	.	4	.	.	.	.	.	4
	TPT-SUR	1	3	1	2	1	.	.	8
	TOTAL	1	8	1	2	1	.	.	13
TB	TB-ADM	45	23	105	3	34	.	.	210
TOTAL	TOTAL	412	2464	1817	1595	2378	417	39	9122

DATE DUE

JAN 13 1993

