

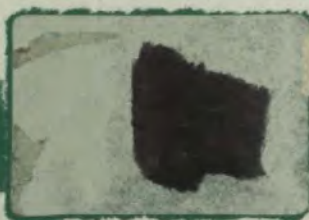
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1972/73

SCIENTIFIC ACTIVITIES



**FEDERAL GOVERNMENT COSTS
AND EXPENDITURES
1963-64 TO 1972-73**

SEPTEMBER, 1972



Ministry of State

Ministère d'État

Science and
Technology

Sciences et
Technologie

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SCIENTIFIC ACTIVITIES

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FEDERAL GOVERNMENT COSTS AND EXPENDITURES 1963-64 TO 1972-73

SEPTEMBER, 1972



Ministry of State

Ministère d'État

Science and
Technology

Sciences et
Technologie

MINISTRE DE L'ÉDUCATION
ET DES SCIENCES
FEB 24 1972
SCIENCE AND TECHNOLOGY
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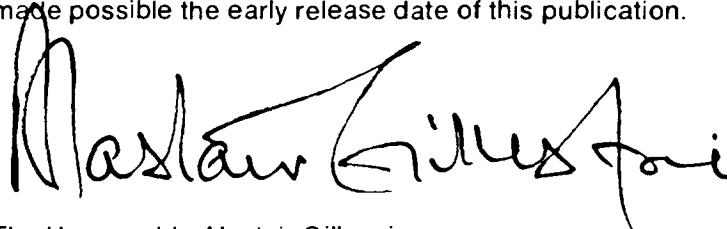
FOREWORD

This annual "Green Book" presents historical and current statistical information on federal support of the natural sciences and engineering, and the human sciences. Data are examined in terms of performance sectors, departmental sources of support, types of scientific activities, manpower resources, fields of science and geographical distribution of funds.

The natural sciences and engineering statistics pertain to the period 1963-64 to 1972-73. The human sciences data appear for the first time in this edition and detail activities for the years 1970-71 to 1972-73.

As further statistical surveys are established, the coverage of this publication will be extended to include data on science funding by industrial, educational and other governmental sectors.

We extend our appreciation to Statistics Canada and the Interdepartmental Committee on Scientific Expenditures who, through their cooperation, have made possible the early release date of this publication.

A handwritten signature in black ink, reading "Alastair Gillespie". The signature is written in a cursive, flowing style with a large initial 'A'.

The Honourable Alastair Gillespie
*Minister of State
for Science and Technology*

EXPLANATORY NOTES

1. Scientific activities are grouped into two categories: research and development, and related scientific activities. The latter include scientific data collection, scientific information, testing and standardization, feasibility studies and scholarship programs. Statistics Canada's publication on federal expenditures on the natural sciences (catalogue No. 13-202) offers definitions of these concepts which respect those established by the Organization for Economic Cooperation and Development in the "Frascati Manual" (OECD, DAS/SPR/70.40).
2. Federal science spending is expressed in terms of both costs and expenditures. As defined by the Interdepartmental Committee on Scientific Expenditures, 'expenditures' refer to the direct costs of scientific activities; 'costs' include the direct and indirect costs of these activities. Indirect costs are comprised of the value of services supplied by other departments, accommodation provided by the reporting agency and administration program costs attributable to scientific activities; they apply only to the intramural activities of departments and agencies.

Unless otherwise stated, the source of all expenditure data is Statistics Canada. Estimates of indirect costs were made by the Ministry of State for Science and Technology (MOSST) and added to expenditures in charts 1 to 7 and 12. Other charts, tables and maps include expenditures only.
3. The term 'natural sciences' is used as an abbreviated form for 'natural sciences and engineering'.
4. As defined by Statistics Canada (catalogue No. 13-545), human sciences include both the social sciences and the humanities.
5. Statistics on continuing personnel are given in full-time equivalent.

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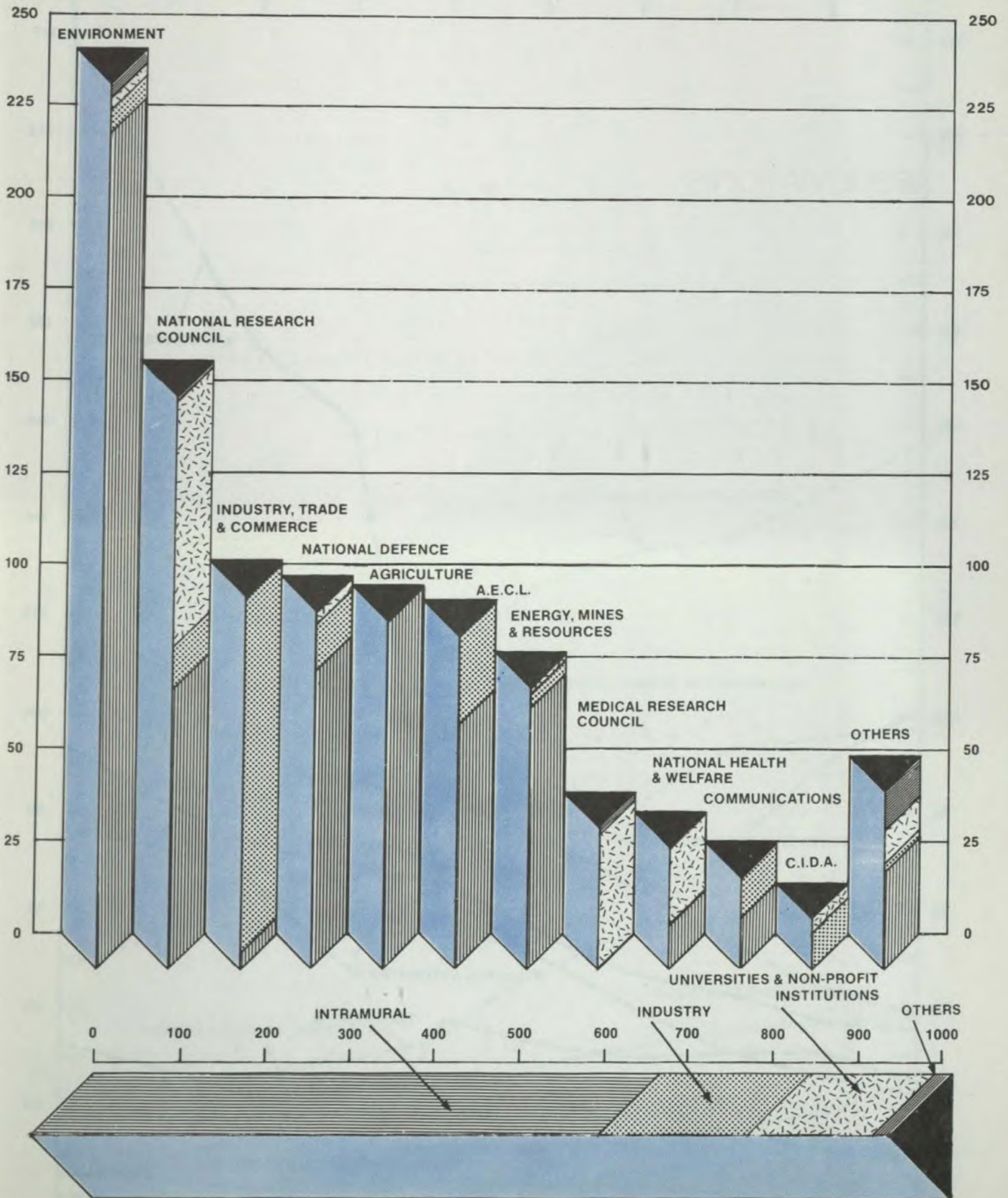
ABBREVIATIONS

AEGB	ATOMIC ENERGY CONTROL BOARD
AECL	ATOMIC ENERGY OF CANADA LIMITED
CIDA	CANADIAN INTERNATIONAL DEVELOPMENT AGENCY
DREE	DEPARTMENT OF REGIONAL ECONOMIC EXPANSION
ED. & NPI	EDUCATIONAL AND NON-PROFIT INSTITUTIONS
EMR	ENERGY, MINES AND RESOURCES
IAND	INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
IDRC	INTERNATIONAL DEVELOPMENT RESEARCH CENTER
IRDIA	INDUSTRIAL RESEARCH AND DEVELOPMENT INCENTIVES ACT
IT&C	INDUSTRY, TRADE AND COMMERCE
MRC	MEDICAL RESEARCH COUNCIL
NH&W	NATIONAL HEALTH AND WELFARE
NRC	NATIONAL RESEARCH COUNCIL

TOTAL COSTS OF SCIENTIFIC ACTIVITIES, BY PERFORMER*

1972-73
(MILLIONS \$)

Chart 1
NATURAL SCIENCES



* See Table No. 1 for total expenditures, p. 21

TOTAL COSTS OF SCIENTIFIC ACTIVITIES, BY DEPARTMENT OR AGENCY

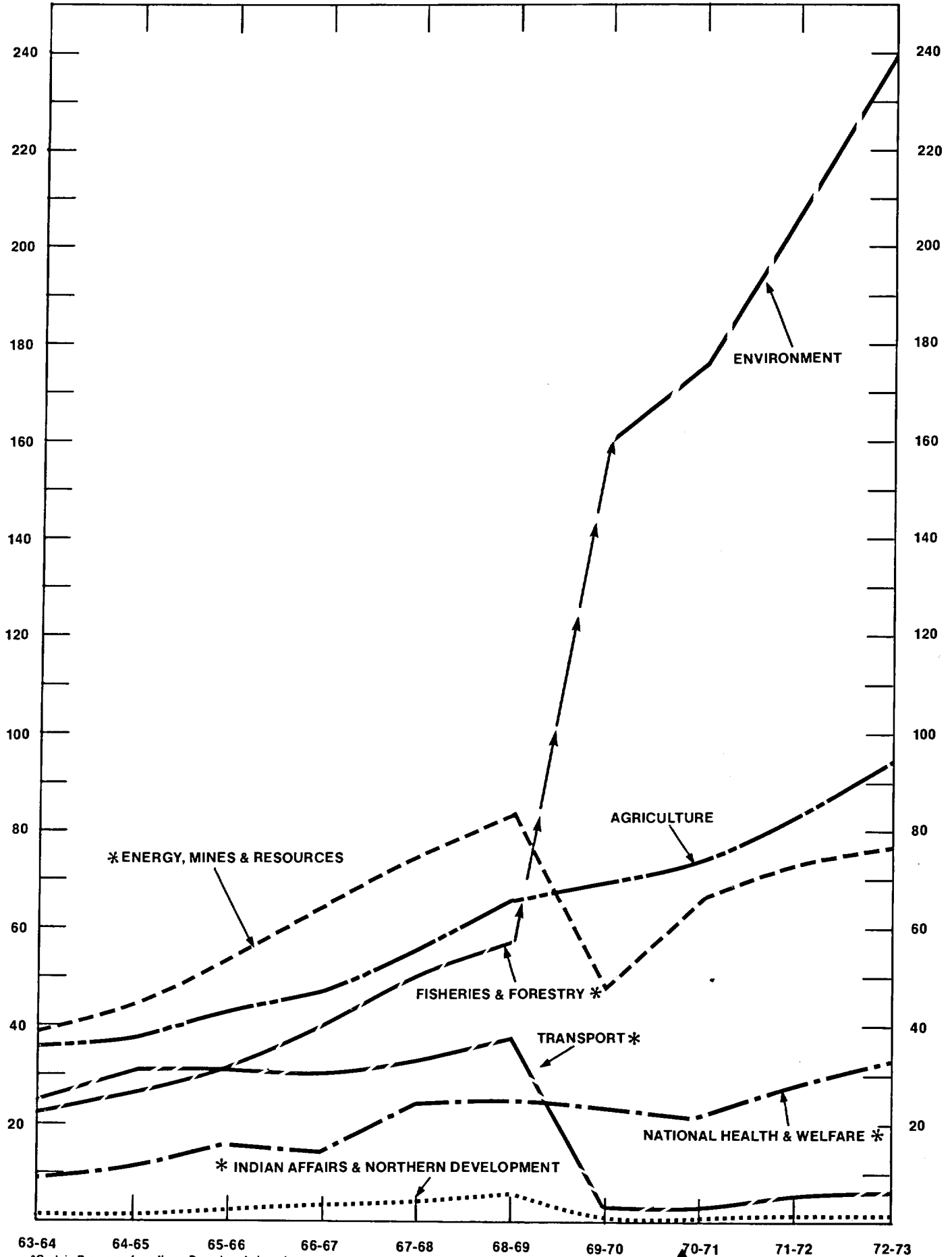
Chart 2

1963-64 to 1972-73

PART I.

(MILLIONS \$)

NATURAL SCIENCES



*Certain Programs from these Departments have been transferred to Environment.

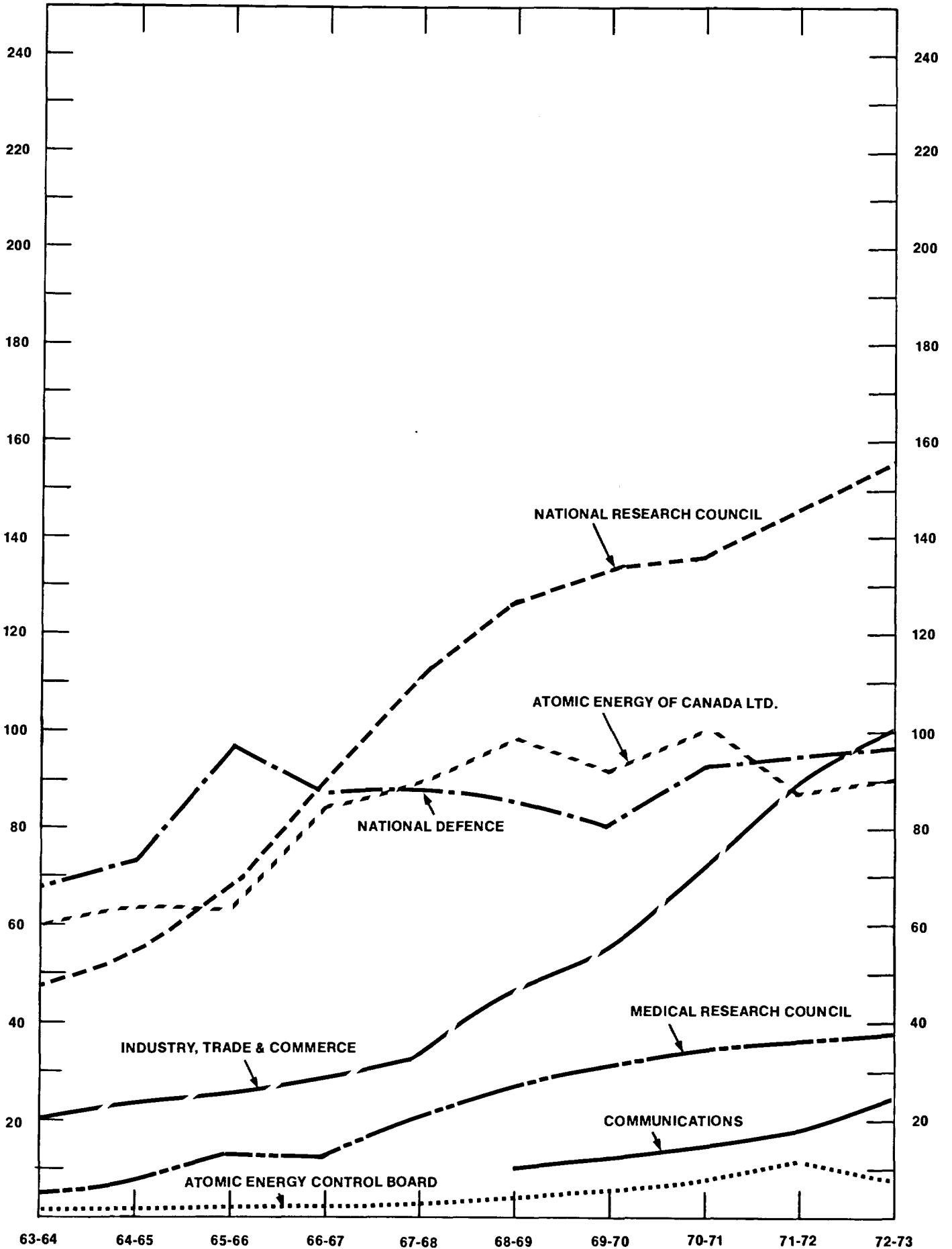
See Table No.3 for total expenditures, p.23

TOTAL COSTS OF SCIENTIFIC ACTIVITIES, BY DEPARTMENT OR AGENCY [▲]

1963-64 to 1972-73

(MILLIONS \$)

Chart 2
PART II.
NATURAL SCIENCES



▲ See Table No.3 for total expenditures, p.23

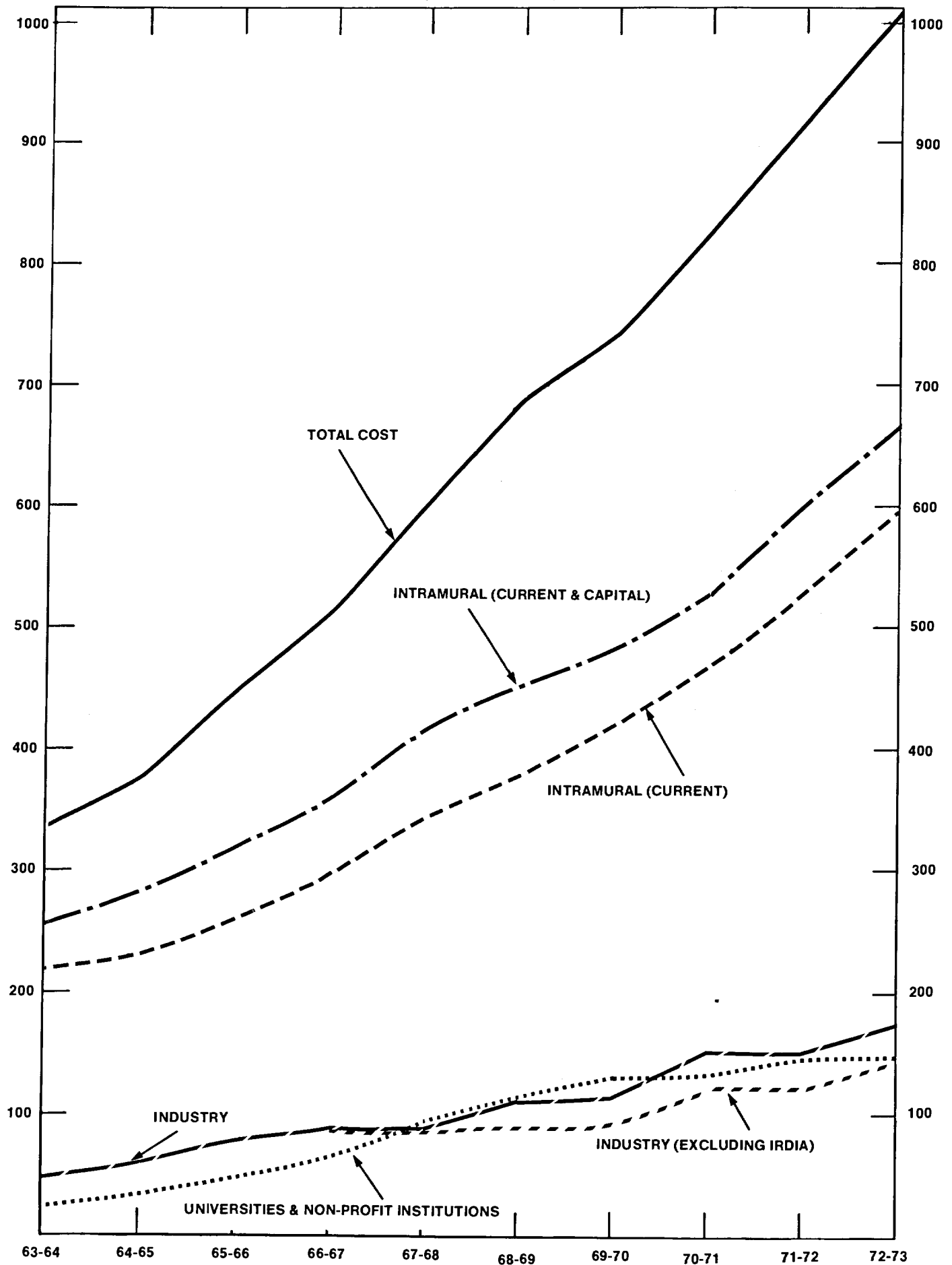
*

TOTAL COSTS OF SCIENTIFIC ACTIVITIES, BY PERFORMER

Chart 3
NATURAL SCIENCES

1963-64 to 1972-73

(MILLIONS \$)



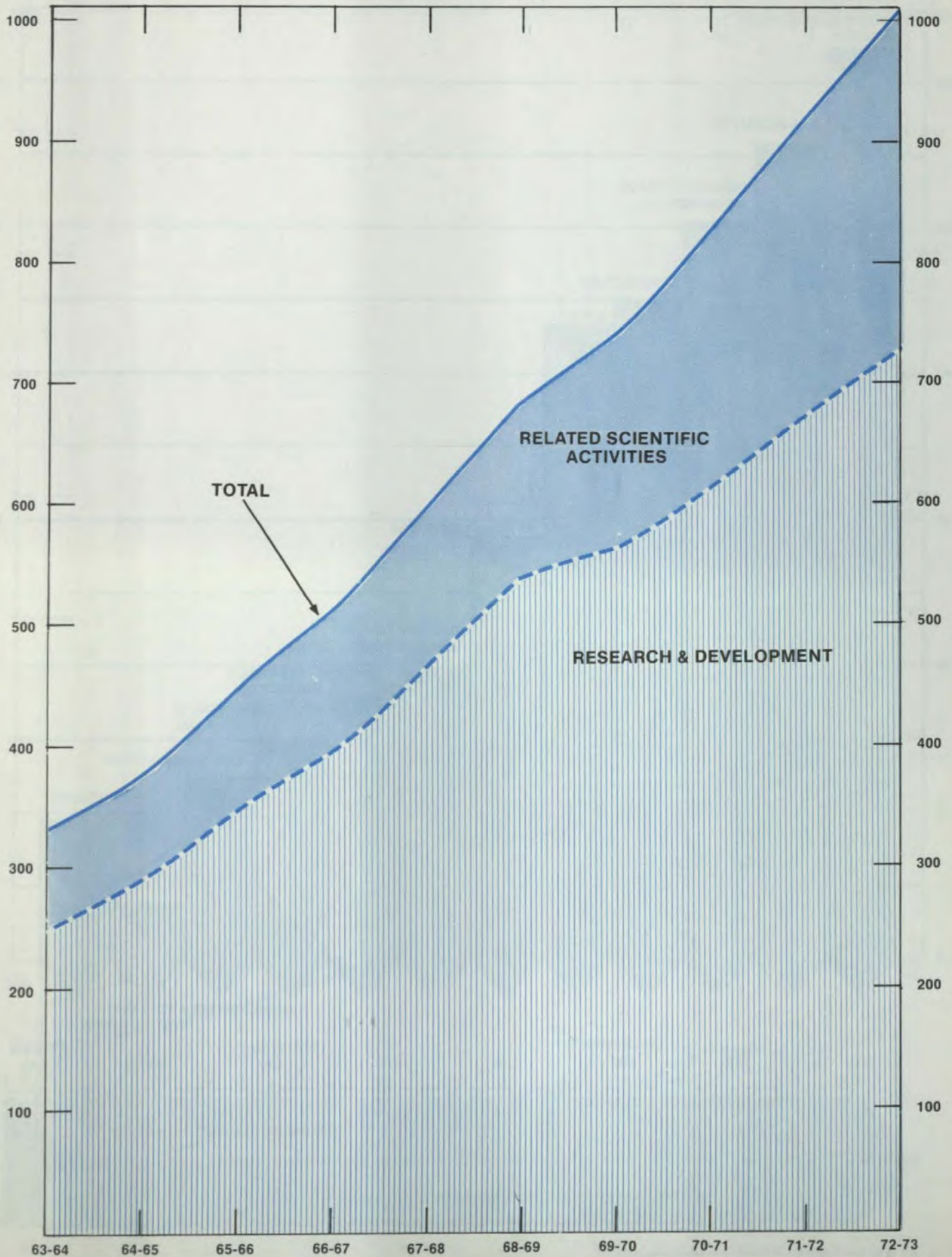
* See Table No. 2 for total expenditures, p. 22

TOTAL COSTS OF SCIENTIFIC ACTIVITIES, BY SCIENTIFIC ACTIVITY*

1963-64 to 1972-73

(MILLIONS \$)

Chart 4
NATURAL SCIENCES



*See Table No. 4 for total expenditures, p.24

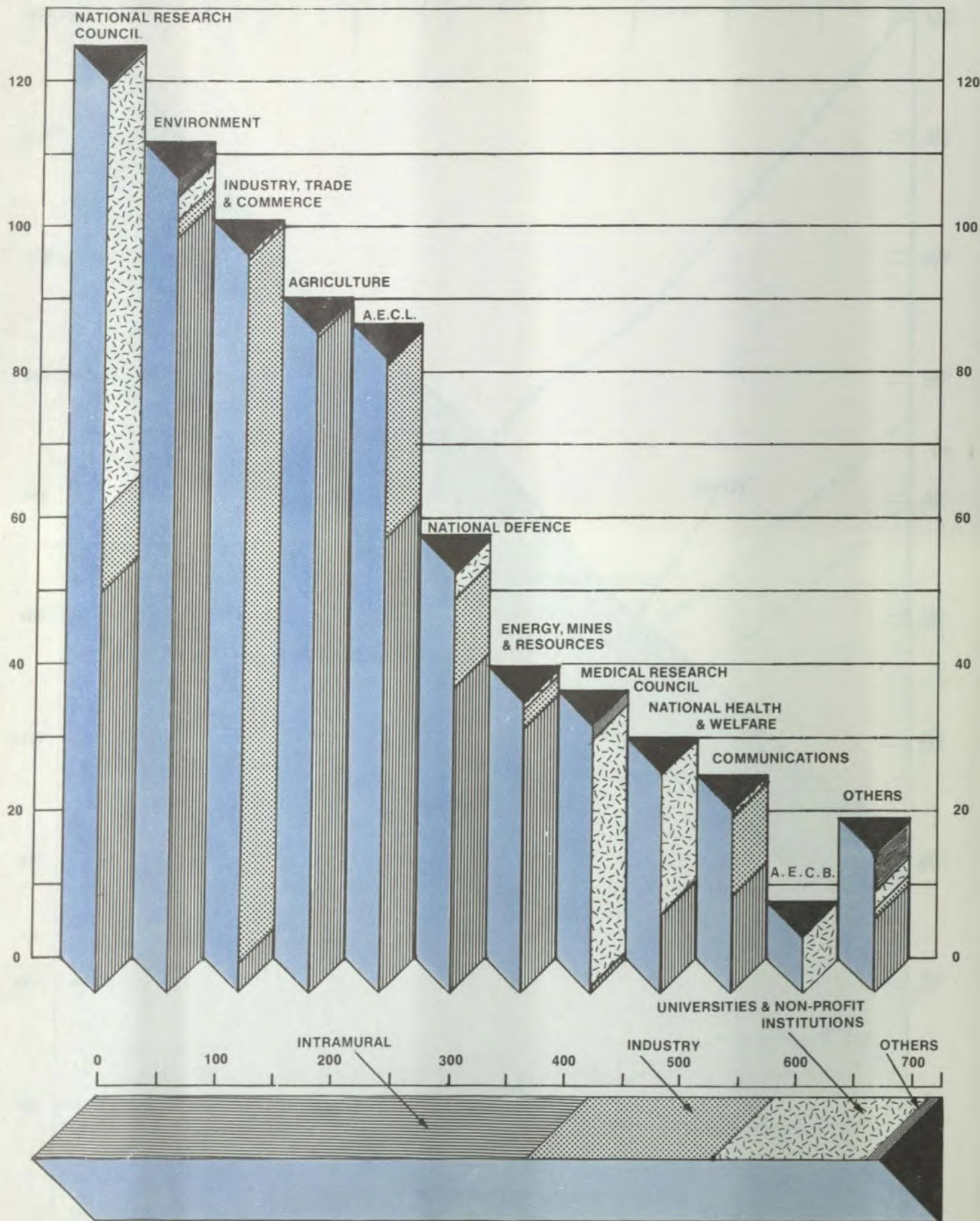
TOTAL COSTS OF RESEARCH & DEVELOPMENT, BY PERFORMER*

Chart 5

1972-73

(MILLIONS \$)

NATURAL SCIENCES



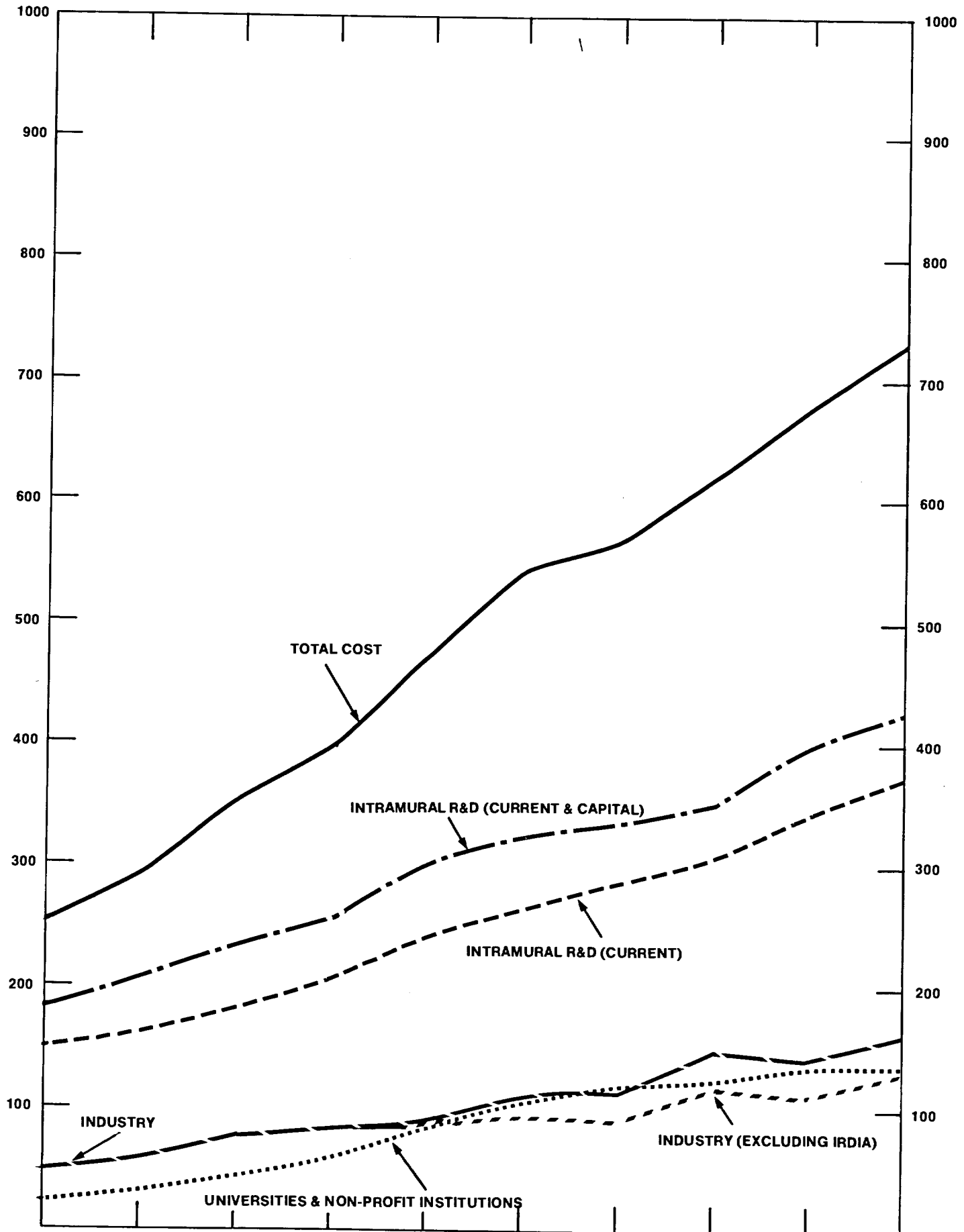
* See Table No. 5 for total expenditures, p 25

TOTAL COSTS OF RESEARCH & DEVELOPMENT, BY PERFORMER*

1963-64 to 1972-73

(MILLIONS \$)

Chart 6
NATURAL SCIENCES



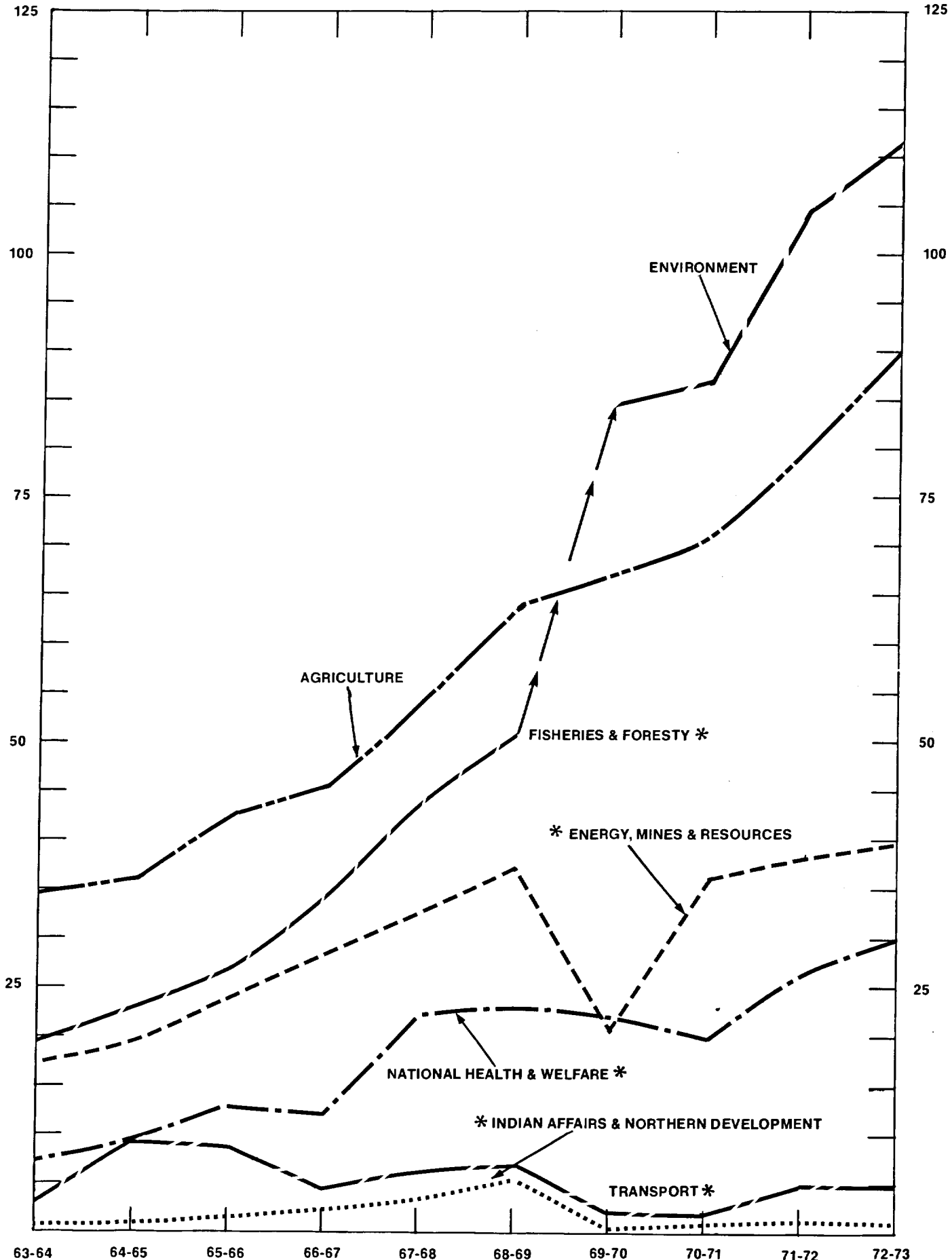
*See Table No. 6 for total expenditures, p.26

TOTAL COSTS OF RESEARCH & DEVELOPMENT, BY DEPARTMENT OR AGENCY

Chart 7
PART I.
NATURAL SCIENCES

1963-64 to 1972-73

(MILLIONS \$)



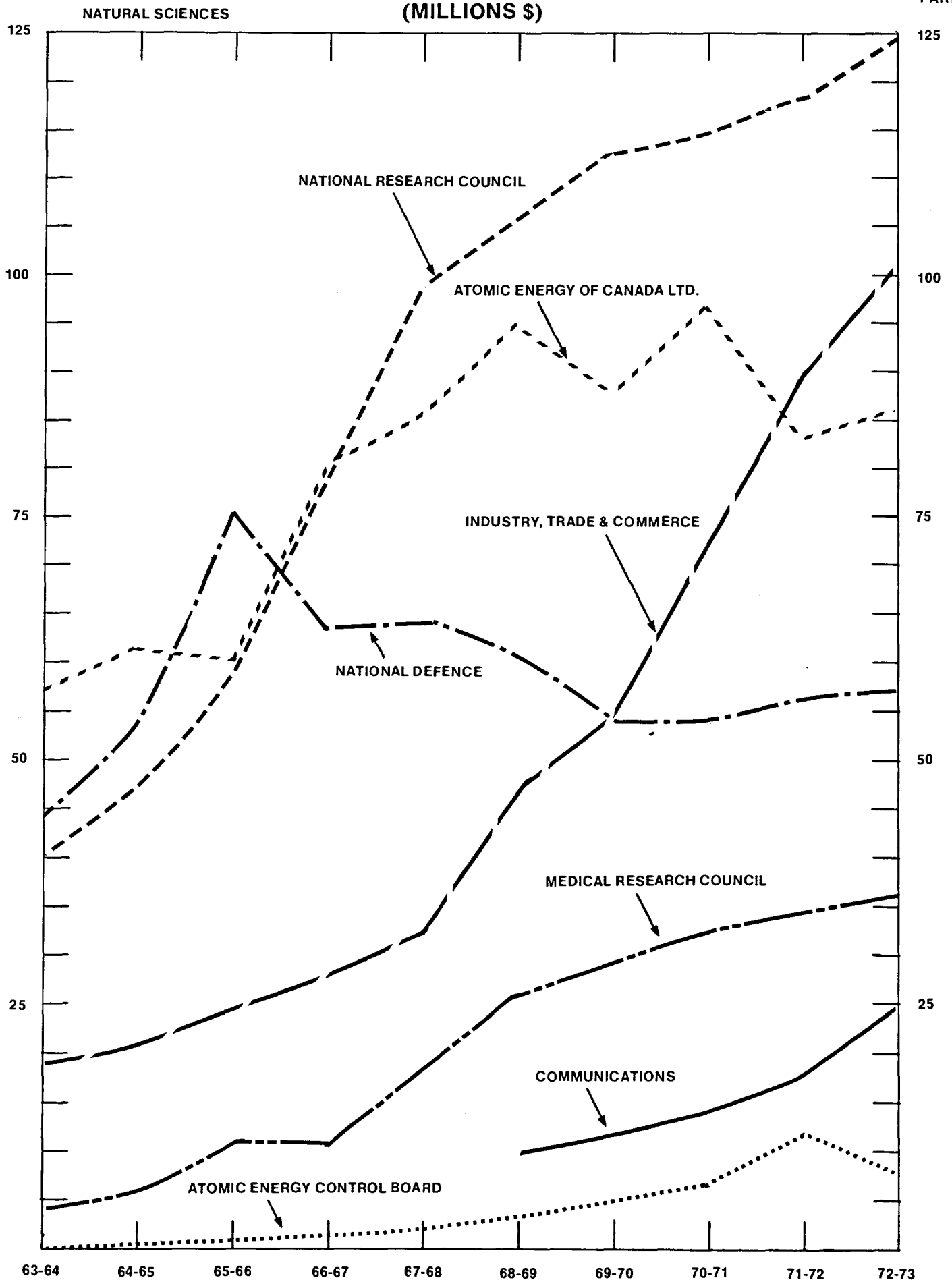
*Certain Programs from these Departments have been transferred to Environment.

▲ See Table No.7 for total expenditures, p.27

TOTAL COSTS OF RESEARCH & DEVELOPMENT, BY DEPARTMENT OR AGENCY

1963-64 to 1972-73

Chart 7
PART II.



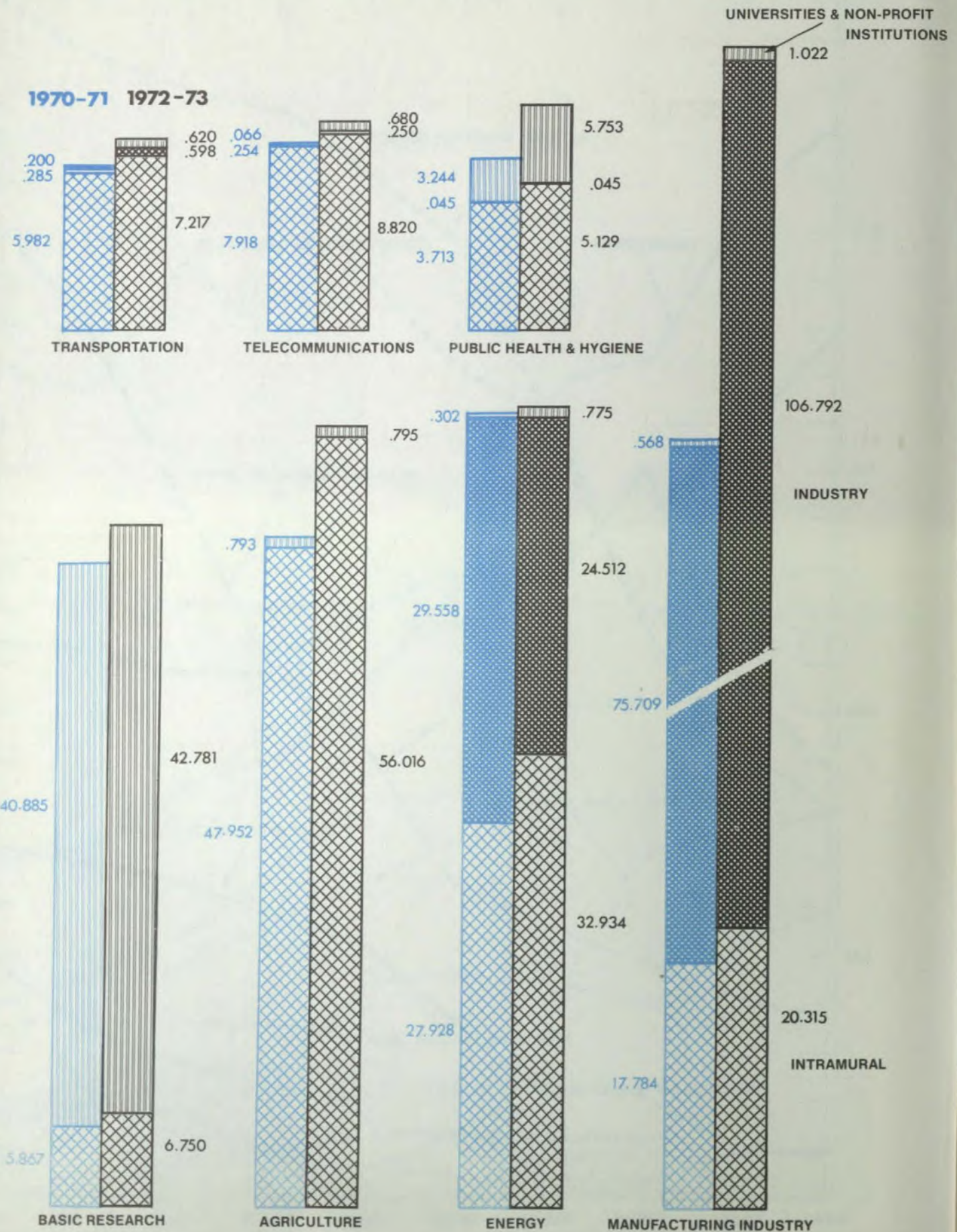
▲ See Table No. 7 for total expenditures, p. 27

PRINCIPAL APPLICATION OF CURRENT EXPENDITURES ON R & D

BY PERFORMER, 1970-71 & 1972-73

(MILLIONS \$)

Chart 8
PART I.
NATURAL SCIENCES



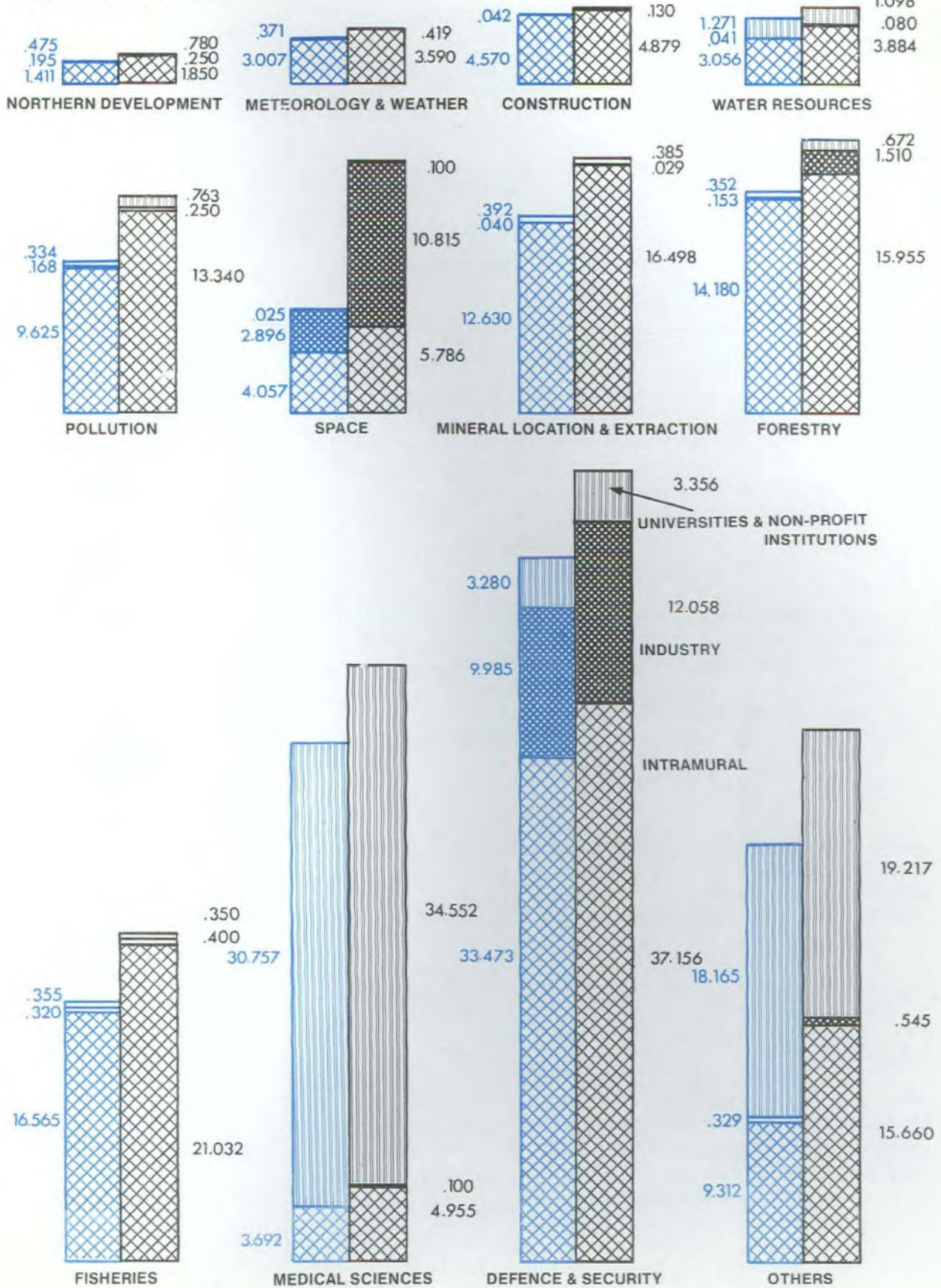
PRINCIPAL APPLICATION OF CURRENT EXPENDITURES ON R & D

BY PERFORMER, 1970-71 & 1972-73

(MILLIONS \$)

Chart 8
PART II.
NATURAL SCIENCES

1970-71 1972-73

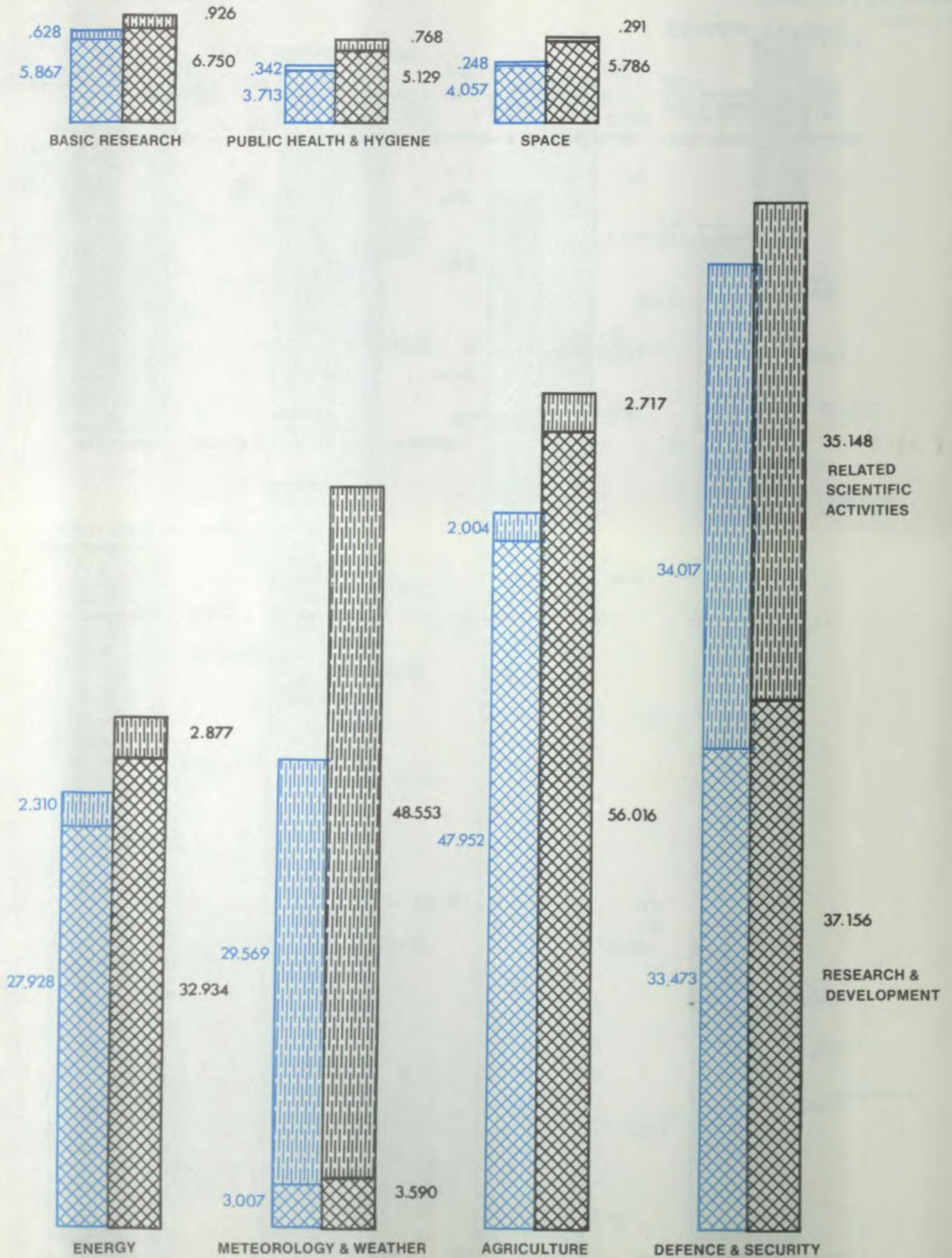


**PRINCIPAL APPLICATION OF CURRENT INTRAMURAL EXPENDITURES
ON SCIENTIFIC ACTIVITIES, BY SCIENTIFIC ACTIVITY, 1970-71 & 1972-73
(MILLIONS \$)**

Chart 9
PART I.

NATURAL SCIENCES

1970-71 1972-73

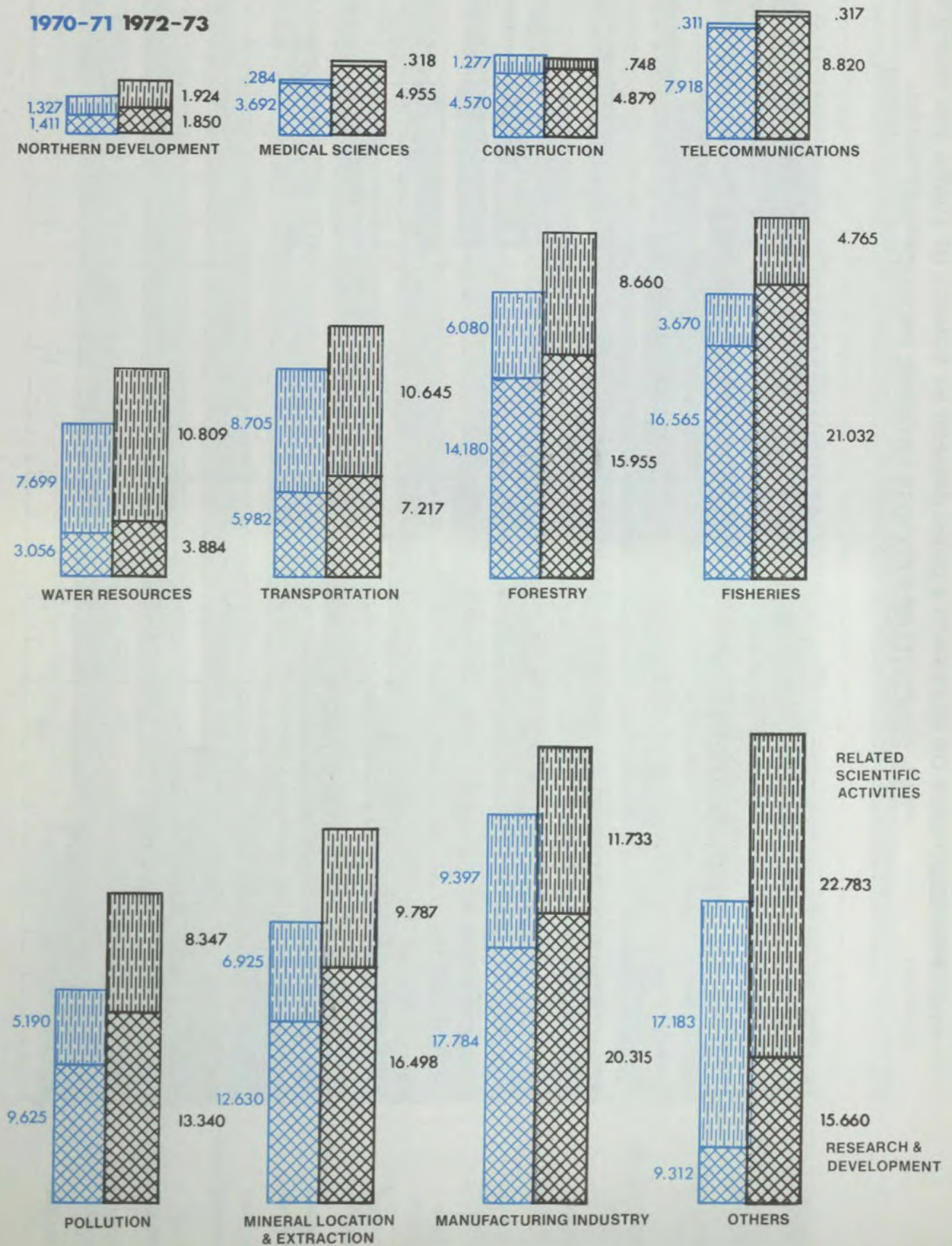


PRINCIPAL APPLICATION OF CURRENT INTRAMURAL EXPENDITURES
ON SCIENTIFIC ACTIVITIES, BY SCIENTIFIC ACTIVITY, 1970-71 & 1972-73

Chart 9
PART II.
NATURAL SCIENCES

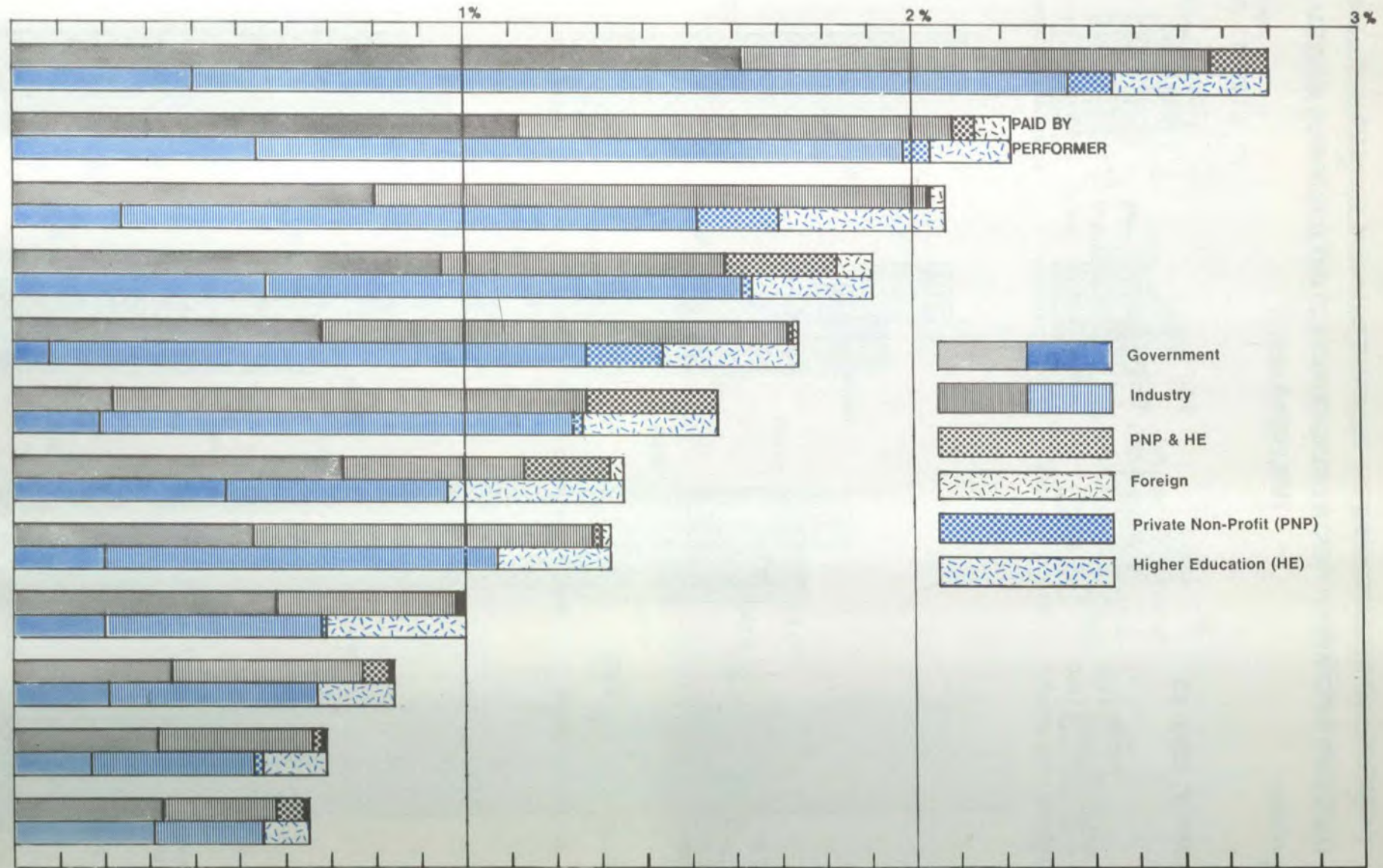
(MILLIONS \$)

1970-71 1972-73



GROSS EXPENDITURES ON RESEARCH & DEVELOPMENT BY SOURCE OF FUNDS AND PERFORMER AS A PERCENTAGE OF GROSS NATIONAL PRODUCT, 1969¹

Chart 10
Natural Sciences

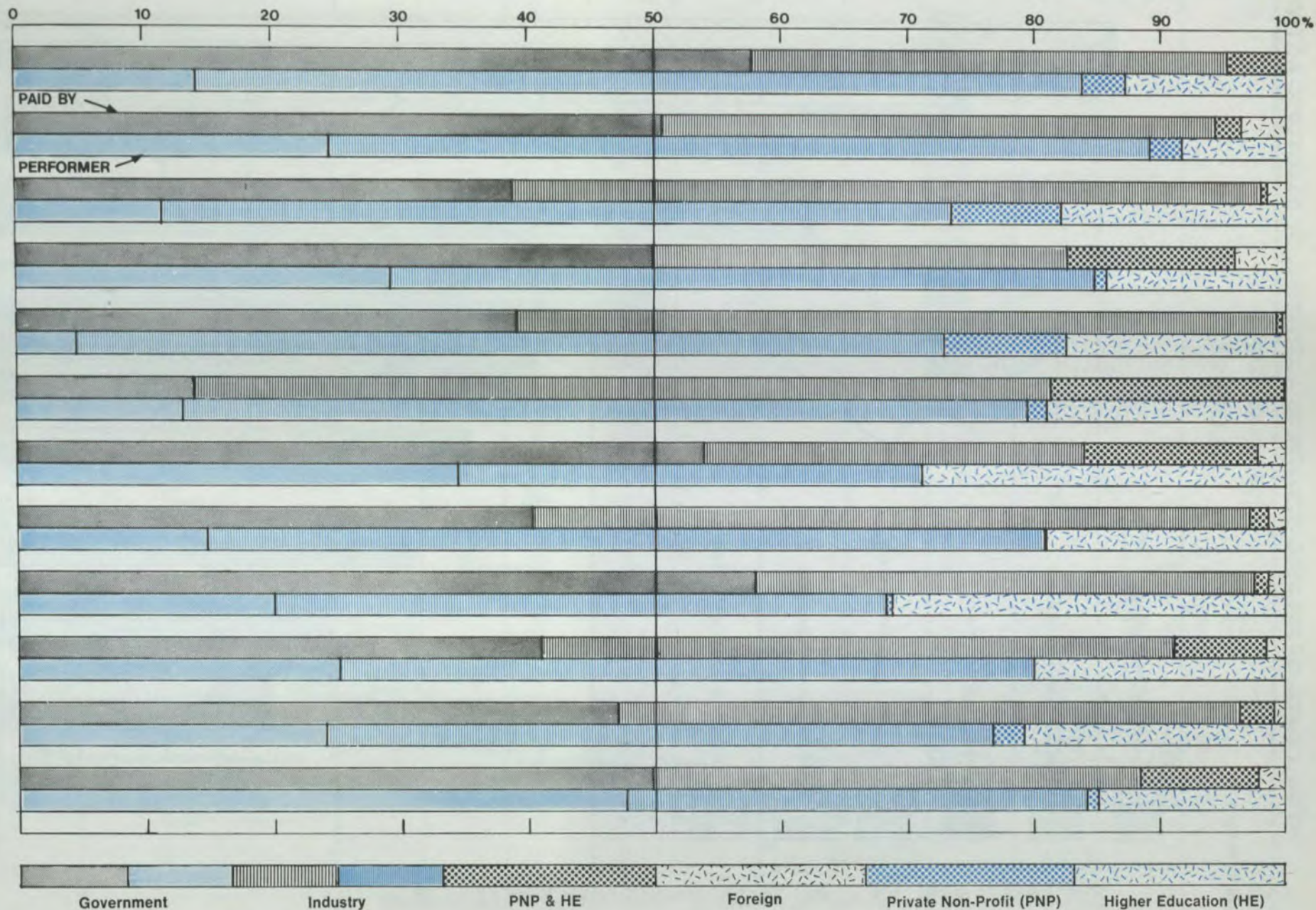


1. Source OECD, DAS/SPR/ 72.22-25. Preliminary data.
2. Includes indirect costs.

GROSS EXPENDITURES ON RESEARCH & DEVELOPMENT BY SOURCE OF FUNDS AND PERFORMER AS A PERCENTAGE OF TOTAL EXPENDITURES, 1969¹

Chart 11

Natural Sciences



1. Source OECD, DAS/SPR/ 72.22-25. Preliminary data.

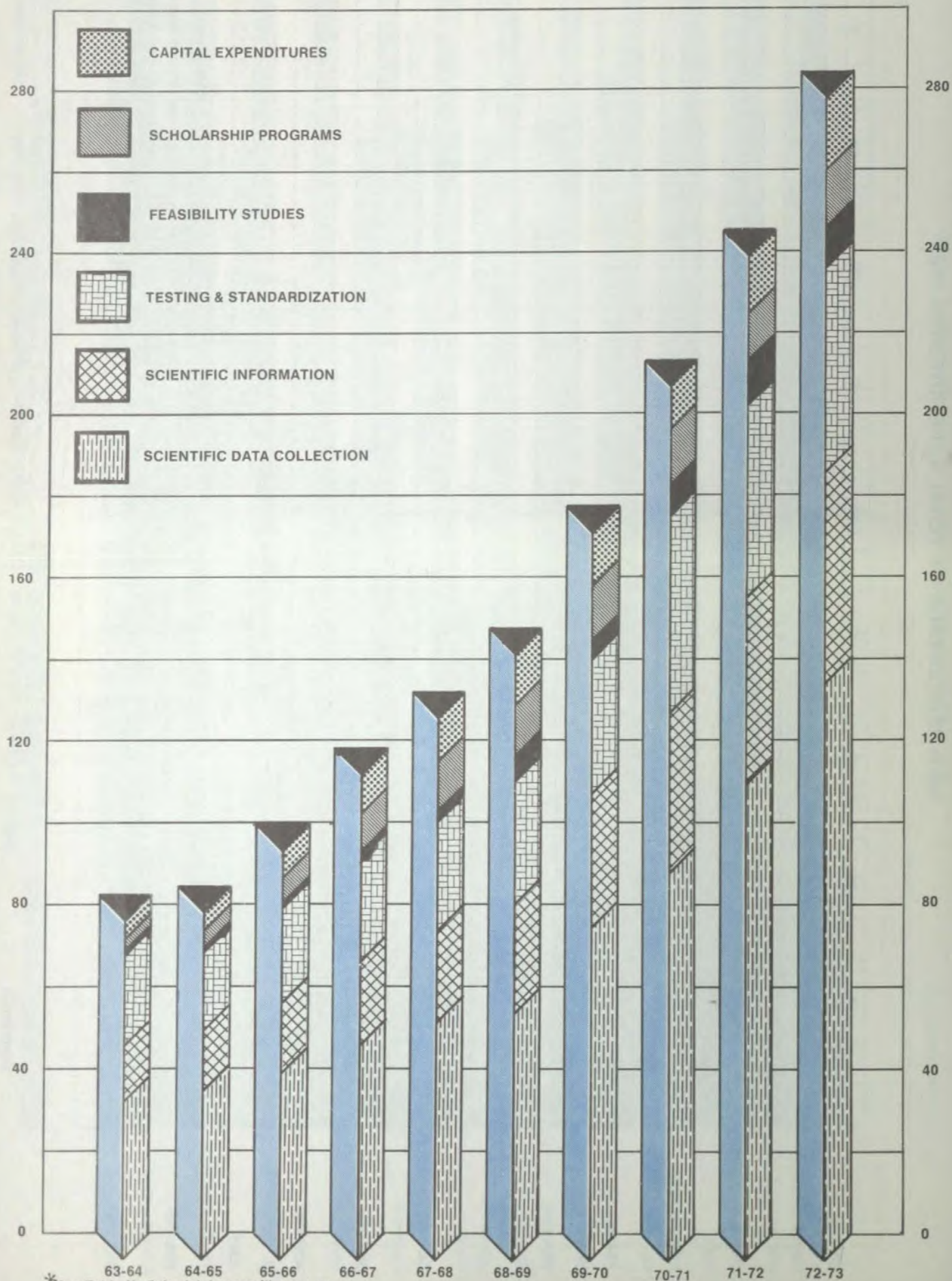
2. Includes indirect costs.

TOTAL COSTS OF RELATED SCIENTIFIC ACTIVITIES, BY SCIENTIFIC ACTIVITY*

Chart 12
NATURAL SCIENCES

1963-64 to 1972-73

(MILLIONS \$)

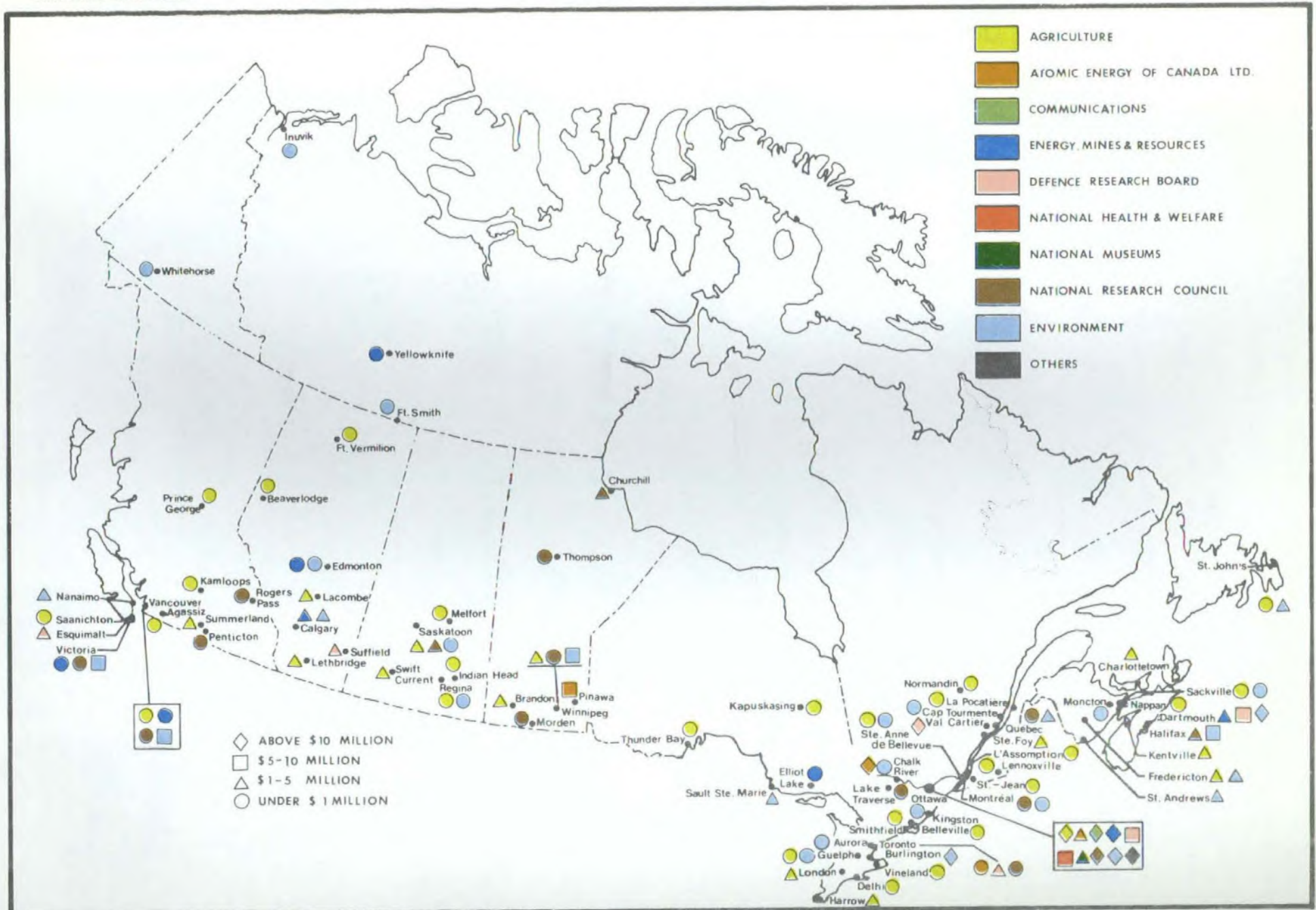


*See Table No. 8 for total expenditures, p. 28

GEOGRAPHICAL DISTRIBUTION OF SCIENTIFIC ESTABLISHMENTS OF FEDERAL DEPARTMENTS AND AGENCIES BY BUDGET 1970-71

NATURAL SCIENCES

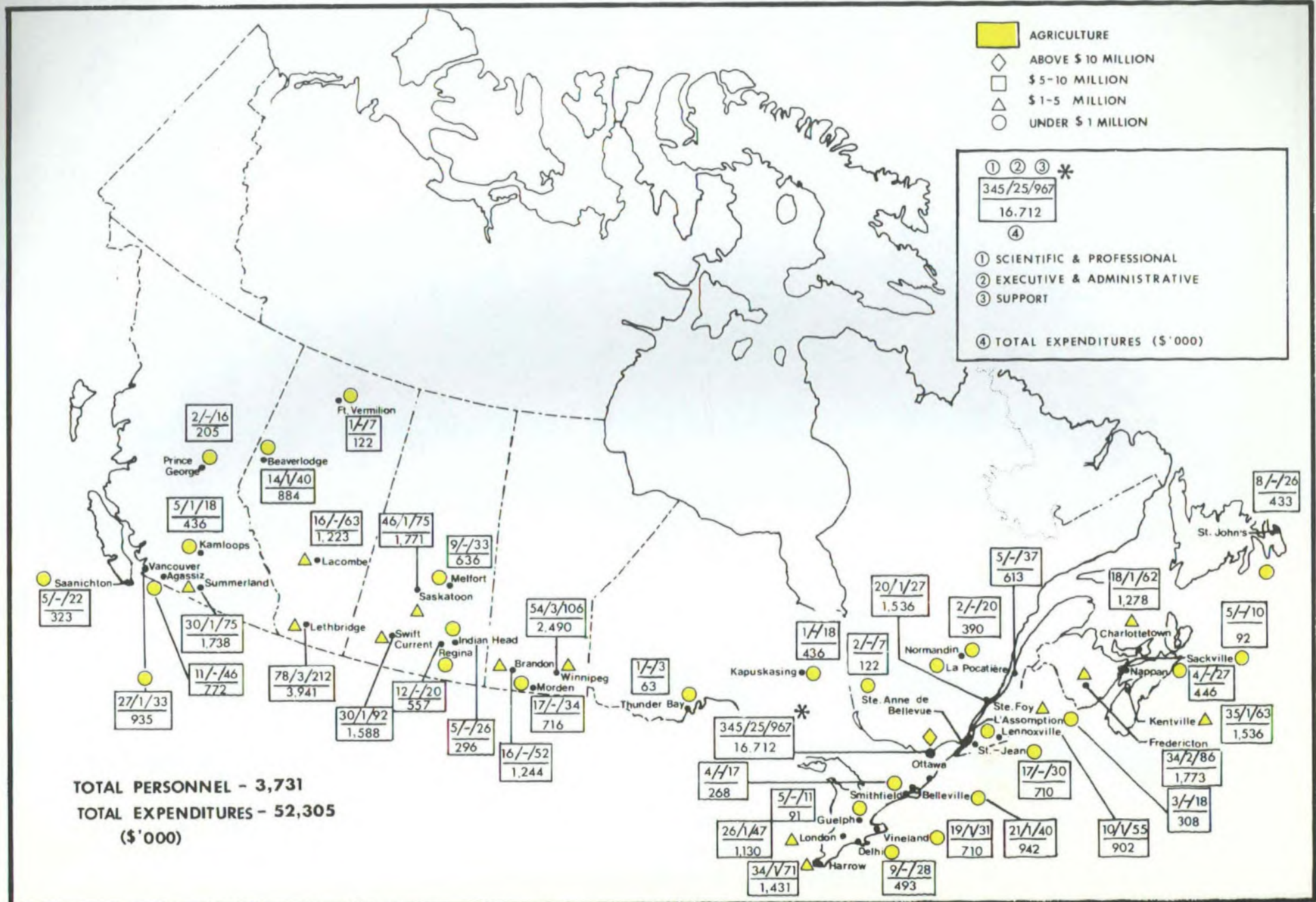
MAP 1



GEOGRAPHICAL DISTRIBUTION OF SCIENTIFIC ESTABLISHMENTS OF THE AGRICULTURE DEPARTMENT (BUDGET & PERSONNEL) 1970-71

NATURAL SCIENCES

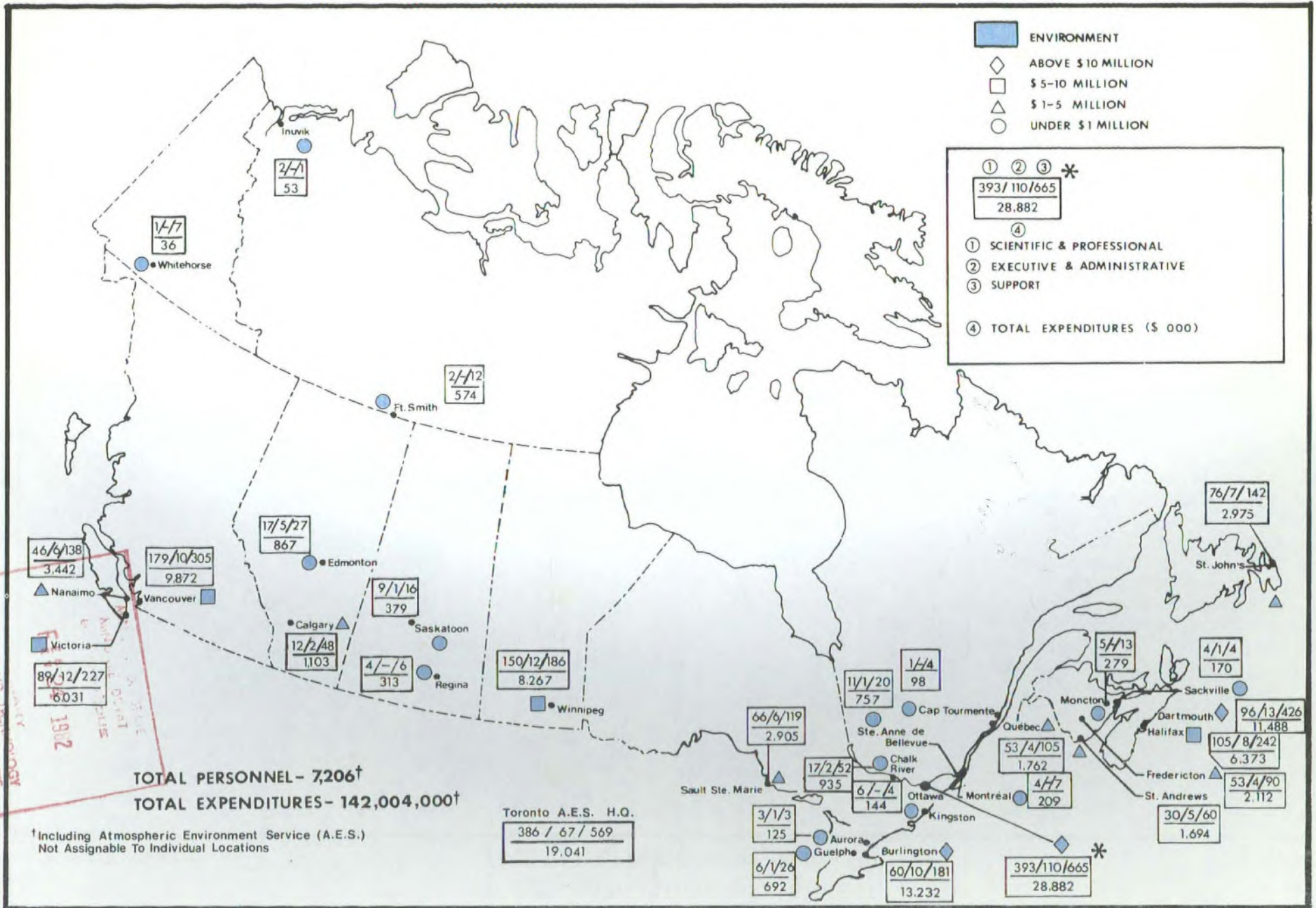
MAP 2



GEOGRAPHICAL DISTRIBUTION OF SCIENTIFIC ESTABLISHMENTS OF ENVIRONMENT CANADA (BUDGET & PERSONNEL) 1970-71

NATURAL SCIENCES

MAP 3



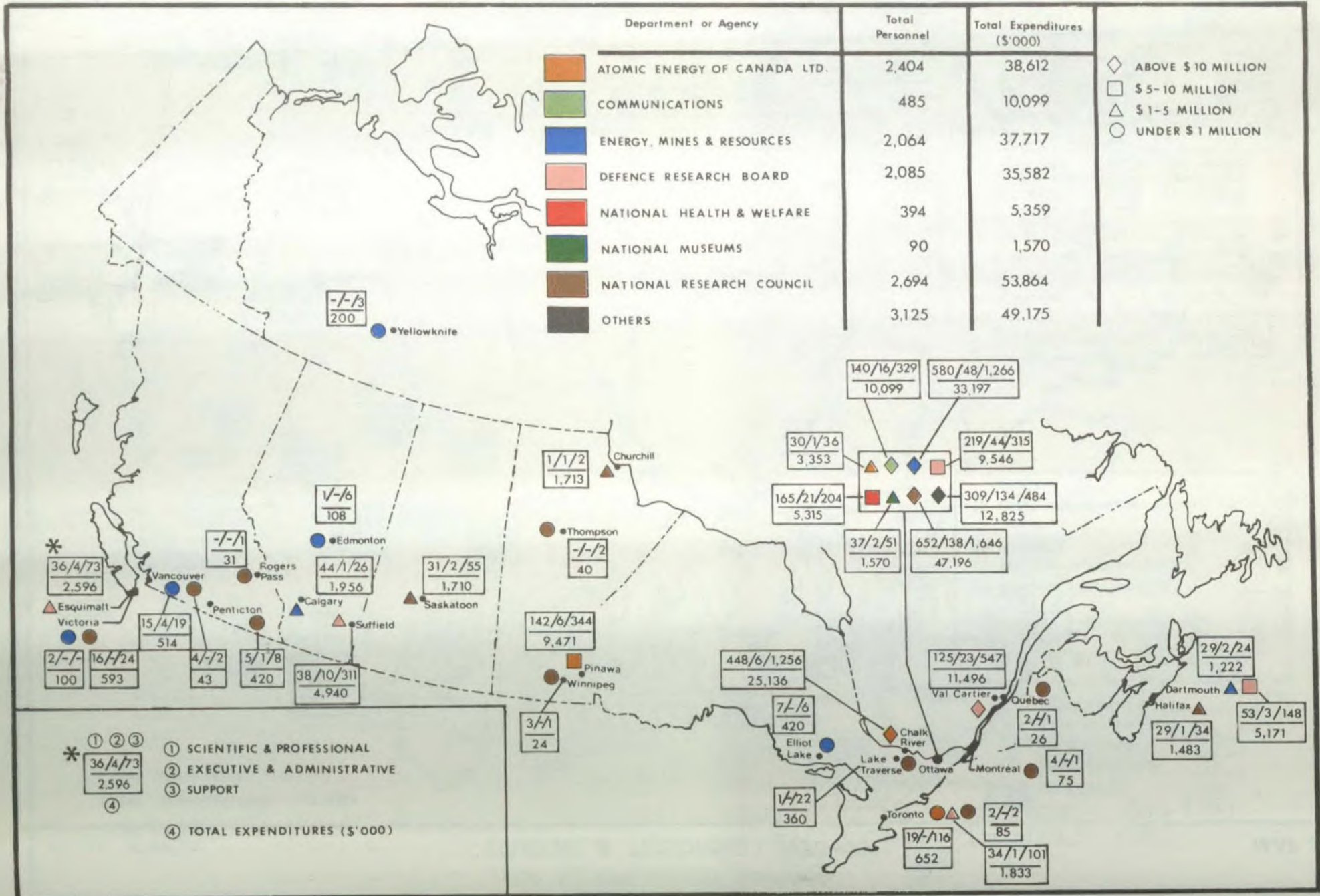
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GEOGRAPHICAL DISTRIBUTION OF SCIENTIFIC ESTABLISHMENTS OF OTHER FEDERAL DEPARTMENTS & AGENCIES (BUDGET & PERSONNEL) 1970-71

NATURAL SCIENCES

MAP 4



**TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES
BY PERFORMER
1972-1973
(MILLIONS \$)**

Table 1
NATURAL SCIENCES

DEPARTMENT OR AGENCY	INTRAMURAL	INDUSTRY	ED. & NPI	OTHERS*	TOTAL
ENVIRONMENT	191.073	6.095	3.384	4.028	204.580
NATIONAL RESEARCH COUNCIL	63.659	11.230	66.870	1.561	143.320
INDUSTRY, TRADE & COMMERCE	3.460	95.857	1.105	—	100.422
NATIONAL DEFENCE	70.922	12.445	3.350	0.730	87.447
AGRICULTURE	69.067	—	0.788	0.012	69.867
AECL	43.267	24.100	0.630	0.090	68.087
ENERGY, MINES & RESOURCES	54.061	3.801	1.555	0.377	59.794
M.R.C.	0.540	—	35.366	2.094	38.000
NATIONAL HEALTH & WELFARE	8.167	0.145	20.785	0.459	29.556
COMMUNICATIONS	12.183	10.815	0.780	—	23.778
CIDA	—	9.500	4.150	—	13.650
CONSUMER & CORPORATE AFFAIRS	7.001	—	—	—	7.001
OTHERS	12.998	1.995	9.514	10.522	35.029
TOTAL	536.398	175.983	148.277	19.873	880.531

*Includes other Canadian and Foreign Performers.

**TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES
BY PERFORMER
1963-64 to 1972-73
(MILLIONS \$)**

Table 2
NATURAL SCIENCES

PERFORMER	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
INTRAMURAL (CURRENT & CAPITAL)	222.921	242.713	281.289	309.293	355.974	386.041	397.694	426.223	482.355	536.398
INTRAMURAL (CURRENT)	184.859	192.086	221.252	250.052	285.229	312.631	337.714	369.888	412.096	463.882
INDUSTRY	50.177	59.114	78.247	87.260	87.524	111.627	115.287	153.837	152.318	175.983
INDUSTRY (EXCLUDING IRDIA)	50.177	59.114	78.247	87.260	85.424	92.027	92.287	123.737	121.318	143.983
UNIVERSITIES & NON-PROFIT INSTITUTIONS	25.902	33.720	47.959	65.101	93.889	115.485	130.419	133.649	148.283	148.277
OTHER CANADIAN & FOREIGN PERFORMERS	1.577	1.810	2.609	3.611	5.432	8.629	12.594	14.347	17.277	19.873
TOTAL	300.577	337.357	410.104	465.265	542.819	621.782	655.994	728.056	800.233	880.531

**TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES
BY DEPARTMENT OR AGENCY
1963-64 to 1972-73
(MILLIONS \$)**

Table 3
NATURAL SCIENCES

DEPARTMENT OR AGENCY	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
ENVIRONMENT	—	—	—	—	—	—	135.869	148.420	175.667	204.580
NRC	42.499	49.603	62.882	84.474	104.465	118.796	124.271	126.386	134.000	143.320
IT & C	19.450	21.012	24.888	28.049	32.591	46.972	54.120	71.855	89.348	100.422
NATIONAL DEFENCE	64.647	69.500	93.488	83.884	84.718	81.414	76.265	84.482	85.234	87.447
AGRICULTURE	29.797	30.309	36.756	39.207	46.455	54.264	54.063	55.507	59.583	69.867
AECL	50.169	54.012	52.192	69.973	72.776	81.047	75.076	82.383	66.397	68.087
EMR *	33.310	36.790	45.550	55.940	62.660	69.590	37.992	51.765	57.892	59.794
MRC	5.169	7.036	12.372	12.471	20.728	27.211	31.273	34.365	36.144	38.000
NH&W *	7.449	9.661	14.422	12.924	22.297	23.282	20.964	19.427	25.562	29.556
COMMUNICATIONS	—	—	—	—	—	10.207	11.828	13.300	16.997	23.778
AECB	.900	1.250	1.600	2.000	2.500	3.595	5.415	7.146	11.780	7.610
TRANSPORT *	21.743	28.477	28.648	27.262	29.995	34.578	2.656	2.462	5.588	5.772
FISHERIES & FORESTRY *	18.360	22.010	26.670	34.340	44.510	49.610	—	—	—	—
OTHERS *	7.084	7.697	10.636	14.741	19.124	21.216	26.202	30.558	36.041	42.298
TOTAL	300.577	337.357	410.104	465.265	542.819	621.782	655.994	728.056	800.233	880.531

*Certain Programs from these Departments have been transferred to Environment.

**TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES
BY ACTIVITY
1963-64 to 1972-73
(MILLIONS \$)**

Table 4
NATURAL SCIENCES

SCIENTIFIC ACTIVITY	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
TOTAL EXPENDITURES	300.577	337.357	410.104	465.265	542.819	621.782	655.994	728.056	800.233	880.531
CURRENT	249.772	276.637	341.799	382.335	443.276	511.221	562.052	629.702	701.694	785.858
CAPITAL	50.805	60.720	68.305	82.930	99.543	110.561	93.942	98.354	98.539	94.673
RESEARCH & DEVELOPMENT	226.632	262.289	321.205	359.756	426.626	491.919	503.372	548.156	593.275	640.863
CURRENT	180.253	206.132	259.662	286.467	337.804	393.707	422.615	460.527	508.880	563.833
CAPITAL	46.379	56.157	61.543	73.289	88.822	98.212	80.757	87.629	84.395	77.030
RELATED SCIENTIFIC ACTIVITIES	73.945	75.068	88.899	105.509	116.193	129.863	152.622	179.900	206.958	239.668
CURRENT	69.519	70.505	82.137	95.868	105.472	117.514	139.437	169.175	192.814	222.025
CAPITAL	4.426	4.563	6.762	9.641	10.721	12.349	13.185	10.725	14.144	17.643

**TOTAL EXPENDITURES ON RESEARCH & DEVELOPMENT
BY PERFORMER
1972-1973
(MILLIONS \$)**

Table 5
NATURAL SCIENCES

DEPARTMENT OR AGENCY	INTRAMURAL	CANADIAN INDUSTRY	EDUCATIONAL & NON-PROFIT INST.	OTHERS ^o	TOTAL
NATIONAL RESEARCH COUNCIL	45.157	11.180	58.360	.870	115.567
INDUSTRY, TRADE & COMMERCE	3.460	95.857	.890	—	100.207
ENVIRONMENT	88.545	2.345	3.374	2.663	96.927
AGRICULTURE	66.160	—	.788	.012	66.960
AECL	40.791	24.015	.630	.090	65.526
NATIONAL DEFENCE	36.755	12.045	3.350	.730	52.880
MEDICAL RESEARCH COUNCIL	.508	—	33.579	2.024	36.111
ENERGY, MINES & RESOURCES	28.068	2.579	.977	.285	31.909
NATIONAL HEALTH & WELFARE	7.321	.145	19.060	.259	26.785
COMMUNICATIONS	11.873	10.815	.780	—	23.468
AECB	—	.115	7.495	—	7.610
TRANSPORT	2.550	.806	.495	.525	4.376
REGIONAL ECONOMIC EXPANSION	.234	—	.445	2.500	3.179
IDRC	.517	—	.144	2.007	2.668
NATIONAL MUSEUMS	1.389	—	—	—	1.389
OTHERS	3.311	.440	1.430	.120	5.301
TOTAL	336.639	160.342	131.797	12.085	640.863

^oIncludes other Canadian and Foreign Performers.

**TOTAL EXPENDITURES ON RESEARCH & DEVELOPMENT
BY PERFORMER
1963-64 to 1972-73
(MILLIONS \$)**

Table 6
NATURAL SCIENCES

PERFORMER	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
INTRAMURAL (CURRENT & CAPITAL)	155.657	175.418	201.927	217.576	255.950	272.027	269.852	278.332	313.921	336.639
INTRAMURAL (CURRENT)	122.021	129.354	148.652	167.976	195.926	210.966	223.057	232.722	257.806	281.766
INDUSTRY	47.185	55.821	75.516	83.748	84.446	108.953	109.802	144.289	139.677	160.342
INDUSTRY (EXCLUDING IRDIA)	47.185	55.821	75.516	83.748	82.346	89.353	86.802	114.189	108.677	128.342
UNIVERSITIES & NON-PROFIT INSTITUTIONS	22.867	30.049	41.874	56.028	82.185	103.180	117.038	119.166	132.853	131.797
OTHER CANADIAN & FOREIGN PERFORMERS	0.923	1.001	1.888	2.404	4.045	7.759	6.680	6.369	6.824	12.085
TOTAL	226.632	262.289	321.205	359.756	426.626	491.919	503.372	548.156	593.275	640.863

**TOTAL EXPENDITURES ON RESEARCH & DEVELOPMENT
BY DEPARTMENT OR AGENCY
1963-64 to 1972-73
(MILLIONS \$)**

Table 7
NATURAL SCIENCES

DEPARTMENT OR AGENCY	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
NRC	37.458	44.139	55.168	74.671	93.032	100.036	105.789	106.908	110.084	115.567
IT&C	19.450	21.012	24.886	28.044	32.570	46.920	54.028	71.538	89.215	100.207
ENVIRONMENT	—	—	—	—	—	—	72.835	74.853	90.167	96.927
AGRICULTURE	28.823	29.650	35.991	38.226	45.182	52.729	52.266	53.528	57.345	66.960
AECL	49.297	52.904	50.958	68.182	70.765	78.997	72.507	80.010	63.976	65.526
NATIONAL DEFENCE	42.913	51.926	73.598	61.941	62.714	59.294	52.378	50.170	51.754	52.880
MRC	4.688	6.309	11.553	11.343	18.769	26.150	29.579	32.701	34.420	36.111
EMR*	14.710	16.160	20.480	24.740	27.550	31.580	16.614	29.401	31.062	31.909
NH&W*	6.583	8.278	11.897	11.183	20.544	21.536	20.099	17.670	23.924	26.785
COMMUNICATIONS	—	—	—	—	—	9.925	11.525	12.978	16.737	23.468
AECB	.900	1.250	1.600	2.000	2.500	3.595	5.415	7.146	11.780	7.610
TRANSPORT*	2.966	8.618	8.056	4.108	5.744	6.406	2.082	1.719	4.562	4.376
FISHERIES & FORESTRY*	16.130	19.190	23.010	29.820	38.940	44.270	—	—	—	—
OTHERS*	2.714	2.853	4.008	5.498	8.316	10.481	8.255	9.534	8.249	12.537
TOTAL	226.632	262.289	321.205	359.756	426.626	491.919	503.372	546.156	593.275	640.863

* Certain programs from these departments have been transferred to Environment.

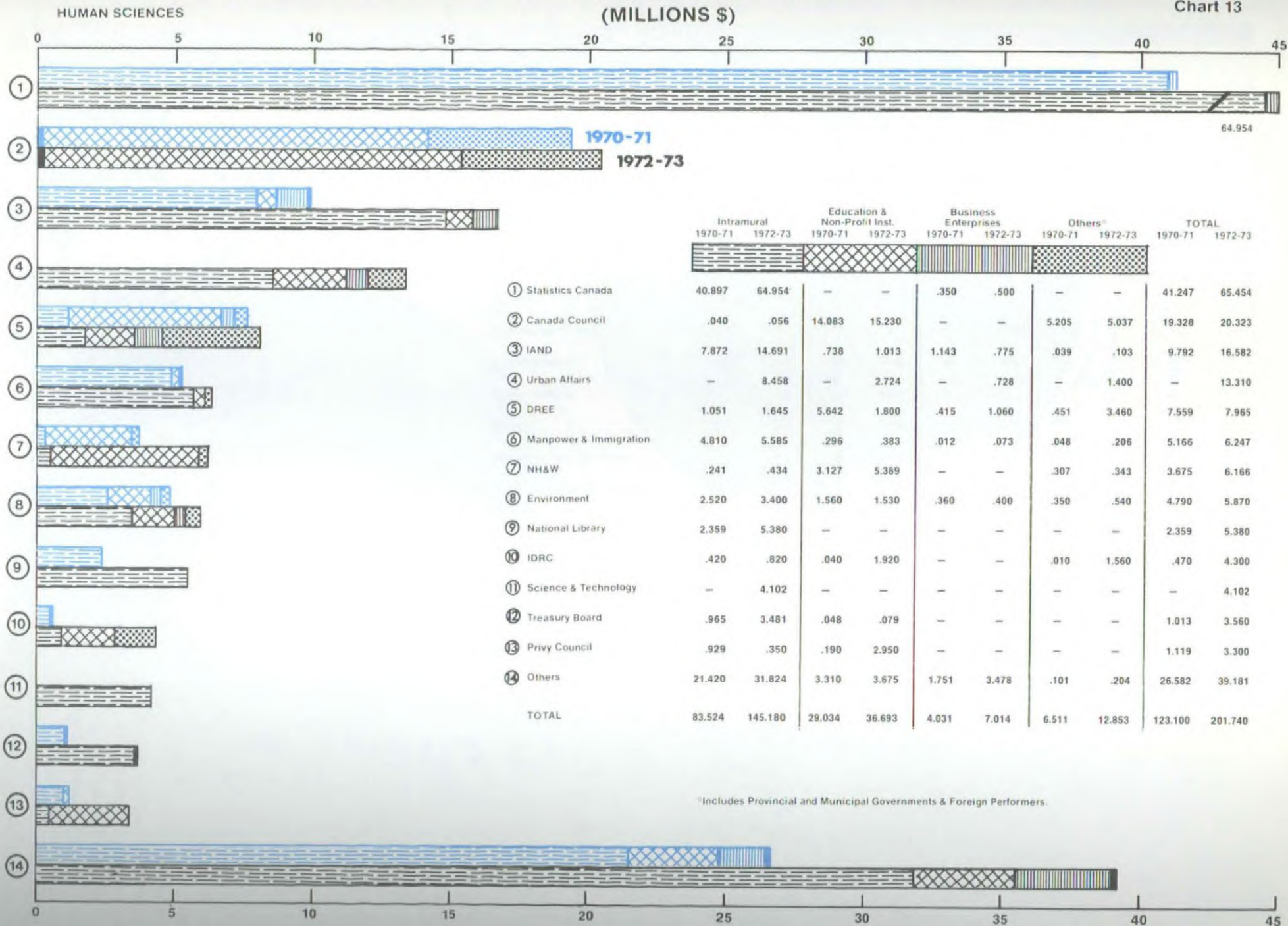
**TOTAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES
BY SCIENTIFIC ACTIVITY
1963-64 to 1972-73
(\$ MILLIONS)**

Table 8
NATURAL SCIENCES

	63-64	64-65	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73
TOTAL CURRENT EXPENDITURES	69.519	70.505	82.137	95.868	105.472	117.514	139.437	169.175	192.814	222.025
SCIENTIFIC DATA COLLECTION	33.933	35.721	39.330	45.407	49.315	51.251	68.216	78.184	96.071	116.034
SCIENTIFIC INFORMATION	12.041	12.972	15.425	17.823	19.407	22.735	26.832	31.617	37.098	42.265
TESTING & STANDARDIZATION	19.801	16.906	20.309	22.034	22.675	25.519	27.056	38.867	37.786	40.477
SCHOLARSHIP PROGRAMMES	3.184	4.236	6.223	9.404	12.075	12.598	13.186	13.527	14.109	14.054
FEASIBILITY STUDIES	.560	.670	.850	1.200	2.000	5.411	4.147	6.980	7.750	9.195
CAPITAL EXPENDITURES	4.426	4.563	6.762	9.641	10.721	12.349	13.185	10.725	14.144	17.643
TOTAL EXPENDITURES	73.945	75.068	88.899	105.509	116.193	129.863	152.622	179.900	206.958	239.668

TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES, BY PERFORMER, 1970-71 & 1972-73

Chart 13

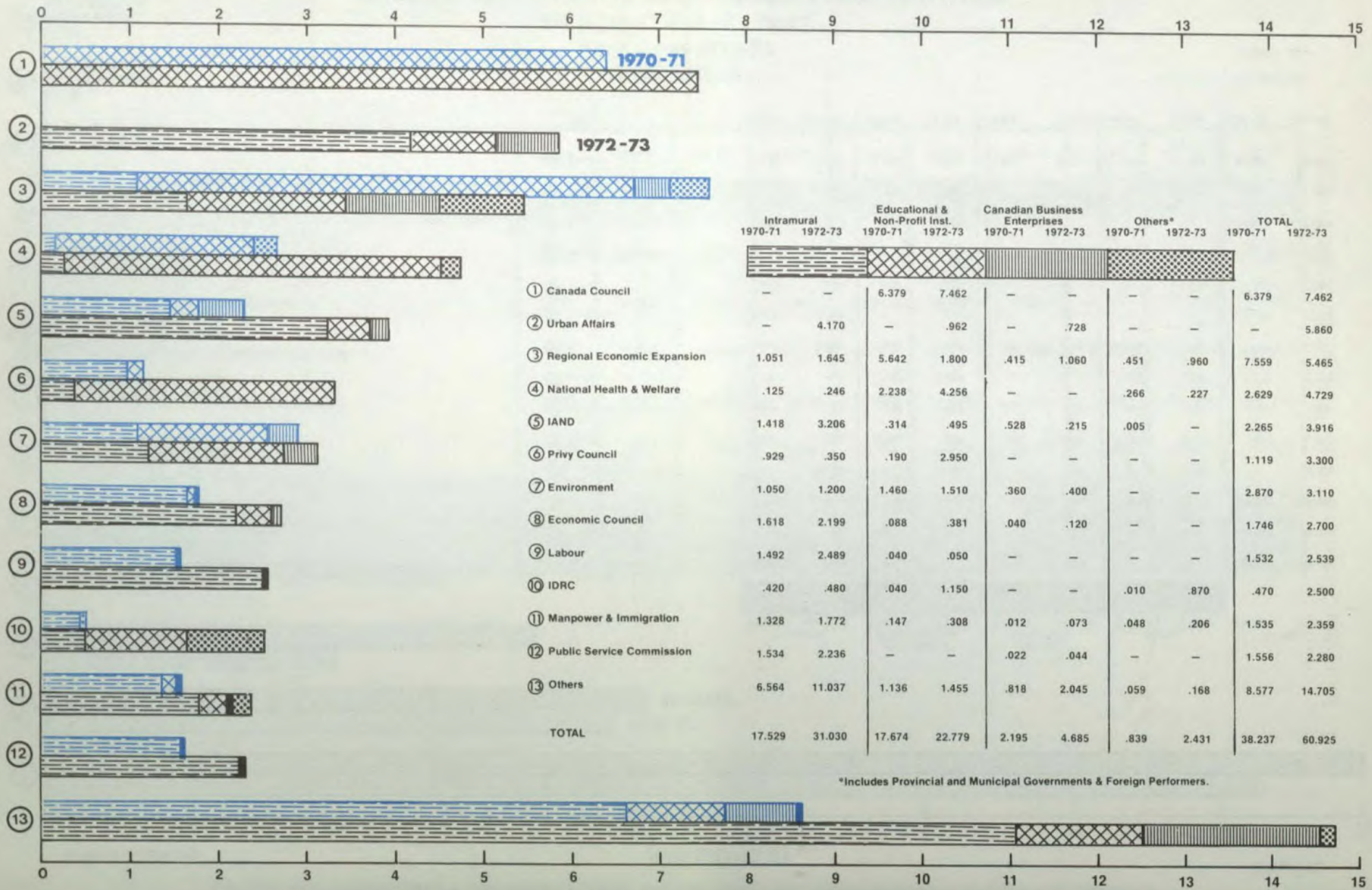


TOTAL EXPENDITURES ON RESEARCH & DEVELOPMENT, BY PERFORMER, 1970-71 & 1972-73

(MILLIONS \$)

Chart 14

HUMAN SCIENCES



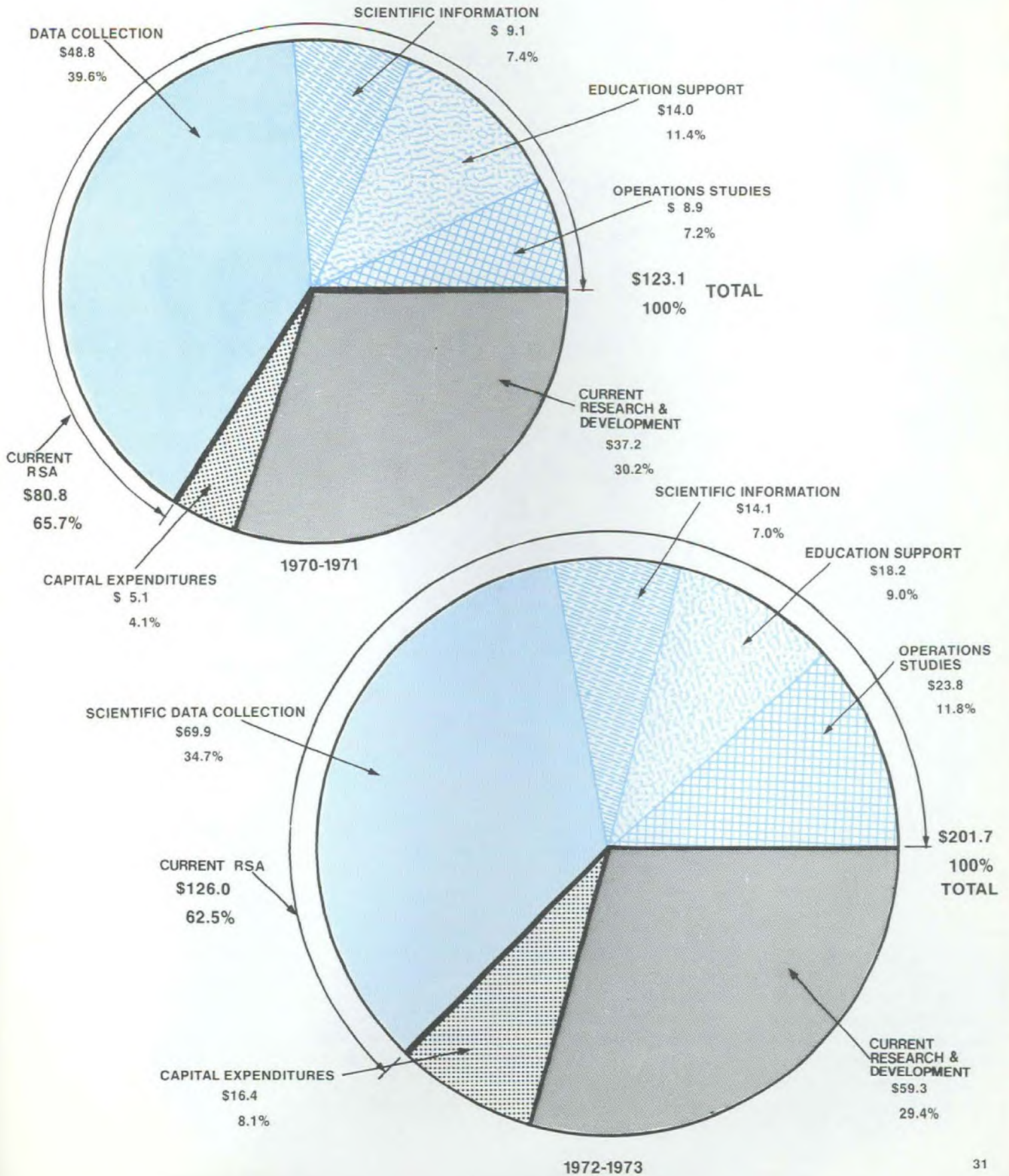
*Includes Provincial and Municipal Governments & Foreign Performers.

TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES BY ACTIVITY

1970-71 & 1972-73

(MILLIONS \$)

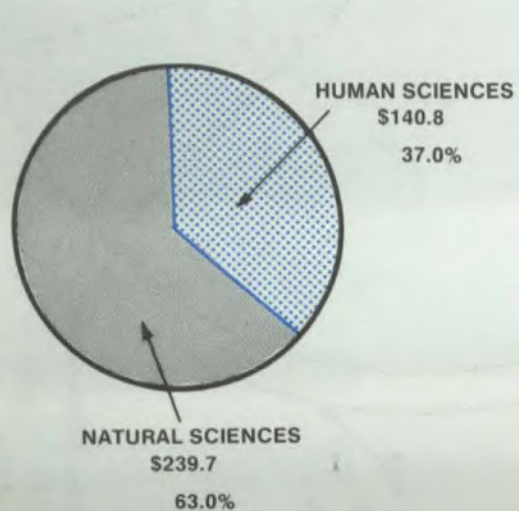
Chart 15
HUMAN SCIENCES



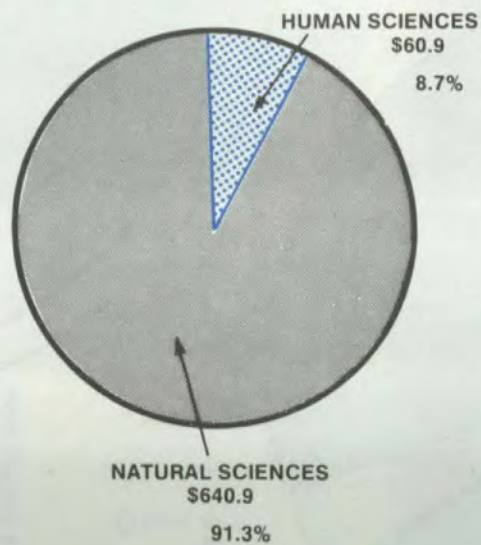
TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES
NATURAL AND HUMAN SCIENCES
1972-73
(MILLIONS \$)

Chart 16

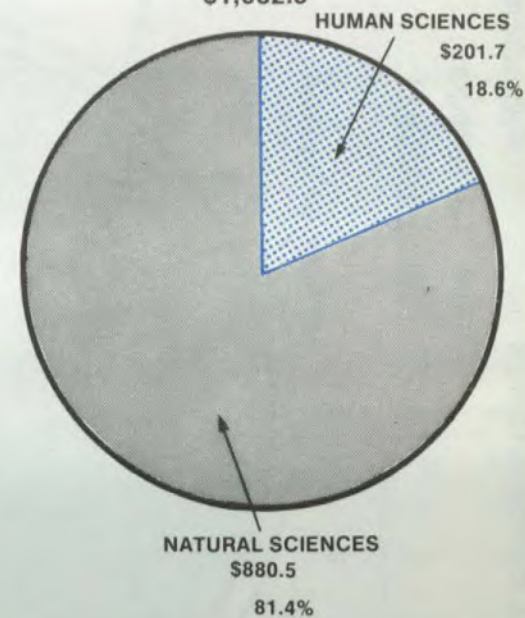
RELATED SCIENTIFIC ACTIVITIES
\$380.5



RESEARCH & DEVELOPMENT
\$701.8

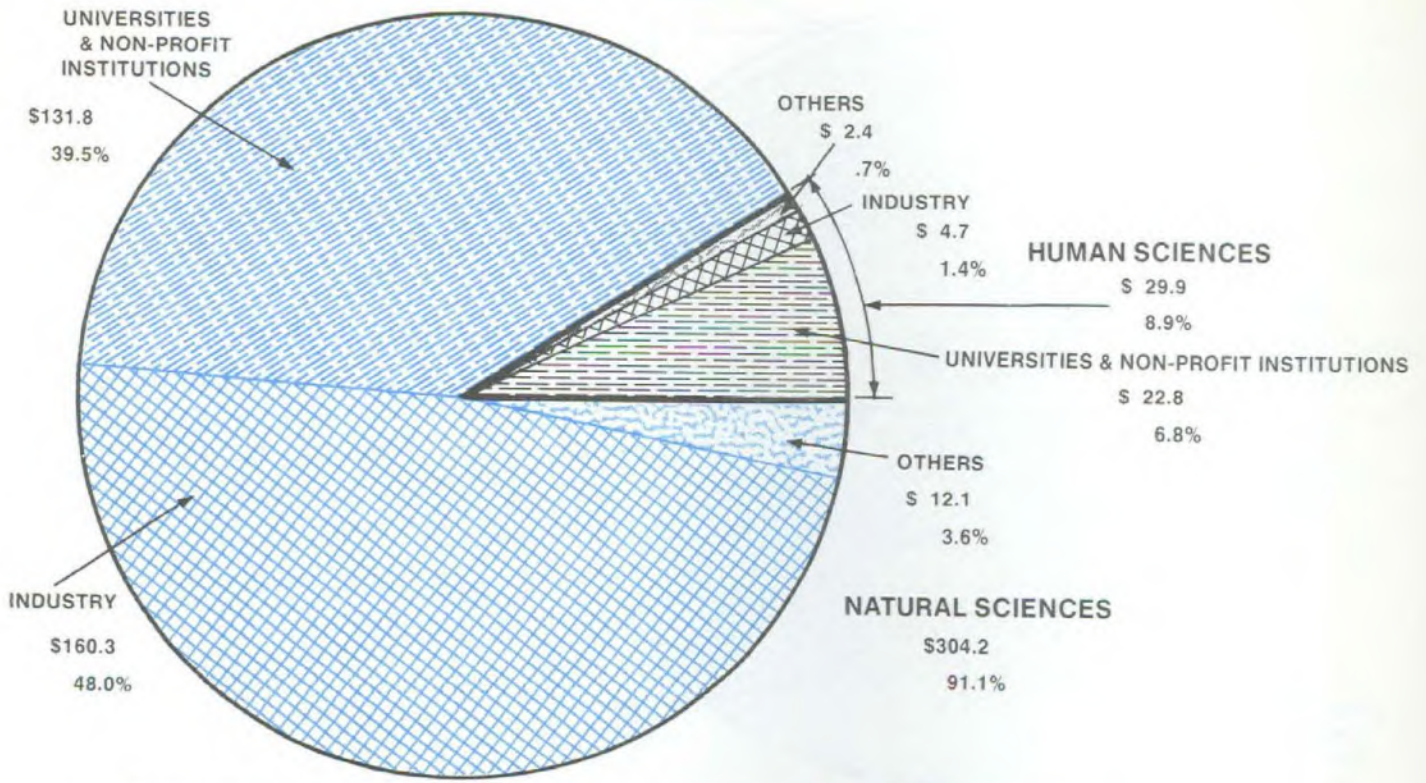


TOTAL
\$1,082.3



**TOTAL EXPENDITURES ON RESEARCH & DEVELOPMENT
NATURAL AND HUMAN SCIENCES
BY PERFORMER, 1972-73
(MILLIONS \$)**

Chart 17



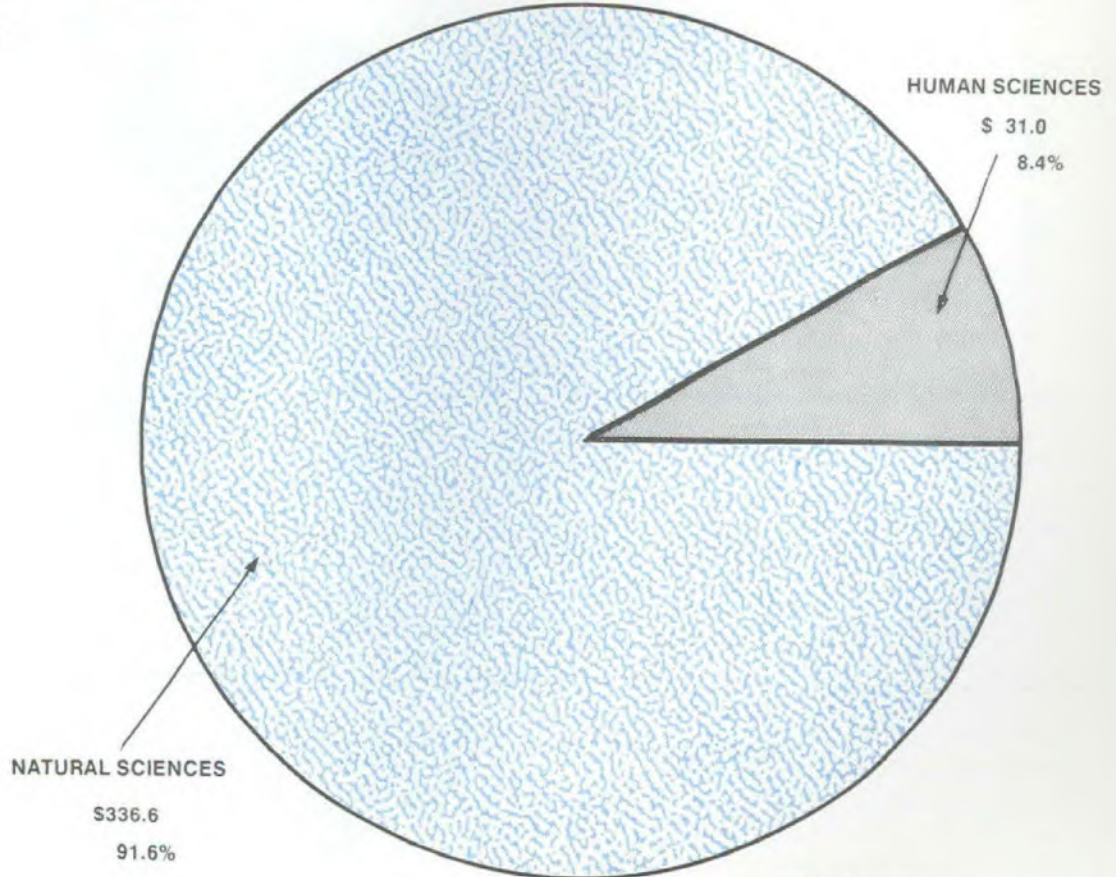
HUMAN SCIENCES

\$ 29.9
8.9%
UNIVERSITIES & NON-PROFIT INSTITUTIONS
\$ 22.8
6.8%

NATURAL SCIENCES

\$304.2
91.1%

EXTRAMURAL
\$334.1



INTRAMURAL
\$367.6

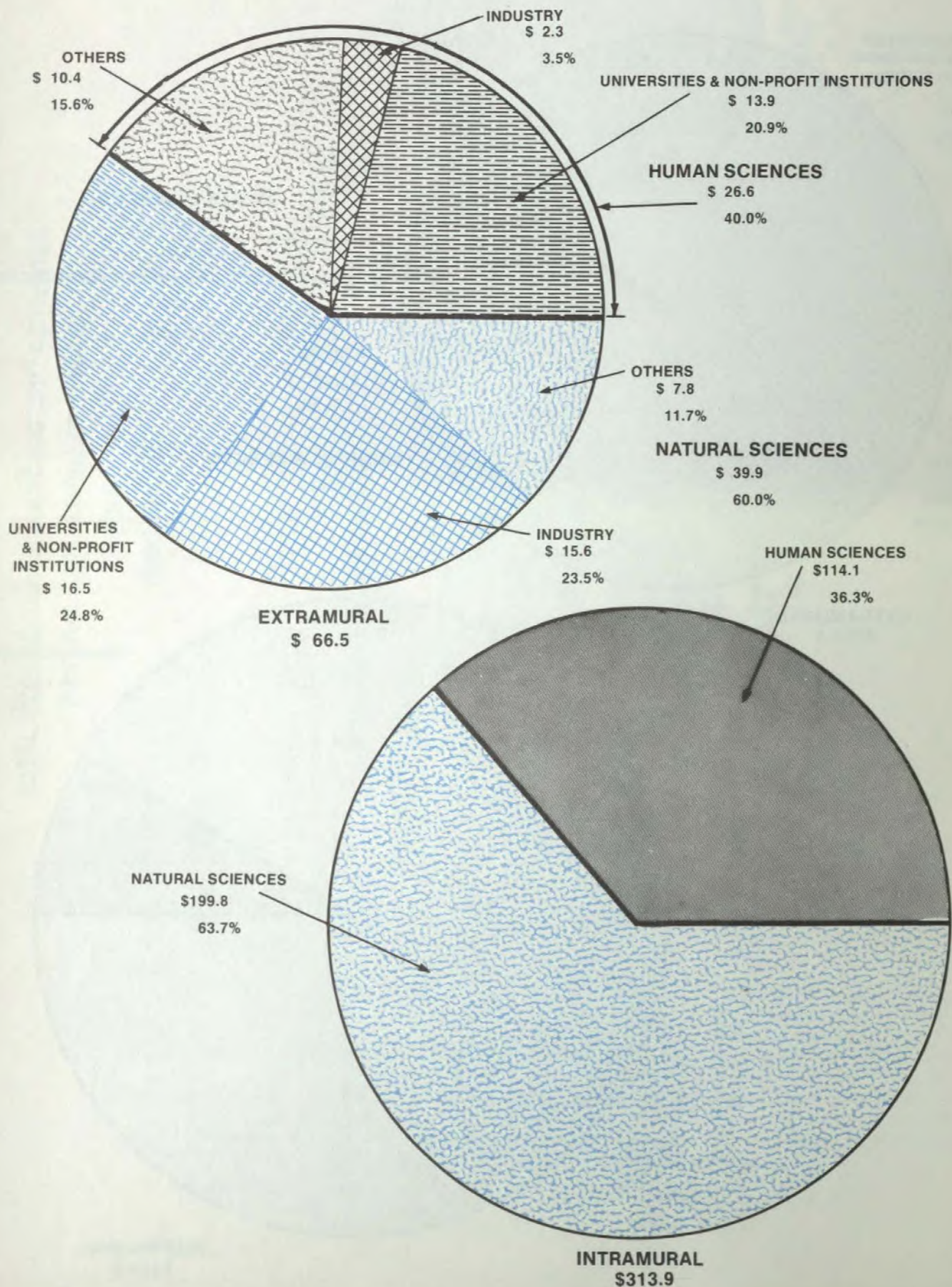
TOTAL EXPENDITURES ON RELATED SCIENTIFIC ACTIVITIES

Chart 18

NATURAL AND HUMAN SCIENCES

BY PERFORMER, 1972-73

(MILLIONS \$)



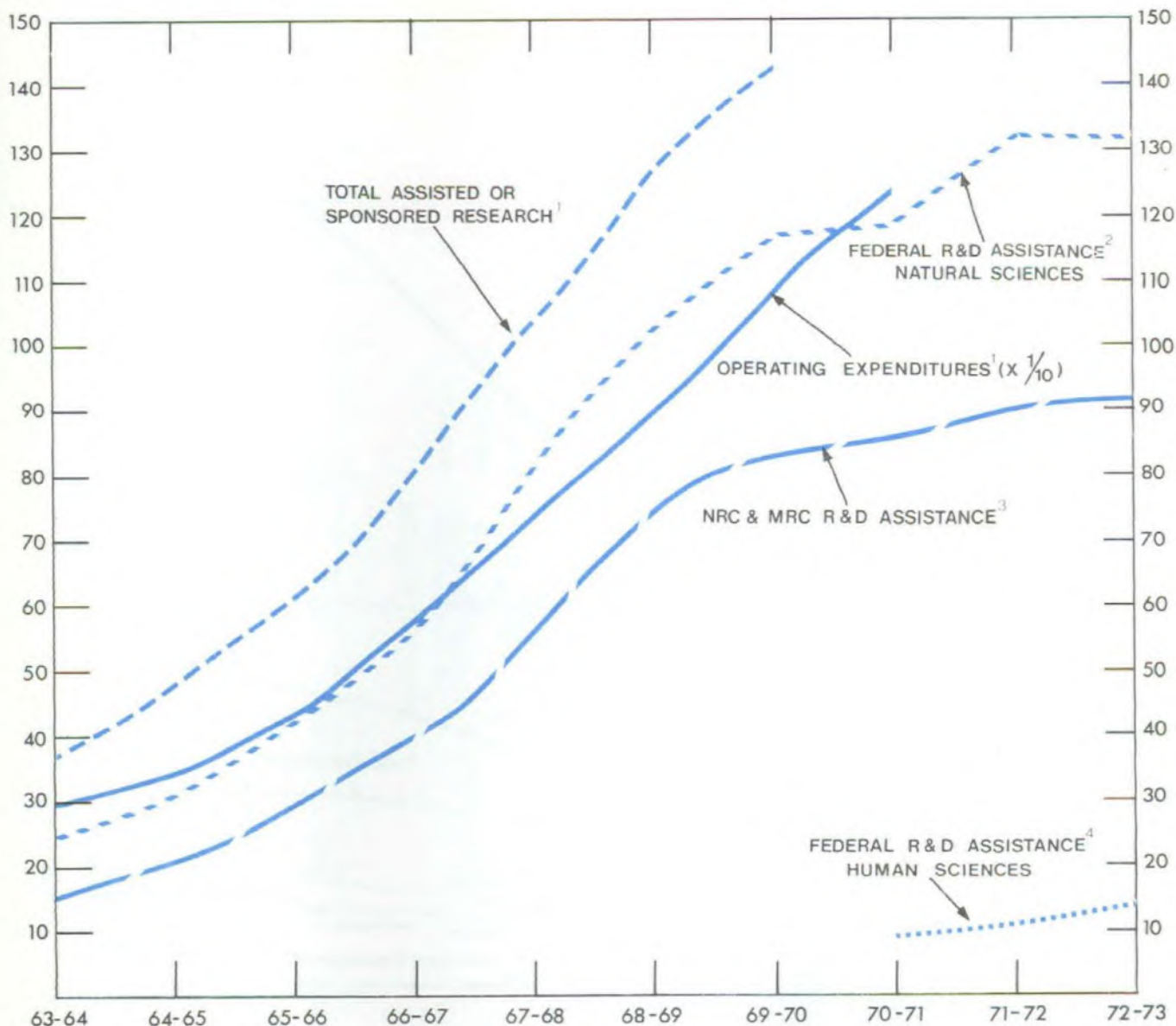
RESEARCH FUNDS AND OPERATING EXPENDITURES OF CANADIAN UNIVERSITIES

HUMAN & NATURAL SCIENCES

1963-64 to 1972-73

Chart 19

(MILLIONS \$)



Sources :

1. Statistics Canada, Cat.No. 81-212.
2. Statistics Canada, Cat.No. 13-202. Including Payments To Non-Profit Institutions Reported As \$ 7.2 Million (5%) In 1971-72.
3. Ibid. Includes Payments To Non-Profit Institutions Reported As \$ 1.8 Million And \$ 2.5 Million For NRC And MRC In 1971-72.
4. Statistics Canada, Cat.No. 13-545. Excludes Payments To Non-Profit Institutions.

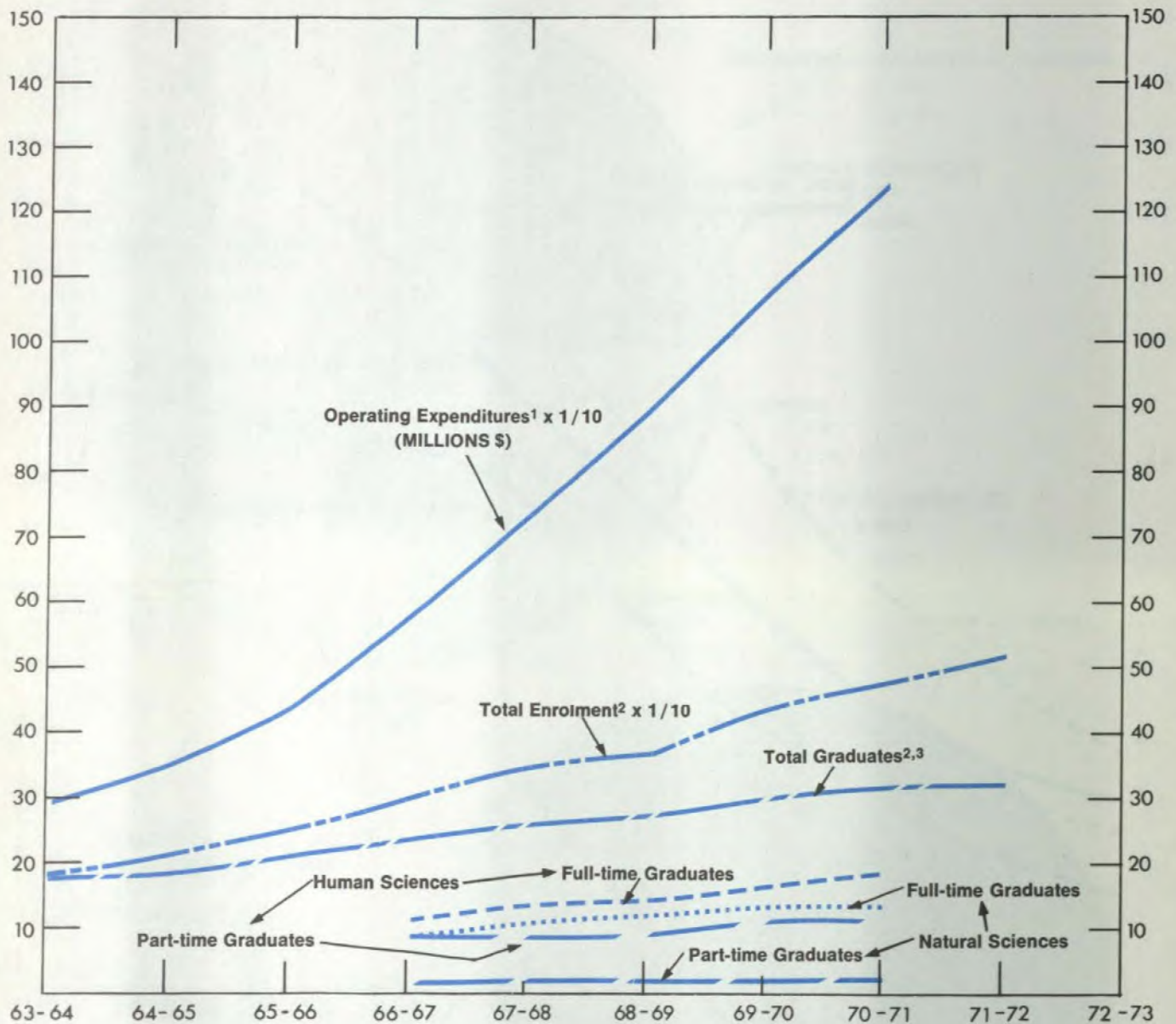
TOTAL GRADUATE AND UNDERGRADUATE ENROLMENT AT CANADIAN UNIVERSITIES

Chart 20

1963-64 to 1972-73

HUMAN & NATURAL SCIENCES

(000's)



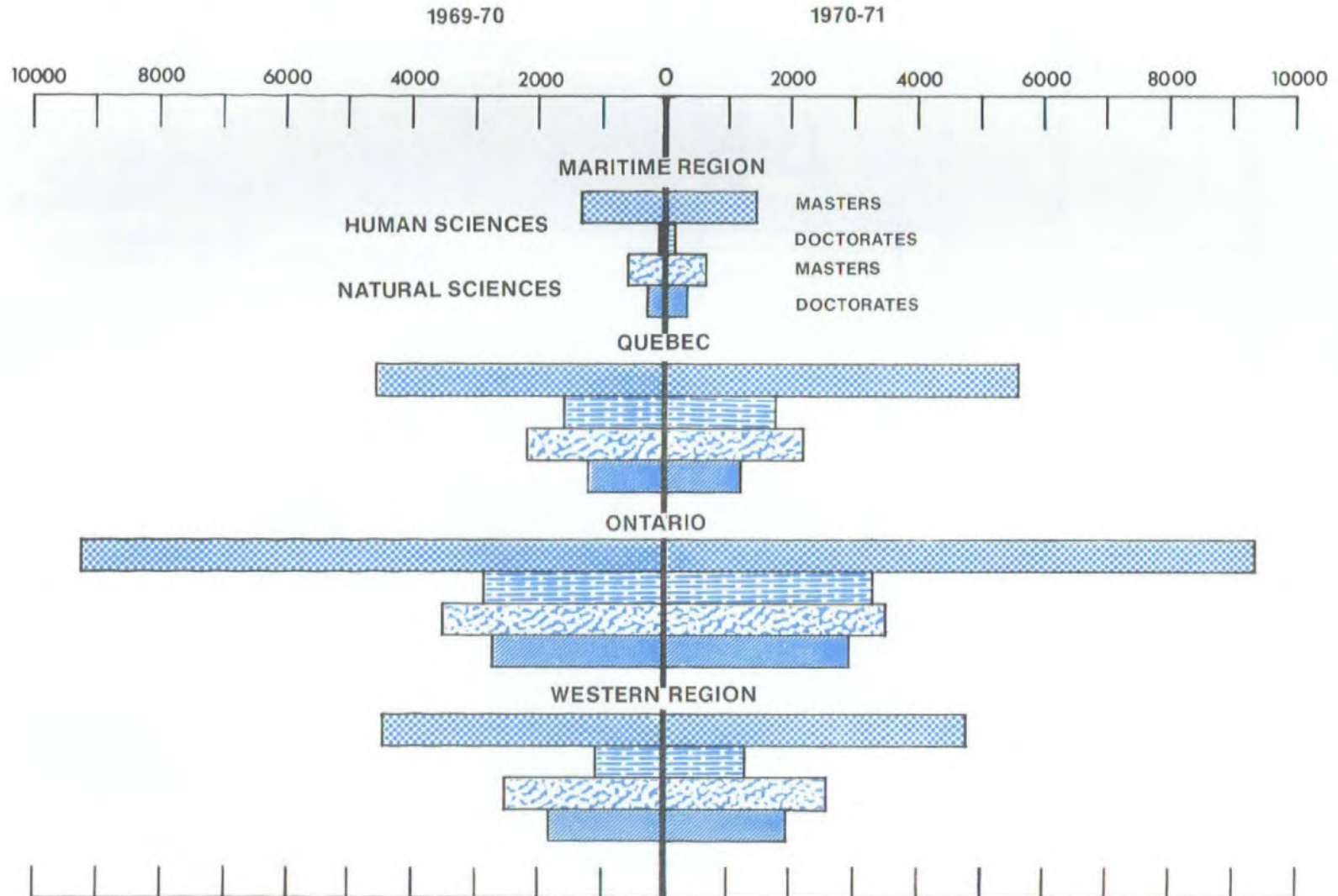
Sources

1. Statistics Canada, Cat. No. 81-212.
2. Statistics Canada, Cat. No. 81-204 & 211. Preliminary data for 1971-72.
3. Data used for 1970-72 include Graduate Students in qualifying, special or other non-degree programs not assignable to field of study.

**TOTAL GRADUATE ENROLMENT IN CANADIAN UNIVERSITIES
NATURAL AND HUMAN SCIENCES BY REGION
1969-70 & 1970-71**

Chart 21

*Source: Canadian Association of Graduate Schools

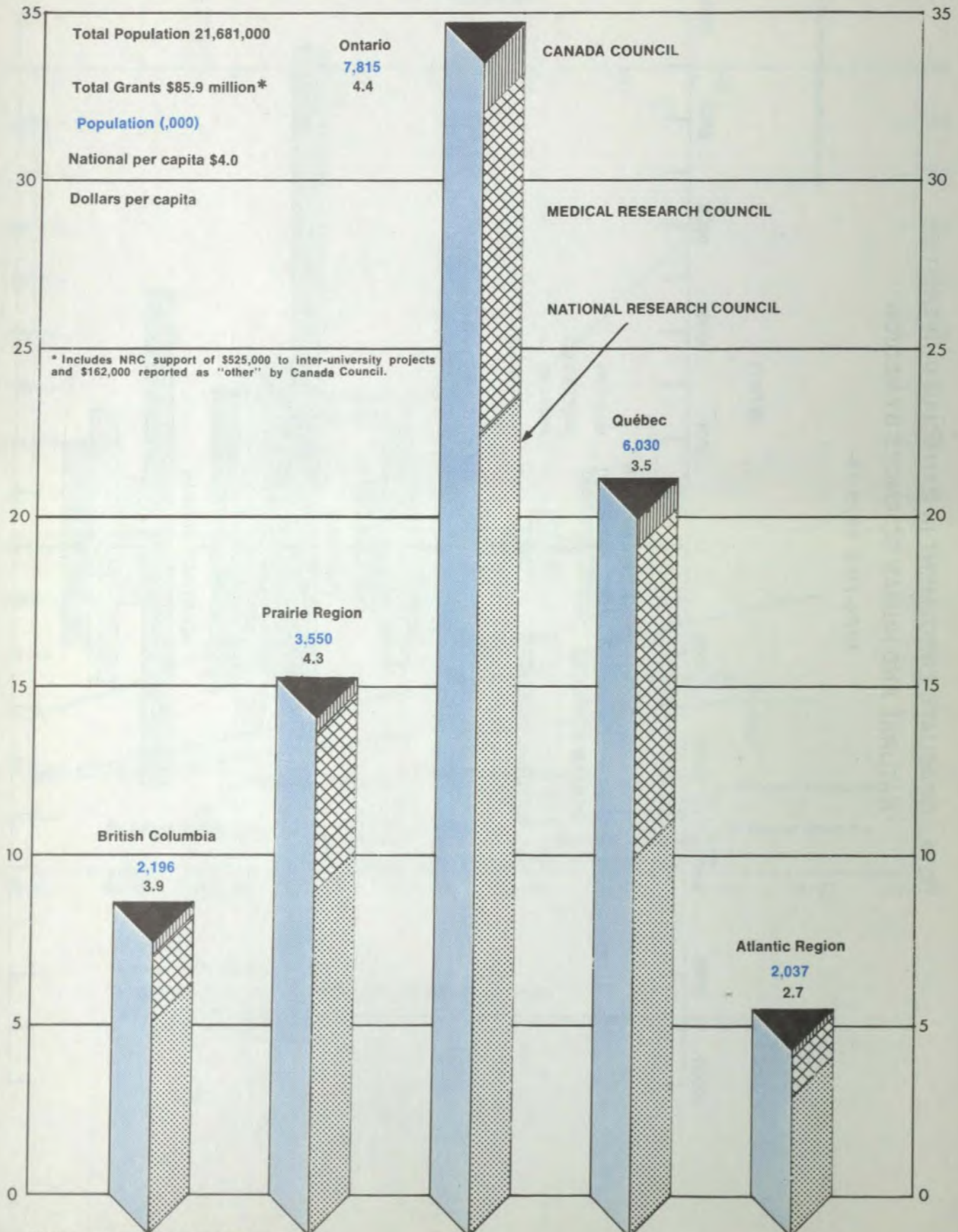


REGIONAL DISTRIBUTION OF NRC, MRC AND CANADA COUNCIL COUNCIL ASSISTANCE TO UNIVERSITY RESEARCH

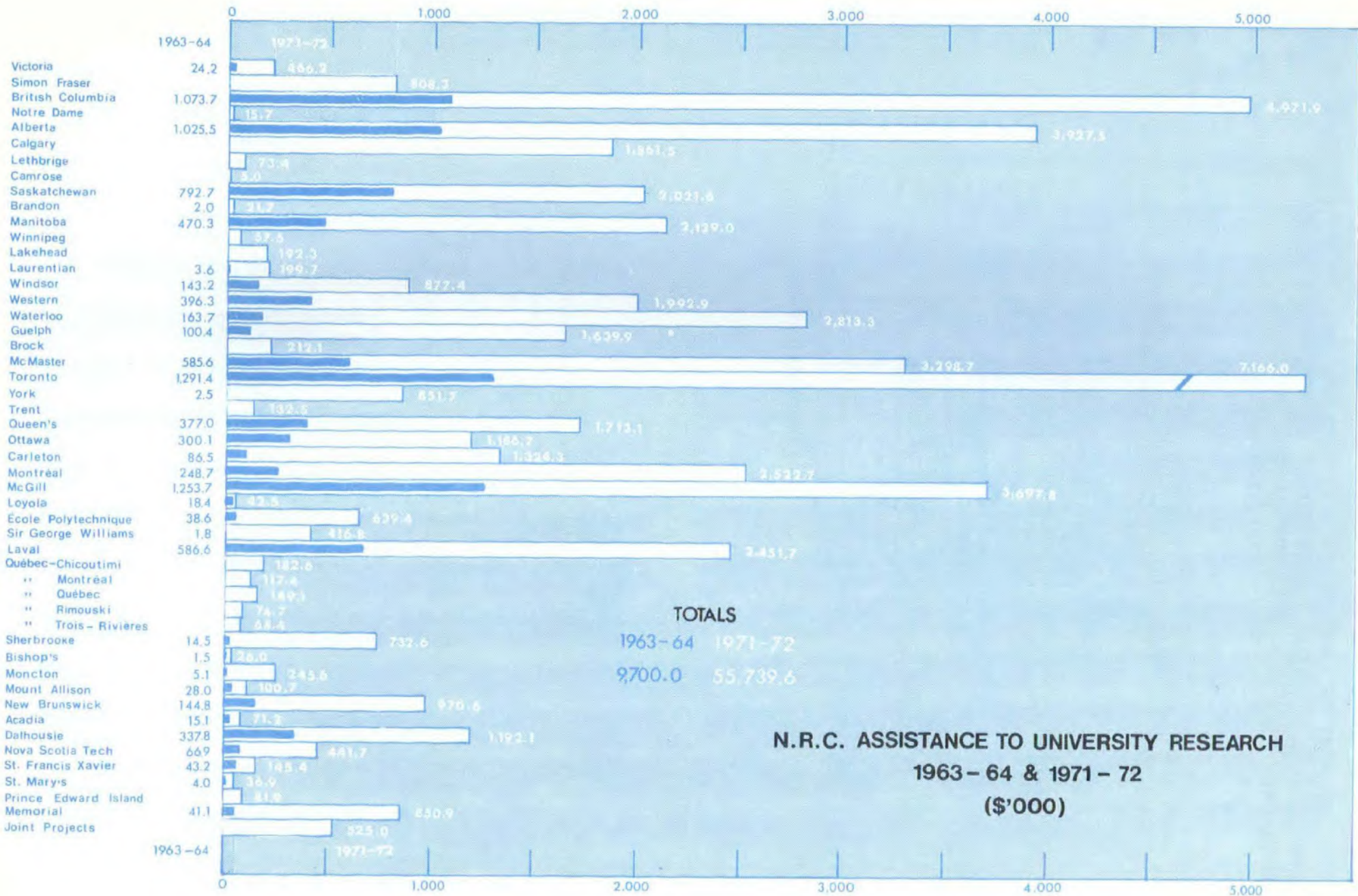
HUMAN & NATURAL SCIENCES

Chart 22

1971-72
(Millions \$)



SOURCE: N. R. C., M. R. C. & CANADA COUNCIL



**N.R.C. ASSISTANCE TO UNIVERSITY RESEARCH
1963-64 & 1971-72
(\$'000)**

SUPPORT OF UNIVERSITIES AND CANADIAN NON-PROFIT INSTITUTIONS
CHART 24 **TOTAL EXPENDITURES ON SCIENTIFIC ACTIVITIES**
NATURAL SCIENCES **BY DEPARTMENT OR AGENCY,**
1970-71 TO 1972-73

