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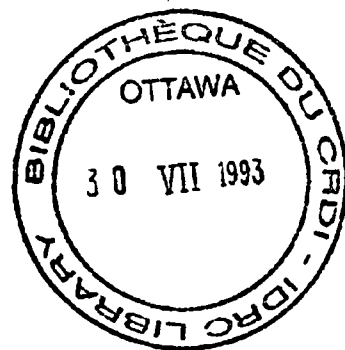
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Human Reproduction Research Funding:

An Overview

HEALTH SCIENCES DIVISION

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## I. Introduction - Definitions

The information presented is an attempt to provide an overview of the financial support given for reproductive research at the international and national levels, particularly for the years 1965-76. More recent information is not available for all donor countries. IDRC's contribution to the field is also examined. In addition, current and projected population statistics to the year 2000 are indicated.

The majority of the data summarized herein is taken from Reproduction and Human Welfare<sup>1</sup>, which is the most recent, comprehensive review of funding in the reproductive sciences. The population statistics are based on U.N. estimates.

For the purposes of this survey, "reproductive research" is categorized as follows:

Fundamental studies in the reproductive sciences: grants and contracts supporting basic research; core support to research centres; conferences; symposia and information dissemination.

Training: a variety of mechanisms to train researchers, in both fundamental and clinical aspects of reproductive research.

Contraceptive development: all studies concerning agents being clinically tested for their fertility regulating effects; core support to clinical research centres.

Studies on safety: current fertility control methods; includes research on agents presently available to the public.

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<sup>1</sup> Greep, R. O., Koblinsky, M. A., and Jaffe, F. S. Reproduction and Human Welfare: A Challenge to Research. New York, New York: The Ford Foundation, 1976.

II. Population Data

A great deal of publicity has been given in the past year to the reported declines in birth rates in some developing countries. This has led in some circles to a false belief that the population problem as experienced in developing countries is now a thing of the past and requires only limited attention. Figure 1 demonstrates the anticipated natural increases in the less and more developed countries to the year 2000. Figure 2 shows the natural increase in world population for the less and more developed countries to the year 2000 and demonstrates that even with the reported fall in birth rate, the population increase in millions per year in developing countries will rise from 67.2 million in 1978 to 84.3 million in the year 2000.

Figure 1

**CRUDE BIRTH AND DEATH RATES  
AND % NATURAL INCREASE  
1950-2000**  
UNITED NATIONS MEDIUM ASSUMPTIONS

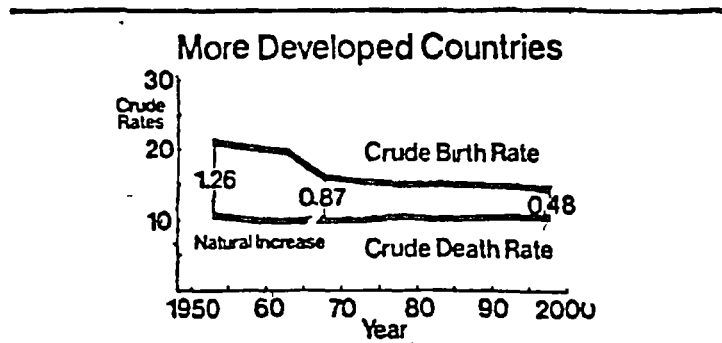
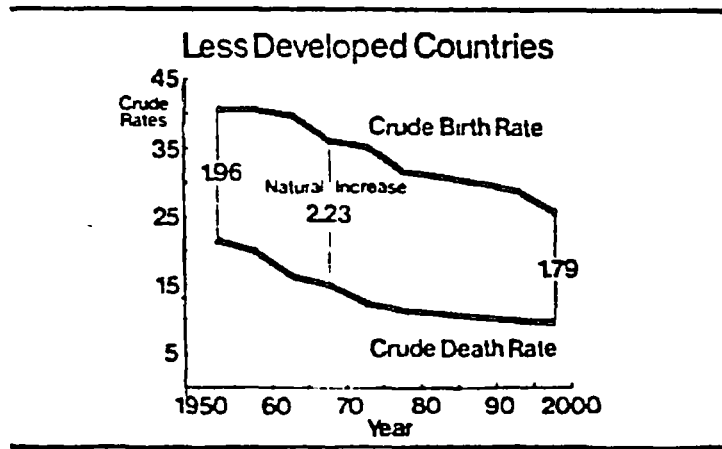
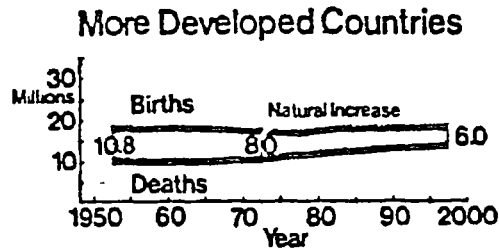
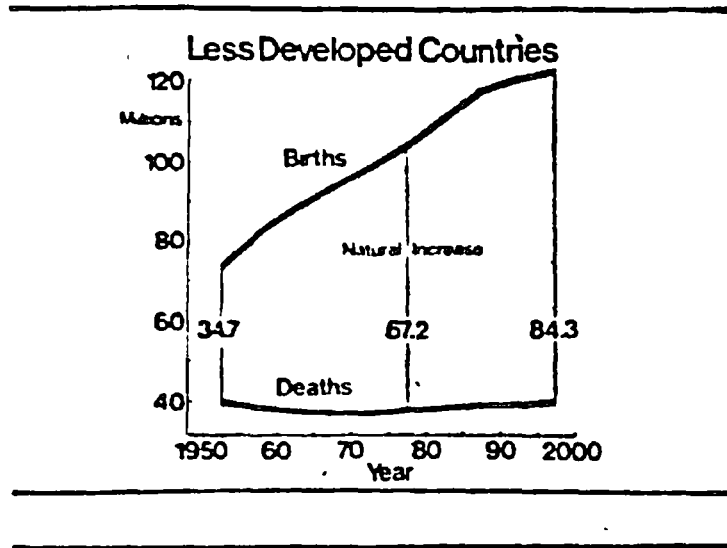


Figure 2

# AVERAGE ANNUAL NUMBER OF BIRTHS, DEATHS AND POPULATION INCREASE 1950-2000

UNITED NATIONS MEDIUM ASSUMPTIONS



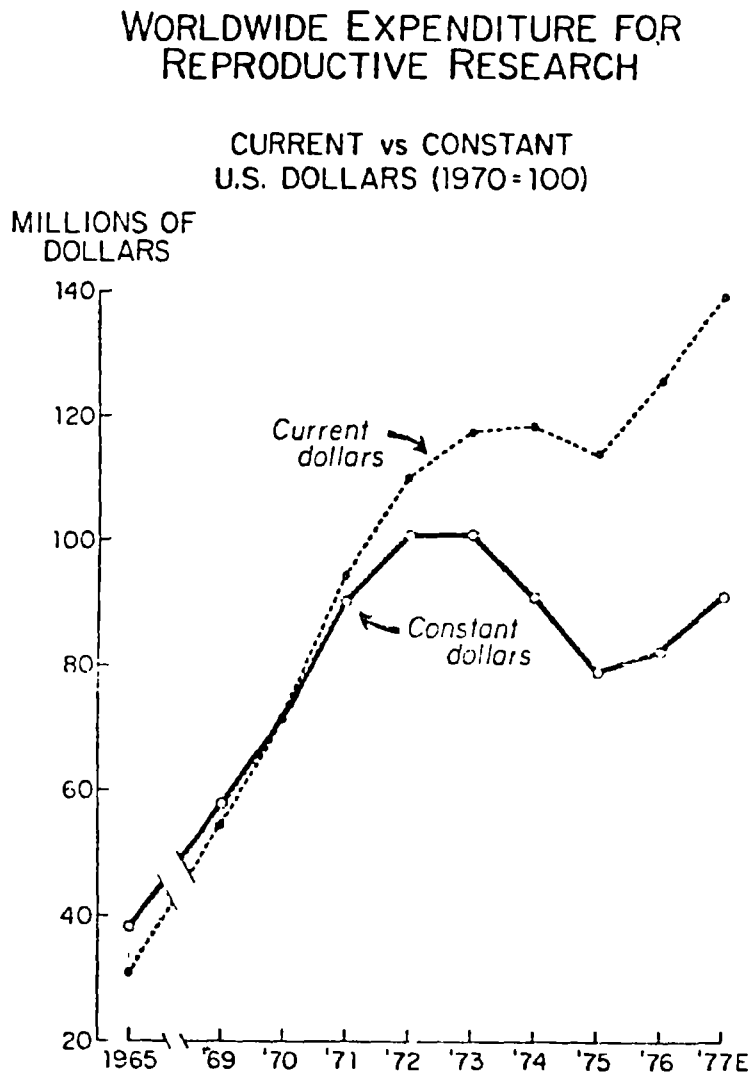
### III. Financial Data

#### 1) Worldwide Expenditures

Prior to 1965, government policies virtually excluded the field of reproductive research from the post World War II rapid expansion of support for biomedical research. In the mid-1960's, concern over rapid population growth and improved pregnancy outcomes resulted in some policy changes and the first signs of financial commitment. During the late 1960's and early 1970's, a priority effort in reproductive research was advocated by the United States, the U.N. agencies and the World Health Organization (WHO) who began actively to support this field.

Worldwide expenditures for reproductive research are reported in terms of current versus constant U.S. dollars. In 1965, worldwide financial support for reproductive research totalled \$31 million. By 1975, this figure increased almost four-fold to \$119 million. However, in terms of actual purchasing power, this increase represented only a two-fold increase. Figure 3 illustrates that in current dollars, world funding peaked in 1973-74. As the graph shows, the 1973-74 decline in financial support seems to have been temporary. However, it should be noted that although the funding levels are again increasing, the 1977 estimated constant dollar expenditure was only equal to the 1971 level of support.

Figure 3

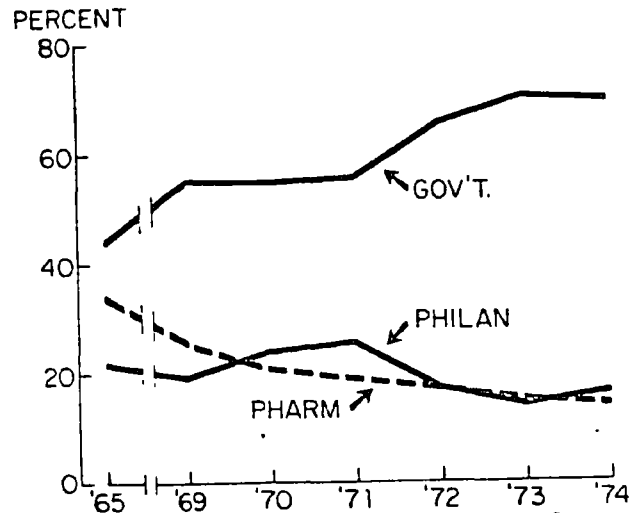


Worldwide expenditures for reproductive research  
Current versus constant U.S. dollars. Constant dollar based on value  
of 1970 dollar

SOURCE: Linda E. Atkinson. Status of Funding and Costs of Reproductive Science Research and Contraceptive Development. Washington, D.C.: National Academy of Sciences, 1979. p. 208

Traditionally, funding has come from three sectors: governments, philanthropic agencies and pharmaceutical companies. Figure 4 indicates that governments are increasingly having to assume the major portion of expenditures for reproductive research. The decrease in philanthropic funds has been due to inflation and vagaries of the equity market in industrialized countries. Declining market potential and new regulatory requirements have made reproductive research a less attractive investment for pharmaceutical firms.

Figure 4



Total and percent of worldwide expenditures for reproductive sciences and contraceptive development by sector government, philanthropy, and pharmaceutical firms (based on constant U.S. dollars, 1970=100).

SOURCE: Greep, R. O., Koblinsky, M. A., and Jaffe, F. S. Reproduction and Human Welfare: A Challenge to Research. New York, New York: The Ford Foundation, 1976, p. 20.

2) Total Expenditures (Domestic and International)

The total amount spent on reproductive research by the government sector of the six major donor countries, both domestically and internationally, is as follows:

	<u>(000) U.S. Dollars</u>							
	<u>1973</u>	<u>%</u>	<u>1974</u>	<u>%</u>	<u>1975</u>	<u>%</u>	<u>1976</u>	<u>%</u>
1. U.S.A.	\$44,578	(70.2)	\$37,980	(67.2)	\$51,204	(63.2)	\$60,378	(66.4)
2. France	7,261	(11.4)	6,797	(12.0)	10,563	(13.0)	10,262	(11.3)
3. Sweden	3,631	( 5.7)	4,046	( 7.2)	7,731	( 9.5)	7,905	( 8.7)
4. Great Britain	3,501	( 5.5)	3,083	( 5.5)	6,889	( 8.5)	5,384	( 5.9)
5. Canada	2,632	( 4.1)	2,508	( 4.4)	3,047	( 3.8)	5,241	( 5.8)
6. Netherlands	1,970	( 3.1)	2,071	( 3.7)	1,629	( 2.0)	1,714	( 1.9)

The above figures confirm that the U.S.A. has continually provided the majority of funds. Under the Department of Health, Education and Welfare, the National Institute for Child Health and Human Development (NICHD) has a broad mandate to study the processes of human development. Within the NICHD, the Center for Population Research was established in 1968, and has since become the single largest source of support for reproductive research in the world.



3) Major Donor Agencies

Funding commitments for reproductive research by 11 international assistance agencies shown in U.S.\$ in millions for the period 1970-76 are listed below.

<u>Agency</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
CIDA	--	--	--	1.0	1.3	1.5	1.5
DANIDA	--	--	.5	.3	.5	.6	.8
FIN-AID	--	--	--	--	.1	.1	.1
FORD FOUNDATION	6.9	10.3	7.4	7.4	6.5	3.9	6.4
NORAD	--	--	.6	.8	1.3	1.6	1.7
ODM	< .1	.1	.1	.1	.1	.3	.3
ROCKEFELLER FOUNDATION	13.6	2.7	1.9	3.0	2.1	2.0	1.0
SIDA	.1	--	3.0	4.0	5.0	6.4	6.8
UNFPA	--	--	--	1.0	1.0	1.0	0.6
USAID	7.4	5.9	6.6	5.2	2.2	3.4	5.2
IDRC	.1	.2	.3	.6	.9	1.5	1.7
<b>TOTAL</b>	<b>28.1</b>	<b>19.2</b>	<b>21.4</b>	<b>23.4</b>	<b>21.0</b>	<b>22.3</b>	<b>26.1</b>

Of the total 69.4 million contributed by the multilateral agencies between 1974-1976, IDRC donated 4.1 million or 5.9 percent.

4) Canadian Contribution

(a) CIDA. CIDA's contribution to the field has been through grants to the WHO Special Programme of Human Reproduction. The table below gives their WHO contribution as a percentage of their multilateral program budget (Canadian dollars).

	Official Development Assistance Disbursements by Program - Multilateral	WHO Contribution	% of Multilateral
1972-73	\$153,820,000	\$1,000,000	0.7
1973-74	185,140,000	1,000,000	.54
1974-75	200,010,000	1,275,000	.64
1975-76	318,560,000	1,456,000	.46
1976-77	416,630,000	1,500,000	.36
1977-78	410,240,000	1,200,000	.29
1978-79	490,190,000	1,000,000	.20
1979-80	---	800,000	---
1980-81	---	? NIL	---

(b) IDRC. Over the past nine years, IDRC has spent \$9,597,000 on reproductive research. The 1971-80 contribution is presented below as a percentage of the Centre's and the Health Sciences Division's budget:

Year	Centre's total approved appropriations budget	Health Sciences approved appropriations budget (Program operations)	Reproductive Research	% Centre budget	% H.S.D. budget
1971-72	\$ 5,650,000	\$1,108,000	\$ 188,000	3.3	17.0
1972-73	13,423,000	2,364,000	361,000	2.7	15.3
1973-74	22,581,000	4,344,000	594,000	2.6	13.7
1974-75	32,213,000	5,139,000	1,169,000	3.6	22.7
1975-76	38,102,000	6,405,000	3,000,000	7.9	46.8
1976-77	39,150,000	5,020,000	1,078,000	2.8	21.5
1977-78	43,016,000	4,816,000	756,000	1.8	15.7
1978-79	42,948,000	4,855,000	1,901,000	4.4	39.1
1979-80	27,369,000	2,665,000	550,000	2.0	20.6
Average	\$29,383,555	\$4,079,555	1,066,000	3.5	23.6

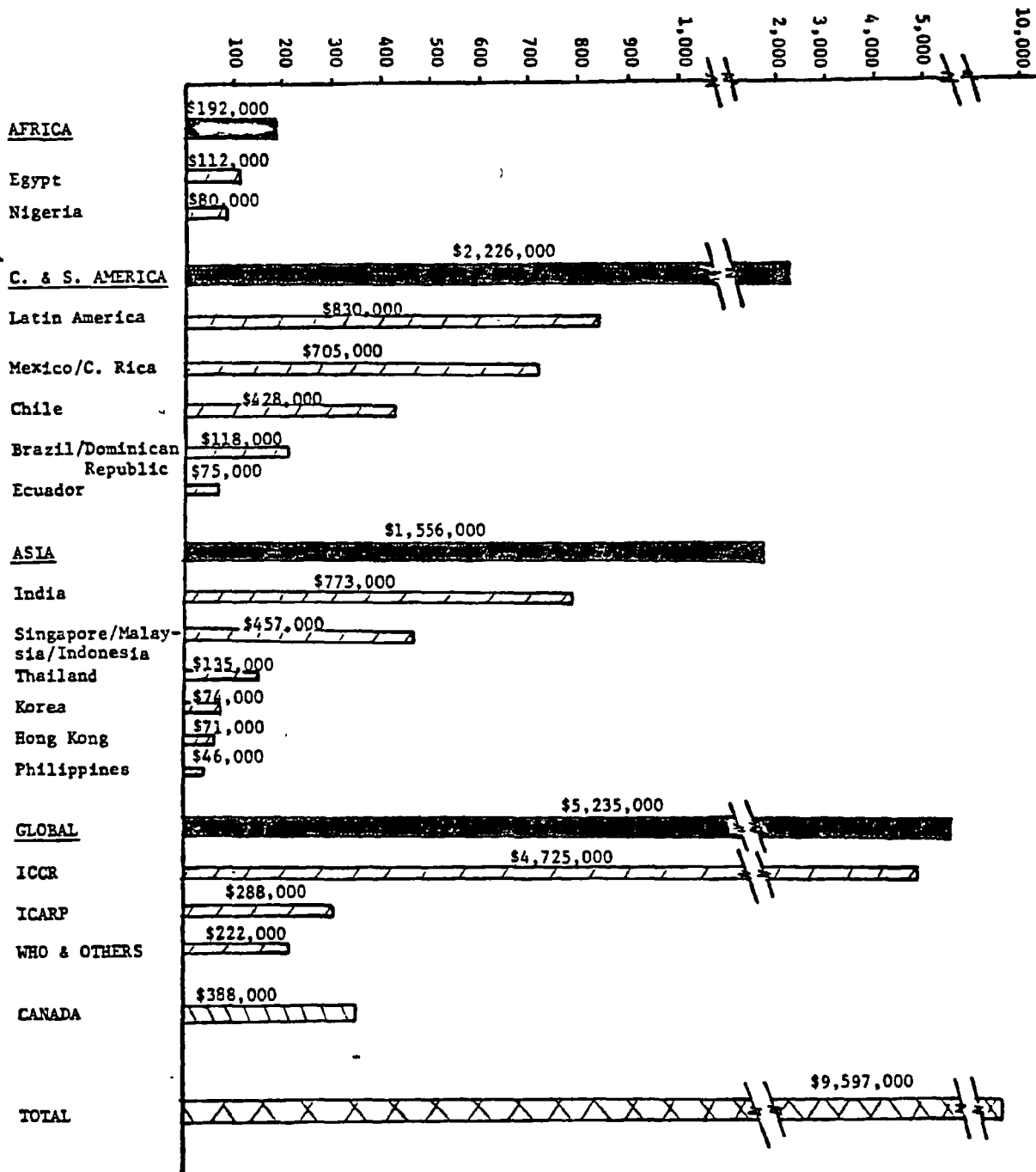
The 1971-80 Health Sciences reproductive research budget has been allocated in five geographic areas (see graph 1, page 10) as shown below:

1. Africa -- \$192,000 or 2.1%
2. Central and South America -- \$2,226,000 or 23.2%
3. Asia -- \$1,556,000 or 16.2%
4. Global -- \$5,235,000 or 54.5%
5. Canada -- \$388,000 or 4.0%

Of the global funds, \$1,500,000 goes to developing country activities. This results in approximately 60 percent of the total IDRC funds being allocated to developing countries and 40 percent to developed countries.

Graph 1

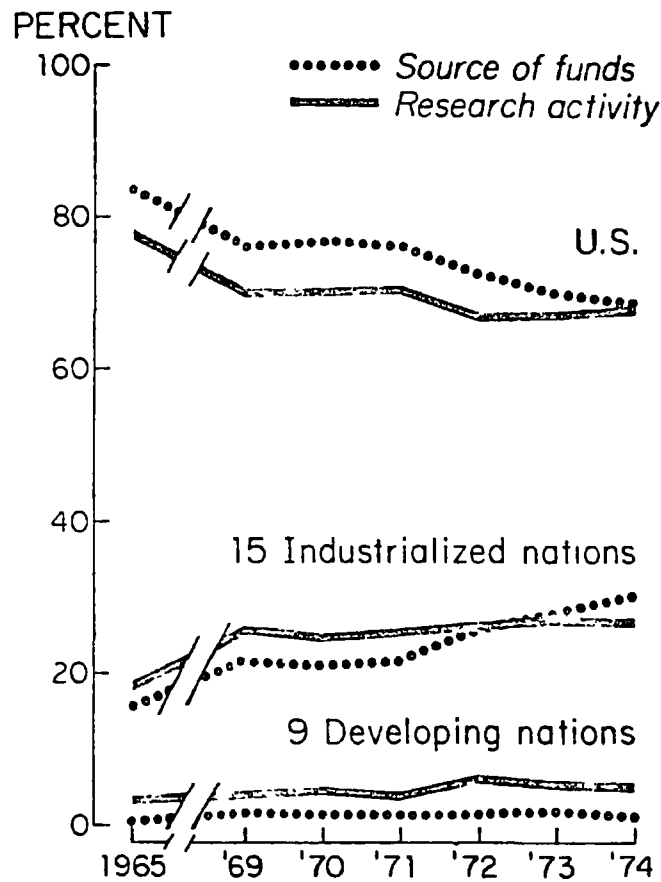
1971-80 (In Thousands of Dollars Canadian)



IV. Disbursement of Funds

(1) Geographic. The geographic distribution of worldwide expenditures for reproductive research is illustrated in Figure 5.

Figure 5



Percent of worldwide expenditures for reproductive sciences and contraceptive development by geographic distribution. source of funds and location of research activity (based on constant U.S. dollars, 1970=100).

SOURCE: Greep, R. O., Koblinsky, M. A. and Jaffe, F. S. Reproduction and Human Welfare: A Challenge to Research. New York, New York: The Ford Foundation, 1976, p. 19.

(2) Sector

For comparison of research emphasis, the percentages spent on the various categories of reproductive research were:

	<u>Fundamental Research</u>	<u>Training</u>	<u>Contraceptive Development</u>	<u>Safety</u>
(1976) Worldwide	66.4%	4.4%	19.4%	6.8%
(1971-80) IDRC	4.4	12.1	67.9	15.6

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