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DEVELOPMENT RESEARCH DONORS IN SUB-SAHARAN AFRICA

A REVIEW OF SELECTED AGENCIES

ANDREW O. ASIBEY

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A Review of Selected Agencies

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FOREWORD

As part of preparing an IDRC strategy paper for Sub-Saharan Africa (SSA), it became important to improve our awareness of the opportunities that exist for the Centre to supplement or build on the efforts of other research donor agencies actively supporting developmental research in the region. Although IDRC has been collaborating with a good number of these agencies in the African region, the extent of their support in terms of areas being supported, total program budget for research, types of countries and institutions being supported, etc. has not been well documented. It was felt that a better appreciation of the overall trends in donor support would facilitate efficient allocation of scarce resources for research in SSA.

Considering the dearth of reliable information, it was decided to approach directly officials in selected bilateral and multilateral agencies as well as those in private foundations. Additional information was derived from annual reports and from other publications. The result is this synthesis document which focuses on (a) the overall resource flow and general characteristics of donor support to developmental research; and (b) profiles of 14 randomly selected individual donor agencies that support research in SSA.

The task of collecting data on what donor agencies are doing in SSA is daunting since most of these agencies, particularly those whose primary function is to finance development-related projects, do not usually record funds earmarked for developmental research separately from other commitments. By undertaking this exercise, we hope to facilitate a framework for doing additional work so as to generate more precise data in the future.

Doug Daniels
Director
Office of Planning and Evaluation

SUMMARY OF KEY STATEMENTS

- Over 20 bilateral or multilateral agencies and private foundations are active in funding "developmental research" in Sub-Saharan Africa (SSA).

- It is estimated that in any given financial year, total external flows for developmental research in SSA amount to a little over **$600 million.**

- Bilateral donors are the largest contributors to developmental research in SSA **(74%)**, followed by multilateral institutions **(20%)**, and private foundations **(6%)**.

- Donor institutions are responsible for approximately 50% of the total research funds spent annually in SSA.

- Donor resources tend to be concentrated in five main sectors:

  a) improving the region's food production capacity;
  b) alleviating population pressures;
  c) arresting environmental degradation through efficient natural resource management;
  d) minimizing the spread of infectious diseases; and
  e) strengthening higher education.

- Very little support is given to industrial research.

- The donor agencies tend to support primarily applied research and hardly any resources are allocated to basic research. There also appears to be an emphasis on the "hard" as opposed to "soft" sciences.

- It is estimated that about **70%** of the research support earmarked for Sub-Saharan Africa goes to **10** countries, containing **57%** of the regions's population.

- There are three main mechanisms for the delivery of support to the region: multilateral arrangements, collaborative programs, and direct support to national research institutions.

- Few donors have published formal statements with respect to identifying a strategic framework or principles for supporting developmental research in SSA.

OVERVIEW OF DONOR SUPPORT TO DEVELOPMENT RESEARCH IN SUB-SAHARAN AFRICA

I INTRODUCTION

"There is not an agency in the development promotion business today that doubts the importance of the contribution relevant research makes to the development process." So begins the opening sentence of a report prepared by John Lewis, External Funding of Development Related Research: A Survey of Some Major Donors (IDRC-MR160^{e}). This contention is supported to some degree by the evidence that most of the major donor agencies designate a portion of their development aid budget to support developmental research* in the Third World. Resources are made available to cover a broad spectrum of research and research complementing activities, that includes agriculture, forestry, fisheries, natural resources management to health, environmental degradation, population, and social sciences. A rough estimate shows that in the case of Sub-Saharan Africa, over 20 bilateral or multilateral agencies and private foundations, are active in one form or another in this field.

Despite the recognized importance of the subject, few donors keep track of the funds allocated to developmental research. It is difficult to compile an aggregate picture of donor activities in the region in terms of the magnitude of their support, including the volume of resource flows; modalities of support; key priority areas; types of recipient institutions; geographical areas of concentration; and future intentions.

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* Using various sources of information, the Lewis study, suggests that there are different dimensions of developmental research broadly defined to include R&D in laboratory conditions; adaptive R&D geared towards the production of prototypes; field testing of complete prototypes, e.g., handpumps; research aimed at finding answers to broad/specific policy issues or socio-economic problems; provision of books and periodicals to libraries, etc.

II ESTIMATED RESOURCE FLOW

Information included in the Lewis study suggested that, on average, about 4.6% of net ODA disbursements are designated for "developmental research". If the 4.6% average is applied to 1987 ODA spending in Sub-Saharan Africa, of the $13,204 million* ODA net disbursements to the region (1988 OECD Report on Developmental Cooperation), roughly $600 million would have been spent on developmental research.

Using information acquired directly from selected donor agencies (as shown in the Annex) and from annual reports and other policy documents, we attempted a donor-by-donor counting of bilateral and multilateral disbursements for developmental research in the region, and arrived at a rough total of $590 million. This approximation tends to confirm the single figure estimate based on the results of the Lewis study. It is not surprising, because where figures were not available we tended to use the 4.6 average. Furthermore, if funds spent on developmental research by private foundations, such as Ford, Rockefeller, and Carnegie, are added to the bilateral and multilateral disbursements, it is estimated that annual donor spending on developmental research and other research-complementing activities is between $620 and $630 million (see Table 1). This estimate is based on a rough method with many imperfections and is presented to encourage the provision of more precise figures.

It appears that the bilateral donors are the largest contributors to developmental research in SSA (74%), followed by multilateral institutions (20%), and private foundations (6%).

Of the funds spent annually by both national governments and external donors on developmental research and research-complementing activities in SSA, it is estimated that donor institutions are responsible for approximately 50% of the total spending. This is a significant share and gives donor agencies considerable leverage over developmental research spending in the region. It also puts greater responsibility on donors to engage in periodic consultations to ensure resource rationalization.

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* All dollar figures in current Canadian dollars unless stated otherwise.

TABLE 1: Annual Financial Disbursements for Development Research in Sub-Saharan Africa by Type of Donor Agency[a]

Donor Agency by Type	Total Research Funds to LDCs (CAD millions per year)	Sub-Saharan Africa's Share	
Bilateral			
USAID	374.9[b]	119.0	
BOSTID	2.6[c]	0.4	
SAREC	56.7[d]	14.8	
French Aid	N/A	111.9[e]	
UKODA	58.8[f]	22.3	
CIDA	N/A	18.3[g]	
GTZ	N/A	16.2[h]	
Other*	N/A	124.2	
IDRC**	103.6	35.6	
Sub-total		462.7	(74%)
Multilateral			
World Bank	N/A	111.9[i]	
UNDP	279.7	12.8[j]	
Arab Financed Agencies	N/A	2.7	
Sub-total		127.4	(20%)
TOTAL ODA		**590**	
Foundations			
Ford	N/A	10.9[k]	
Rockefeller	59.7	17.9[l]	
Carnegie Corp.	9.9	7.4[m]	
Int. Foundation for Science	N/A	0.24	
Sub-Total		36.44	(6%)
TOTAL		**626.5**	**(100%)**

* This comprises best estimates of contributions by Japan ($27.9m); Italy (($51.8m); Netherlands ($23.3m); Switzerland ($6.1m); and Arab Countries ($15.1m) to support developmental research in Sub-Saharan Africa.

** Actual Program Appropriations by Region for FY 1988/89.

NB: See following two pages for notes on table.

NOTES:

a. This annual estimate is based on figures from different fiscal years, using the most recent information possible. Most of the bilateral figures are based on net bilateral disbursements of ODA to SSA for FY 1987 as suggested in the 1988 OECD Report. SSA's share of research funds is based on an estimate that 4.6% of bilateral and multilateral development funds is spent on research in any given fiscal year, as reported in the Lewis study (IDRC-MR160^{e}).

b. The total figure derived from USAID's Congressional Presentation, Annex IV (1989). The SSA's share represents a best estimate of funds spent on supporting Sub-Saharan African developmental research by the S&T Bureau, the Office of the Science Advisor, the Africa Regional Bureau, and contributions to CGIAR.

c. Between 1981 and 1988 BOSTID's overall support for development research stood at $18.4 million CAD and SSA's share was $2.6 million.

d. This estimate is based on SAREC's 1988/89 Annual Report.

e. The figure is derived from France's net disbursement of ODA to SSA, and assuming that 4.6% of the total ODA is spent on development research in SSA, including contributions to CGIAR.

f. Total as reported in UKODA's Report on Research and Development 1986/87. SSA's share is based on a calculation that 38% of UKODA's net disbursements of ODA are spent in Sub-Saharan Africa.

g. This figure was for FY 88/89.

h. GTZ's net disbursement for development projects in SSA was $351.8 million in FY 1987/88, and it was assumed that 4.6% of the total was earmarked for research.

i. The World Bank's total consists of the Bank's contributions to CGIAR plus the average of its annual loans/credits specifically earmarked for supporting "free standing" agriculture research projects and agricultural and rural development projects with research components. Between 1981 and 1988, a total of $768.9 million was spent on such projects. This was divided by eight to give an average amount of $96.1 million. We also added the average contribution to non-CGIAR research in SSA between 1984 and 1987, which totalled $1.6 million.

j. The figure represents 4.6% of $279.7 million which UNDP spent on development related activities in SSA during FY 1988/89.

k. Sub-Saharan Africa's share was based on a list of projects cited in the 1988 Ford Foundation Annual Report. Research oriented projects were identified on the basis of type of activity and nature of recipient institutions. In fiscal 1988, the Foundation provided training grants totalling $7.2 million some of which were directly research-related, such as staff development for research institutes and archives.

l. An estimate given by a senior Vice President at the Rockefeller Foundation in New York.

m. Figure based on a best estimate of a Senior Program Officer at the Carnegie Corporation of New York.

III GENERAL CHARACTERISTICS OF DONOR SUPPORT

A preliminary review of the various research sectors being supported by the donor agencies and foundations appears to suggest that the bulk of donor resources tend to be concentrated in five main sectors. These are, in order of importance:

a) improving the region's food producing capacity;

b) alleviating population pressures;

c) arresting environmental degradation through efficient natural resource management, particularly in the area of forestry and desertification;

d) minimizing the spread of infectious diseases and improving child and maternal health; and

e) strengthening higher education.

That a high proportion of resources is being channelled by the donors to lessen the region's food deficit and to minimize population growth attests to the intractable and continuing nature of these two problems in Sub-Saharan Africa. Table 2 shows program concentration by donor agency.

Notwithstanding these emphases, there is a perception within the African scientific community that not enough support is given to industrial research. There was a consensus at a recent consultative meeting on the management of science for development that while Africa is responsible for the production of a significant proportion of the world's mineral and agricultural products, its share of the world's value added to manufactured goods (MVA) is extremely low, as a result of the minimal processing of the region's raw materials. Thus, the MVA in industrialized countries is as high as 65%, while that of Sub-Saharan Africa is a mere 1% (Odhiambo et al, Science for Development in Africa, ICIPE, June 1989, p. 31).

A review of project and program descriptions and other activities indicates that the donor agencies tend to

TABLE 2: PROGRAM CONCENTRATION BY AGENCY

SECTORS	AGENCIES												
	USAID	UKODA	FRENCH AID	SAREC	GTZ	CIDA	IDRC	WORLD BANK	UNDP	FORD	ROCKEFELLER FOUNDATION	CARNEGIE	IFS
Food Production	■	■	■	■	■	■	■	■	■	■	■		■
Environment, Forestry and Desertification	■	■		■	■	■	■	■		■	■		
Fisheries							■		■				
Infectious Diseases				■			■		■	■		■	■
Child and Maternal Health	■			■			■			■		■	■
Higher Education	■	■	■	■		■	■	■		■	■		
Women in Development	■			■		■	■			■			
S&T Policy							■					■	

support primarily applied research* hardly any resources are allocated to basic research. There also appears to be an emphasis on the "hard" as opposed to "soft" sciences. It is noteworthy that, by supporting primarily applied research, donors are implicitly treating Sub-Saharan Africa as a basic science and technology adopting region.

The decision to allocate research funds to a specific country or geographical area may be influenced by a combination of factors. These include the nature of the developmental research problem; the level of scientific competence; the number of research scientists; the possibilities for collaborative arrangements with home-based research centres and universities; previous colonial ties, and ideological considerations. Thus UKODA and French Aid tend to channel research funds largely to former British and French colonies; SAREC concentrates its support in the Eastern and Southern African region; USAID provides the bulk of its research funds for agricultural research to a group of countries it has defined as Technology Producing Countries (TPCs). The remaining countries, collectively classified as Technology Adopting Countries (TACs), are assumed to have limited capacity to generate their own technology and hence, need to rely on borrowed research findings produced by TPCs, the International Agricultural Research Centres (IARCs), regional research and donor country research institutions. USAID believes that TACs should place emphasis on academic training of researchers with the aim of building a critical mass of scientists who are capable of judiciously borrowing and/or developing technology in the future. Overall, it appears that about 70% of the research support going to Sub-Saharan Africa goes to 10 countries, representing approximately 57% of the region's population. They are: Botswana, Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Nigeria, Malawi, Senegal, Tanzania, and Zimbabwe.

Most of the donor agencies use a range of modalities to channel resources to support developmental research in SSA.

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* The Frascati manual defines applied research as "original investigation to acquire new knowledge directed primarily towards specific, practical aims or objectives" and basic research as "work designed to acquire knowledge without any particular application or use in view."

The most frequently used channels are: support through **multilateral arrangements**, such as the Consultative Group for International Agricultural Research (CGIAR)* and the Special Program for African Agricultural Research (SPAAR); **collaborative arrangements** and direct support to national institutions.

Through **multilateral mechanisms**, donor agencies are attempting to coordinate their efforts in order to strengthen agricultural research in SSA. The establishment of SPAAR in 1986 allows participating donor institutions to share common information on overall resource-flows for agricultural research. It should enable each donor agency to identify areas of complementarity or gaps in support. Additionally, the CGIAR system is an important coordinating mechanism for channelling resources to support agricultural research of benefit to the SSA. In 1988, CGIAR figures show that bilateral donors contributed over $176 million to support IARCs in LDCs. Of this total, it is estimated that 40% or $70 million was spent in the SSA (CGIAR 1988 Financial Report, May 17, 1989). Information in the Annex shows that donors also make significant contributions to other international and regional research centres.

Some **collaborative arrangements** facilitate the use of donor nationals to provide scientific and technical advice to recipient institutions. In other collaborative arrangements, African research scientists are paired with their developed country counterparts to research topics of common interest. USAID and SAREC appear to favour this approach, while UKODA, French Aid and GTZ seem to **use their own nationals** to work directly on research projects related to SSA. In other cases, African research scientists are invited to participate in the projects. As part of collaborative efforts, African research scientists receive higher training, usually at the PhD level in donor countries.

Although a significant number of donor agencies provide direct support to African researchers associated with their own national research institutions and centres, available information indicates that the proportion of resources

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* The CGIAR is an informal network of government, regional, and international organizations which supports 13 independent agriculture research centres and their programs throughout the Third World.

flowing directly to national researchers accounts for at most one-third (i.e. $200 million) of the total designated funds for developmental research in the region. The remaining funds are channelled through multilateral and collaborative arrangements.

IV STRATEGIC INTENTIONS

By reviewing donor reports and other documents as well as interviewing officials of selected donor agencies, it becomes apparent that very few donors have **formal statements** with respect to identifying a **new strategic framework** or **principles** for supporting developmental research in SSA. Thus, although there may be an overall increase of resource-flows to the region, current approaches with respect to such characteristics as **geographical concentration, modalities of support, and sectors of support** are likely to continue. France, UKODA, USAID, and SAREC do not appear to have any intention of changing the main recipient countries. Current modalities for channelling resources to support Sub-Saharan African research are unlikely to change. A high proportion of research funds will continue to be provided through multilateral and collaborative arrangements.

In sum, it can be said that, at this aggregate level, knowing what other donors are doing now is probably a good indication of what they are likely to be supporting in the coming years.

Annex

PROFILES OF SELECTED INDIVIDUAL DONOR AGENCIES

Bilateral Agencies

It has been possible to collect information on USAID, BOSTID, UKODA, SAREC, French Aid, GTZ/GATE, CIDA, and IDRC.

1. UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

Total funds for research: $374.9 million (1989);*
Sub-Saharan Africa's share: $119 million;**
Main areas of emphasis: Building research and institutional capacity in the agricultural sector.

USAID channels funds through centrally funded programs, mission funded programs, and regional bureau programs. The centrally funded programs provide technical support to USAID's economic assistance programs through applied research, as well as development and testing of appropriate technology. Field mission funds are used to support specific research projects defined at the mission level. Each regional bureau such as the Africa Bureau can direct funds to support research. As a result of this decentralized decision-making process, it is difficult to calculate the actual proportion of the agency's total budget earmarked for research in any given fiscal year. However, it is possible to use existing documents and notes from discussions with USAID's officials to calculate indicative figures.

It is estimated that USAID will spend approximately $374.9 million on research support and research complementing activities throughout the Third World during fiscal year 1989. Regarding Sub-Saharan Africa's share, if research

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* All dollar figures in current Canadian dollars unless stated otherwise.

** The two figures are best estimates; calculated from various tables in USAID Congressional Presentation, Annex IV (1989).

funds spent through the Africa Regional Bureau, the S&T Bureau, the Office of the Science Advisor, and support to the IARCs are taken into consideration, it is estimated that USAID will spend about $119 million on research and related activities in SSA. Of this total, half ($59.5 million) will be spent by the Africa Regional Bureau to support agricultural research and faculties of agriculture in selected countries in the region (see below). The remaining amount will be spent by the S&T Bureau, the Office of the Science Advisor, and the field missions to support various research and research-complementing activities.*

A review of USAID's Congressional presentation (Annex IV, FY 1989), and discussions with USAID officials confirm that a significant proportion of the estimated $119 million earmarked for supporting research in SSA is spent in the United States through **Collaborative Research Support Programs (CRSPs)**. The **CRSP** mechanism allows USAID to use U.S. scientists especially those associated with U.S. land-grant universities, to provide scientific/technical advice to institutions and individual recipients in Sub-Saharan Africa. Typically, the U.S. and African scientists/institutions will work on specific projects or problems of common interest. In sub-Saharan Africa, CRSPs have covered a broad range of research topics such as small ruminants (sheep and goat breeding); forestry and fuelwood; cereals (maïze, millet and sorghum); root crops (cassava, potatoes, and sweet potatoes); legumes (beans, cowpeas, chickpeas, and pigeon peas); and peanuts.

A 1985 USAID strategy paper, "Plan for Supporting Agricultural Research and Faculties of Agriculture in Africa", divides sub-Saharan African recipient countries into two broad categories: **Technology Producing Countries (TPCs)** and **Technology Adopting Countries (TACs)**. Classification into either of the two categories is based on such criteria as types of crops being produced (especially those providing staple food), extent of government support for agricultural research, and degree of linkages between national agricultural centres and international agricultural centres. There are eight sub-Saharan African countries which meet the criteria of TPCs and have been given substantial support.

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* Ibid, plus interviews with USAID officials in Washington, D.C.

They are Cameroon, Kenya, Malawi, Senegal, Sudan, Zaire, Zambia, and Zimbabwe (see Appendix A).

The Agency attempts to facilitate linkages between the TPCs and the TACs by increasing attention to training programs that build up a critical mass of scientists thus enabling researchers to borrow research ouputs prudently.

To facilitate greater efficiency in the delivery of support, USAID has divided SSA into agro-ecological zones for research on specific commodities. Most of these research topics are being undertaken in the TPCs:

- Maïze - Eastern Highlands, Western Coast, Zaire Basin, and Southern Zones;
- Sorghum and Millet - Southern, Sahelian, Sudanian, and Eastern Highlands Zones;
- Roots and Tubers - Zaire Basin and Western Coastal Zones;
- Edible Legumes (particularly beans and cowpeas) - Eastern Highlands, Western Coastal, and Sahelian Zones;
- Upland Rice - Western Coastal Zone and Madagascar; and
- Forages in Mixed Farming Systems - Sahelian, Sudanian, Eastern Highlands, and Southern Zones.

There has been a steady rise in USAID's expenditure for agricultural research in SSA from $6 million in FY 1980 to over $95 million in FY 1989.

In late 1987, Congress approved a new funding facility for SSA called Development Fund for Africa (DFA) with a total commitment of $1,362.2 million for FY 1988 through 1991. The overall objective of the DFA is to create conditions for "sustainable, broad-based, and market-oriented economic growth in Africa" (USAID; An Action Plan for FY 89-FY 91: The Development Fund for Africa, March, 1989, p.ii). However, the DFA is not intended to supersede existing sectoral or sub-sectoral strategies and plans. Rather its action plan will be integrated into current programs which may have large research components.

Annex

Overall, USAID tries to look at the total research system which includes complementary linkages among the national agricultural research systems, the IARCs, CRSPs and regional research centres and research institutions of donor countries. The systems' approach is aimed at strengthening the various research components.

Annex

2. BOARD ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (BOSTID)

Total funds for research (1987-88) **$2.6 million**
Sub-Saharan Africa's share **$0.4 million**

Between 1981 and 1988, BOSTID supported about 17 projects in sub-Saharan Africa through national research institutions. The bulk of the funds went into supporting three key sectors: **health and nutrition** ($1,1 million); **forestry** ($489,000); and **food production** ($378,420)*.

Among the 10 recipient countries in SSA, three received a large share of the total program funds: Kenya ($812,651), Senegal ($298,333), and Nigeria ($339,983). The principal criterion for the selection of projects was their scientific merit. In the case of SSA, BOSTID emphasized the development of indigenous capacity in developmental research through the use of local researchers/scientists. U.S. scientists were used to provide scientific advice to recipient institutions/individuals.

The future of the research support program of BOSTID is uncertain since the Congress recently decided to cut the Board's program budget for fiscal year 1989/90, leaving it with no funds to support new research activities in LDCs. BOSTID will continue to manage existing projects, and will provide scientific backstopping to the grant program of the Office of the Science Advisor of USAID. Also, it has been indicated that BOSTID would continue to maintain some links with LDC recipients in some advisory capacity. This may largely consist of advising national research councils to improve research management and science and technology policy-making capacities generally.** Two areas in which advisory activities are underway are science and technology information and science education in SSA.

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* Figures were obtained directly from BOSTID.

** Based on interviews with BOSTID officials.

Annex

3. **UNITED KINGDOM OVERSEAS DEVELOPMENT ADMINISTRATION (UKODA)**

Total Funds for Research (FY 1986/87): $58.8 million
Sub-Saharan Africa's Share: $22.3 million
Main Recipient Institutions: British research institutions and universities.

The UKODA expenditure on development research has four components:

(i) Support for research contracts carried out by individual researchers or research teams who are usually based in British universities or similar institutions. For FY 1986/87, 6.7 million pounds ($13.4 million) was spent under this program.

(ii) Support to British scientific establishments, including scientific units of the UKODA. 1986/87 expenditure was about 8.5 million pounds ($17 million).

(iii) Support to international centres. Between 1985 and 1987 UKODA contributed 23.37 million pounds ($46.8 m) to these centres of which about 9.3 million pounds ($18.6 million) was spent in SSA.*

(iv) Expenditures in R&D carried out as part of Britain's aid to particular countries. In 1986/87 approximately 7.7 million pounds ($15.4 million) was provided for this purpose.**

Three main programs have been established to implement UKODA programs, namely the Economic and Social Research Program (ECOSOC), Engineering Research, and Natural Resources units.

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* The calculation is based on CGIAR's tables (CGIAR 1988 Financial Report). 40% of CGIAR expenditure goes to support agricultural research in SSA.

** UKODA, Report on Research and Development 1986/87.

Annex

ECOSOC tends to focus a great proportion of its programs on SSA, and is currently supporting research related to the implementation of economic structural adjustment policies by the countries in the region. There are plans to support research on structural adjustment policies in Ghana, Uganda, and Sudan. Additionally, future research support in SSA will be directed at exploring the linkages between economics and the environment.

The **Engineering Research Program** covers mainly water and architectural projects. Currently, there are seven projects related to SSA.

The main priority of the **Natural Resources program** is to promote agricultural production with emphasis on food production, although in some cases, support is given to cash crops. Past activities in SSA have focused on oil seeds, maize, millet, rice, animal husbandry, animal health, and agroforestry.

It is noteworthy that a key underlying principle of these programs is that support is given to research projects which will be of benefit to more than one developing country.

Most of these research programs are carried out in UKODA scientific units, other British government departments, and research institutions. The most important ones are: the Tropical Development and Research Institute, the Resources Development and Research Institute, the Overseas Unit of the Transport and Road Research Laboratory, the Overseas Division of the British Building Research Establishment, the Centre for Tropical Veterinary Medicine, Tsetse Research Laboratory (Bristol), the Overseas Division of the National Institute of Agricultural Engineering, the Oxford Forestry Institute, Hydraulics Research Limited, the Centre for Population Studies, and the Institute for Development Studies.

Through this list of institutions, it may be said that the UKODA programs are not designed to build national research and scientific capacities directly in SSA or elsewhere in the Third World. However, in some research projects, countries which may directly benefit from research outputs are often identified and, in some cases, their scientists/researchers are invited to work jointly with their British counterparts. The main sub-Saharan African recipient countries are: **Botswana**, Kenya, **Malawi**, Sudan, Tanzania, **Zambia**, and **Zimbabwe**.

Annex

4. SWEDISH AGENCY FOR RESEARCH COOPERATION WITH DEVELOPING COUNTRIES (SAREC)

Total Funds for Research in LDCs (1988/89): $56.7 million
Sub-Saharan Africa's share: $14.8 million

Between 1979 and 1989, SAREC supported about 181 projects in SSA, covering three main research sectors, namely **food production, health/nutrition and education.*** These projects were funded through bilateral channels, regional research cooperation, and special programs.

The **bilateral activities** involve direct cooperation between Swedish university departments and sub-Saharan African research institutes/centres. Through this approach, SAREC has concentrated support in a few countries in Eastern and Southern Africa, such as **Botswana, Ethiopia, Kenya, Mozamnique, Somalia, Tanzania, and Zimbabwe.** The only countries in West Africa which have received support from SAREC are **Guinea Bissau and Cape Verde** (see Appendix B).

Research training is an important component of the bilateral program. The emphasis on long-term institutional co-operation is based on what SAREC defines as a "sandwich" model, whereby training and research in a sub-Saharan African country is alternated with training in Swedish university departments.

The regional research cooperation encompasses Archaeological Research ($0.34 m. 1987-88); Reproductive Health ($0.4 m. 1987-88); and the Program for African Social Science Research (PASS) ($5.2 m. 1986-89). PASS is designed to support research in the social sciences and humanities in SSA, and a great proportion of the fund goes to CODESRIA (Council for the Development of Economic and Social Research in Africa). Other programs supported are: Strategies for the Future of Africa, Association of African Women for Research and Development (AAWORD) and the Southern African Development Co-ordination Conference (SADCC).

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* The total project figures were calculated from the Inter-Agency Development Research Information System database (IDRIS).

Annex

SAREC also makes significant contributions to the following international research centres:

Organization	Total Contribution FY 1987/88 (CAD million)
International Livestock Centre for Africa (ILCA)	.36
International Laboratory for Research on Animal Diseases (ILRAD)	.45
West Africa Rice Development Association (WARDA)	.46
International Institute of Tropical Agriculture (IITA)	.19
The International Centre for Insect Physiology and Ecology (ICIPE)	.70(a)
TOTAL	2.02(b)

(a) Note that between 72/73 and 1987/88, SAREC contributed about $5.90 m. to ICIPE's programs

(b) By 1988, SAREC had contributed approximately $6 million to these centres through the CGIAR (from the 1987/88 Annual Report.)

SAREC's 1987/88 Annual Report identifies three main priority areas, namely environment, AIDS, and Social Sciences.

On environment, the main emphasis is on desertification and deforestation. Since 1985, SAREC has allocated $0.2 m. to AIDS research, mainly in Tanzania and Guinea Bissau. The Swedish Government has allocated an additional $11.3 m. in excess of SAREC's regular budget to support AIDS research for a three-year period, beginning 1988/89. The Social Science focus is intended to respond to the financial crisis of African universities and research institutions, by providing periodicals/books for a number of university libraries.

Annex

5. FRENCH AID

Total Funds for Development in SSA: **$2,434 million**
Total Funds for research in SSA: **$111.9 million**
Types of Recipient Institutions: **Mainly Tropical Agricultural Research Centres located in France.**

France is a major contributor towards agricultural research in SSA. From 1976 to 1983, France's support for tropical agricultural research totalled $182 million in 1980 US dollars.* France has been active in supporting research in SSA and in other Third World countries since the 1940s, largely through eight product research institutes which were under the then Tropical Agriculture Development Studies and Research Group (GERDAT), and the Overseas Office of Scientific and Technical Research. These various groupings have been further streamlined into two principal agencies: ORSTOM - the French Institute of Scientific Research for Development, and CIRAD - the International Centre for Cooperation in Agronomical Research for Development. ORSTOM has a staff of 1,200 of whom 700 are working outside France (210 in SSA). A large proportion of its research activities consists of agricultural research. CIRAD has a professional staff of 910 of whom 525 are working outside France (375 in SSA).

The French system consists largely of technical assistance to recipient countries. This mode of support implies that the bulk of the research activities are undertaken by French nationals who are either stationed in recipient research stations or who work in CIRAD and ORSTOM's research laboratories located in Montpelier and Paris.** Currently, SSA accounts for about 70% of the total research support given by the French to the Third World.

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* West Africa Agricultural Research Review, World Bank 1985-86, World Bank, Western Africa Projects Department, February 28, 1987. P. 351.

** West Africa Agricultural Research Review, World Bank 1985-86, World Bank Western Africa Projects Department, February 28, 1987, pp. 352-353.

Additionally, France contributes a significant amount of its aid budget to IARCs. From 1985 to 1988, France contributed $11.7 million to the IARCs, 40% ($4.6 million) went directly to support activities/projects aimed at strengthening agricultural research in SSA. While such support may benefit a number of countries in the region, traditionally France has tended to support developmental research that provides greater benefits to former colonies in the region. Senegal, Côte d'Ivoire, Cameroon, and Gabon tend to receive more support than the remaining Francophone countries.

Annex

6. GERMAN AGENCY FOR TECHNICAL COOPERATION (GTZ)

Total Funds for Research in FY 1987: **$351.8 million**
Sub-Saharan Africa's Share: **$16.2 million**

The GTZ/GATE (German Appropriate Technology Exchange) has supported 31 projects in SSA since 1979. The bulk of these projects were in the agricultural sector, particularly food production and fisheries, and were carried out through collaborative programs between universities and national research institutes in SSA and in the Federal Republic of Germany.*

The GTZ/GATE also provides support to strengthen SSA's agricultural research systems through the IARCs. Between 1985 and 1988, GTZ provided about $42.4 million to the CGIAR centres of which $16.9 million went directly to IARCs that are located in SSA. From 1977 to 1989, it supported 34 bilateral agricultural research projects in a number of sub-Saharan African countries for total investments of $83.3 million.**

GTZ research funds are spread among 10 Sub-Saharan African countries. They are: Benin, Burkina Faso, Kenya, Mali, Niger, Somalia, Tanzania, Togo, Zaire, and Zambia.

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* Based on figures from the Inter-Agency Development Research Information System database (IDRIS).

** West Africa Agricultural Research Review, World Bank 1985-86, pp. 352-353.

Annex

7. CANADIAN INTERNATIONAL DEVELOPMENT AGENCY (CIDA)

Net Government-to-Government Assistance for development in sub-Saharan Africa in FY 1988/89: $426 million
Total funds for research in sub-Saharan Africa:$18.3 million*

A review of CIDA's 1987-88 Annual Report shows that a portion of the Agency's total disbursements to core countries in sub-Saharan Africa is spent on supporting research and research complementing activities. In practice, spending on developmental research tends to be concentrated in core countries and regional groupings such as **Senegal, Côte d'Ivoire, Zaire, Cameroon, Tanzania, Kenya, Ghana, Zambia, Zimbabwe, the Southern African Development Coordination Conference (SADCC), and the Sahel.** Appendix C highlights selected developmental research activities supported by CIDA in SSA.

The bulk of the funds went into **supporting agricultural research and human resource development.** A significant proportion of CIDA's support to developmental research in SSA is channelled through **international and regional agricultural centres.** Canadian contributions to CGIAR amounted to approximately $15.6 million in 1987/88, placing Canada third among national donors. CIDA also supports specific initiatives carried out in the international centres. Through IITA, CIDA is supporting an Africa-wide Biological Control Program to combat cassava mealybugs and green spidermites, which are causing cassava losses of 30% to 80% in 30 African countries. CIDA contributed $650,000 towards this effort (CIDA's Annual Report, 1987-1988, p. 67).

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* The amount was obtained from CIDA's Policy Branch through the IDRC-CIDA Liaison Officer.

Annex

8. INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)

Total funds for research for FY 1987/88 through 1989/90: $150 million

Sub-Saharan Africa's Share: $50 million

Since 1971 SSA has received a large share of IDRC's program funding, averaging 25% of total resources allocated to developmental research in the Third World. This trend has continued in the last few years, with the Centre increasing its allocation of both financial and human resources to the region. In fiscal years 1987/88 through 1989-90, the region's share of the Centre's program appropriations averaged 33%, an increase of 8% over past disbursements. This increase is reflected in the allocation of additional professional positions to the region. Almost half of the Centre's professional staff outside of Ottawa are now posted to either Dakar or Nairobi, an increase from 36% in fiscal year 1983/84.

Thirty eight of the 45 sub-Saharan African countries have received project/program funding from IDRC; although Centre support has been highly concentrated, with 71% of all grant funds being concentrated in only 10 countries: Burkina Faso, Cameroon, Ethiopia, Kenya, Mali, Nigeria, Senegal, Sierra Leone, Tanzania, and Zimbabwe. These countries account for 57% of the total population in SSA.

IDRC offers a broad range of sectoral approaches to respond to development problems in such areas as agriculture, forestry, nutrition, environment, food production and storage, information sciences, earth and engineering sciences, health sciences, demography, economics, urban planning, and gender and development. Training is also an important component of IDRC's support.

In terms of types of recipient institutions, Centre support to public research institutions is far greater than support to non-governmental institutions, with government institutions and universities carrying out more than three quarters of the projects. A recent discussion paper: "Strategic choices for Sub-Saharan Africa" submitted to the IDRC Board in October 1989, concludes that Centre support has been concentrated in relatively few institutions both nationally and regionally. About one-quarter of the support went to only eight of the 190 national institutions

supported, and over half of the funding to non-national institutions was concentrated in seven out of 55 institutions supported. The 10 national institutions with the most IDRC projects, are universities. Additional information on trends in IDRC support to SSA is provided in Appendix D.

In principle, IDRC does not use expatriate research scientists to conduct research on behalf of African recipient institutions. However cooperative arrangements, facilitate collaboration between African and Canadian research scientists.

IDRC has collaborated with other donors in 17% of its sub-Saharan African projects since 1983. Nine percent involved major international (bilateral, multilateral or private) organizations and 8% involved a variety of national and non-national agencies. To its projects with other major donors, IDRC contributed $16.4 million and the known donor contributions totalled $29.9 million. The major donor collaborators were **CIDA**, contributing $10.8 million for 17 projects; **Ford Foundation**, $7.5 million for 16 projects; **SAREC**, $4.5 million for four projects; **Rockefeller Foundation**, $.5 million for seven projects; and **WHO**, $.3 million for two projects.

In terms of IDRC's strategic intentions for the region, a recent policy paper attempted to determine whether IDRC's current policies and procedures are adequate for effective support to research in SSA. It concludes that in comparison with other developing regions, SSA requires special consideration. The paper suggests that the particular needs of the region are being met by the Centre's current policies and operational procedures, but these should be further refined to make IDRC funding more effective in responding to existing conditions. The following are highlights of the key recommendations:

(i) In relation to human resources development, it is suggested that Centre activities in SSA seek opportunities for (a) strengthening the institutional bases for both research and training; (b) the indigenization of training; and (c) tailoring training to the technical and managerial needs of recipient institutions.

Annex

(ii) There should be a sharing of research resources and results among the region's national and regional research centres and institutions. This is in light of the fact that there are many fragile research institutions addressing common research problems with limited resources, both human and financial.

(iii) To ensure greater complementarity of efforts collaboration with other donor agencies should be an essential component of an IDRC strategy for the regions.

(iv) IDRC's project support has tended to be concentrated "in relatively few institutions in relatively few countries". The paper recommends that a centre strategy for SSA should build on this pattern of support by encouraging Centre Programs to concentrate their projects in institutions with proven or potential research strengths.

Annex

Multilateral Donors

The United Nations' affiliated organizations such as the World Bank, FAO, WHO, UNEP, UNESCO, and UNDP play an important role in supporting research and research-complementing activities in SSA. But among these organizations, the World Bank and UNDP appear to be the key players in terms of the volume of resource-flows.

1. THE WORLD BANK

Estimated funds for Research in Sub-Saharan Africa per annum: **$111.9 million**

Although the World Bank supports research related to education and environment, thus far, the bulk of its lending in SSA is for agricultural research and related activities.

From FY 1981 through FY 1987, projects with agricultural research as a component or as a principal objective were financed in 68 countries, 30 of these were in SSA.

The following highlights some of the principal channels used by the Bank to support agriculture research in SSA:

Free Standing Agricultural Research Projects

One of the principal objectives of these types of projects is to strengthen national agricultural research systems, which include among other things, effective linkages with the extension services. The total cost of free standing projects approved between FY 1981 and 1987 was $1,754.7 million and the cost of the research components was $972.5 million. Sub-Saharan Africa's share was $527.4 million and $169.8 million respectively.*

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* "Review of Lending for Agricultural Research" FY 1981-1987 (A World Bank Discussion Paper).

Annex

Research Components in Agricultural and Rural Development Projects (ARDs)

Between FY 1981 and 1987, 209 projects with agricultural research components were financed. The total cost of the research components was $789 million.

Policy Based Lending

This type of lending is made to facilitate reforms. Between 1984 and 1987, the Bank lent $536.7 million to seven sub-Saharan African countries (Central African Republic, Côte d'Ivoire, Mauritius, Niger, Sierra Leone, Tanzania, and Zaire) for policy reform projects which had significant agricultural research components.

Bank Support for CGIAR

CGIAR figures show that from 1985 to 1988, the Bank's grants for core and essential activities amounted to $138.6 million of which 40% ($55.5 million) was spent on African agricultural research (CGIAR Financial Report, May 1989). In addition to providing grants to the CGIAR, the Bank has, since FY 1984, made a limited number of grants to international agricultural research institutions which are not part of the CGIAR system to support core and special research projects. By FY 1987, the Bank had given a total of $4.9 million to such institutions. The International Centre for Insect Physiology and Ecology (ICIPE) and the International Council for Agroforestry (ICRAF) have benefitted from such grants. Additionally, the Bank has been instrumental in the setting up of the Special Program for African Agricultural Research (SPAAR). SPAAR was launched in 1986, and is essentially designed to facilitate donor coordination of resources being channelled to support agricultural research in Sub-Saharan Africa, especially to strengthen national agricultural research systems (NARS) through :

(a) the development and testing of relevant technologies in support of sustainable agricultural development;

(b) better coordination of donor assistance with the explicit objective of avoiding the duplication of efforts; and

(c) greater exchange of information on past, current and future activities of participating agencies.

The Bank actively supports macro-economic and policy research. In collaboration with other donor agencies such as IDRC and the Rockefeller Foundation, it has been participating in two important economic research consortia, the International Consortium for Economic Research for Sub-Saharan Africa and the "Réseau sur les politiques industrielles et les incitations sectorielles" network for primarily francophone African countries. The Bank is contributing US $300,000 to the former and US $150,000 to the latter. It also provides support to other equally important sectors. In the area of population, health and nutrition (PHN), the Bank has initiated two major studies: The Determinants of Fertility and the Agenda for Action to Improve Population Program Implementation in the 1990s. In FY 1990, the Bank's Africa region has devoted over US $200,000 to this research while mobilising over US $800,000 from external sources to conduct population-related activities. There are four major research activities in the health sector which include AIDS, Health Financing, Health Policy, and most recently, a US $1.2 million proposal for a study of the Economic Impact of Fatal Adult Illness in Sub-Saharan Africa. In FY 1990, the Bank's Africa support for this research amounts to over US $160,000 and external financing for these studies has, to date, amounted to approximately US $200,000.*

Regarding strategic intentions, future Bank lending to sub-Saharan African countries may continue to focus on economic reforms through structural adjustment programs. As a corollary to this program, the Bank, in association with other multilateral and bilateral donors, plans to set up economic management and policy analysis centres in selected African countries. These centres would primarily be responsible for preparing policy studies on micro and macro economic issues that would be of relevance to the governments in the region. The Bank is also emphasizing the

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* This information is based largely on comments made on an earlier draft of this paper by the Technical Department, Africa Regional Office, The World Bank.

restructuring of higher education, with the aim of facilitating a more cost-effective university education across the continent than it is at the present.

Annex

2. UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

Estimated Funds for Research in sub-Saharan Africa (FY 1987): $12.8 million

In 1987, the project expenditures estimate was $809.2 million, with Africa accounting for the second largest regional share, estimated at $279.6 million (35%) - (UNDP World Development Annual Report, 1987). It is estimated that a portion of sub-Saharan Africa's share ($12.8 million) was spent on supporting science and technology activities and other research-complementing activities, including training, institution building, and the provision of equipment. Some of the S&T projects funded by the UNDP in SSA include: research and training on Coastal Marine Systems; African Biosciences Network (ABN); and African Network of Microbiological Resources Centre in Biofertilizer Production and Use.

The UNDP also gives grants to regional and international research centres. Between 1985 and 1988 the UNDP contributed $40.1 million to CGIAR towards core and essential activities, of which 40% ($4.2 million) went directly to support agricultural research in SSA (CGIAR Financial Report, May 1989).

Annex

Foundations

Private foundations and organizations such as the Ford Foundation, the Rockefeller Foundation, Carnegie Corporation of New York, and the International Foundation for Science provide significant support for research activities in SSA.

1. THE FORD FOUNDATION*

Total Funds for Research in sub-Saharan Africa (FY 1988): $10.9 million

The Ford Foundation supports a wide range of activities including agricultural research, agricultural development, and rural development. Some of the principal development themes it supports are: women's participation in agriculture and rural development; regional seminars on agriculture in SSA; irrigation planning; economic and social research in universities; training researchers for on-farm trials; and support of projects in SSA conducted by IARCs.

- Proportion of support by types of institution:

  35% universities;
  30% government institutions;
  30% NGOs;
  5% international/regional organizations.

- The key recipient countries are: Kenya, Mozambique, Nigeria, Senegal, Tanzania, and Zimbabwe.

Regarding strategic intentions, Ford is moving away from core support to universities to providing resources for the development of specific disciplines within selected universities in SSA. Examples of such support are: the establishment of the department of demography at the University of Zimbabwe; and the provision of books to the library of the Eduardo Mondlane University in Mozambique.

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* Based on an interview with an Assistant Program Officer at the Ford Foundation.

Annex

2. CARNEGIE CORPORATION OF NEW YORK*

Total Funds for Research (1990-91):**	**$9.9 million**
Sub-Saharan Africa's share:	**$7.4 million**

Approximately 75% of Carnegie Corporation's program for strengthening human resources in 1990-91 will be spent in countries in sub-Saharan Africa which are members of the Commonwealth. Of this portion, one-third covers S&T-related projects, another third is spent on maternal and child health projects and the remaining funds are used to support activities in South Africa and to promote public understanding of development in the United States. Additionally, the Corporation is funding operational research in African and Caribbean countries.

The bulk of the research support is channelled through national research institutions, primarily universities, and through regional organizations such as the Economic Commission for Africa (ECA). A proportion of the program budget is made available to non-governmental regional professional scientific bodies, including the African Academy of Sciences (AAS).

Carnegie does not provide direct support to individuals. Individuals are supported as part of a staff development program, and should be affiliated with national institutions. In some cases, Carnegie may extend support to American scientists/institutions to provide technical assistance to recipient institutions in SSA. For example, with respect to the health projects, Columbia University is involved in providing technical assistance to the recipient institutions.

A decision by the board of trustees requires the Corporation to limit its support to former British colonies in SSA and in the Caribbean. With the exception of Gambia,

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* The information is based on an interview with a Senior Program Officer at the Carnegie Corporation.

** Note that this sum represents the Corporation's total program budget.

which has recently been brought into an S&T network being sponsored by the IDRC and Carnegie, most of the Commonwealth African countries have received support from Carnegie.

S&T policy, and maternal and child health issues are the principal areas of support in SSA. Current emphasis has been on inter-disciplinary research. For example, in the area of health, the corporation is encouraging the incorporation of social science perspective by facilitating the participation of social scientists in health related projects.

Future support to the region will continue to focus on strengthening scientific capacity by supporting researchers working on maternal and child health issues and on S&T policy.

Annex

3. THE ROCKEFELLER FOUNDATION*

Total funds for Research (1988-89):	**$59.7 million**
Sub-Saharan Africa's share:	**$17.9 million**

Of the **$17.9 million**, about 55-60% was spent on research-complementing activities such as the development of human capital, encompassing training, fellowships, and other institution/capacity building activities. Another 30% was spent on actual research with no training component. A portion of this money was allocated to the IARCs. If research undertaken by African graduate and post-graduate training is taken into consideration, the Foundation calculates that approximately 90% of the region's share was spent on research.

Universities are key recipient institutions. The Foundation does not usually make grants to government departments.

The Foundation emphasises on building indigenous capacity to resolve particular problems, and to support long-term programs while emphasizing an **inter-disciplinary or synergetic approach.** To promote the utilization of research results, the Foundation allocates 10% of program funds toward social action or social marketing of research outputs.

In SSA, the Foundation supports research related mainly to **food production**, new varieties, market behaviour**, soils and water, **health and population,** (encompassing AIDS **research, health seeking behaviour, vaccine development,** and **design of contraceptives), environment, and education.** The Foundation plans to spend more on education in the future, and is putting $500,000 into the Macro-Economic Network for SSA. Currently, the Foundation houses the secretariat for this network.

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* The information is based on an interview with an Associate Vice-President at the Rockefeller Foundation.

** The Foundation's agricultural related activities are located mainly in Eastern and Southern Africa.

Annex

The Foundation has been more active in **Anglophone** than in Francophone countries, but aims to increase its activities in Francophone Africa.

The Foundation will introduce a major global environmental program in 1990 in which Africa will be included. The overall share of funds going to Africa will remain constant.

Annex

4. THE INTERNATIONAL FOUNDATION FOR SCIENCE (IFS)

Estimated Annual Funds for Research in sub-Saharan Africa: **$0.24 million***

The IFS provides support to a range of Sub-Saharan African research institutions, including ministries and universities. Most of the projects are related to agriculture and livestock. The IFS also funds other research activities such as epidemiological and medical studies. From 1979 to 1988, the IFS supported a total of 496 research projects in sub-Saharan Africa at a cost of $2.38 million. Support was concentrated in the following countries: Burkina Faso, Cameroon, Congo, Ethiopia, Kenya, Nigeria, and Tanzania.

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* This figure is a best estimate, using total project costs provided in the IDRIS database. For example, in 1989 alone, the World Bank provided US $600,000 to IFS for making small grants to young scientists in Africa.

Appendix A

USAID: Flow of Resources to Countries Designated as Technology Producing Countries (TPCs)

COUNTRY	TYPE OF PROJECT	RES. COMPONENT (%)	FUNDING (US$)
Cameroon	Tropical Roots and Tubers	91	5,198
	National Cereals Research I	45	17,562
	National Cereals Research II	53	4,079
Kenya	National Agricultural Research	75	11,438
Malawi	Agricultural Research	82	7,380
	Ag. Research and Extension	60	9,000
Senegal	Agricultural Res. and Planning	75	4,013
	Strengthening Ag. Research	35	6,475
	Agricultural Research II	91	3,270
Sudan	Western Agricultural Research	97	25,220
Zaire	Applied Research and Extension	60	9,000
	Applied Ag. Research II	60	10,800
Zambia	Ag. Dev. Res. and Extension	45	5,632
Zimbabwe	(None)	--	00

Source: Prepared by the Africa Regional Bureau (USAID), dated 6/2/89.

Appendix B

SAREC: Top Sub-Saharan Africa Recipient Countries and Sectors of Support

Country	Period of Support	Total Research Funds ($000,000)	Sectors/Areas of Support
Botswana	1979-1988	2.6	Education and Rural Development
Cape Verde	1980-1989	2.3	Geosciences and Aquaculture
Ethiopia	1979-1989	10.1	Agriculture and Graduate Training in Biology and Chemistry
Mozambique	1978-1988	5.3	Women's Health Marine Biology
Somalia	1980-1989	6.6	Agriculture, Health, Women in Development, and Archaeology
Tanzania	1977-1989	6.4	Agriculture and Health
Zimbabwe	1981-1989	4.02	Agriculture, Natural Resources and Health

Source: SAREC : Annual Report, 1987/88

Appendix C

CIDA: Main Developmental Research and Research Complementing Activities Identified in CIDA's 1987/88 Annual Report

Core Countries	Type of Research/ Research-Complementing Activity	Sector	Total Cost ($m)	Type of Recipient Institution
Kenya	Training the research and mgmt. staff of the Kenya Agricultural Res. Inst.	Agric/ Food Product	N/A	----
	Agricultural Res. Development Training	Pasto-ralists	6.9	----
Tanzania	Helped set up a multi-crop research centre as part of a wheat project	Agric/ Food Product	N/A	----
Zambia	Res. into the viability of growing rain-fed wheat. This project has a training component designed to strengthen the Zambian government agricult. research capability.	Agric/ Food Product	9.9	----
SADCC	1) Supporting agric. research throughout the SADCC region. Projects supported include a regional sorghum and millet research.	Food Product	27.9 42	Intl. Crop Res. Inst. for the Semi-Arid Tropics (ICRISAT)

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Appendix C

Core Countries	Type of Research/ Research-Complementing Activity	Sector	Total Cost ($m)	Type of Recipient Institution
SADCC (cont'd)	2) Training workshops and seminars in each of the SADCC countries for agr. res. directors and other government officials.	Agric.	1.2	ISNAR
	3) Research into improved bean culti.		8.6	IITA and Southern African Centre for Cooper. in Agr. Research
	Forestry network	Forest.	8.7	ICRAF and Forestry Res. Insts. in Malawi, Tanzania, Zambia.
Côte d'Ivoire	Capacity Building	Rural Economy	7.1	CIRES
Rwanda	Training of Profs. at the Univ. nationale de Rwanda	Higher Educ.	---	Univ. nationale de Rwanda
Sahel	Demography - 42 Fellowships will be awarded, including teacher & researcher exchange.	Higher Educ.	---	
Burkina Faso	Informal Sector	---	.1	---

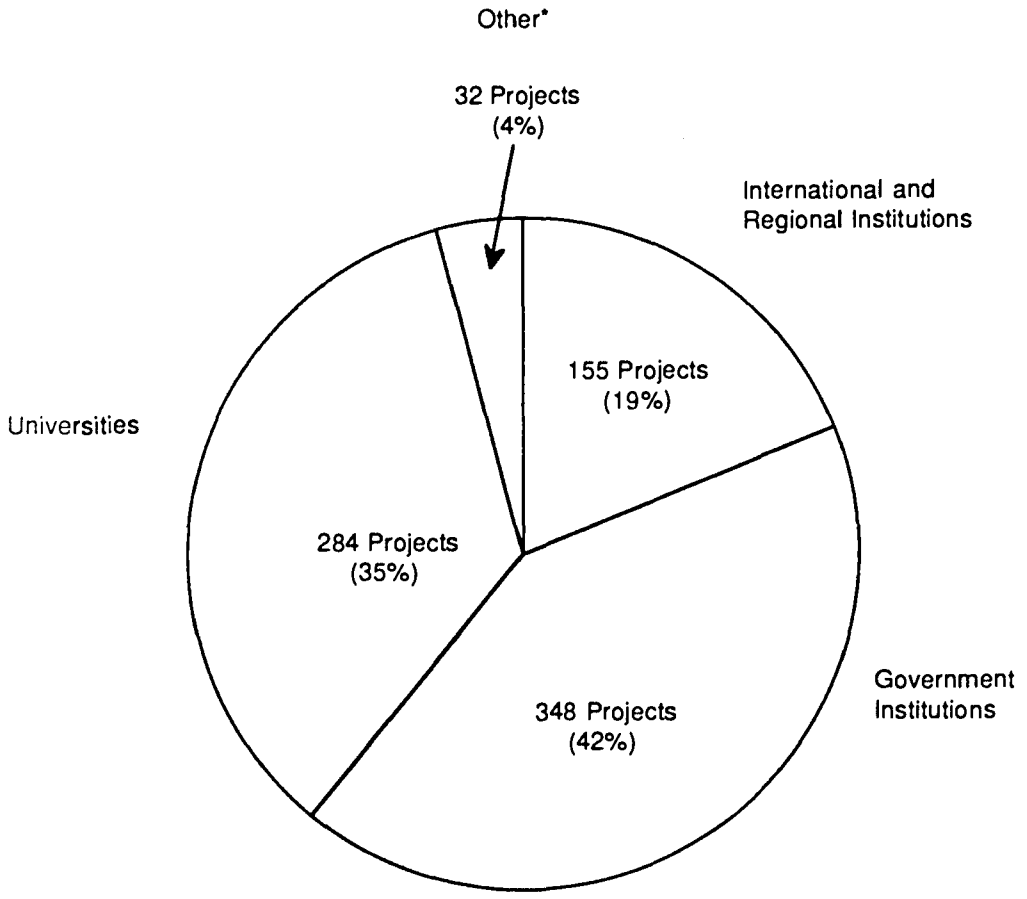
Source: Compiled from CIDA's 1987-88 Annual Report.

Appendix D

Figure I:

Distribution of Projects in Sub-Saharan Africa, by Type of Institution

(1971/72 - 1987/88)



Total Projects = 819

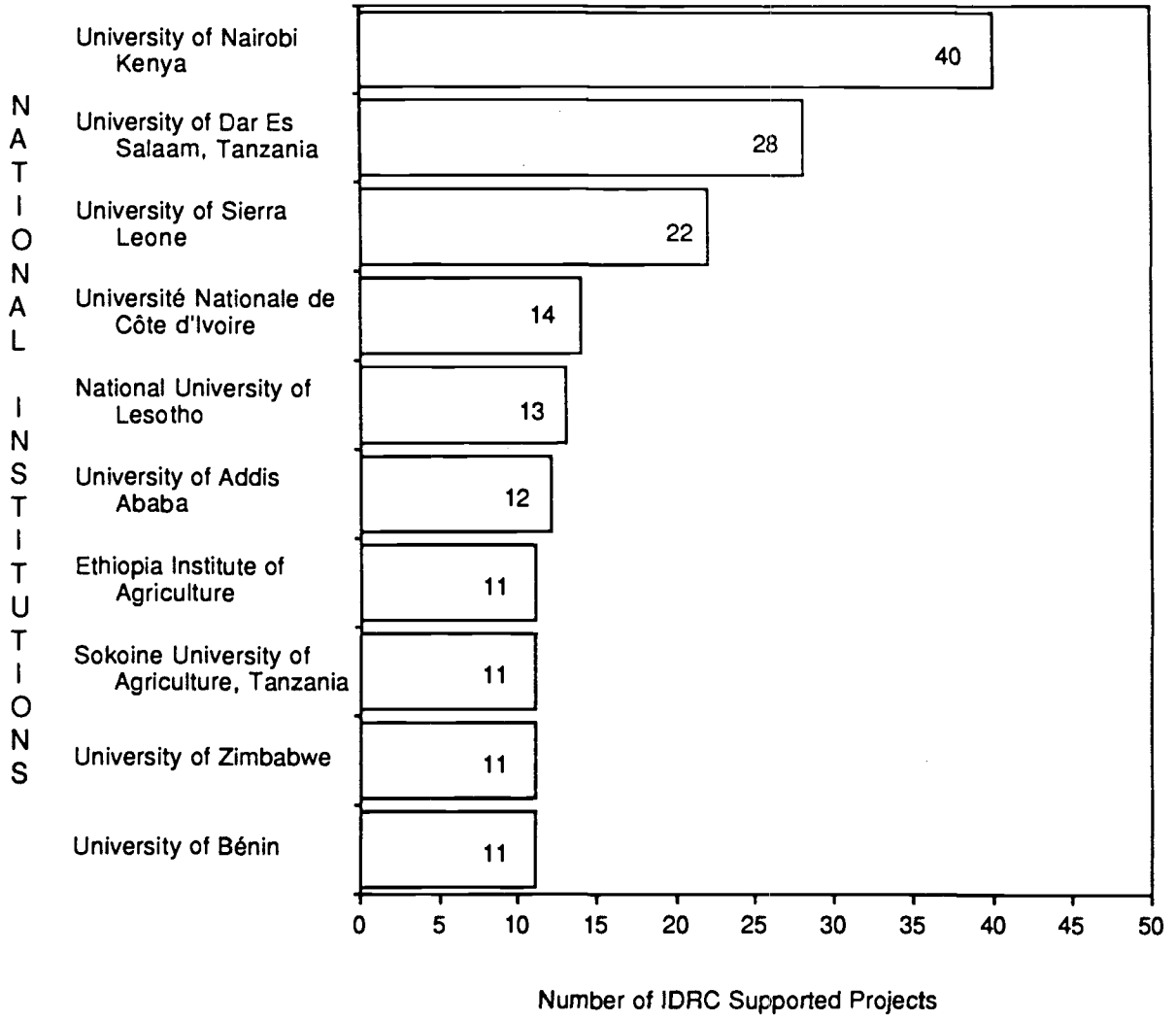
* Consists Primarily of Non-Governmental Organizations (NGOs) and Professional/Scientific Associations.

Appendix D

Figure II:

The 10 National Institutions in Sub-Saharan Africa with the most IDRC Projects*

(1971/72 - 1987/88)



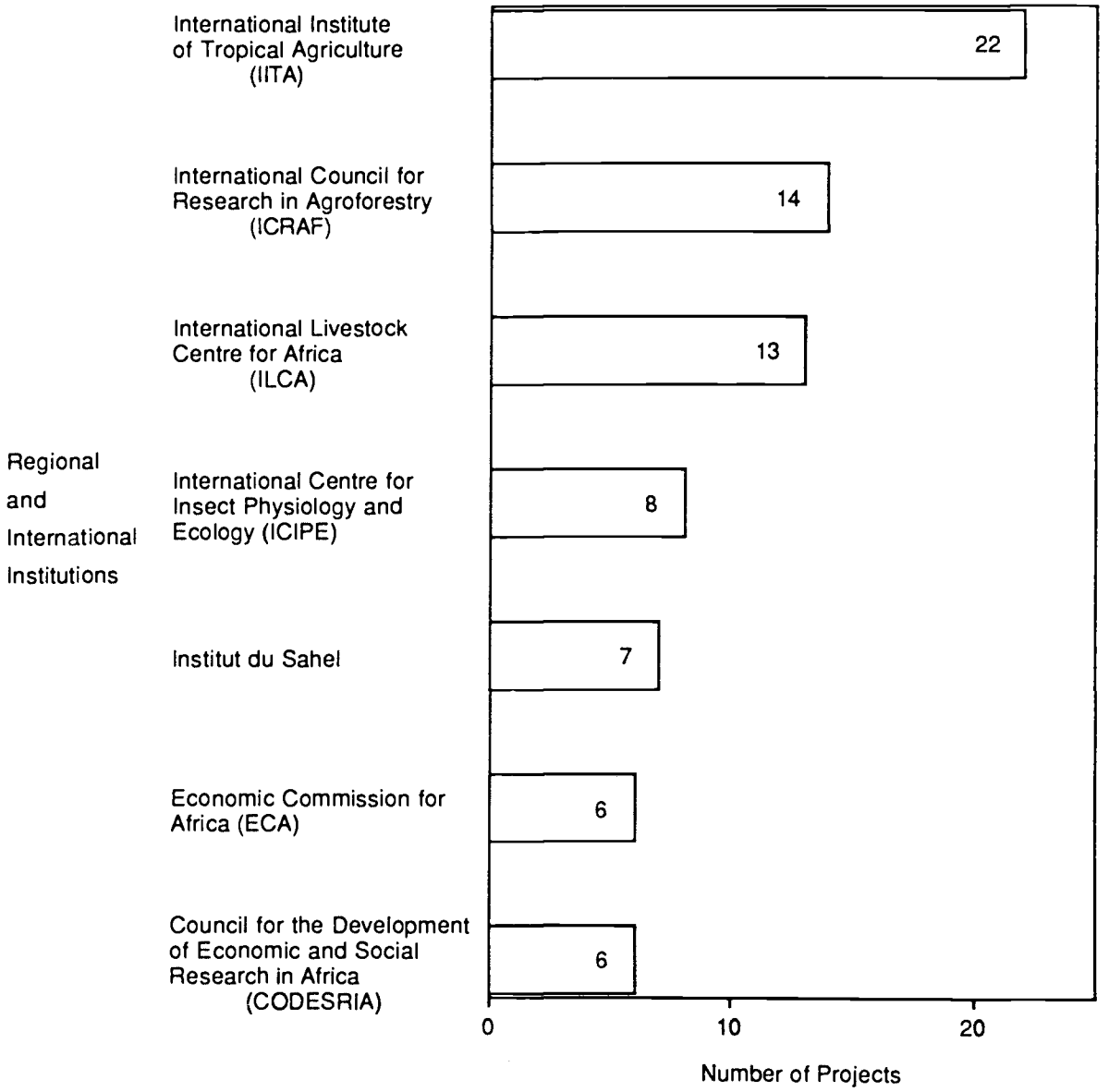
*The remaining 491 projects have been supported through 180 other national institutions.

Appendix D

Figure III:

Regional and International Institutions in Sub-Saharan Africa with the most IDRC's Projects*

(1971/72 - 1987/88)

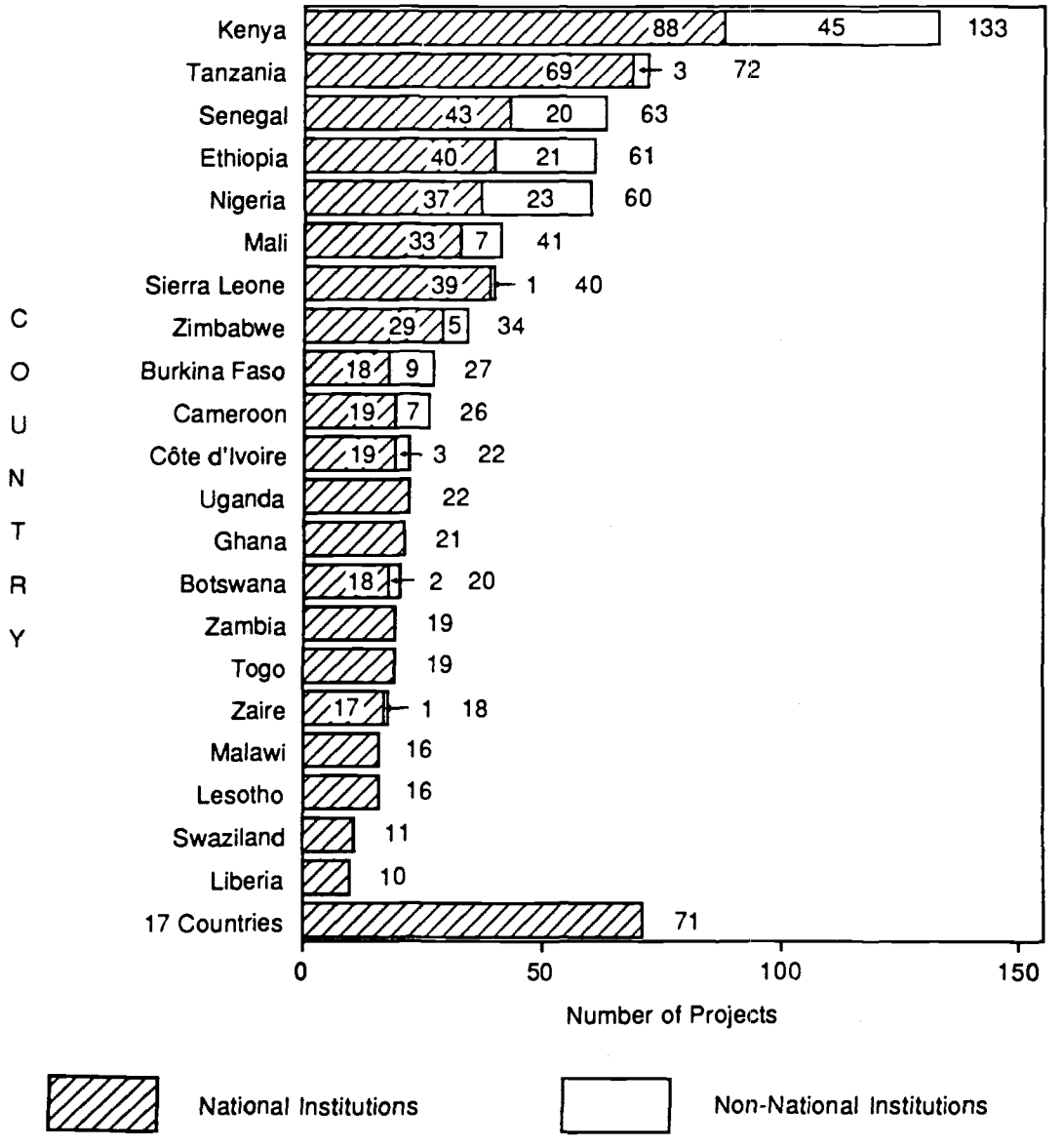


* The remaining 82 projects have been supported through 48 other non-national institutions.

Figure IV:

Distribution of Projects with National and Non-National Institutions in Sub-Saharan Africa, by Country

(1971/72 - 1987/88)



Appendix E

List of Donor Officials Interviewed

United Kingdom Overseas Development Administration (UKODA)

Mr. A.G. Coverdale
Economic and Social Division

Mr. P. Skinner
Economic and Social Division

Mr. S.R.J. Robbins
Natural Resources Division

Mrs. A.F. Stirton
Engineering Research Division

Board on Science and Technology for International Development (BOSTID)

Dr. Michael P. Greene
Associate Director

Dr. M.G.C. McDonald Dow
Associate Director - Studies

CGIAR Secretariat (Washington, D.C.)

Dr. Donald S. Plucknett
Scientific Advisor

Carnegie Corporation of New York

Dr. Patricia Rosenfield
Senior Program Officer

The Ford Foundation

Mark R. Quarterman
Assistant Program Officer
Developing Country Programs

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Appendix E

The Rockefeller Foundation

Dr. Joyce Moock
Associate Vice President

United Nations Development Programme (UNDP)

Mr. Benjamin Gurman
Senior Regional Projects Officer
Division for the Regional Programme
Regional Bureau for Africa

United States Agency for International Development (USAID)

Dr. Calvin Martin
Assistant Director for Research
Office for Technical Resources
Bureau for Africa

The World Bank (Washington, D.C.)

Mr. Ramgopal Agarwala
Chief, Special Economic Office

Pierre Landell-Mills
Chef de division
Département géographique 1
Région Afrique

Akbar Noman
Senior Economist
Office of the Vice President, Africa

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