IDRC

Annual report 1990–1991

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Annual Report 1990–1991

International Development Research Centre

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to stimulate and support scientific and technical research by developing countries for their own benefit.

The fields of investigation to which IDRC gives its financial and professional support include: farming; food storage, processing, and distribution; nutrition; forestry; fisheries; animal sciences; environment; tropical diseases; water supplies; health services; education; population studies; economics; communications; urban policies; issues relating to women in development; earth and engineering sciences; and information sciences.

Although IDRC is funded by the Canadian Parliament, its operations are guided by an international 21-member Board of Governors. Under the IDRC Act, the chairman, vice-chairman, and 9 other governors must be Canadian citizens; currently, 5 of the remaining 10 governors are from developing countries.

The programs that the Centre supports help developing countries build the scientific competence of their institutions and researchers so that these countries can work to solve their own problems. Research projects supported by IDRC are, therefore, identified, designed, conducted, and managed by developing-country researchers in their own countries, to meet their own priorities.

IDRC helps to create and supports international networks through which developing countries can learn from each other, share common experiences, and conduct similarly designed studies in areas of mutual concern. The Centre also promotes cooperation between researchers in developing countries and their counterparts in Canada.

IDRC has its headquarters in Ottawa, with regional offices in Cairo, Egypt; New Delhi, India; Nairobi, Kenya; Dakar, Senegal; Singapore; and Montevideo, Uruguay .

Contents

Introduction

IDRC marked its 20th anniversary in October 1990 in an international environment stunningly different from that at its birth. The world's population had increased by 1.6 billion (43%); a debt crisis of monumental proportions had descended upon countries of both North and South; holes had been discovered in the ozone layer; world patterns of trade (in both goods and services) and of capital formation were evolving and changing rapidly; the "cold" war had ended, plummeting the Soviet Union and much of Eastern Europe into political and economic havoc; and the consumption of narcotics in northern countries had risen to record levels, spawning an immense international production and trafficking industry.

Against this background of extraordinarily rapid change, the developmental issues, which had attracted the attention of the Canadian Parliament in 1970, nevertheless remained disturbingly unresolved. Resources dedicated to official development assistance (ODA) worldwide had grown from US$26 billion to US$48 billion (countries of the Organisation for Economic Co-operation and Development only), striking progress had been achieved in food-grains production in Asia, improvements in life expectancy and infant mortality had been recorded in a number of countries, smallpox had been eliminated, and physical infrastructure had been greatly enhanced: all of these were monumental achievements.

Nevertheless, 1990 ended with a quarter of a million children dying each week in developing countries from preventable disease, with a substantial portion of the developing region's population living in "absolute poverty," with population growth showing little sign of decline, with massive rural-to-urban migrations and the resulting phenomenon of megacities, with bleak employment prospects for new entrants into the labour force in almost all developing countries, with striking increases in the incidence of several infectious diseases including those sexually transmitted, with unsustainable burdens upon the environment, and with demands for the entire range of social services beyond the capacity of most governments to respond effectively. As a result, governments are increasingly unable to cope, let alone function credibly; social discontent and political instability are widespread in the Middle East, Africa, Asia, and Latin America. One consequence is an increase in military expenditures and a disturbing growth in the weapons trade in all developing regions.

In these two decades, IDRC's annual grant from the Parliament of Canada has grown from $5 million to $114 million, a network of six regional offices has been put in place, and its support for scientific research extended to some 5 000 projects in more than 100 countries. IDRC's concept has inspired replication in several other OECD countries and inspired many tributes and honours, among them the 21st Century Award of Sigma Xi, the world's premier science honours society. The citation described IDRC as

> ... a mechanism which utilizes innovative approaches, emphasizes the advantage of flexibility, and exhibits sensitivity to developing country priorities.... Its perceptive, imaginative and generous *modus operandi* has profound implications for the stability and well-being of the interdependent world of the 21st century.

IDRC was launched by Parliament with high expectations. It was given considerable independence, a flexible mandate, and has received not insignificant resources. On several occasions during its two decades of experience in a world of rapid and continuing change, IDRC has chosen to reexamine its function and to question how best it can discharge its statutory responsibilities.

President David Hopper presented an important paper to this effect to IDRC's Board of Governors part way through his mandate in the early 1970s. On each of its 10th and the 15th anniversaries (1980 and 1985), IDRC prepared major, published documents (*Give Us the Tools*, 1980; and *With Our Own Hands*, 1985) consisting in significant part of evaluations of the Centre's performance prepared by scientists and others in developing countries. Emerging from those analyses were extensive policy and structural changes designed to maintain IDRC's relevance, to improve its responsiveness, and to augment its effectiveness.

This awareness of external change, and a willingness to adapt to it, have been as critical to IDRC's continuing effectiveness and world leadership as has been the superb performance of its highly professional staff.

IDRC's mandate

The Centre's statutory mandate was derived from observations made by the United Nations Advisory Committee on the Application of Science

and Technology to Development in the mid-1960s that

> Only a very small fraction of the world's scientific and technical resources is devoted to the problems of the developing countries; the overwhelming proportion of the world's intellectual capital, as well as its physical capital, is applied toward meeting the needs of the highly developed countries.

A few years later, the Pearson Commission found little change and, indeed, noted that overwhelmingly the scientific activities within developing countries were carried out by expatriates, and all too often for the principle benefit of interests outside those countries.

Prime Minister Lester B. Pearson stated in June 1967 that

> The challenge for international development is to find new instruments for concentrating more attention and resources on applying the latest technology to the solution of man's economic and social problems on a global basis.

Mr Pearson's emphasis on technology reflected the views of such competent observers as Nobel Laureate Sir Arthur Lewis that the primary distinction between countries industrialized and those referred to as "developing" was the inability of the latter to acquire, to create, and to use technology. Two elements are in issue here because technology without an understanding of its nature and its purpose is of little worth. Knowledge is required; knowledge gained in large part through empirical research designed and conducted by those most immediately seized of the particular problems deterring development. Some of this research necessarily should be conducted by scientists within the developing countries; some could most effectively be pursued by others on behalf of those countries. Parliament recognized the duality and chose to empower the fledgling IDRC in both respects. The Centre's statute reads:

> The objects of the Centre are to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying scientific, technical and other knowledge to the economic and social advancement of those regions ....

IDRC was to be a knowledge organization; one that would stimulate, generate, and disseminate knowledge. The peculiar mix of these activities as needed is generally acknowledged to be the genius of the Centre. The relationship of one activity to the other varies with time, region, discipline, and institution; the choice depends in each instance upon the experience and sensitivity of IDRC's staff and its international Board. The ability of the Centre to bring together so wisely its panoply of resources has given it an enviable reputation, one that would not be possible were the organization but a simple granting agency.

IDRC's philosophy

The views of Pearson and Lewis rest on a sound anthropological footing — that footing, in turn, is the basis for IDRC's philosophy.

The human animal distinguishes itself from all other biological species in two respects: unlike any other creature, humans are tool makers and record keepers. Through the millennia, tools have been employed on occasion for constructive accomplishment and, on other occasions, for cruelty and destruction. Records have permitted knowledge to be accumulated for problem-solving and for well-being; records have also served as a reflection of injustice, real and perceived, kindling resentment and reprisals, sometimes over centuries.

The ability to make tools and keep records has elevated the human species into a position so superior to all others that it dominates them all without exception. As between societies and communities, those that are most proficient in each respect have gained a clear ascendancy in terms of general well-being. Not surprisingly, in the final decades of the 20th century, the salient distinction between those wealthy countries that are deemed to be "industrialized" and those less wealthy that are described as "developing" is found in the possession of technology as Sir Arthur Lewis observed. Quality of life, on an aggregate, societal basis, is measurable in technological terms. That being so, the power of a society to choose among technologies, and its ability to use what it chooses, are surely critical to developmental success. If that power is denied, if that ability is restricted, no other development activities are capable of sustained success. For that reason, much of what falls within the ODA rubric is not essentially development at all; food aid is a prime example.

Choice and use of technology are not necessarily exercised wisely, however, and it is open to IDRC to indicate what societal characteristics it regards as essential for "development." The Board of Governors addressed this question some years ago and identified three such characteristics: equity, participation, and sustainability.

The Board further ventured its own definition of development, one that continues to be pertinent and valid:

> Development is a process of change that is aimed at improving the well-being of people in a way that is consistent with human dignity, which is best fostered in conditions of adequate nutrition, sound health, independence of spirit, pride in indigenous culture, and respect for human rights.

The Board added that, in its judgment, development decisions are investment decisions and must be made by those in the developing countries, not by IDRC. The central element of power of choice — the ability to assume control of decisions — requires refurbishment and enhancement.

IDRC employs ODA resources to pursue its purposes in three mutually reinforcing ways:

- By providing funds to other institutions for research and research-related activities;
- By providing advice, information, and services to other institutions on such activities; and
- By initiating and conducting developmental research activities.

How best to perform these functions and what proportion of its resources to assign to each is a continuing challenge for the Centre. In particular, to ensure that efficiency does not mask ineffectiveness and that convention does not blur relevance are managerial requirements. The narrow focus necessary for research, as industrialized countries have long understood, can deter the harmonization of activity necessary for effective problem solving; it can also encourage the dedication of resources long after developmental circumstances have altered substantially.

Should IDRC not consciously and continuously evaluate its programs and its structure, therefore, its ability to respond flexibly and coherently to real need and its efficiency in discharging its mandate will both deteriorate. It must acknowledge and respond to growing regional differentiations, to the evolving research competencies of developing countries, and to the fluctuating patterns of available resources.

Program activity

In October 1990, IDRC celebrated its 20th anniversary as an organization dedicated to promoting the generation, sharing, and use of knowledge on the problems of the developing world. During the months leading up to that anniversary, IDRC launched a review of its strategy, its mode of operation, and its main purposes.

Although this exercise is designed to be completed only in the latter part of 1991, the analysis of the Centre's past efforts in support of developing-country researchers has shown how much more complex today's activities are than the relatively straightforward "projects" that were the Centre's starting point two decades ago. That analysis has highlighted for us the importance of concepts such as networking and multidisciplinarity; it has demonstrated that sophisticated scientific approaches can be used to develop "simple" technologies; it has taught us lessons on how to better stimulate cooperation among donor agencies for improving support of developing-country researchers; it has brought the Centre to face the challenge of assisting in strengthening research institutions that have been weakened by the prolonged and pervasive economic crisis in many developing countries; and it has helped us face up to the challenge of promoting the application of the results of research at all levels from Cabinet Rooms to rural clinics.

In previous annual reports, we have tried to show practical examples of the many projects that the Centre has supported around the developing world in our main fields of activity — agriculture, health, the social sciences, information, engineering, communications, and so forth. This year, we display our program from different vantage points that will, we hope, serve to illustrate the many other aspects of "strengthening the research capacity of developing countries" — which still remains one of the principal objectives of IDRC.

Networking

In today's world of high-technology communications, it has become commonplace to talk of "networking" with the physical networks of contemporary telecommunications acting as metaphors for the complex array of linkages through which people interact. In the world of research, networking describes an increasingly elaborate system through

Networking for small-scale farmers

For Canadians, a banana is a just healthy choice for dessert. For many Africans, however, bananas are their primary source of calories and nutrients. For many farmers in developing countries, the fruit is their major cash crop. Despite its importance for the poor, until recently, little research had been done on the banana, or its starchy cousin, the plantain. Therefore, when farmers in Latin America and Africa began to notice a drastic drop in banana and plantain production in the 1970s and 1980s caused by the Black Sigatoka disease, they had nowhere to turn for advice. In the 1980s, over a 4-year span in Costa Rica, annual plantain exports fell from 26 000 to 5 000 tonnes because of Black Sigatoka. Naturally, these blights hurt the small-scale, subsistence farmers the most. Although large, commercial plantations can afford fungicides to ward off plant disease, most small-scale farmers cannot.

In 1984, IDRC stepped into the gap and created the International Network for the Improvement of Banana and Plantain (INIBAP). IDRC is one of a consortium of donors who support the work of INIBAP. The network combined a small central administration located in Montpellier, France, with regional technical offices in four developing countries. The central office was strategically located in the same city as France's important Centre de cooperation internationale en recherche agronomique pour le développement (CIRAD) in Montpellier. CIRAD's library also houses one of the world's best collections of materials relating to bananas and plantains. The

which researchers join forces in pursuit of common goals. In the world of development research, networking began as a means of combatting the intellectual isolation suffered by many developing-country researchers and has now flowered into a powerful tool for combining the talents and resources of scattered groups and individuals working in many diverse fields.

In the industrialized world of the North, scientists can take for granted their ability to communicate with colleagues in distant institutions by electronic mail, by telephone, or face-to-face at frequent professional meetings. Science is a highly social activity and thrives on the free flow of information among its practitioners: this flow acts as a stimulus to creativity. In sharp contrast, many scientists in the developing world must struggle in isolation from their colleagues, with few chances to meet and discuss shared technical interests, with little access to current literature, and often with virtually no knowledge of who their colleagues might be in adjacent countries. In these circumstances, donor agencies such as IDRC have devoted extensive efforts to devising means of allowing these researchers to stay in touch and to work together.

Networks in the developing world often start off modestly as simple programs in which participants with a common interest — for example, in a particular crop such as oilseeds, or a policy area such as education, or a widely shared development problem such as urban water supply — agree to share information on a regular basis, often via a newsletter, and to meet periodically to compare results and methodologies.

With time, as these networks become stronger, the participants usually will develop a shared research agenda, with each participating group emphasizing a particular aspect of the topic that brought the participants together in the first place. In some cases, different network participants will take on special responsibilities, such as for training, in others, the stronger institutions will pay particular attention to assisting their less-experienced colleagues. In recent cases, where Canadian research groups have become involved, the Canadians play a special role, serving as "windows" into the scientific community of the industrialized world for their colleagues in the South.

The concept of networking has now taken such hold that it has been used in the design of new, international institutions, such as INIBAP, the International Network for the Improvement of Banana and Plantain, to link National Research Programs together — in this case, programs dealing with

small INIBAP office provides cost-efficient coordination of projects, publications, and exchanges of plant varieties and research material. The regional offices — one in Burundi for eastern Africa, one in Nigeria for West and Central Africa, one in Costa Rica for Latin America, and one in the Philippines for Southeast Asia — handle most of INIBAP's scientific work, including genetic improvement and tissue-culture research. The regional offices also support national programs for banana research.

The foremost challenge for banana and plantain researchers now is to develop plant varieties resistant to pests and disease, especially Black Sigatoka. To this end, INIBAP developed an international program to collect and test different varieties of the fruit. A variety of plantain resistant to Black Sigatoka was recently found in Central America but, although flavourful, its short, round shape is unacceptable to local consumers. Researchers are now cross-breeding the fruit hoping to produce a new variety that has disease-resistance combined with the traditional oblong shape.

INIBAP also coordinates the crucial exchange of plant varieties between countries. Because exchanges carry the risk of spreading diseases or pests from one country or continent to another, the samples first go through transit laboratories in France or Belgium. The laboratories screen the specimens, usually by multiplying sample cuttings in test tubes and growing them into new plants. If found safe, the plants are sent to recipient researchers and grown in the field under supervision.

The network also links up researchers on projects, allowing them to learn from each others' work and avoid duplication. The network publishes research results and keeps a flow of relevant publications circulating through the scientific community.

Because INIBAP-sponsored research is geared to the small-scale farmer, new products must be cheap to be useful. A relatively inexpensive fungicide is now available that is more successful in controlling Black Sigatoka. Research has also improved spraying techniques to make small volumes of fungicide go further.

bananas and plantains — as a preferable alternative to creating new facilities from scratch.

Multidisciplinarity

There has been much debate in the scientific communities of both the South and the North, over the last many years, concerning the validity and the practicality of "multidisciplinary research." The scientific disciplines, such as biology, chemistry, mathematics, economics, and sociology, have developed powerful bodies of knowledge and arrays of techniques related to the understanding of specific sets of carefully defined problems; these disciplines have served humanity well in creating an immense fund of human knowledge.

Few disciplines, however, ever claim to deal with the problem set of other disciplines and, most particularly, the social and physical sciences have traditionally had completely different interests. The question of multidisciplinarity has, in the past, been resolved effectively, either within the boundaries of the natural sciences — where teams of physicists, chemists, and biologists are found tackling many physical problems — or within the social sciences — where economists, sociologists, and political scientists can be found tackling complex issues together. The problems of multidisciplinarity that give rise to the greatest complexity are those that transcend the boundaries of both the natural and the social sciences, as is typical in research addressing the practical problems of development.

In a recent paper for IDRC's Board, it was argued that

> The Centre's encouragement of more integrated, cross-disciplinary approaches to research has stemmed from a recognition of the frequent inadequacy of addressing development problems through single-discipline projects. Much remains to be learned about when and how to apply cross-disciplinary research.

A good example of the intricacies of the arrangements that can be necessary to mobilize a multidisciplinary group in a developing country is

Building better homes to prevent Chagas disease

In two villages in Paraguay, 133 families now live in sturdy, inexpensive houses they rebuilt through an IDRC-sponsored program. These South American homes are not just stronger, however, they are also resistant to insects that carry one of Latin America's most wide-spread diseases — Chagas' disease. Triatomine insects, also called cone-nosed bugs, thrive in the rural tropics and often breed in wall cracks, particularly inside dark, poorly ventilated houses. At night, they drop onto sleeping family members, suck their blood, and inject Chagas-ridden feces into their victims.

It is a stealthy disease. Most victims are infected as children, but do not feel the symptoms until 15 or 20 years later — during their prime working years. Pregnant women can also pass on the disease to their newborns. In Latin America, an estimated 16–18 million people are now infected, and more than 90 million are at risk. The disease causes muscle tissue enlargement in the esophagus, colon, or heart. victims may suffer painful digestive blockages. About 1 in 10 experience heart problems, often dropping dead from heart attack. There is no effective vaccine or treatment for Chagas.

Governments have traditionally used insecticides to kill triatomine insects, with little success. Spraying is expensive and temporary, and the most successful insecticides are often toxic to people and animals.

In contrast, the 3-year IDRC project, begun in 1988, took a sustainable approach to the problem. Researchers set out to find the best and cheapest ways to renovate rural homes — eliminating roof and wall cracks and improving lighting and ventilation — thereby wiping out the living quarters for the triatomines. Choosing

provided by the *Chagas disease-resistant housing* project in Paraguay, supported by IDRC. The project, as finally executed, involved researchers from four disciplines, drawn from institutions of different kinds (a university, government ministries, and non-governmental agencies) with no past history of working closely together as a team, and with support from five different program divisions within IDRC. The considerable promise of the results now emerging from this particular project seem to provide justification for the lengthy negotiations that went on among all of the participants to define and structure the approach that was finally taken to this multifaceted problem.

From sophisticated science to simple technology

Because IDRC sees working on the problems of poverty as its primary mission, it has to remain very conscious that the results of the research that it supports will, in many cases, be used by the most disadvantaged groups in society who have had little opportunity to use modern technologies. The challenge to many of the researchers supported by the Centre is to bring the tools of modern science to bear on the analysis of a problem while producing technologies that can be afforded, used, and maintained by the poor.

One such example is provided by the *Camanchacas* project in Chile, which used sophisticated understanding of the physics of clouds to optimize the design and location of a device that would "milk" moisture from daily occurring fog clouds to provide potable water for fishing communities located on the Pacific Coast of the Atacama desert.

The actual collectors look like nothing more than giant volleyball nets and the water droplets are collected in plastic eaves troughs, but their apparent simplicity masks a good technical understanding of the formation, occurrence, and fate of the fog clouds whose water is being harvested.

In a similar vein, researchers supported by IDRC funding in Southeast Asia have taken the advanced techniques of "expert systems" and

three Paraguayan villages, they tested the effects on triatomine infestation of fumigation, house reconstruction, and the two approaches combined.

One of the greatest challenges was to get sustained community involvement in the project. This was crucial to ensure that the project results would be practical and easily applied in other villages. To achieve the scientific and community goals, the project took a multidisciplinary approach. It involved professionals from health, social sciences, forestry, and engineering, drawn from two universities, the government health department, and independent agencies.

The villagers began with some knowledge of Chagas, but did not realize their homes were incubating the disease. A sociologist and community health worker held community talks to explain the disease and motivate the villagers to participate in the project. This was no small feat as each family had to provide almost half the cost of rebuilding their home — about US$250 in labour and materials. The per-capita gross national product (GNP) in Paraguay is only US$1 180 per year. Families also collected insects spotted in their houses for the researchers.

To understand the insect's behaviour and the disease's effect on community health, an entomologist and epidemiologist were involved. Residents were tested for the disease and, if infected, were referred to hospitals for assessment and treatment. On the engineering side, an architect, construction engineer, and timber engineer experimented with combinations of local materials, such as wood, clay, dung, straw, and sand, and with different door and window designs to produce the healthiest, most resilient, and most functional structure at the best price.

Early results from the project showed triatomine infestation was lower in renovated homes, but fumigation appeared to have the most immediate effect. Researchers say it will take several years to assess the long-term effectiveness of housing improvements on reducing Chagas. They also recommend more health education to change community habits. For example, villagers allow farm animals, which carry the insects, to run freely through their houses.

For future application of their results, the researchers developed an organizational strategy that would guide the simultaneous management of five 100-house improvement programs. The project results were presented to Paraguay's National Housing Council in late 1990 and are under review for possible inclusion in the national housing plan.

applied them to the technology of drying tea leaves, a technology that, in Sri Lanka, has changed little over the last two centuries. The problem in this case was to capture the knowledge of the tea-drying expert, who "knows" when conditions in the drier are right for producing a good quality of dried leaf and to control those conditions within a drier at those critical values during the prolonged time needed to dry a complete batch of tea.

Because every batch of tea tends to be different, the controls need to be reset regularly, but there are no mathematical models available to capture the subtleties of the necessary changes. To add to the challenge, a knowledge of the economics of the cooperatives that dry much of Sri Lanka's tea indicated that the investment that could be afforded for such a control system would have to be no more than about US$1 000! Once again, the early results of the project are promising.

Cooperation among donor agencies

The amounts of funds that all of the donor agencies that finance research in the developing world have at their disposal are very small in comparison with the needs and demands for such funding. To cite but one comparison, although the USA spends about US$120 billion annually on research and development, a study commissioned by IDRC[1] provided "an estimate for total 1984 aid funding of research in the range of US$1.3–1.4 billion."

Because the needs of all developing countries, when taken together, to have research carried out on the problems of their development certainly are no less than the needs of the USA alone, the disparities in funding are obvious, even if donor financing accounts for only 10–20% of all funding of research in all developing countries. (In some small countries, external sources certainly provide at least half of all research funding, whereas in some large countries with extensive scientific capacities, external donor support plays a much smaller role.)

In this environment of considerable need, donor agencies must take steps to see that the funds that they make available are used to greatest advantage while ensuring that the recipients' interests, rather than those of the donor community, are the interests that underlie the research agenda being supported. One effective means of meeting these twin objectives simultaneously has been the formation of "Research Consortia" as arrangements

[1] *External funding of development-related research: a survey of some major donors* — John P. Lewis, IDRC-MR160e, 1987, 68 pp.

Paving the way for better economic management in Africa

Over the past 20 years, most countries in the world have enjoyed rising income and productivity levels. During the same period, most African nations, already the poorest on earth, became more impoverished. The decline of African economies was partly due to external factors, such as deteriorating terms of trade and shrinking foreign aid, and partly due to structural problems, including weak management and dependence on primary exports. Some of the blame, however, also lay with bad economic policies — overvalued exchange rates, poor investments, and distorted incentive systems for food and industrial production. Few African governments had experienced economists to advise them. Instead, they based policy decisions on the past experience of other countries, including the very dissimilar economies of industrialized countries.

In 1983, IDRC took a step toward improving Africa's pool of economists by creating the *Macroeconomic Analysis Program for Eastern and Southern Africa*. Based in Nairobi, the program both funded economic-policy research and provided African macroeconomists with a variety of support services including meetings, literature, and advice from resource persons. It provided the first opportunity for many African economists to have their work reviewed by peers and to link up with researchers studying similar problems. IDRC had originally supported macroeconomic research on the usual project-by-project basis, but quickly realized it was not cost effective. African economists were working in virtual isolation, with no access to essential literature, little monitoring, and few peers with whom to discuss their research. Their training at overseas universities began to depreciate the moment they returned home.

By 1987, the *Macroeconomic Analysis Program* had attained sufficient credibility that other agencies, including the World Bank, the US Agency for International Development (USAID), and the Rockefeller Foundation were willing to finance its expansion. The wider range African Economic Research Consortium (AERC) was established, which now supports macroeconomic

through which different donors can arrange for the coordinated funding of research on priority issues.

The "African Economic Research Consortium" provides essential support to researchers and policymakers in the countries of eastern and southern Africa from a variety of donors of different kinds (bilateral, multilateral, and private foundations) in ways designed to respect the region's research priorities while providing a unified control — exercised by those working within the region — over the total amount of financing available. To achieve this end, each of the donors has had to accept the definition of a common approach and common ground rules for allocating resources, each of which acts to the advantage of the region.

In recent years, this kind of concerted action among larger groups of donors has become somewhat more common. As familiarity with the process of coordination of this style becomes greater, it is to be hoped that it will become even more common, and that it will lead to a better form of support being available to the research communities of the developing world.

Donor consortia are also formed, from time to time, to allow for the stimulation of public debate, around the world, on issues of importance. The International Commission on Health Research for Developing Countries, which was created and financed by a consortium of North American and European, public and private, donor organizations is one such example. Its final report[2] has given rise to a follow-up program focusing on the identification of *Essential National Health Research* programs for a growing number of participating developing countries. This follow-up is jointly managed, for the consortium of participating donors, by IDRC and the Swedish Agency for Research Cooperation with Developing Countries (SAREC).

Institution strengthening

Since its creation in 1970, IDRC has pursued the twin objectives of supporting applied research and, at the same time, seeking to strengthen the capacity of developing countries to carry out research programs on their own. Although much of the Centre's efforts in capacity building have, in the past, focused on training and upgrading the skills of individual researchers, recently, increased attention has been given to the need to strengthen the research institutions in which the researchers are expected to work.

[2] *Health research: essential link to equity in development* — Commission on Health Research for Development, Oxford University Press, New York, NY, USA, 1990, 136 pp

research throughout sub-Saharan Africa, including some francophone countries. (Another IDRC-supported network was also created in 1988 to support economic research specifically in francophone Africa.) The consortium's annual budget — which exceeds $1 million — is now contributed by 11 agencies.

By pooling financing from many donors, AERC has reduced duplication of donor efforts, lowered administrative costs, and created an opportunity for African researchers to play a stronger role in setting research priorities. In 1990, the consortium financed 41 research projects. Most concentrated on balance-of-payments issues and domestic financial management. In 1991, however, the focus will expand onto other subjects such as taxation policies and foreign-debt management.

Unlike Latin American academics who often work closely with government officials on policy decisions, African academics have historically had little influence on government policies. To overcome this, the Consortium encourages university researchers to team up with government researchers on projects in the hope that the two will develop closer ties. This approach has had the most success in Tanzania. The Tanzanian government has recently involved local economists in discussions that assisted the government in its negotiations over structural adjustment.

In another instance, several AERC-supported economists attended a research strategy meeting held by the African Association of Central Banks in April 1990. The central bankers and research directors were sufficiently impressed by the economists' knowledge and technical skills that they later hired many of them for bank research.

AERC is now entering its second phase with increased support from its donors, a growing stream of publications, and plans for a made-in-Africa program of graduate training in economics. The seed planted by IDRC in 1983 has taken root and become a prominent feature on Africa's economic scene.

A well-functioning research centre needs more than a complement of trained scientists or scholars: it needs access to information, administrative and financial personnel who are familiar with the kind of environment needed to stimulate creativity, and a senior management structure that can define objectives and create the necessary coherence in the institute's program without stifling innovation.

To bring all of these elements together in an industrialized country is no easy task. To do so in the developing world, and particularly in some of the poorest countries, is a formidable challenge — but one that must be met. Over the last 2 years, IDRC has reached agreement with three universities in sub-Saharan Africa — Makerere in Uganda and the national universities in Bénin and Mozambique — to join with them in building faculties or programs dealing with issues of public health. In each case, it is expected that the programs of support will have to be of long duration, will have to deal with the training of both medical and nonmedical staff, and will have to tackle the definition of educational curricula as well as of research agenda.

Applying the results of research

Both the countries of the industrialized North and those of the developing South know, full well, that the act of financing research, in and of itself, is not sufficient to ensure that the knowledge generated by that research will be used in practice. In the North, research performed within an enterprise is usually felt to be more likely to be exploited than that done in other institutional settings, because of the way in which the enterprise is assumed to be attuned to the needs of "The Market." However, the science policy literature of the developed world, during at least the last two decades, has struggled with the problem of linking the research outputs of both government laboratories and universities with the productive sector; today in Canada, the topic of university–industry linkages is still high on the policy agenda.[3]

If these problems of linkage are difficult in the industrialized world, they are much less understood in the developing world. In response to the need to improve understanding of these linkages, IDRC itself, with its recipients, has embarked on a series of "experiments" in the promotion of "utilization" and, through its regional offices, has begun a series of regional consultations concerning the linkages between developing-country universities and the productive sectors of their respective countries.[4]

Because IDRC supports research involving a wide spectrum of disciplines, and whose results are aimed at an even wider spectrum of potential users, the approaches that have been taken vary widely.[5] In many of our social science activities, the explicit aim of projects is to influence the direction and content of governmental policy; the ways in which this can be achieved differ greatly depending upon the openness of particular governments to advice.

For the African Consortium for Economic Research, a simple expedient has been devised, research groups seeking support must have, among their members, an appropriate official from either a central bank or finance ministry. Although such an approach cannot guarantee that a government will follow any particular piece of advice flowing from research, it goes a good distance to ensure that the government is aware of research conclusions and that the researchers involved are aware of the constraints on the government's freedom to act.

Through much of the 1980s, the countries in the Southern Cone of Latin America were ruled by military dictatorships that were actively opposed to the conduct of social-science research, so it fell to foreign donors, such as IDRC, to provide support for groups of social scientists who had chosen to remain in their home countries, despite the risks involved. With the arrival of democratic governments in the area, many of those researchers now find themselves holding ministerial rank and in positions to implement the results of the research that they had carried out. A number of senior members of the Aylwin government in Chile and of the Alfonsín government in Argentina were supported by IDRC during the period of the military regimes.

Conclusion

Networking, multidisciplinarity, institution strengthening, and utilization — these are some of the concerns that go to make up IDRC's "strategic framework" of policies and practices that the Centre is seeking to implement as it finances research around the developing world. The list of topics covered here is a sampling only of the longer list of preoccupations that underlie IDRC's ongoing efforts to improve its own understanding of the process of *Research for Development*.

[3] See, for example, *Accessing university research: the experience of Canadian industry* — J. André Potworowski, IDRC-MR210e, 1989, 82 pp.

[4] *Case studies on indigenous industrial R&D utilisation* — N.C.B. Nath and Lokesh Misra, IDRC-MR188e, 1988, 297 pp.

[5] *Universities and the application of research results: proceedings of a workshop, Singapore, 19–20 September 1988* — Corazon F. Azucena, editor, unpublished, 124 pp.

Financial commentary and highlights

During 1990–1991, IDRC was subject to significant external and internal pressures, both created by revised projections of revenue. Once again, the Centre's operating budgets and longer term resource plans had to be completely revised to meet the latest projections of revenue levels. After years of experiencing an active pattern of revenue growth, it has now become obvious that IDRC is entering an era where resources will be at a premium and where we must concentrate on becoming more efficient and effective while giving full regard to economy.

Management's challenge is not only to cope with the lower projections of grants, but also to continue its current drive to improve the proportion of funds being spent on program activities as compared to operational activities. Currently, the ratio of program to operational expenditures is 77:23. The challenge for the last 2 years and for the next 3 years is to reduce the operational costs of our head office and regional offices to 20% of total expenditures. This target will be difficult to achieve and will require sacrifices and hard decisions, but IDRC's management is determined to reach a ratio of program to operational expenditures of 80:20 by financial year 1994–1995.

During the past 2 years, significant steps were taken to reduce operational expenditures. These steps included reducing the size of our regional offices in Cairo and New Delhi and required the relocation of all program officers located in these offices. The steps also included a reduction in staff from the approved level of 462 positions, contained in our Two-Year Resource and Operational Plan for 1990–1991 and 1991–1992 presented to IDRC's Board of Governors in March 1990, to a revised target of 429 positions, representing a 7% reduction.

These budgetary reductions were made while maintaining investment in office automation to sustain productivity. IDRC is now linked electronically to all of its offices and has achieved its target of one microcomputer per regular user. Both the head office and the regional office in Singapore are now on Local Area Network (LAN) systems and plans have been drafted to include the regional office in Montevideo in the LAN system in 1991–1992.

IDRC's decision to examine our operational costs closely with a view of reducing them was given additional impetus by the request from Treasury Board that we comply with the wage restraint and management initiatives announced by the Minister of Finance in his Budget of 26 February 1991. Furthermore, in April 1991, IDRC was advised that its grant would be reduced by $8.0 million because of a reallocation of expenditures for official development assistance (ODA). The impact of this reduction was still being studied as this report was being written, but it will undoubtedly result in a further reduction in size.

IDRC's Parliamentary grant for 1990–1991 was slightly below the level received in 1988–1989, that is, 2 years earlier. In addition, the increase in our Parliamentary grant forecast for 1991–1992 is only 0.8%. In real terms (constant dollars), IDRC's grant is declining and this situation could continue for several years. On the other hand, expenditures on existing and new projects were lower than forecast for 1990–1991. The Centre ended the year with a surplus of revenues over expenditures of $4.5 million, whereas in the preceding year there was a deficit of $9.9 million.

IDRC's financial situation will, therefore, allow it to absorb part of the shock of the decrease in the grant forecast for 1991–1992. It should be noted

that this decrease coincides with the period when the Centre is implementing its new strategy, which is to take into account the projected Parliamentary grant for the coming years. In parallel to the reduction in expenditures during 1990–1991, the Centre has reduced the number of person-years at the head office in such a way as to ensure that performance is not significantly affected. The forecast is that the number of person years will continue to decrease in 1991–1992 and 1992–1993.

Revenues

Total IDRC revenues were slightly higher than those of the previous year and amounted to $122.5 million. Revenues consist of the Parliamentary grant of $114.1 million, investment and other income of $3.3 million, and income for contract research of $5.1 million. Figure 1 illustrates the trend in revenues over the last 4 years and for the year to come.

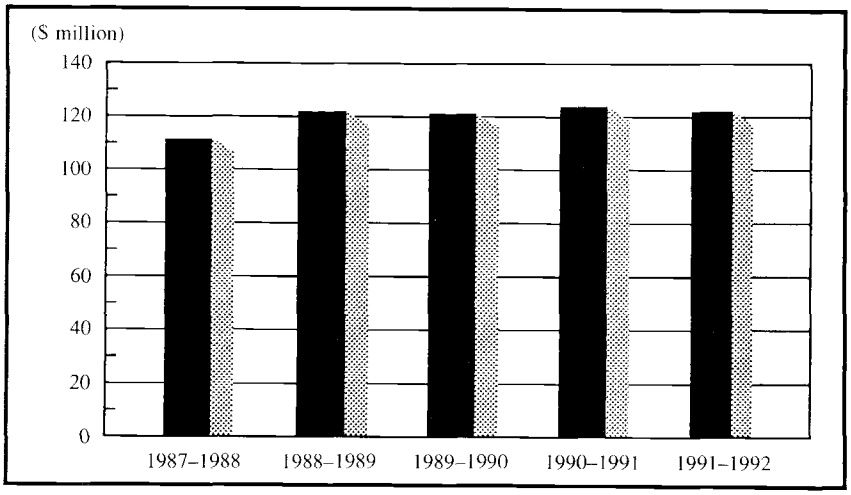

Figure 1. Total revenue for the Centre for 1987–1988 (actual) to 1991–1992 (budget).

The variances from the previous year for the three revenue components were very different from one another. The Parliamentary grant for 1990–1991, a total of $114.1 million, represented an increase of $5.6 million (5.2%) as compared to the preceding financial year. The $3.3 million from investment and other income is the same as for the previous year, but was higher than the budgeted target of $0.9 million. Lastly, the contract research revenues declined by $4.2 million (-44.7%) in comparison to 1989–1990. This was because the V International Conference on AIDS (acquired immune deficiency syndrome) took place in the preceding financial year. Setting these revenues aside, contract revenues increased by $2.2 million (75.9%).

For 1991–1992, total revenues of $122.0 million are projected, a drop of 0.5% over 1990–1991.

Expenditures

Total expenditures in the financial year 1990–1991 reached $118.0 million. This amount represents a decrease of $12.9 million dollars, 9.9% over the values for the previous financial year. Figure 2 shows the relative share of each category of expenditure for 1990–1991.

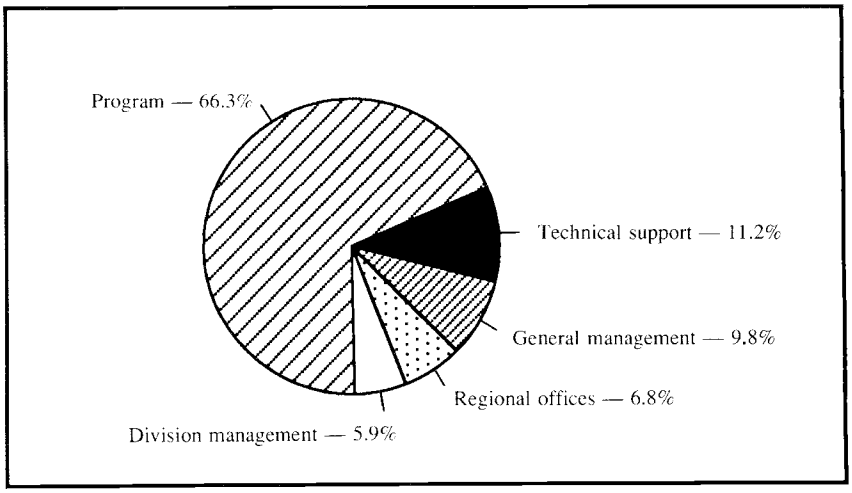

Figure 2. Breakdown of actual expenditures for 1990–1991.

Table 1 shows the forecast expenditures (budget) for 1991–1992 with the actual expenditures for 1990–1991 and the previous 3 years (in millions of dollars and as a percentage of the individual years' totals).

Development research activities

Development research activities reflect the direct costs of all scientific and technical research projects financed by IDRC in developing countries. These are the raison d'être for the Centre's existence. This category of expenditures includes projects that are identified, developed, and managed by developing-country researchers; projects that are supported by the Centre and international research networks; and contract research projects that are managed on behalf of other donor agencies.

In 1990–1991, expenditures for development-research activities reached $66.9 million or 56.7% of the Centre's total expenditures. Expenditures for existing projects that involve, for the most part, development research dropped by 8.7% as compared to actual expenditures for 1989–1990. In addition, expenditures on new projects dropped by 19.6% as compared to the preceding year.

Table 1. Expenditures for 1987–1988 (actual) to 1991–1992 (budget).

	Budget		Actual							
	1991–1992	% of total	1990–1991	% of total	1989–1990	% of total	1988–1989	% of total	1987–1988	% of total
Development research activities	$ 69.9	55.9	$ 66.9	56.7	$ 78.5	60.0	$ 67.9	58.5	$ 62.4	58.6
Research-related activities	27.2	21.8	24.5	20.8	25.2	19.3	23.8	20.5	21.3	20.0
General management	11.9	9.5	11.5	9.8	11.1	8.5	9.9	8.5	10.4	9.8
Regional offices	8.3	6.7	8.0	6.8	8.7	6.6	7.2	6.2	5.8	5.5
Division management	7.6	6.1	7.0	5.9	7.4	5.6	7.2	6.2	6.5	6.0
Total	$125.0	100.0	$118.0	100.0	$130.9	100.0	$116.0	100.0	$106.4	100.0

This significant decrease in expenditures was anticipated when the budget was prepared and was not a major variance from expectations. The decrease was the result of the reduction in the Parliamentary grant for 1990–1991, which compelled us to reduce the financial allocations and whose effects on expenditures were experienced last year. The decline in contract research was also a contributory factor.

However, a growth of 4.5% in development research activities is projected for next year.

Research-related activities

Research-related activities include technical support, small projects that lead to the development of research projects, and activities related to the dissemination of information or the application of the results of research. These activities also include maintaining a specialized, development-research library, which serves both the Canadian development community and IDRC staff, as well as implementing small projects that support ongoing IDRC programs. Expenditures for this category reached $24.5 million in 1990–1991, or 20.8% of total Centre expenditures. This represented a drop of 2.9% as compared to the previous year.

Technical-support expenditures include the cost of program personnel, whose role is to assist in the development of new projects, monitor ongoing research projects, and provide technical support to recipients. In 1990–1991, technical-support expenditures were $13.2 million, representing 11.2% of total Centre expenditures, a drop of 4.3% as compared to the preceding year.

For 1991–1992, research-related expenditures are forecast to rise by $2.7 million or 11.1%. However, the actual technical-support activities portion of this category will experience a lesser increase, $0.7 million or 5.4%.

Regional offices

The Centre's six regional offices play an important role in enhancing the effectiveness of the support that the Centre provides to research projects in developing countries. They facilitate contacts with grant recipients and improve the Centre's ability to respond to the needs of developing countries. These offices are located in Egypt, India, Kenya, Senegal, Singapore, and Uruguay. The total cost of operating these offices in 1990–1991 was $8.0 million, a drop of 7.8% as compared to 1989–1990. This decrease is largely explained by the fact that there was an exceptional expenditure in the previous year as a result of moving the Bogotá office to Montevideo.

For 1991–1992, regional office expenditures are budgeted at $8.3 million, which represents a 3.1% increase compared to the 1990–1991 expenditure levels.

Division management

In 1990–1991, expenditures for division management totaled $7.0 million, a 5.5% decrease as compared to the previous year, and represented 5.9% of the total Centre expenditures for 1990–1991.

Expenditures for division management are expected to increase by 9.4% over 1990–1991 levels to $7.6 million.

General management

To sustain its overall operational effectiveness, the Centre must fulfill a wide variety of policy, executive, administrative, and service functions. These functions are discharged by the Board of Governors; the Executive Office; the offices of the Secretary and the General Counsel, the Treasurer, and Human Resources; as well as the Administration, Electronic Data Processing, and Internal Audit departments.

General management expenditures reached $11.5 million, an increase of 3.5% over the previous financial year (Table 2). Management expenditures grew over 1989–1990 levels from 8.5% to 9.8% as a proportion of total expenditures. This occurred because this category of expenditures includes many fixed costs, such as rent, utilities, and depreciation, which cannot be quickly reduced when rapid action is required.

For 1991–1992, the expenditures for management are projected to increase by 3.1%, an increase of $0.4 million.

Table 2. General management expenses for the 12-month period ending March 31, 1991.

	1991	1990
Salaries and benefits	$ 6 891 464	$ 6 505 670
Rent and utilities	1 890 128	1 806 255
Office and sundry	1 150 941	1 185 650
Depreciation and amortization	478 441	416 267
Travel and relocation	209 218	248 310
Governors' meetings	247 432	308 621
Professional and special services	278 663	366 521
Telecommunications	250 719	237 043
Working group expenses	63 889	8 064
Insurance	56 196	41 281
Total	$11 517 091	$11 123 682

Equity of Canada

The equity of Canada, which stood at $4.0 million at the end of the previous financial year, rose to $8.6 million by March 31, 1991. This increase is due to a surplus of investment income over that forecast and a reduction in expenditures from that budgeted for projects. For 1991–1992, the year-end equity is projected to drop again to $5.5 million.

Person-years

For 1990–1991, the Centre's head office staff totaled 418.3 as compared to 439.9 in the budget. Vacancies were spread between technical support, division management, and general management. For 1991–1992, the number of head office person-years is expected to be reduced to 435.3. The actual number should be lower than this figure because of positions that will be eliminated and because of vacant positions that will remain unfilled during the year.

Appropriations

Total Centre appropriations for 1990–1991 were $112.7 million, a decrease of 2.6% compared to $115.7 million in the previous fiscal year. This total included $73.0 million allocated for new projects, accounting for 64.8% of the total amount appropriated during the year. Figure 3 shows the allocation of program appropriations by geographic region.

For 1991–1992, total appropriations are projected to reach $131.4 million, with the program appropriations of $89.8 million representing 68.3% of the total.

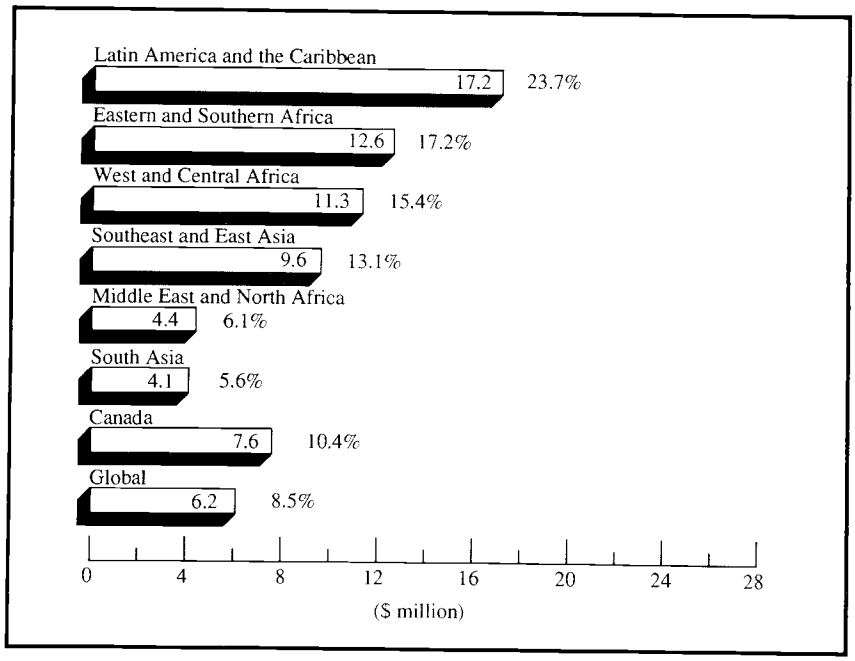

Figure 3. Actual appropriations for 1990–1991 by region.

Responsibility for financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management also assumes responsibility for all other information in the annual report, which is consistent, where applicable, with that contained in the financial statements. In support of its responsibility, management maintains financial and management control systems and practices to provide reasonable assurance as to the reliability of financial information, and that assets are safeguarded and the operations are carried out effectively. The Centre has an internal audit department whose functions include reviewing internal controls and their application on an ongoing basis.

The Board of Governors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Finance and Audit Committee whose members are not employees of the Centre. The Committee meets with management, the internal auditors, and the external auditors on a regular basis.

The Auditor General of Canada conducts an independent examination in accordance with generally accepted auditing standards and expresses his opinion on the financial statements. His examination includes appropriate tests and procedures to enable him to report whether the financial statements are presented fairly. The external auditors have full and free access to the Finance and Audit Committee of the Board.

Financial highlights ($ 000)

	Budget 1990–1991	Actual 1990–1991	% variance from budget	Actual 1989–1990	1990–1991 vs 1989–1990 (% change)
FINANCIAL ACTIVITY					
Revenue	$118 530	$122 541	3.4	$121 083	1.2
Grant from Parliament of Canada	114 130	114 130	0.0	108 500	5.2
Contract research	3 000	5 133	71.1	9 277	-44.7
Investment and other income	1 400	3 278	134.1	3 306	-0.8
Expenditure	$118 413	$117 998	0.4	$130 946	-9.9
Existing projects	49 943	49 734	0.4	54 450	-8.7
New projects*	28 438	28 554	-0.4	35 504	-19.6
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4
Excess of revenue over expenditure (expenditure over revenue)	$ 117	$ 4 543	—	$ (9 863)	-146.1
PROGRAM ACTIVITY					
Appropriations	$113 032	$112 707	0.3	$115 678	-2.6
New projects	73 000	72 997	0.0	74 686	-2.3
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4
Commitments	$113 965	$109 706	3.7	$145 089	-24.4
Projects	73 933	69 996	5.3	104 097	-32.8
Technical support	13 405	13 169	1.8	13 762	-4.3
General management	11 500	11 517	-0.1	11 124	3.5
Regional offices	7 780	8 048	-3.4	8 728	-7.8
Division management	7 347	6 976	5.0	7 378	-5.4

* Includes contract research and division activity projects.

Five-year financial review ($ 000)

	Budget 1991–1992	Actual 1990–1991	Actual 1989–1990	Actual 1988–1989	Actual 1987–1988	Actual 1986–1987
RESULTS OF OPERATIONS						
Revenue	$121 950	$122 541	$121 083	$121 293	$112 417	$102 401
Grant from Parliament of Canada	115 000	114 130	108 500	114 200	108 100	100 000
Contract research	4 773	5 133	9 277	4 199	2 107	1 423
Investment and other income	2 177	3 278	3 306	2 894	2 210	978
Expenditure	$124 980	$117 998	$130 946	$115 975	$106 401	100 969
Development research activities*	69 936	66 925	78 459	67 875	62 362	60 382
Research-related activities	27 246	24 532	25 257	23 825	21 347	20 262
Research operational support	15 930	15 024	16 106	14 388	12 329	10 971
General management	11 868	11 517	11 124	9 887	10 363	9 354
Excess of revenue over expenditure (expenditure over revenue)	$ (3 030)	$ 4 543	$ (9 863)	$ 5 318	$ 6 016	$ 1 432
PROGRAM ACTIVITY						
Appropriations	$131 426	$112 707	$115 677	$141 265	$124 904	$111 517
New projects†	89 750	72 997	74 685	103 659	89 685	79 351
Technical support	13 878	13 169	13 762	13 330	12 527	11 841
General management	11 868	11 517	11 124	9 887	10 363	9 354
Regional offices	8 301	8 048	8 728	7 177	5 828	5 394
Division management	7 629	6 976	7 378	7 212	6 501	5 577
Commitments	$127 348	$109 706	$145 089	$126 834	$120 154	$105 099
Projects‡	85 672	69 996	104 097	89 228	84 935	72 933
Technical support	13 878	13 169	13 762	13 330	12 527	11 841
General management	11 868	11 517	11 124	9 887	10 363	9 354
Regional offices	8 301	8 048	8 728	7 177	5 828	5 394
Division management	7 629	6 976	7 378	7 212	6 501	5 577
Outstanding commitments	$104 724	$105 200	$116 100	$104 400	$ 96 000	$ 88 343

* Includes contract research.
† Includes division activity projects.
‡ Excludes contract research (special projects).

Research and support expenses
for the year ended March 31, 1991

	1991				1990
	Development research activities	Research-related activities	Research operational support	Total	Total
PROGRAMS					
Agriculture, Food and Nutrition Sciences	$21 510 313	$ 4 822 468	$ 1 191 782	$ 27 524 563	$ 29 307 634
Social Sciences	10 806 717	2 961 603	1 274 435	15 042 755	15 979 385
Health Sciences	10 154 987	2 901 744	1 019 398	14 076 129	14 919 356
Information Sciences	8 941 553	2 238 501	1 252 837	12 432 891	13 658 405
Earth and Engineering Sciences	6 820 729	1 188 471	584 233	8 593 433	9 132 973
Fellowships and Awards	4 807 419	998 173	382 608	6 188 200	6 977 894
PROGRAM-RELATED ACTIVITIES					
Regional offices	14 759	1 482 388	8 047 720	9 544 867	10 048 907
Communications	801 910	5 225 263	855 760	6 882 933	9 801 025
Special program activities	3 066 447	458 063	—	3 524 510	7 263 111
Development-research library	—	1 723 452	—	1 723 452	1 765 694
External liaison and relations	—	531 816	415 089	946 905	968 389
	$66 924 834	$24 531 942	$15 023 862	$106 480 638	$119 822 773

Person-year levels

	1991–1992	1990–1991		1989–1990	
	Budget	Budget	Actual	Budget	Actual
PROGRAM DIVISIONS	279.3	285.1	268.5	298.0	283.3
Agriculture, Food and Nutrition Sciences	49.0	47.6	47.0	48.5	48.5
Social Sciences	42.0	44.0	42.2	48.0	43.3
Information Sciences	36.6	38.6	34.2	42.5	35.5
Project-related staff	36.4	36.4	37.2	36.5	39.4
Health Sciences	33.0	35.0	30.0	36.0	34.1
Earth and Engineering Sciences	17.0	17.0	13.6	18.0	17.0
Communications	15.0	15.0	16.3	26.0*	24.3*
Project-related staff	28.0	28.0	25.6	19.0*	18.3*
Fellowships and Awards	11.3	11.5	11.3	11.5	11.6
Office of Planning and Evaluation	11.0	12.0	11.1	12.0	11.3
GENERAL MANAGEMENT	153.0	151.8	148.6	158.5	150.5
Office of the Treasurer	37.0	37.8	36.6	39.0	35.5
Administration department	34.0	34.0	33.0	35.0	32.9
Office for Human Resources	18.0	17.5	16.8	19.5	18.0
Electronic Data Processing	16.0	16.0	16.2	14.0	15.4
Office of the Secretary and General Counsel	15.0	15.0	14.9	17.0	16.2
Executive Office	15.0	14.0	13.2	15.0	13.5
Regional offices administration	13.0	12.5	13.2	14.0	14.6
Internal Audit	5.0	5.0	4.7	5.0	4.4
SECONDMENTS/SABBATICAL/ STUDY LEAVE	3.0	3.0	1.2	3.0	1.5
TOTAL: HEAD OFFICE-HIRED STAFF	435.3	439.9	418.3	459.5	435.3

* Reflects Division's old structure.

AUDITOR GENERAL OF CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA

AUDITOR'S REPORT

To the International Development Research Centre
and the
Secretary of State for External Affairs

I have audited the balance sheet of the International Development Research Centre as at March 31, 1991 and the statements of operations, equity and changes in the financial position for the year then ended. These financial statements are the responsibility of the Centre's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards in Canada, conforming with International Auditing Guidelines. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. The audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Centre as at March 31, 1991 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles in Canada, conforming with International Accounting Standards.

L. Denis Desautels, FCA
Auditor General of Canada

Ottawa, Canada
June 3, 1991

Financial statements for the year ended March 31, 1991

Balance sheet
as at March 31, 1991

	1991	1990
ASSETS		
Current		
Cash and short-term deposits (Note 3)	$16 894 314	$14 115 678
Accounts receivable	1 409 170	1 040 856
Prepaid expenses	882 017	849 248
	19 185 501	**16 005 782**
Recoverable deposits	175 976	206 894
Property and equipment (Note 4)	5 031 677	5 477 839
Endowment funds (Note 5)	293 041	433 475
Total assets	**$24 686 195**	**$22 123 990**
LIABILITIES		
Current		
Accounts payable and accrued liabilities (Note 6)	$10 225 827	$11 303 825
Contract research (Note 7)	650 181	1 426 291
	10 876 008	**12 730 116**
Accrued employee separation benefits	2 941 320	2 623 128
Deferred rent — Head office	2 007 001	2 311 918
Endowment funds (Note 5)	293 041	433 475
Total liabilities	**16 117 370**	**18 098 637**
EQUITY	**8 568 825**	**4 025 353**
Total liabilities and equity	**$24 686 195**	**$22 123 990**

Contractual commitments (Note 9)

Approved:

Acting President

Treasurer

Statement of operations
for the year ended March 31, 1991

	1991	1990
EXPENSES		
Development-research activities		
Project grants	$ 56 382 561	$ 63 424 558
Centre projects	5 408 936	5 757 433
Contract research (Note 7)	5 133 337	9 276 881
	66 924 834	**78 458 872**
Research-related activities		
Technical support	13 169 049	13 762 411
Program-development support	5 739 734	6 683 451
Information dissemination	3 899 706	3 045 514
Development-research library	1 723 452	1 765 694
	24 531 941	**25 257 070**
Research operational support		
Regional offices	8 047 720	8 728 412
Division management	6 976 142	7 378 419
	15 023 862	**16 106 831**
Total research and support expenses	**106 480 637**	**119 822 773**
General management expenses	**11 517 091**	**11 123 682**
	117 997 728	**130 946 455**
REVENUE		
Grant from Parliament of Canada	**114 130 000**	**108 500 000**
Investment and other income	**3 277 863**	**3 306 151**
Contract research (Note 7)	**5 133 337**	**9 276 881**
	122 541 200	**121 083 032**
EXCESS OF REVENUE OVER EXPENSES (EXPENSES OVER REVENUE)	**$ 4 543 472**	**$ (9 863 423)**

Statement of equity
for the year ended March 31, 1991

	1991	1990
Balance at the beginning of the year	**$4 025 353**	**$13 888 776**
Excess of revenue over expenses (expenses over revenue)	4 543 472	(9 863 423)
Balance at the end of the year	**$8 568 825**	**$ 4 025 353**

Statement of changes in financial position
for the year ended March 31, 1991

	1991	1990
Operating activities		
Cash provided by (used in) operations		
Excess of revenue over expenses (expenses over revenue)	$ 4 543 472	$ (9 863 423)
Items not affecting cash		
Amortization of property and equipment	1 374 701	1 322 278
Provision for employee separation benefits	494 327	303 142
Loss (gain) on disposal of equipment	(121 724)	28 508
Amortization of deferred rent	(304 917)	(304 917)
	5 985 859	**(8 514 412)**
Changes in noncash operating assets and liabilities		
Accounts receivable	(368 314)	(152 203)
Prepaid expenses	(32 769)	545 412
Recoverable deposits	30 918	(23 464)
Accounts payable and accrued liabilities	(1 077 998)	(1 069 871)
Payment of employee separation benefits	(176 135)	(402 693)
Contract research liability	(776 110)	(1 106 037)
	(2 400 408)	**(2 208 856)**
Cash provided by (used in) operations	**3 585 451**	**(10 723 268)**
Investing activities		
Additions to property and equipment	(1 041 560)	(2 336 333)
Proceeds on disposal of equipment	**234 745**	**278 192**
	(806 815)	**(2 058 141)**
Increase (decrease) in cash	**2 778 636**	**(12 781 409)**
Cash and short-term deposits at the beginning of the year	**14 115 678**	**26 897 087**
Cash and short-term deposits at the end of the year	**$16 894 314**	**$14 115 678**

Notes to financial statements as at March 31, 1991

1. Authority and objective

The International Development Research Centre, a Corporation without share capital, was established in 1970 by the Parliament of Canada through the International Development Research Centre Act. The annual grant received from the Parliament of Canada is pursuant to External Affairs Vote 60 and 50 for the years ended March 31, 1991 and 1990 respectively.

The objective of the Centre is to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles, conforming with International Accounting Standards, and reflect the following significant accounting policies.

Property and equipment

Property and equipment are recorded at cost and amortized over their estimated useful lives. Leasehold improvements are amortized over the terms of the respective leases. The methods and rates used to provide for the amortization of property and equipment are:

	Method	Rate (%)
Computer equipment	Straight line	20
Leasehold improvements	Straight line	5–50
Office furniture and equipment	Diminishing balance	20
Vehicles	Diminishing balance	30
Telephone system	Straight line	20

Recognition of revenue

Parliamentary grants are recorded as revenue on an accrual basis.

Revenue in respect of contract research is recognized at the time the related project expenses are incurred. Contract research funds received in excess of expenses are included in current liabilities.

Accrued employee separation benefits

Employees are entitled to specified termination benefits, calculated at salary levels in effect at the time of separation as provided for by conditions of employment. The liability for these benefits is recorded as the benefits accrue to employees.

Deferred rent

Any rent-free period or other benefits associated with long-term leases are deferred and amortized over the term of the lease on a straight-line basis.

Pension costs

Employees are covered by the Public Service Superannuation Plan administered by the Government of Canada. Contributions to the Plan are required from the employees and the Centre. These contributions represent the total liability of the Centre and are recognized in the accounts on a current basis.

Income taxes

The Centre is exempt from any liability for income taxes.

Foreign-currency translation

Foreign-currency transactions are translated into Canadian dollars by the use of an average exchange rate that closely approximates the rate in effect at the transaction date. Monetary assets and liabilities are adjusted to reflect the rate of exchange in effect at year-end. Exchange gains and losses are included in operations for the current year.

3. Cash and short-term deposits

	1991	1990
Cash (bank overdraft)	$ (465 070)	$ (659 105)
Short-term deposits		
Canadian banks	8 530 333	11 648 255
Commercial companies	6 754 895	—
Foreign-owned banks	2 074 156	2 151 598
Federal and Provincial governments	—	974 930
	$16 894 314	**$14 115 678**

4. Property and equipment

	1991			1990
	Cost	Accumulated amortization	Net	Net
Computer equipment	$ 5 818 074	$2 767 285	$3 050 789	$3 021 759
Office furniture and equipment	1 844 228	1 141 245	702 983	692 713
Leasehold improvements	1 303 313	518 161	785 152	988 617
Vehicles	984 160	571 597	412 563	636 771
Telephone system	833 577	753 387	80 190	137 979
	$10 783 352	**$5 751 675**	**$5 031 677**	**$5 477 839**

Amortization for the year amounted to $1 374 701 (1990, $1 322 278).

5. Endowment funds

In 1987, the estate of the late John Bene established a fund to provide a postgraduate fellowship in the field of social forestry. During the same year, a former member of the Board of Governors of the Centre established a fund for applied or mission-oriented research. Last year, the Centre received a contribution from the V International Conference on AIDS (acquired immune deficiency syndrome), which was used to establish a fund for the purpose of AIDS research in the Third World.

	1991	1990
Balance at the beginning of the year	$433 475	$165 441
Donations received	—	255 958
Interest income	48 816	22 076
Expenses	(189 250)	(10 000)
Balance at the end of the year	**$293 041**	**$433 475**
John Bene	$161 006	$160 170
Governor	19 267	17 201
AIDS	112 768	256 104
Total endowment funds	**$293 041**	**$433 475**

6. Accounts payable and accrued liabilities

	1991	1990
Accrued liabilities – projects	$ 6 686 751	$ 6 983 667
Accrued annual and other leave benefits	1 472 304	1 390 149
Other	2 066 772	2 930 009
	$10 225 827	**$11 303 825**

7. Contract research

Contract research relates to research conducted or managed by the Centre and to the V International Conference on AIDS organized by the Centre. These are funded by other international agencies, the Canadian International Development Agency (CIDA), and other federal government entities.

Contract research expenses of $5 133 337 (1990, $9 276 881) include $4 681 921 (1990, $2 909 740) expended on behalf of CIDA. In addition, the Centre received $146 646 (1990, $49 971) as an administration fee from CIDA, which is included in investment and other income.

Contract research current liabilities of $650 181 (1990, $1 426 291) include $139 266 (1990, nil) related to AIDS activities. Contract research liabilities do not include any amounts related to CIDA activities (1990, $1 043 422), rather receivables of $264 676 related to contract research activities on behalf of CIDA have been included in accounts receivable in 1991.

8. Operating leases

The Centre has entered into various lease arrangements for office premises, equipment, and staff accommodation in Canada and in various countries. The total annual payments under such lease arrangements will be:

Year ending March 31	
1992	$ 6 194 140
1993	5 500 868
1994	5 051 369
1995	5 005 147
1996	5 046 551
1997–2000	8 520 433
	$35 318 508

9. Contractual commitments — project grants and program development

The Centre is committed to make payments up to $105.2 million during the next 4 years subject to funds being provided by Parliament and subject to compliance by recipients with the terms of project agreements. The Centre has also submitted formal grant offers to prospective recipients totaling $14.8 million and is awaiting acceptance of these offers.

Board of Governors

Janet M. Wardlaw*
Chairman of the Board of Governors
Guelph, Canada

Peter A. Larkin*
Vice-Chairman of the Board of Governors
Vancouver, Canada

Ivan L. Head
President and Chief Executive Officer
Ottawa, Canada
(Term expired 12 March 1991)

Anne-Claude Bernard-Bonnin*
Outremont, Canada

Albert J. Butros*
Amman, Jordan

Gelia T. Castillo
Laguna, Philippines
(Term expired 16 December 1990)

Umberto P. Colombo
Rome, Italy

Joan E. Foley*
Toronto, Canada

David A. Hamburg
New York, USA

Gerald K. Helleiner*
Toronto, Canada

Walter J. Kamba*
Harare, Zimbabwe

Alexander A. MacDonald*
Antigonish, Canada

Lucille Mair
Kingston, Jamaica

Marcel Massé
Hull, Canada

Robert C. McGinnis*
Winnipeg, Canada

Sadako Ogata
Tokyo, Japan
(Resigned 22 January 1991)

Jean-Guy Paquet*
Quebec, Canada

Marie-Josée Pinard
Montreal, Canada
(Term expired 22 July 1990)

Vulimiri Ramalingaswami
New Delhi, India

Xi Hui Da
Beijing, People's Republic of China
(Term expired 16 December 1990)

Clara Zomer*
San José, Costa Rica

* Executive committee

Officers of the Centre

Ivan L. Head
President
(Term expired 12 March 1991)

Raymond J. Audet
Vice-President, Resources

James Mullin
Vice-President, Program
(Acting President, 13 March to 15 April 1991)

Robert Auger
Secretary and General Counsel

Gerald R. Bourrier
Director, Fellowships and Awards

W. Douglas Daniels
Director, Planning and Evaluation

Antoine Hawara
Treasurer

Geoffrey C. Hawtin
Director, Agriculture, Food and Nutrition Sciences

David Nostbakken
Director, Communications

J. Allan Rix
Director, Human Resources

Karl Smith
Director, Health Sciences

Martha B. Stone
Director, Information Sciences

Mousseau Tremblay
Director, Earth and Engineering Sciences

Anne V.T. Whyte
Director, Social Sciences

Richard Wilson
Director, Health Sciences
(Resigned 5 December 1990)

Regional Directors

Daniel Adzei Bekoe
Eastern and Southern Africa (Nairobi)

L. Fernando Chaparro
Latin America and the Caribbean (Montevideo)

Jingjai Hanchanlash
Southeast and East Asia (Singapore)

Fawzy Kishk
Middle East and North Africa (Cairo)

Vijay G. Pande
South Asia (New Delhi)

Pierre Sané
West and Central Africa (Dakar)

Projects, fellowships, and publications

The details of the projects supported in 1990–1991, of the Fellowships awarded, and of the Publications supported by IDRC are listed in a supplement to the Annual Report. Copies are available through the Distribution Unit, Communications Division, IDRC, PO Box 8500, Ottawa, Canada K1G 3H9.