AFRICA, INFORMATION, AND DEVELOPMENT: IDRC's EXPERIENCE

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Abstract. This paper examines an information strategy for Africa; it reinforces the significant role information services play in securing sustainable development in the African continent. The importance of having a coherent and systematic information strategy as a tool for donor agencies to respond to the information and sectoral needs of developing countries is discussed by revealing IDRC's five year experience with information activities in Africa and its strategic approach. The paper begins with a brief account of the history of the development of an information strategy for Africa, a consultative process which allowed the Africans themselves to assess their information problems and prioritize their needs. It then reviews the results of IDRC's post-strategy project activities in Africa and the impact of the strategy on these activities.

1. African Development and Information

1.1 Background and Introduction

Heavy financial investments in Africa do not ensure sustainable development in the absence of adequate information infrastructure and services. Information is a vital tool for sustainable development. African decision-makers and policy formulators need pertinent, accurate and timely information in order to make informed decisions. Furthermore, scientific information is of paramount importance to the enhancement of production and consumption patterns and to the development of local technologies; a bedrock for the Continent's economic development.

Nonetheless, the general lack of appreciation of the role of information, the almost non-existent national information policies and the recurrent, inadequate financial resources allocated to information systems and networks development have severely deterred the use of information to solve Africa's socio-economic problems.

It is for these reasons that Canada's International Development Research Centre (IDRC) recognized the need for strengthening Africa's information infrastructure and human resource

capacities in order to ensure sustainable development in the African Continent. The Centre has

been supporting activities related to the provision of information services in developing countries

by supporting local/indigenous initiatives. Since its inception in 1970, it has supported numerous

projects in Africa ranging from the establishment of various electronic databases to provision

of scientific and technical information to end-users. In the early years of its establishment, it

supported mostly projects related to documentary services whereas in recent years, its focus has

shifted towards projects that add value, emphasize innovation, enhance capacity building and

promote sustainable development, including those that aim to formulate appropriate marketing

strategies for information products and services.

1.2 An Information Strategy for Africa

Over the years, the special need for developing a more coherent and systematic

information strategy for Africa became evident as the information needs of the Continent

accelerated and as the importance of the use of information to secure socio-economic

development became ever more apparent. In response to this need, IDRC commissioned, in

1987, a series of papers and organized a number of workshops involving African specialists. The

workshops provided an avenue for tabling some of the specific information needs of the

Continent that would help in the design of a regional plan that could respond to those needs.

Workshop participants advocated for a stronger emphasis on meeting the needs of end-

users and also those of researchers and policy-makers. In particular, they called for designing

appropriate information services that would meet the needs of grass-roots users, especially the

urban and rural poor. The importance of indigenous knowledge to the development process was

identified as a mechanism that would allow Africans to come up with their own solutions to information and developmental bottlenecks. Furthermore, human resources development was recognized as a vital tool for ensuring sustainablility of information services in the Continent and the need to put emphasis on training information professionals and workers was echoed.

After intense discussions and deliberations, a strategy document on how Africa could strengthen its information programs and services and the role that information can play in its further development was put together by IDRC, taking into account the recommendations of the African participants at the workshops. The resulting document, entitled *Sharing Knowledge for Development: IDRC's Information Strategy for Africa* (IDRC, 1989), and known more popularly as the "Africa Strategy", articulated ten specific objectives (see box) which would help direct assistance to information activities in Africa.

Africa Strategy Objectives (not listed in any order of priority)

(1)   To improve the effective utilization and sharing of existing knowledge and resources in Africa at the local, national, and regional levels;

(2)   To improve information sharing and data transfer at the national and regional levels by promoting standards, compatibility, and use of methodologies, technologies, and tools adapted to the African environment;

(3)   To stimulate greater use of local technical expertise in information handling by promoting South-South cooperation within Africa;

(4)   To design and implement information systems and services that are relevant to the local environment and that address specific needs and problems;

(5)   To improve the indigenous capacity to plan, develop, and implement national and regional information policy;

(6)   To build human resources in information sciences through needs-based training at all levels and particularly, training of managers and trainers to strengthen the multiplier effect;

(7)   To improve the capacity of people involved in the provision of information to act as agents of change;

(8)   To secure long-term commitment for sustainable information programs;

(9)   To promote a two-way flow of communication so that rural (and urban) poor people participate in an interactive dialogue on issues affecting them;

(10)   To improve the capacity of local scientists and technologists to obtain relevant information and bring about a more effective transfer of technology at the grass-roots level.

In order to put the Strategy itself in its proper historical perspective in terms of IDRC's pre-Strategy African programs and activities, a comprehensive analysis of the Centre's support to Africa in the period covering 1970 to 1988 was also carried out. The results of this exercise, along with information on the Strategy itself and its expected implications on IDRC's information-related project activities in Africa were disseminated widely (Akhtar, 1990; Camara, 1990).

The adoptation of the Strategy by IDRC in 1988 was not a radical departure from its previous activities in Africa. On the contrary, the Strategy objectives were consistent with the principles that guided the Centre's activities prior to the implementation of the Strategy as well as with its current mission of "Empowerment Through Knowledge". It simply helped to focus on priority needs of the region. To this end, it was decided that IDRC's Information Sciences Division (ISD) would try and appropriate approximately 50% of its overall budget for African projects every year.

1.3 IDRC's Continuing Mission in Africa

Following the announcement of Canada's Prime Minister at the Rio Earth Summit Conference in June 1992 that IDRC should take a lead on implementing the Agenda 21 action plan, the Centre's priorities have changed. This led to Centre-wide structural and thematic re-organization in late 1992, to respond to the new theme of environment and sustainable development. Accordingly, the Information Sciences and Systems Division (ISSD)*, IDRC 's program Division responsible for the design and implementation of "Africa Strategy", has changed its operational structure as well as its program priorities in order to accommodate the call from Rio. The Division's mission to "stimulate socio-economic advancement by improving access to, and better exploitation of, scientific, technical, and other knowledge" has, however, remained in line with the objectives of the Africa Strategy. Its program objectives focus on four

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* Note : The acronyms - ISD and ISSD are used interchangeably throughout the article. The Information Sciences Division (ISD) has been restructured in 1992 and has since functioned under its new name, Information Sciences and Systems Division (ISSD). The later acronym is used to refer to the Division's activities after 1992.

major areas: better access and use of information; improved collaboration; capacity building; and information innovations, all of which are also identified in the Africa Strategy.

IDRC, todate, recognizes the importance of having an information strategy for Africa, however there has been a considerable shift in the nature of information activities it supports. In addition to providing continuous support for essential information and sectoral activities in Africa, there is a growing emphasis on supporting developing country institutions that provide information on environmentally sound technologies, and on support of indigenous knowledge and research on pertinent issues that address the information problematique of the Continent. An examination of the contribution of IDRC's information activities in Africa during the past five years has confirmed that the project objectives have generally been consistent with those of the Africa Strategy.

2. Reviewing the Experience

2.1 Objective and Methodology of the Review

Although a formal assessment of the impact of the Strategy on information programs and services in Africa is premature, with most projects supported over the last five years still not having been completed, it was deemed desirable to carry out a review of the project activities undertaken in Africa on the fifth anniversary of the Strategy.

The review was undertaken through the use of a questionnaire designed around the parameters of the ten Strategy objectives in order to assess the extent to which each post-Strategy project or activity undertaken by IDRC's Information Sciences Division has been in line with the stated objectives. For the purposes of data analysis, the ten Strategy objectives were grouped

and categorized under six broad headings: objectives 1-3 were grouped under "Better Utilization of Existing Resources"; objective 4 under "Responding to User's needs and Behaviours"; objective 5 under "Infrastructure and Policy-Level Support"; objectives 6 & 7 under "Capacity Building"; Objective 8 under "Sustainable Information Systems and Services"; and objectives 9 & 10 under "Reaching Out to End-Beneficiaries". A database, containing information on, *inter alia*, the objective(s), type, location, duration and cost of each project was created. A questionnaire was sent to each IDRC program officer responsible for negotiating and implementing a project. The responses to the questionnaire were then studied to report on the *status quo* of the Centre's information activities in Africa.

The objectives of this article are, therefore, twofold: to report on the findings of the review, which analyzed the extent to which the Strategy has been delivered upon in the Centre's programs and activities (with special emphasis on the implications of the ten Strategy objectives) over the first five years of its implementation, and to share IDRC's experience with information specialists and others in Africa. While IDRC supports primarily projects (that, on average, last 2-3 years and involve an IDRC grant of CAD $ 150-300 thousand per project), it also supports a fairly large number of small pre- and post- project activities such as feasibility studies, pre-and post-project training, study tours, workshops, seminars and evaluations. For the purposes of this study, we have placed emphasis on analyzing IDRC-supported project activities in Africa (as opposed to small activities) since, by and large, projects tend to have the greatest impact and they also make up the lions share of the Centre's contribution financially.

2.2 Africa, IDRC and the Trends

Up until the fifth anniversary (1 April 1988 to 31 March 1993) of the implementation of IDRC's Africa Strategy, 94 projects and 69 small activities have been supported in Africa and a total in excess of CAD $ 17 Million and approximately CAD $ 800 thousand have been spent respectively. The projects and small activities differ in scope as well as in the nature of support. Projects are generally medium- to long-term in duration ranging from 6 to 72 months, with the average project being around 36 months. Projects make up the largest proportion of the Centre's activities.

Small activities on the other hand are ordinarily short-term, financial contributions granted in support of project development, consultancy services, training and evaluation, and for small-scale research activities. These activities usually have a short life-span ranging anywhere between four months to a few days. Small activities most often prepare the groundwork for projects. They are especially effective in human resources development since they provide avenues for Africans to participate in project-related conferences, workshops and study tours, thereby enhancing and upgrading their skills and providing them with an opportunity to exchange views with their counterparts in the South as well as the North.

IDRC's information-related project activities in Africa are spread throughout the Continent (see figure 1), with heavy concentration on the sub-Saharan region. It should be noted though, that several of the projects are regional in scope; hence, most of the countries that have not been the direct recipients of IDRC grant would, in all likelihood, benefit from projects that have a regional mandate.

Eastern and Southern Africa

Number of Projects

Central/West Africa

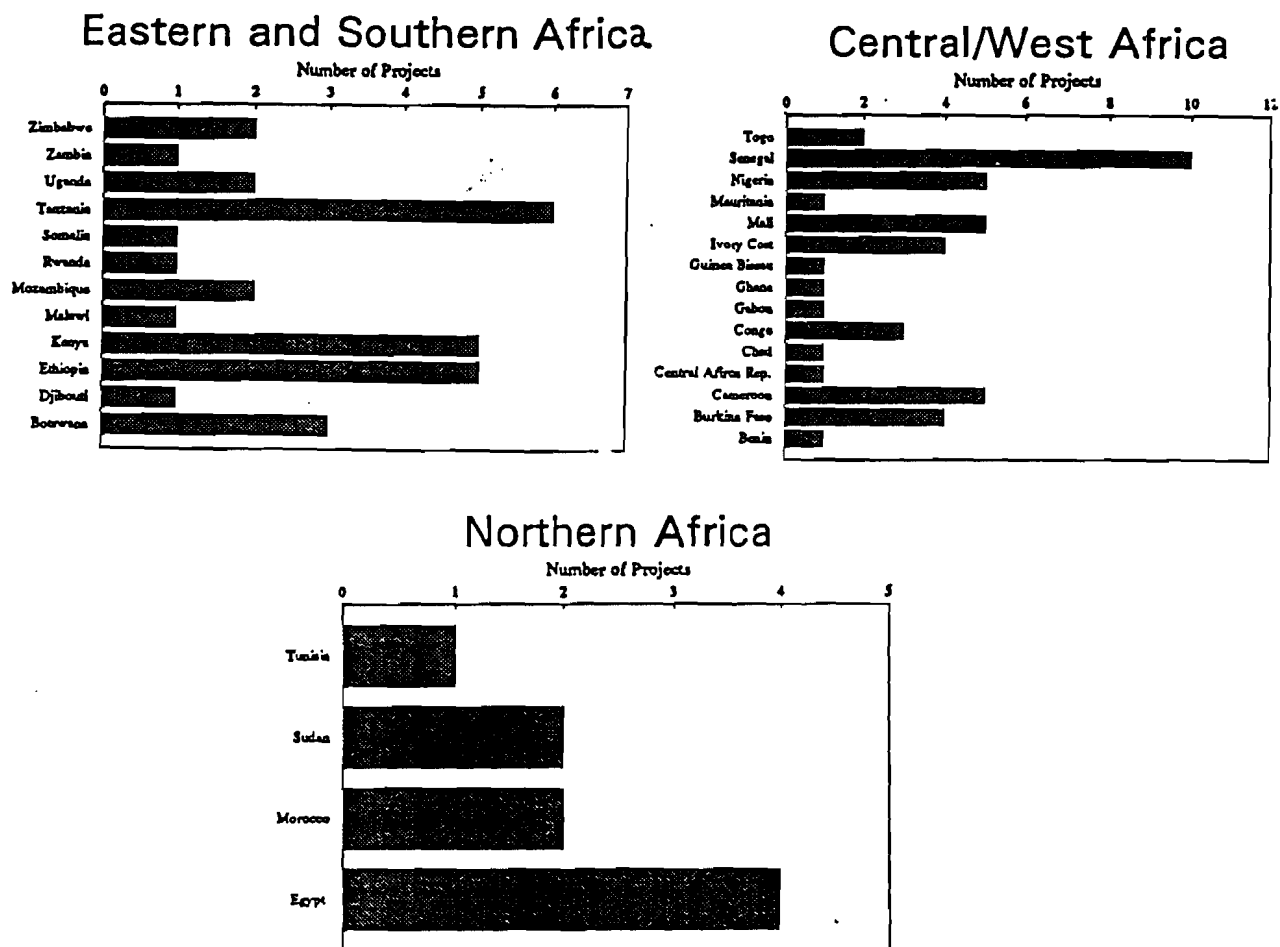Number of Projects

Northern Africa

Number of Projects

Figure 1: IDRC Grant Recipient Countries

IDRC has been striving to comply with its objective of expending about 50% of its budget allocated for information sciences, in Africa. This has proven difficult to achieve due to shifting Centre-wide priorities and dwindling financial resources. Even so, as Figure 2 shows, on average, at least forty percent of all monies appropriated each year was for projects in Africa. As well, approximately forty percent of all new projects approved each year were in Africa.

Grant Appropriated for African Projects ▒ **Percentage of New Projects in Africa**
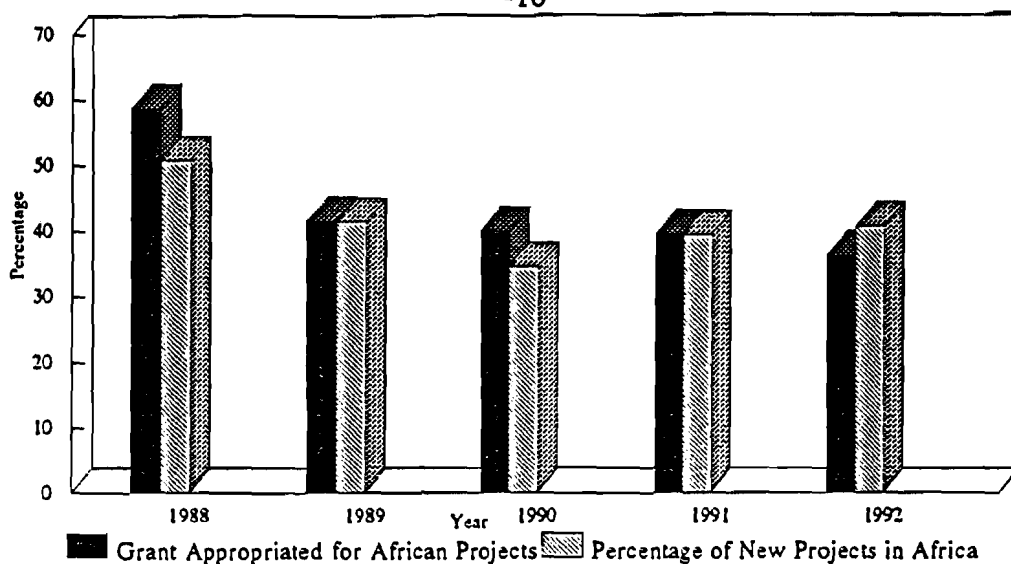
Figure 2: Percentage of IDRC Grants to Projects in Africa vis-a-vis
its Overall Budget Allocation for Information Sciences

In real terms, the total grant contributed to Africa has peaked to its highest in 1988 at
CAD $ 6 million and, thereafter it averaged at CAD $ 3 million per annum over the next four
years. Similarly, a greater number (33) of new projects was approved at the start of the Strategy
in 1988 than in any other year. Between 1989 and 1991, the new African projects averaged
between 16-17 each year, declining to nine in 1992 (see Figures 3 and 4).
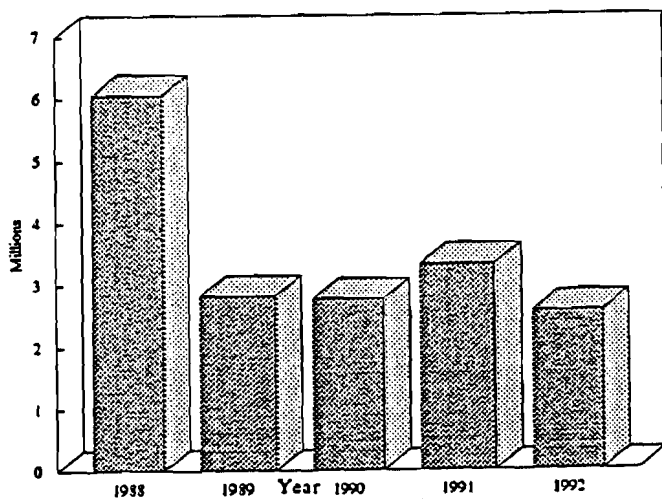

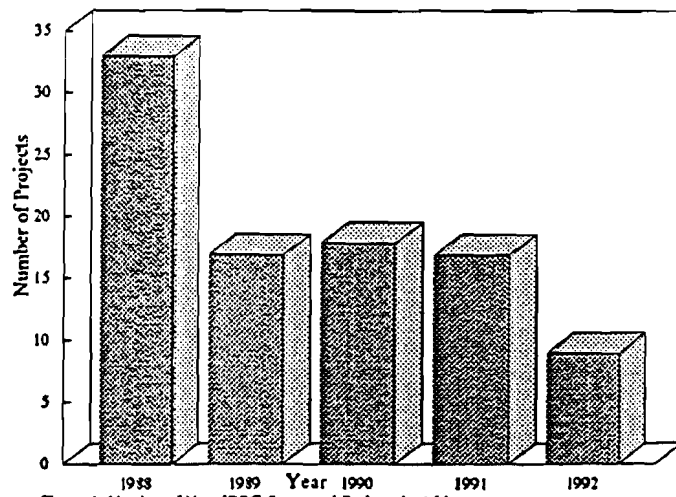Figure 3: IDRC Grant Levels to Information Science in Africa

Figure 4: Number of New IDRC-Supported Projects in Africa

Although these figures show clearly that the Centre has not been able to maintain the
level of its financial commitment to Africa that it had hoped to achieve, nevertheless, when

compared against its overall financial allocation for the information sciences - and project activities for each of the years - we find that IDRC's Information Sciences Division has continued to contribute a significant proportion of its budget to projects in Africa.

3. Implementing the Africa Strategy

In this section, we will examine the extent to which the ten "Africa Strategy" objectives have had an impact on the nature of the projects that have been supported in Africa. As indicated above, for the purposes of this study, we have classified the ten objectives of the Strategy into six broad categories. We will now examine the findings relating to each category.

3.1 Better Utilization of Existing Resources

At the workshop preceding the drafting of the Strategy document, African specialists strongly voiced the opinion that resource sharing in Africa needs to be strengthened to maximize the use of information resources at local, national and regional levels. Our analysis reveals that since the implementation of the Strategy, proponents have indeed placed particular emphasis on this area, resulting in this broad objective having remained top priority among 25% of the projects supported since the Strategy implementation.

In a broader sense, better utilization of existing resources (objectives 1 - 3), including: increased accessibility and utilization of indigenous knowledge; research into new methods and approaches to facilitate information sharing; networking; and South-South cooperation, has been the top priority for 34% of the projects. Improving effective utilization and sharing of resources has been particularly emphasized within the "better utilization of existing resources" theme.

Information networking, South-South cooperation and information sharing are carried out mostly at regional and national levels and, to a lesser extent at the sub-national level. Projects with a regional mandate have tended to strengthen regional networking and cooperation. Other projects too, that did not have a regional focus have attempted to establish links with other institutions in the South by establishing institutional linkages.

3.2 Responding to User's Needs and Behaviours

Those projects that are primarily aimed at responding to user's needs and behaviours have attempted to develop new networking tools, design and test new model products and services, and assess user's needs by carrying out market analysis. According to our questionnaire survey, responding to user's needs (objective 4) is the single most important objective covering 47% of all projects supported in Africa.

These projects target various sectors ranging from health, food & agriculture, informatics, industry/Small and Medium Enterprises (SMEs) and natural resources. Figure 5 reveals that a great number of the projects (24.1%) have focused on provision of information to food and agriculture sectors followed by Industry/SMEs (15.2%), and health (12.2%). Several projects (15%) are multi-sectoral, providing information across two or more sectors.

(1.0%) Policy (24.1%) Agric. & Food
(15.5%) Multi-Sectoral
(1.0%) Environment
(6.9%) Informatics
(5.3%) Social Sector
(15.2%) Industry/SME
(3.0%) Eco.,Debt&Trade
(2.0%) Science & Tec.
(12.2%) Health
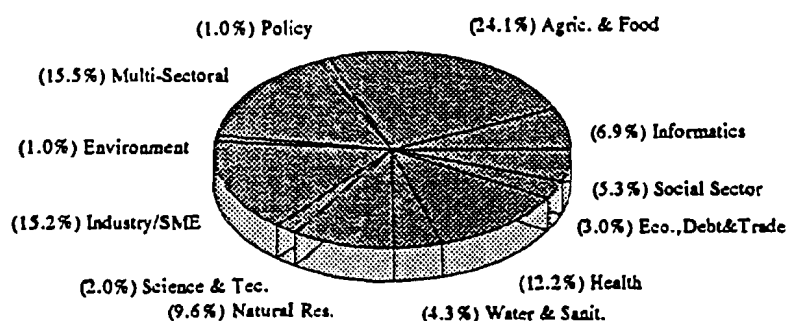(9.6%) Natural Res.
(4.3%) Water & Sanit.

Figure 5: Target Sectors

The target groups or beneficiaries of the projects supported by the Information Sciences

Division of IDRC are also diverse. Researchers are among the top category followed by policy-

makers and development practitioners (see figure 6). Very few projects have targeted women

as beneficiaries, which shows that while women remain indirect beneficiaries of all projects,

there have been very few projects designed to particularly address their information needs.

(33.9%) Researchers
(24.7%) Policy Makers
(7.3%) Grassroots
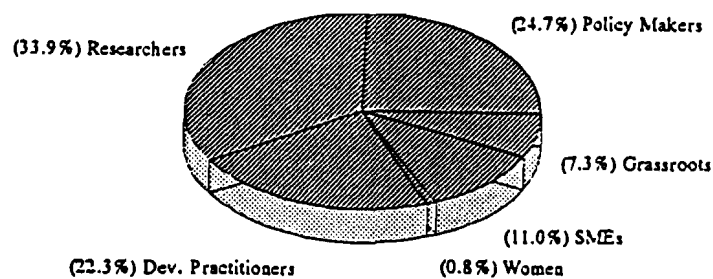(11.0%) SMEs
(22.3%) Dev. Practitioners
(0.8%) Women

Figure 6: Target Beneficiaries

Supporting projects that are closer to end-beneficiaries and the grass-roots was a very

important element of discussion at the pre-Strategy meeting. Participants at the meeting had

expressed the need to have projects that are closer to end-users. However, the result of our

questionnaire survey shows that reaching out to end-beneficiaries, as a project objective, has

been the highest priority for only 7.3% of the projects in the past five years. These projects have

adopted various mechanisms to achieve this goal, including: involving users in decision-making

processes, conducting user surveys to assess information needs, developing need-based products

and services, and stimulating user-demand through promotional efforts. All in all, projects that

reach out to end-beneficiaries are, more often than not, one's in which IDRC has had to play

a proactive role.

IDRC is now encouraging potential project leaders to develop projects that are closer to the needs of end-users and to actually involve them in the identification of their information needs. It has recognized the importance of learning about users' information needs and of delivering information products and services in accordance with specified needs, to ensure maximum project impact on users and on the region. More and more, IDRC-supported projects in the pipeline are now taking this approach to information product/service delivery. The Centre is also currently putting more emphasis on its Development Communication Program that is "particularly concerned with segments of the Third World populations whose access to information is restricted by their geographical, economic or social marginalization, or by the fact that they do not read or can not speak the official language of their country of residence" (IDRC, 1993).

Furthermore, based on the premise that the Centre's activities have different impact on different user groups within a society, IDRC's Information Sciences and Systems Division has recently outlined a Divisional gender strategy. It is expected that the strategy would provide guidelines for integrating gender issues into the Division's future activities, help in identifying the impact of its project activities on a gender-basis, and encourage that a deliberate effort be taken to develop gender-related projects.

3.3 Infrastructure and Policy-Level Support

Planning and decision-making without accurate and relevant information are not only futile but could also be counter productive. As an African information specialist at the 1987 pre-

Strategy workshop articulated, "there is a direct relationship between effectiveness in development plan formulation and implementation and the use of accurate data and information - provided that the national leadership takes decisions on the basis of available information" (Adeyemi, 1988, p.37).

The ability of governments to develop effective policies and plans depends on their ability to acquire and interpret information relevant to the country's socio-economic and cultural situation. Thus a strong national information infrastructure allows for access to information from various sectors and provides the basis for sound planning and decision-making.

Such an infrastructure requires that sound information policies exist to provide the framework for the development of information systems and services to meet development needs. Thus, the formulation and implementation of appropriate information policies should constitute a vital component of the overall national development policy.

Nonetheless, the result of our study reveals that planning, development and implementation of national and regional information policies (objective 5) have not been accorded high priority by project recipients during the five years of implementation of Africa Strategy; only 4 (4.3%) projects had this objective as their first priority.

Those projects that explicitly aimed at planning, developing and implementing national and/or regional information policies have attempted to achieve this objective by sensitizing policy-makers to information and information technology as a tool for development, and by developing and promoting national/regional/sectoral information technology policies.

While most of the projects reviewed have been initiated on the premise that information is vital for decision- and policy-making, formulation of information policies *per se* has only

recently begun to be seen as a priority. The major preoccupation of projects within the last five years has been the development of information infrastructure and institutional capacity building. Nonetheless, the recent IDRC Program Statement on "Information Policy Research" acknowledges the significance of establishing information policies in developing countries in order to carry out sustainable development (IDRC, 1993). The same program statement states that in the years to come, "in order to have a more profound, broader and longer lasting impact on the information problematique, IDRC is re-directing more of its resources towards information policy research activities" (*ibid*).

3.4 Capacity Building

Most of the projects reviewed have given considerable emphasis on the development of human and institutional resources to enhance developing countries' capacity to manage information and communication technologies. Capacity building (objectives 6&7) is one of the Strategy objectives that has been given priority in the projects (following objectives to respond to user's needs and better utilization & sharing of existing resources). The development of human resources, particularly those involved in the provision of information, has been the focus in the capacity building objective.

Within the parameters of this objective, training of information professionals and technicians on information technologies, tools and methods has been accorded the highest priority. Fifty per cent of the projects have a human resources development objective and are focused primarily on training of information professionals and technicians, followed by training on information technologies (32%).

IDRC has taken a particular interest in strengthening professional information capacity in Africa. Over the last six years, it has supported two regional post-graduate schools of information science - the School of Information Studies for Africa (SISA) at Addis Ababa University, Ethiopia and the African Regional Centre for Information Studies (ARCIS) at the University of Ibadan, Nigeria - and plans for launching, in 1994, a similar post-graduate program at the University of Botswana are currently underway. The Centre has also recently assisted with the launching of the Consortium of African Schools of Information Science (CASIS), which will serve as a mechanism through which information, human, financial and physical resources would be shared throughout the region, and collaborative research would be undertaken in areas that address the specific information needs of the Continent. To this end, CASIS has identified five interrelated programs: institutional strengthening; continuing education; exchange programmes; consultancy and advisory services; and research. By pooling together human, physical, and financial resources, CASIS aims to offer a mechanism for effective and efficient utilization of existing resources in the African region.

The capacity building objective will continue to be among the first priorities in IDRC's Information Sciences and Systems project activities in the coming years. By concentrating efforts on higher level, post-graduate education, it is hoped that there can be a multiplier effect in terms of upgrading skills throughout Africa and the recently established Consortium, through its networking and resource sharing efforts, should help to speed up this process.

3.5 Sustainable Information Systems and Services

Securing long-term commitment for establishment of sustainable information programs (objective 9 and 10) has been a very important aspect of all IDRC projects. Nonetheless, for obvious reasons, this objective has not been all that easy to achieve in Africa. Among the projects that do make an explicit reference to sustaining the proposed information program, the most popular mode is by way of host institution financing. This, in spite of a recent IDRC study that empirically explored the issue of sustainability of information systems in developing countries, and made eighteen recommendations for the creation and enhancement of conditions conducive to sustainability (Agha and Akhtar, 1992). These recommendations were directed towards three primary groups - development planners, information specialists, and donor agencies.

IDRC is now putting even greater emphasis on projects that have mechanisms to assure financial as well as program sustainability. To ensure this, it promotes projects that aim, among others, at developing business plans and marketing strategies in order to generate revenue from the information products and services they have to offer.

4. Conclusion

IDRC's information strategy for Africa has been a very effective tool for directing and coordinating its project activities and for setting its program priorities in the African Continent based on their expressed needs. It has proved to be an effective tool through which a donor agency, such as IDRC, can respond to the expressed needs of grant-recipient countries as opposed to providing support in areas where the need is felt merely by donors. The development

of the Strategy, a consultative process that allowed the Africans themselves to assess their information problems and prioritize their needs, has reinforced IDRC's well received approach in the developing world.

The Centre's experience in the information sciences in Africa is exemplary of the need for a systematic and coordinated approach to supporting development projects and activities in Africa. It has reinforced the view that support provided in an *ad hoc* fashion, without a clear understanding of the actual needs of the recipients and without involving them in the identification of their own problems and in establishing their own priorities, may not only be unsuccessful but could also be futile, not to mention costly.

IDRC will continue its support to strengthen the creation, management, and use of development information in Africa through its Information Sciences and Systems Division, by using the "Africa Strategy" as a guide for directing and coordinating its program focus. The Division will put particular emphasis on projects which: promote indigenous research, foster the design of information policy, strengthen Africa's information capacity, and which have greater impact on grass-root communities. It will support projects that go beyond mere establishment of information and documentation centres - projects that strive to disseminate relevant and timely information to beneficiaries, including the urban and rural poor. By so doing, it will fulfil the Centre's mission of **Empowerment through Knowledge**.

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