

tive bibliographic information systems. The "territorial formula", by which each participating country processes only its own documents, results in an equitable sharing of costs. In return for contributing its bibliographic records to the system, the country gains access to the literature of the rest of the world.

The program provides support mainly to regional centres acting on behalf of their member governments. The Agricultural Information Bank for Asia, which is linked to AGRIS, the Food and Agriculture Organization's (FAO) global agricultural information system, has received an IDRC grant for a third phase of operations. Like its counterpart in Latin America, the Asian network is adding to its previous activities, making greater application of computer methods and building new services to deliver documents in response to specific requests.

In the field of population information, the regional centre for Latin America received a second IDRC grant. The objective of the second phase is to decentralize some of the document collection and recording activities to national co-operating institutions. A first grant has also been awarded to an African regional centre for population information.

Both of these centres could eventually form part of a worldwide population information system, POPIN, the design of which was studied in some detail by the United Nations Population Division with the assistance of an IDRC staff member seconded for the purpose.

For the information needed by development planners and policymakers, IDRC is continuing a demonstration of the proposed Development Sciences Information System (DEVSIS). In the last year, the demonstration has resulted in a joint bibliography and index to the Canadian and West German development literature.

#### **Development literature**

At the same time, several other countries have been producing indexes to their own development literature and several are joining the demonstration managed by IDRC. Meanwhile, with IDRC support, the Economic Commission for Latin America has launched a similar demonstration with the participation of ten ministries of planning. At the request of the Economic Commission for Africa IDRC managed a group of consultants in defining a program to be known as DEVSIS Africa.

To service requests for MINISIS from a variety of North American institutions, IDRC recently signed a marketing contract with Systemshouse, a Canadian computer software marketing and consulting firm. It is anticipated that in the first year of the contract over ten North American institutions or ministries will purchase the system.

In a large project covering the information from all sectors in one geographic region, IDRC joined several other donors in funding the planning stage of an information network for the Sahel. The project is intended to enable the eight member countries of the *Comité inter-Etats de Lutte Contre la Sécheresse Sahélienne* to share information pertaining to the common problems of the Sahelian drought and at the same time to help them develop national information policies and infrastructures.

In addition to the documentation aspect of international information systems, the division also continues to support the use of a common computer system for bibliographic manipulations. ISIS, a package of computer programs originally developed by the International Labour Office (ILO) for information retrieval and library management, is now used by many institutions, both national and international, some of which have drawn on IDRC for technical advice.

ISIS resource centres have also been established in Pakistan and Costa Rica, both with some assistance from IDRC. These will serve as sources of expertise, as training centres, and will also process records from international and regional systems.

For its own bibliographic processing in Ottawa, the division has now been operating for more than a year with MINISIS. This is an ISIS-related bibliographic system, designed by the Centre's computer scientists....

#### **Reducing duplication of effort**

...Developing countries, with their scarce resources and limited research capacity, can ill afford the waste of time and money that results from...duplication of effort, nor for that matter, can the industrialized countries, with all their resources.

The answer is global information networks that carry the latest research data

swiftly from one country to another. One of the most advanced of such networks is AGRIS — the international information system for the agricultural sciences and technology. Operated by the UN Food and Agriculture Organization, AGRIS was established with considerable support and assistance from IDRC. It became fully operational in 1975 and now handles more than 100,000 "pieces" of information each year.

The principle behind such systems is simple. Each country (or region) puts in all the data it has available and, in return, gains access to all the data available from other participating countries. Because of the sheer volume of information, such systems must be computerized to operate efficiently, and, in the past, this meant high costs in computer equipment and programs. What was needed was a small computer with a program that could cope with a big job at a relatively low cost. IDRC's computer scientists undertook to try to develop such a package.

It took two years, and the end result was MINISIS, "A minicomputer based information management system".... MINISIS performs all the same functions but on a much less expensive minicomputer.

#### **Versatile minicomputer**

The MINISIS package offers many advantages in addition to low cost; perhaps the greatest is its versatility, which enables it to be used for many different applications, including many library management functions. Also important, MINISIS is what computer scientists call a "user friendly" system. In other words, it is easy to learn, even for those with little or no experience of computerized information systems.

In fact, MINISIS...has attracted considerable interest not only from the developing countries, as was intended, but also from governments and institutions in the industrialized nations — including Health and Welfare Canada. Most significant of all, the ILO is planning to replace its ISIS with MINISIS, at considerable savings.

In short, MINISIS is a breakthrough in bibliographic information processing. But if the developing countries are to be able to benefit from this advance, they need to be able to obtain experience with the system through on-the-job training. To provide this, IDRC hopes to establish

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