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INFORMATION COMMUNICATION AND IDRC

No. 2, August 1994



ARCSE

Informatics for Development Global Opportunities and Challenges

These days one cannot pick up a newspaper, magazine or journal, listen to the radio, or watch television without hearing about the "new information age", "information society", "informatics revolution", "information superhighways" and so on. This is especially true in the developed world, but is becoming increasingly so in the developing world, although still primarily in major cities and media. I can recall very clearly stopping in a small town in Costa Rica a few years ago and being impressed with the number of posters tacked onto trees telling people to take a computer course as the key to their future success.

The informatics revolution is well upon us. It provides both tremendous **opportunities** for progress and transformation, in the global economy, regions, countries, communities, institutions, and individuals, and also tremendous **challenges**, in issues such as equity, information policies, social impacts, privacy and access. This is especially true for developing regions which can benefit from effective use of new information technologies (IT) but also run the risk of an increasing information and information technology gap.

Faced with an ever-changing environment, the development community in general, and organizations like IDRC in particular, need to examine carefully these opportunities, challenges, and risks and to establish strategies for the effective utilization of IT in their operations, programs, and relationships with partners. IT is also a key ingredient in enabling institutions, governments, and businesses to use new modalities of operation and to develop new kinds of relationships, with instant access to information sources, communications facilities and sophisticated tools for modelling, analysis, and decision-support.

Within the donor community, IDRC has been in the forefront of informatics and development since its inception. It has supported programs involving information

sciences, communications, informatics and their applications in a host of disciplines. A number of initiatives are currently under way within the Centre to respond to some of these challenges and opportunities.

For example, ISS Division is working on establishing a Canadian Interest Group in Informatics and Development. This will provide input to the Division in its capacity as the Canadian focal point for Unesco's Intergovernmental Informatics Program, as well as to its own informatics-related program activities. This group is expected to stimulate greater involvement in global development issues by the Canadian informatics community and to provide a platform for discussion on how Canadian achievements and expertise in information technology and its applications can be used to help solve global problems of sustainable development.

IDRC is nurturing its role as a knowledge broker in the development community, especially as related to information and IT issues. It is supporting, among others, a study on establishing a "flexible and effective mechanism to enhance information sharing and collaboration among donors, and information linkages to other key groups" in the context of Agenda 21 research and capacity-building.

IDRC is also experimenting with the use of the Internet to provide access to its information resources and those of its partners. Looking a bit to the future, we are considering potential IDRC and developing country involvement with Canadian electronic highway initiatives. This might include using a Canadian channel to provide access for developing countries to IDRC and other Canadian information services. We would like to consult and work with other institutions and individuals on various aspects of information and communication technology research and application issues. Your ideas on how we can work together are most welcome.

-- Robert Valantin, Director, Information and
Communication Technologies, ISSD

Canadian GIS links North and South

-- *The Honourable Flora MacDonald* --

I am very pleased, as chairperson of the International Development Research Centre, to be here this morning to participate in and to learn more about the work of the GlobeSAR Roundup. During my years as a Member of Parliament, I held three different cabinet posts. I can say, without any reservation whatsoever, that being Minister of Communications was the most exciting job I ever held. It gave me the opportunity to become cognisant of the exciting developments taking place in new global technologies -- to be, as it were, close to the starting gate of the new information highways.

This meeting marks the end of an important stage in the GlobeSAR project, the stage during which airborne data were collected and preliminary field work done in several developing countries of Africa and Asia. GlobeSAR is a unique Canadian initiative with long-lasting benefits and I would like to congratulate all those involved -- the Canada Centre for Remote Sensing, the Canadian Space Agency, IDRC, Intera Technologies Ltd., Innotech Aviation and Radarsat International Inc. -- on the achievements to date. The work of the next three years, and the results that will be made widely available, will be of immense benefit to millions of people in all parts of the world.

In the past few years, I have been able to travel to many developing countries, particularly those in Africa and Asia. One quickly realizes that an inadequate, indeed very limited, knowledge of their natural and environmental resources remains a basic problem in their ability to implement sustainable and equitable development programs. Policy- and decision-making for such programs require unrestricted access to low-cost, reliable, accurate, and timely geographic information at various scales and in various formats.

Even though it has been clearly established that space technologies can contribute to sustainable development, it should not be forgotten that such technologies are affordable in only a few privileged nations. Meanwhile, the rest of the world's population struggles to meet its basic food needs. With the exception of a few developing countries, remote sensing technology remains the monopoly of the North. Earth resources satellites are conceived mainly to meet the information needs of their owners, and do not appropriately take into account specific needs of developing countries. South-

ern countries are often considered as potential consumers of data, or in a best case, test-beds for applications that cannot be undertaken in the North: tropical rainforests, drought and desertification, mangrove forests, to name a few.

Strengthening developing country capabilities to select, assess, transfer, and adapt the remote sensing technologies to meet their environmental and developmental goals, is a key phase to building North-South collaboration in space research and applications. With this in mind, IDRC has appropriated over four million dollars on geomatics projects in the last three years, including the Radarsat project in Costa Rica, and GlobeSAR.

IDRC has a proven track record of supporting research applications and technology transfer of remote sensing and geographic information systems to developing countries. It will continue to concentrate its efforts on the development of the institutional research capabilities to promote and diffuse remote sensing technology. Special efforts will be made to link up researchers in Canada with those in developing countries.

Canada must not only share the results of its research with developing countries, but must also involve them actively in the assessment of these technologies. They must play a part in research and development and in the design of satellites dedicated to the study of natural phenomena common to these countries such as: desertification dynamics and process, marine and coastal resources, and fragile production systems.

A great deal has already been accomplished and I congratulate you for that. A great deal remains to be done, and I wish you well in your future endeavours. The kind of partnership that you are promoting in space research between Canada and the countries of the South makes it possible for these countries to share in the research and development program, and in the wealth that results therefrom. And this, of course, provides a solid basis for the establishment of long-term sustainable partnerships between Canada and the developing world.

(From notes for a speech given at the GlobeSAR Roundup, Ottawa, 24 January 1994.)

GlobeSAR -- global natural resources management

IDRC has identified satellite Synthetic Aperture Radar (SAR) remote sensing as a response to Agenda 21's concern to improve methods of data collection and analysis for natural resources and environment. IDRC, together with the Canada Centre of Remote Sensing (CCRS) and the Canadian Space Agency, is co-funding GlobeSAR, a major pre-launch international demonstration project for Radarsat, the Canadian radar earth resource satellite scheduled for launch in early 1995.

GlobeSAR is a three-year project led by CCRS in cooperation with private Canadian institutions: Intera Technologies Ltd., Innotech Aviation, and Radarsat International Inc. GlobeSAR involves the participation of over 60 institutions in over 14 countries, ten of which are from the developing world: Kenya, Morocco, Tunisia, Uganda, Tanzania, China, Malaysia, Thailand, Vietnam and Jordan. The project was developed as a result of a series of on-site technology familiarization workshops, which brought together Canadian researchers, and researchers and managers from the hosting countries. The workshops were held in Rabat, Tunis, Amman, Nairobi, Bangkok, Beijing, Hanoi, Kuala Lumpur, and Karachi.

Through this project, IDRC expects to strengthen the capacity of researchers and practitioners throughout the developing world to benefit from new radar remote sensing technologies in environmental studies, and to promote technology-based linkages between Canadian and developing country participants. The project will provide participating developing countries with some information infrastructure needed to collect, process, and access radar data in conjunction with conventional data. This will help developing country decision-makers improve the quality of natural resources management, define environmental in-

dicators, and assess and monitor environmental changes. More specifically, the project includes the implementation of a large Airborne SAR data acquisition campaign over selected sites in participating countries, production of satellite simulated data representative of different ecosystems, and research capacity building.

The research capacity will be built through the transfer of technology and know-how, and the development of earth resource applications. The project will provide participating developing country institutions with appropriate data, complementary equipment (hardware and/or software), and training for radar data processing and analysis. Research activities cover the use of the technology for the assessment and monitoring of natural resources in fragile environments. These will include mountainous environments, coastal zones, wetlands, inland waters, and areas prone to land degradation, soil erosion, and desertification.

The project commenced in October 1993 and to date, the following steps have been successfully achieved: (1)

in-situ preflight training seminars; (2) ground data collection; (3) airborne data acquisition and in-situ pre-processing; (4) additional processing in Canada for some of the data with the participation of representatives of developing countries; and (5) selection and order of equipment.

Soon after the return of the aircraft from its successful around-the-world mission in January 1994, CCRS organized a round-up meeting to share the preliminary results, as well as the future plans and objectives with the Canadian community. At this occasion, the Honourable Flora MacDonald, Chairperson of the IDRC Board of Governors, presented a paper which states IDRC's vision and expectations in supporting such highly technological projects (*see page 2*).

Although the project is still at its early stage, it has generated much interest from other developing countries. Talks are under way with regards to the possibility of development of a GlobeSAR II project in Central and South America.

-- *Djilali Benmouffok, ISSD*

Third edition of the DAI CD-ROM

The third edition of the DAI CD-ROM was published in June 1994. This CD-ROM will contain close to 95,000 records of development activities of the United Nations and its specialized agencies, IDRC, CIDA, USAID, JICA, the World Bank, Inter-American Development Bank, and a number of other bilateral and international development assistance agencies.

This edition of the DAI CD-ROM will sell for US \$250 for one copy, US \$175

each for 2-49 copies, and US \$50 each for 50 and more copies. It will be given free of charge to non-profit developing country organizations. Organizations which contribute their data to an edition of the DAI CD-ROM will receive a free copy of this edition.

For information on how to order the third DAI CD-ROM, and how to contribute data to future editions, please write to: *Mary Campbell, the Coordinating Unit for INDIX, ISSD, IDRC: fax: (613) 563-3858; internet: indix@idrc.ca.*

Debt management for developing countries

In June 1991, IDRC launched a three-year DRMS (Debt Recording and Management System) program, Phase I, to extend the benefits of computer-based debt management to developing countries, with an emphasis on the sub-Saharan African region. Many of these countries are heavily indebted and face serious problems in managing their foreign debt. The program is jointly funded by IDRC and CIDA, and is carried out within ISS Division by an in-house DRMS Unit.

The DRMS program offers developing countries the possibility of making extensive use of computerized debt management information systems, combined with training on efficient methods to process and manage a country's domestic and external debt information. In the long run, such a program should make a positive contribution to easing debt problems faced by Third World countries and thus helping to create the conditions for sustained social and economic development.

The debt management information system provided to targeted countries under this program is based on the Commonwealth Secretariat's debt management software, CS-DRMS. IDRC contributed funding and technical input for the initial design and testing of CS-DRMS, and for its implementation in several Commonwealth and other developing countries. Currently, CS-DRMS is operational in its English version in more than 30 countries, mostly members of the Commonwealth. A French version of CS-DRMS was launched officially on 31 May 1994, and Mali is expected to be the first site where the French version of the CS-DRMS software will be installed. Beneficiary countries are expected to assist with its testing later this year.

The presentation of the DRMS program through organized missions has prompted requests for implementa-

tion in the following countries in West Africa: Mali, Bénin, Cameroon, Burkina Faso, Cape Verde, Chad, Sénégal and Central African Republic. Under the current project phase, the DRMS Unit is concentrating on delivering the program in the first three countries.

Implementation activities of the DRMS program effectively began with the first training course delivered in December 1993 in Mali. The course covered loan interpretation and instructions for filling in data entry sheets.

In many cases, the CS-DRMS software will need to be integrated with present or future networks planned in the Ministries of Finance or the CAA (Caisse Autonome d'Amortissement) in these countries. The CS-DRMS software and SCO-UNIX operating system can easily be integrated into such networks using standard prod-

ucts available on the market (such as TCP/IP).

IDRC and the Commonwealth Secretariat have cooperated in the development of a Language Independent Version (LIV) of CS-DRMS, with French as the first implementation other than English. This will be a multilingual system as is the case with IDRC's MINISIS. In this way all users of CS-DRMS will receive and use the same software. They will, however, have different dialogue and screen files and report text according to their local working language.

IDRC has also been active in the implementation and support of DRMS projects co-sponsored by various donors in Laos (Asian Development Bank), Thailand (USAID), and Bulgaria (World Bank).

-- Nicholas Cop/Antoi
Raffoul/Robert Valantin, ISSD

Regional Round Table on Land and Water Management

As part of the consultation process to refine further the scope of its program and improve its efficiency and impact, IDRC Regional Office for the Middle East and North Africa (MERO) organized a Regional Round Table on Land and Water Management in December 1993 in Cairo, Egypt. The centre of attraction of this three-day meeting was the 11 IDRC-supported projects on integrated management of natural resources, environmental studies and environmental policies. The round table was attended by IDRC staff and 17 project leaders from Algeria, Canada, Egypt, Jordan, Morocco, Senegal, Syria, Tunisia, West Bank and Yemen.

The participants discussed the commonalities, strengths and weaknesses of the projects and agreed on

the need to improve the sharing of experiences on data and information access, on modelling tools, techniques and their limitations, and on methodologies to help integrate the different disciplinary components of their research work. To this effect, MERO is exploring the possibility of expanding the electronic mail connections among all projects. Work is under way as well to compile a data bank on projects expertise and to design networking procedures.

Copies of the Proceedings of the Round Table are available from IDRC Regional Office for the Middle East and North Africa, P.O. Box 14 Orm Giza, Cairo, Egypt.

-- Gilles Cliche, IDRC
Regional Office, Cairo

Consortium of African Schools of Information Science

The Centre has recently approved a project which will assist in putting in place the preliminary activities for the establishment of a Consortium of African Schools of Information Science (CASIS). Four graduate programs in Information Science in four sub-regions of Africa will spearhead the project to rationalize and co-ordinate education in information science in Africa. CASIS will provide a mechanism for linking the efforts and resources of existing schools and programs, in order to promote and advance information science and its use for African development.

The four founding members are: the Africa Regional Centre for Information Science (ARCIS) University of Ibadan, Nigeria; the School of Information Studies for Africa (SISA), University of Addis Ababa, Ethiopia; the Department of Library Studies, University of Botswana, and the Ecole des sciences de l'information (ESI), Rabat, Morocco. While the initial members are these four graduate schools, the aim of CASIS is eventually to link all existing schools of information or related sciences in Africa.

Scarce human resources and weak infrastructures is the reality in most sectors and areas of activity in Africa. While building capacities and strengthening local institutions have been considered as primary mechanisms for solving Africa's infrastructural problems, efforts towards building such capacities assume the existence of a base of national capabilities. CASIS will aim at developing a common approach towards the solution of pervasive problems, to strengthen the human resource base throughout the continent and to improve collaboration in the region.

CASIS will be administered through a simple structure, composed of a Board

of Directors and a Secretariat. The Board, which will comprise representatives of member schools, will take responsibility for developing policies, rules, regulations, and the program of work of the Consortium. CASIS will create responsibility centres or working groups consisting of member institutions who would each be assigned specific responsibilities identified by the Board such as: planning and monitoring; research support; consultancy/advisory services; public relations, promotion, fund raising. The small Secretariat would be staffed by a Consortium Executive Officer, a secretary and an accountant/administrator and will be located at the University of Addis Ababa. Its role will be to facilitate the work of the Board by coordinating the implementation of the programs of the Consortium as determined by the Board, and as facilitator and administrator of its activities.

Five interrelated programs have been identified for implementation within CASIS. They are: (1) strengthening the infrastructure of the member institutions of the Consortium to facilitate sharing and exchange of information and resources; (2) establishing continuing education programs aimed at information users and professionals from other disciplines and training trainers; (3) developing faculty and student exchange programs; (4) coordinating a consultancy and advisory services program in information science for African institutions, and (5) developing a coordinated research program relevant to indigenous development priorities. The Consortium will establish a Trust Fund to sustain the implementation of CASIS' programmes in the long term. For further information on CASIS write to:

-- Patricia Thompson, ISSD.

New publications

Akhtar, Shahid and Martha Melesse. [in press]. Africa, information and development: IDRC's experience. *Journal of Information Science: Principles and Practices*.

Bessette, Guy. Communication pour le développement et transfert des connaissances: au-delà des pratiques émetteur-récepteur. *Communication*, 14 (2): 137-170, 1993.

The CGNET story; a case study of international computer networking, by David Balson (ISSD) et al. Ottawa, IDRC, 1994. CA \$16.95.

Durrant, Fay. State of the art of information management in the Caribbean. San Juan: ACURIL, 1993. Presented at the 23d Annual Conference of the Association of Caribbean University, Research and Institutional Libraries, Barbados, May, 1993. (A copy may be obtained from: CIID, Casilla de Correos 6379, Montevideo, Uruguay)

The Earth Summit CD-ROM. Ottawa, IDRC, 1994. CA \$650.

Measuring the impact of information on development, edited by Michel J. Menou. Ottawa, IDRC, 1994. CA \$24.95.

Sy, Jaques Habib. Broadcasting in the Third World: empowerment by whom, for whom? *Development*, (3): 12-15, 1993.

IDRC publications may be obtained from: IDRC Books, PO Box 8500, Ottawa, Ontario, Canada K1G 3H9.

Development communication for social change

The ISS Division is now in the process of developing a new program in the area of development communication.

This is a very broad field that involves use of communications as a means of bringing about social change. It encompasses many definitions, approaches, different and even conflicting ideologies.

Although we sometimes refer to this concept in global terms, such as the overall contribution of communications to the development of society, there is general agreement on defining development communication as the planned application of communications strategies and processes for the purposes of development. The differences arise concerning the phrase "for the purposes of development".

Some people will place the emphasis on making community institutions participate in decision making and strengthening them, others on the transfer of information that supports a climate favourable to change and development, and still others on the promotion of social justice and democracy. Then, too, we hear of communications for facilitating understanding or consensus among participants in a development initiative, and so on.

Nevertheless, beyond these differences of approach, we can assert that the lessons of experience in this area point to the importance of emphasizing interactive and participatory processes, rather than the production and dissemination of information in isolation from community processes. "One-way communication carries the seeds of disaster" was the very proper title of a report from the Clearinghouse for Development Communication.

In practice, we can find many approaches and methodologies that can apply to development communication, depending on the definition chosen: such as, using the mass media and

technologies, community communication, communication in support of development projects, communication for democracy, IEC, remote education, informal and basic education, social marketing. The field is very broad and diversified.

At IDRC, applying the lessons from experience in this area, we are currently working with a definition of development communication that takes an interactive and participatory perspective and emphasizes the interrelationships between the main thrusts that we find in practice. This is the CIME approach: Communities, Information, Media, Education. This approach refers to the interrelationships of the following elements:

- producing, disseminating and circulating information to support decision making;
- introducing and using two-way com-

munications systems, based on the media and technology;

--supporting the education process in key areas of development;

--activating community communication processes so as to provide a link between access to information, knowledge acquisition and development attitudes, on the one hand, and development activity on the other.

Information alone is of no use without a community-based communication process for making it its own and without proper communications channels. The introduction of two-way communications systems based on the media and technology needs to be linked with a process of community communication that defines the conceptual or integration parameters, the implementation conditions and the means for evaluating it. In the end, education in the key areas of development is inseparable from development information, since the latter is not enough by itself to bring about the changes in behaviour and attitudes that are essential for development.

By emphasizing the interrelationships between community communication, information, the media and education, we are trying to link the idea of development communication to a process of stimulating interchanges among individuals, groups and communities as a means of tackling some development problems.

The program is now in the developmental phase, and we welcome institutions that are active in the field to take part in identifying the program's goals and strategies. In a forthcoming issue, I will describe how this process is unfolding. In the meantime, anyone interested in knowing more about the program should contact me or Shahid Akhtar, Director of the Information and Communication Networks and Systems Group, ISSD.

- Guy Bessette, ISSD

Equity, growth and participation

Shahid Akhtar, Director of the Information and Communication Systems and Networks, ISSD is the guest editor of a special issue (1993:3) of *Development: journal of the Society for International Development*. Entitled, *Equity, growth and participation: the information age*, it brings many perspectives on the technological and socio-economic aspects of the information age under broad headings: the communication revolution and the development problematique; prospective avenues for social change through communications; the information age in action; and SID debates sustainability and development. For copies of the issue, please contact the Society for International Development, Palazzo Civiltà del Lavoro 00144 Rome, Italy.

ELADA 21 -- electronic atlas on environment and development

Agenda 21 was developed for the United Nations Conference on Environment and Development (UNCED) through a two-year preparatory process. It serves as a reference for individuals and organizations. Unfortunately, reading the document, extracting relevant information for a particular action and analyzing logical links between different disciplines of the document are challenging and time consuming tasks. Visualization of information by means of electronic graphic presentation, and analysis of geographical data with an interactive, problem-oriented user interface would help considerably to overcome some of the limitations of the textual format of Agenda 21.

IDRC and Canada Centre for Remote Sensing (CCRS) of Natural Resources Canada, in collaboration with several international partners: Earth Council; Interim Biodiversity Secretariat, Geneva; National Biodiversity Institute, Costa Rica; Solidarités agricoles et alimentaires, France; United Nations Environmental Program, Global Resources Information Databases; World Conservation Monitoring Centre, UK; and the World Conservation Union (IUCN), Geneva, are putting

together a collaborative research project to develop a dynamic Electronic Atlas of Agenda 21 (ELADA 21) on environmental development issues.

ELADA 21 will be an easily accessible information tool based on a multimedia and GIS technologies that allows for interpretation of environmental phenomena including economic and social dimensions. It will make it easier to understand the Agenda 21 action plan, help the design and the development of environmental policies, and serve to monitor and report on the results and impacts of these policies.

ELADA 21 will be a long-term, multi-phase, global project with short-term measurable outputs in specific disciplines. It will be carried out by national, regional, and multilateral institutions worldwide under the lead of CCRS. The ultimate goal of the project is to establish an open electronic knowledge-base on the basic achievements of the Agenda 21 action plan and, consequently, would involve strong networking activities. It could even serve as a repository of the Agenda 21 action plan and programs.

The first phase of the project will begin shortly and will concentrate on technical issues related to the Atlas Shell development and building a proof-of-concept prototype. The second phase will develop a volume on biodiversity. The main goal of the second phase will be to collect and integrate within the shell the biodiversity data and, if possible, to introduce scenarios linking biodiversity with socio-economic values. One of the objectives of Agenda 21 is to improve the conservation of biological diversity and the sustainable use of biological resources. The *ELADA 21 Biodiversity Volume* will therefore encourage a greater understanding and appreciation of the value of biological diversity, produce regularly updated information on biodiversity, and promote broader cooperation towards the development of innovative biodiversity strategies, plans and actions.

Further project phases would focus on capacity building in geomatics, networking, and biodiversity in the selected developing countries and also on development of other Agenda 21 chapters.

-- *Djilali Benmouffok, ISSD*

Information and Agenda 21

In April 1994, IDRC hosted an informal consultation on "Environment, Development, and Information" to discuss progress in this field since the UN Conference on Environment and Development (UNCED) held in June 1992. To stimulate a variety of perspectives, the meeting was attended by 24 organizations comprising a mix of international NGOs, UN agencies, foundations, and bilateral donors.

The specific objectives were:

(1) to increase awareness and understanding of the various concerns, priorities, gaps, and approaches in the information field post-UNCED;

(2) to share information on current and planned post-UNCED initiatives, with a view to identifying complementarity and collaborative action;

(3) to explore whether there is any need for an ongoing informal consultative mechanism to stimulate debate and action.

Two years after UNCED, it is evident that a lot of information-related activity has been initiated, but that most of the information on what is being done and by whom is largely anecdotal and incomplete. More systematic information support systems will be

required to address sustainable development through more effective, collaborative efforts.

A full report on the meeting is available. It includes a summary of the discussion and conclusions, list of participants, statements of their Agenda-21 objectives and priorities, selected post-UNCED information activities, bibliography, background papers, and an overview of potential areas of collaboration. Copies can be requested from:

Paul McConnell, Director, Program Coordination and Development, ISSD.

Measuring impact of information on development

Is it possible to measure the impact of information on development? The answer to this deceptively simple question remains elusive. But an international research effort being supported by IDRC is starting to make progress.

It seems reasonable to assume that making more effective use of information products and services could improve the quality of decision making at all levels in public, private, and non-governmental sectors, and thereby exert a significant impact on many aspects of development. However, there has been no definitive work to substantiate the underlying assumptions about the value of information. Acceptable measures have not yet been established to confirm the extent to which information interventions can exert an impact on social and economic development. There are several understandable reasons for this, given the complexity of the task. Nevertheless, this is a field that must be explored further if there is to be any significant breakthrough in the way in which information products and services are valued and supported.

In response, IDRC has initiated a research program with the objectives: (1) to review the linkages between

information and development and suggest suitable approaches toward assessing the impact of information on development; (2) to develop an initial framework for field-testing the preferred methodology through several case studies; and (3) to stimulate a long-term collaborative research effort to explore the many facets of this subject.

The program was started in March 1992, with an international computer conference that debated background considerations and definitions (e.g. "impact", "development", "information"), the different perspectives from which to assess benefits, the various types of benefits to be obtained, experience with assessment methods (e.g., benefit-cost analysis, and examination of the life cycle of information production and use), characteristics of indicators and other aspects.

The findings of this computer conference were then examined in a workshop that was tasked with outlining a conceptual framework and a practical approach for investigating the impact of information on development. The outputs of this workshop together with the material generated during the computer conference were edited into a

comprehensive review that was published by IDRC in December 1993. (The report, *Measuring Impact of Information on Development* is available from IDRC Books, P.O. Box 8500, Ottawa, Canada K1G 3H9; fax (613) 563-0815). In addition, as a spinoff from the preliminary work, a handbook on Benefit-Cost Analysis for information managers also is in preparation.

The initial activities in the research program have helped map out the underlying concepts. Several follow-up activities are envisaged to test the initial framework and assessment methodology. Field testing has already begun, with the first group of case studies designed to assess the impact of several regional information systems on decision making in the Caribbean. Other case studies are under development in Latin America, Asia, and Africa.

In addition, the research program will expand to support studies aimed at increasing our understanding of the various components of the assessment framework and their interaction. This was the main theme of a special round table hosted by IDRC in February of the seven graduate schools of library and information studies in Canada. It is hoped that these discussions will lead to increased participation by Canadian scientists and a strengthening of the research agenda. The research program is also expanding within developing countries. This growing international collaborative effort may lead to achieving its objectives despite the scope and complexity of the task. Certainly, the potential significance of the findings could have a major influence on the value -- and viability -- of information activities in the future.

-- Paul McConnell, Director,
Program Coordination and
Development, ISSD

EXPERT Database

The ISS Division maintains an in-house database of information specialists who are interested in working in a broad area of development information.

The database is used to identify well-qualified people who can participate in varied information-related activities. The work may vary from an information needs study, testing of a new information technology, organizing a training program, to project management and program evaluation. If you are interested in being added to this database, please send your résumé to:

EXPERT Database, Information Sciences and Systems Division,
IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9.

Asian health and the environment -- information on CD-ROM

Asia will have its first series of CD-ROMs on health and the environment within the next 12 months. The series will comprise three discs: (1) environmental and resource management; (2) occupational safety and health, natural toxins; and (3) tropical diseases, traditional Asian medicines and natural products. Subject areas will initially cover water and sanitation; solid waste and waste water management; safety at the work-place; venoms and toxins; mosquito-borne diseases; diarrhoeal diseases; traditional Chinese medicines; medicinal and aromatic plants; and plant, animal, mineral and industrial products. The CD-ROMs will contain a combination of three types of information: (1) bibliographies and directories; (2) factual information with illustrations and (3) full text publications with illustrations.

Behind this unique initiative is a consortium of nine Asian database partners: Asian Alliance of Appropriate Technology Practitioners, Manila; Environmental Systems Information Centre, Asian Institute of Technology, at Bangkok; Asian Pacific Information Network on Medicinal and Aromatic Plants, Manila; Chinese Medicinal Material Research Centre, Chinese University of Hong Kong; International Centre for Diarrhoeal Disease Research, Dhaka; National Institute for the Improvement of Working Conditions and Environment, Thailand; Publications and Information Directorate, Council of Scientific and Industrial Research of India; SEAMEO Tropical Medicine and Public Health Project, Bangkok; Venom and Toxin Research Group, National University of Singapore.

In September 1993, at a meeting in New Delhi sponsored by IDRC, these nine database owners agreed to develop and market collectively the CD-ROMs under the umbrella title of *Asian health and the environment*. The discs will be updated every six months. The price of each disc is expected to be around US \$200 for the developing countries and US \$400 for developed countries.

If you are interested in receiving CD-ROM pre-publication bulletins, please contact: *Dr. G. P. Phondke, Director, Publications and Information Directorate, Dr KS Krishnan Marg, Near Pusa Gate, New Delhi 110012, India. Tel: 91-11-574-6024; Fax: 91-11-573-1353*

-- *Maria Ng Lee Hoon, IDRC Regional Office, Singapore*

Information Policy Research Program

The Information Policy Research Program (IPRP) was recently established in the ISS Division. The overall objective of the program is to influence the information and information technology policy environment to promote and facilitate more effective utilization of information and related technologies in support of sustainable and equitable development.

The main focus of the program will be:

- to increase awareness of decision makers concerning the value of information and its role in economic and social development;
- to investigate the processes of interactions between information and society;
- to investigate the information-seeking behaviour of policy makers and their information uses and process of decision making;
- to examine policy issues related to technology transfer; and
- to promote the dissemination of the research results, collaboration among key players, and capacity building in the area of information policy research.

The information technology policy aspect of this program was discussed at a *Workshop on IT, Donors and Development* at the *IFIP Working Group 9.4 Conference on Social Implications of Computers in Developing Countries*, held in Havana, Cuba, February 1994. The approaches proposed for this program were for the most part endorsed at this workshop. The main conclusions of the workshop were that: (1) the program should play an advocacy role, regarding IT as a significant component in the development process; (2) more intensive dissemination of results of research and experiences should be supported; (3) capacity-building in IT policy research is essential to achieve the goals of the program; (4) equity issues in the information society should be central to much of the research support; (5) the cultural context must be kept in mind in most of the research activities; and that (6) attention must also be placed on the existing and potential future negative aspects of IT and development.

If you are interested in receiving IDRC's *Information Policy Research Program Statement*, please contact: *David Balson, ISSD.*

ISSD participation in Ukrainian project

During a visit to Ukraine in March this year, Foreign Affairs Minister André Ouellet announced a series of new Canadian assistance initiatives designed to address pressing environmental, health and social issues in Ukraine.

One project area is designed to help with the rehabilitation of the Dnipro river, the source of drinking water for 70 percent of Ukraine's population. IDRC will implement this three-year, \$5-million project.

The Information and Communication Technologies (ICT) Group of the ISS Division will develop and monitor projects concerning computer applications in environmental data collection and processing. The main objec-

tive of the informatics subprogram in this project is to support the design and development of the environmental management information system for the Dnipro river basin. The weak information infrastructure and a lack of computer skills among high- and middle-level management in Ukraine are serious concerns for the Ukrainian Ministry of Environmental Protection.

During IDRC's missions to Kiev, the Ministry and other institutions indicated a number of information management related problems, for which Canadian assistance would be critical. There are many potentially beneficial projects for Dnipro rehabilitation in Ukraine which are stalled or not being implemented due to limited access to

technology, a lack of expertise in some areas, a lack of cooperation and coordination among different institutions, and low project management skills.

In collaboration with Ukrainians, the Canadian team will evaluate ongoing projects and select the projects which will receive support from the program. Some of such projects may include application of remote sensing and GIS for environmental data collection and processing, establishing access to environmental data bases world-wide, and specialized software development. The strategy is to use Canadian expertise and technology in critical points of effective implementation of the environmental management information system in Ukraine.

-- Zbigniew Mikolajuk, ISSD

International database on AIDS

The World Health Organization Global Programme on AIDS has commissioned the Global Management Committee Task Force on HIV/AIDS Coordination to prepare a comprehensive biennial report summarizing HIV/AIDS-related activities of major organizations within the United Nations system, intergovernmental organizations, bilateral agencies and nongovernmental organizations, to constitute an information base for the analysis, documentation and coordination of activities and programmes.

The Task Force approached the Coordinating Unit for INDIX in the autumn of 1993, for help in two areas: (1) designing a database which would

become the first global system for monitoring and information exchange which focuses on HIV/AIDS-related activities; and (2) collecting the data for this database which would form the information base for the biennial report.

The Unit was able to supply the members of the Task Force with the help and the information that they needed. For the design of their database, they used the CEFDA (Common Exchange Format for Development Activity information) format developed by the International Network for Development Information Exchange (INDIX), while the data was supplied from the DAI CD-ROM.

Almost 900 records of AIDS/HIV-related development activities, submitted to the DAI CD-ROM by the United Nations and its specialized agencies, IDRC, the World Bank, and bilateral organizations such as CIDA, USAID and DANIDA, were captured from the second edition of the DAI CD-ROM and sent to the Task Force in January 1994. Updated information from the third edition of the DAI CD-ROM will also be sent to the Task Force in time for the completion of their pilot report.

- Mary Campbell, Coordinating Unit for INDIX, ISSD

Information, Communication and IDRC is published by the Office of Director General, Information Sciences and Systems Division, International Development Research Centre, P.O. 8500, Ottawa, Ontario, Canada K1G 3H9; tel.: (613) 236-6163, fax: (613) 563-3858. Director General: Martha B. Stone. Editor: Atsuko Cooke. (Internet: acooke@idrc.ca) ISSN 1195-6879. Cette publication est aussi disponible en français.

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