

Library services for researchers: Working blindfolded

Making development information available to the public: The ITDG Resource Centre

Libraries

Go into the average library in the developing world, and weep. Piles of books, bundles of papers: dusty and termite-ridden. Locked cabinets (where's the key?) contain the only useful books. A catalogue? Are you joking?

That's a tragedy for the many people who would use libraries if they were properly funded and cared for. It's especially a tragedy for researchers and development workers, who rely on (reasonably) up-to-date information in order to develop and spread new technologies.

Fortunately, digital technology is coming to the rescue. With the Internet and CD-ROM, it's becoming less and less important to have a printed copy of a book on the library shelves. Instead, it's a few seconds' work to find the electronic copy, and another few minutes to print it out.

The facilities and skills needed by librarians (they now like to be called "information specialists") are changing. Computers, databases, the Internet are now the coin of the realm. That implies funding, training and support (such as Internet connections).

It doesn't eliminate the need for the traditional librarianship skills, though: acquiring the right books, careful cataloguing and shelving, helpful service to visitors. As with many aspects of the digital revolution, the job is changing, but the objective – satisfied clients – is still the same.

Library services for researchers: Working blindfolded



Paul Mundy

A researcher without a library is a researcher who works blindfolded. Bereft of the journals that contain the latest findings, lacking the books that describe standard techniques, a scientist is condemned to repeating experiments that may already have been done by others, to reinventing the wheel. It is the scientific equivalent of solitary confinement.

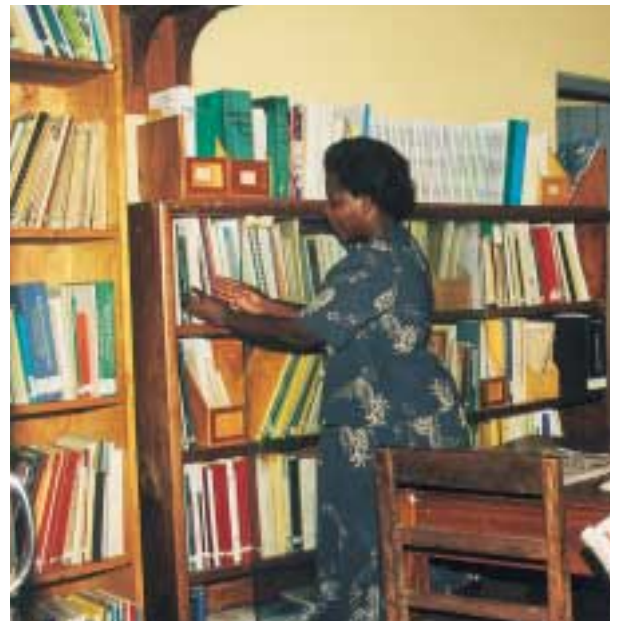
As with all prisons, this punishment does not only cost the prisoner dearly. It is also expensive for society at large. An isolated scientist works more slowly, less effectively, than one with access to information. Scientific progress is slowed. Investment in education and training, equipment and institutions goes to waste.

But building a state-of-the-art library is expensive. It would have to subscribe to dozens of journals, buy hundreds of books, just to serve a single discipline such as marine biology or plant breeding. Add together the dozens of disciplines that make up a typical research institute, and a ministry or university would have to fork out hundred of thousands of dollars just for scientific literature.

And there's another paradox: because scientific information is so specialized, most of the books in a library, and most of the articles in a journal, are of little use to any single researcher. An institute library must subscribe to an expensive journal in the hope that an article in it happens to be of interest to one of the institute's researchers or students.

Inter-library loans

Libraries' traditional method of overcoming these problems is through inter-library loans. If a visitor to one library cannot find the book she wants there, she can ask the librarian to borrow it from somewhere else. The librarian checks through a database to locate the desired book, and then sends a request to the library that owns it. A couple of weeks later, the book arrives in the mail.



The lack of adequate libraries is a major constraint to agricultural research. Here, a librarian tidies the shelves of the library of the Forestry Research Institute in Uganda
(Photo: Paul Mundy)

But inter-library loans have their snags. The would-be borrower may have to wait months before a current reader sees fit to return a book to the library. Mailing may add another two weeks. Books are expensive to ship around the globe. They tend to get damaged or lost.

Internet: the solution?

The Internet might seem to be the obvious solution. Surely, one might think, it should be possible for users to search for and download the information they need with just a few mouse clicks?

That's possible for some types of information: specialized databases such as FAO's World Agricultural Information Centre contain large amounts of data. Many libraries have put their catalogues online. But when it comes to detailed scientific information, the Internet has two major handicaps: copyright and connectivity.

Publishers of books and journals are understandably reluctant to put them online. That is tantamount to renouncing copyright. Sales of the printed version would slump. No income, no publication.

Restricting access to those who pay a subscription fee doesn't really work either. Credit cards are often used to buy goods online, but computer users are strangely reluctant to pay for downloaded information. There are concerns about the security of credit cards in cyberspace. Credit cards not an efficient way of transferring the fairly small amounts of money that publishers would charge for a peek at a research paper or a dataset. In any case, how many scientists in developing countries have a credit card – or would want to use their personal credit card to pay for information for their institute?

The second major hurdle that the Internet must overcome is the problem of connectivity – or rather, the lack of it. Even if a research institute has computers, modems, software and staff familiar with the Internet (and many still do not), it must still have a cheap, reliable service with which to connect to the Internet.

But try getting online in many countries, and you condemn yourself to repeated attempts to connect, interminable waits for files to download, and frequent disconnections that force you to start all over again. The Internet may hold glittering promise for the future of scientific communications in developing countries... but we're not there yet.

Disks that capture a rainbow

But that doesn't mean that information and communication technologies should be written off. Two show particular promise: e-mail and CD-ROMs.

Unlike the World Wide Web, e-mail does not rely on high-quality, reliable connections. It can make do with more crackly phone lines and slower modems because far fewer data are transmitted than in the graphics-rich web. Surf the web, and you may easily be online for an hour or more. Download your e-mail, and you are probably connected for a couple of minutes at most.

CD-ROMs – those small, shiny disks that reflect a rainbow of colours – have a host of advantages when it comes to storing and transmitting information. One CD-ROM can hold thousands of pictures, or the text of hundreds of books. Unlike books, CD-ROMs are light, easy to transport, and virtually unbreakable. They contain far more information than a magnetic floppy disk, and they cannot be deleted accidentally.

The dust or fungus that makes floppies unreadable can easily be wiped off the plastic surface of a CD-ROM. The drives needed to read CD-ROMs are now standard equipment on computers, and the software needed to read the data can be included on the disk itself.

Perhaps most importantly, though, CD-ROMs are cheap to produce, and cheap to distribute. The biggest cost is not (as with books) in the printing and mailing, but in putting information in the right format to be saved onto the disk. Once this investment is made, hundreds or thousands of CD-ROMs can be reproduced very cheaply.

Answers for Eastern Africa

Taken together, e-mail and CD-ROMs make it possible for ARIS (Agricultural Research Information Service) at Uganda's National Agricultural Research Organization to provide question-and-answer services for users in Ethiopia, Kenya and Uganda.

A user e-mails a request to ARIS for information on, say, how to control cassava mealy bug. The ARIS librarian searches the library's collections, including the 130 journals on its TEEAL CD-ROMs (see Box 23), and e-mails back a list of possible articles or books to the user.

Often the question is too broad: the librarian must check back with the user in order to narrow it down to a more specific query. That would take ages by mail, and be prohibitively expensive by telephone. By e-mail, it is simple, quick and cheap.

Once the user is satisfied the information is available, he or she can pay a visit to the library in person, or ask the librarian to send off photocopies of the relevant articles in the mail. If the article is already in electronic form (for example, if it comes from a CD-ROM), it is easy to send it as an e-mail to the user.

Usage of this service is still limited: an average of 10 requests per week came in during the last five months of 1999. But the service is still new; once it is widely known, the ARIS information specialists are likely to be kept very busy answering queries.

BOX 23

Library in a box

Cornell University's Mann Library (one of the largest agricultural libraries in the world) and the Rockefeller Foundation have found one way around the copyright problem. Scientific publishers recognize that they do not sell many copies of their journals in developing countries. So when the Mann Library approached the publishers, they agreed that their journals could be included on CD-ROMs, providing they would not be available in the developed world.

The result is TEEAL – The Essential Electronic Agricultural Library. This is a set of 172 CD-ROMs, containing the full text of 130 journals since 1993: 730,000 pages in all. The price? \$10,000 (about €10,000). That seems a lot until you consider the cost of the printed versions: \$370,000 (€370,000).

For most aid donors, though, \$10,000 is small beer. Research institutions in developing countries can often find a donor to cover the cost of the disks, the computer equipment needed to use them, and the staff training required. Among donors willing to consider supporting the purchase of TEEAL are CTA (for sub-Saharan Africa, the Caribbean and the Pacific), Cornell University's International Institute for Food, Agriculture and Development, the Ford Foundation, SIDA, Unesco, USAID and the World Bank.

For more information, see www.teeal.cornell.edu

Information for the Pacific

Providing a service similar to Eastern Africa's ARIS in the Pacific islands is PIMRIS (Pacific Islands Marine Resources Information System). This is an information network that collects, stores, retrieves and disseminates information on fisheries and other living and non-living marine resources in the tropical Pacific.

The people of the Pacific don't see a distinction between land and water resources that others do, so that even though the Pacific is a vast ocean speckled with tiny islands, it is seen more as a huge, watery continent. Fish, shellfish and corals are vital to the livelihoods of the people who live here. So it is important to conserve these resources and use them wisely.

Based at the University of the South Pacific, the PIMRIS Coordination Unit has four other regional cooperating partners: the Forum Fisheries Agency, the Secretariat of the Pacific Community, the South Pacific Regional Environment Programme and the South Pacific Applied Geoscience Commission. Although each of the cooperating partners has its specific mandate and information resource base, PIMRIS is a formal network (guided by a steering committee) that facilitates the sharing and dissemination of information for the benefit of the Pacific island countries.

PIMRIS serves a wide range of users, from government officials and research institutes to students and fisherfolk. It can provide users with bibliographies, search for literature using computers, and keep researchers up to date through its current-awareness services. It also prepares packages of information on tropical marine subjects, and arranges inter-library loans.

In view of the lack of trained librarians in many Pacific countries, PIMRIS offers consultancies, technical assistance and training to the staff of marine and fisheries libraries in the Pacific islands.

BOX 24

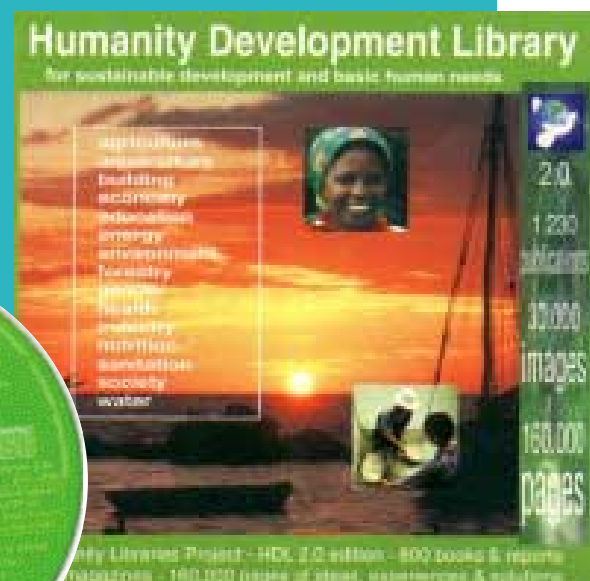
1230 books for just €6

The Humanity Libraries Project, a Belgium-based private organization, produces CD-ROMs that contain the full text of hundreds of books on development. The “Humanity Development Library” is a single disk containing 1230 publications, including 30,000 line drawings and 160,000 pages, all in a very easy-to-use format. The original publications would weigh 340 kg and cost \$20,000. The disk and its protective envelope weigh just 25 g. The cost? €6.

Other English-language disks in the series cover medicine and health, the environment, and food and nutrition. In French, there's the *Bibliothèque pour le développement durable et les besoins essentiels* (600 publications) and an anthology of development in the Sahel (*Sahel point doc*).

Most of the original publishers of the publications are NGOs, UN organizations or development agencies, who want to ensure the information they produce is spread widely, and who don't have to cover their costs like a commercial publisher would. Michel Loots, who runs the Humanity Libraries Project, asks them for permission to copy the materials. A computer-equipped centre in Romania (where costs are low) scans the text and pictures and indexes them. This enables the project to produce and sell disks at what seems a ridiculously low price.

For more information, see www.humanitycdrom.org



FOR MORE INFORMATION

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Food and Agriculture Organization of the United Nations (FAO), World Agricultural Information Centre website
www.fao.org/waicent/search/default.htm



“I want to know about fuel briquettes”

The walls of the small room are lined with shelves, groaning with books, papers and filing boxes, each one neatly catalogued. The few remaining square inches of wall space are taken up with bulletin boards, with brochures and posters pinned to them. Magazines and newspapers are scattered on the two tables in the centre of the room. Readers occupy three of the six chairs, and there is a constant stream of visitors coming through the door.

“Margaret, can you help this gentleman? He wants to know about fuel briquettes.”

“Hello, can you help me? I need some information on food processing.”

“Margaret, what do we have on bicycles?”

Margaret Kenyaggia, the librarian, takes it all in her stride. She quizzes each visitor. “Which organization are you from? What sort of food processing? What do you need the information for?” When she has a better idea of what the visitor wants, she pulls out a book from one of the shelves. Or she turns to her computer in the corner of the room, taps in a few keywords on the keyboard, locates the books in the catalogue, and pulls out the most useful ones for the visitor.

Nerve centre

Libraries in the developing world are all too often poorly run, under-used, dusty mausoleums for books. Not so ITDG’s Resource Centre in Nairobi. It is the nerve centre for this NGO, and is reputed to be among the best libraries in town.

ITDG, or “I.T.” as the Intermediate Technology Development Group is better known in Kenya, is one of many NGOs working to promote development and eliminate poverty in Eastern Africa. But it is one of the few that maintains a library of books and other materials on development. Begun in 1994, it now has about 3000 books and perhaps 2500 newsletters, journals and reports, all crammed into a room measuring no more than 4.5 m by 6 m.

The centre is also unusual in that it is open to the public. There is a small fee for users: someone who just wants to read in the library is charged 30 Kenyan shillings (about €0.45) a day. Or they can pay 500 shillings (a little more than €7) for a whole year, and can borrow



Margaret Kenyaggia (right) in the ITDG Resource Centre
(Photo: Paul Mundy)

two books at a time for up to two weeks. Margaret Kenyaggia also offers a corporate membership: 1500 shillings (about €22) for four staff members for a whole year.

“Before we started charging, people were flocking in here,” she explains. But the main reason to start charging was so that the library could lend books out. “If they didn’t have to pay, people wouldn’t look after the books,” she says. “Now we can be sure they will take care of them, and that they will bring them back.”

Keeping up to date

Margaret Kenyaggia works hard to keep the library collection up to date. She’s constantly on the lookout for new books: she finds them by browsing through publishers’ catalogues, reading book reviews in newsletters, and by attending book-launching ceremonies. Technical specialists on the ITDG staff identify books to buy. Margaret Kenyaggia’s own computer isn’t connected to the Internet yet, but she borrows someone else’s a couple of times a week so she can search for information. And she listens to her visitors’ needs. If people ask for a book she doesn’t yet have, she tries to find a copy.

“You’ll find things here that you won’t find in other libraries in Nairobi,” she says with a smile. The collection attracts over 2000 visitors a year, many who have heard of it by word-of-mouth. And that doesn’t include a constant stream of ITDG staff coming in search of information, or just to catch up on the day’s news in the newspapers lying on the table. Many of the visitors are students or researchers from local universities. “The university has its own library, of course,” says Margaret Kenyaggia, “but the students tell me that the books there are not up to date.”

Paying for the service

The fees that the library charges cover repairs, but are not enough to buy new books. So how can IT-Kenya afford to run a library, when so many other organizations are strapped for cash? ITDG runs a range of development projects, and the costs of buying books and running

the library is built into the budget of each project. Because ITDG's work covers a broad range of topics – energy, transport, building, farming and livestock – so does the library. That makes it even more attractive to visitors from outside.

The library gets a few free copies of books from IT-Kenya's parent organization in the UK. "They give us a free copy of some books, but if we want more than one, we have to pay, like anyone else," says Margaret Kenyaggia.

She does get some help running the library. Students studying librarianship at the local university are required to get practical experience as part of their diploma requirements. She puts them to work for three months. "It's a good way of training people," she says, "but the problem is, after three months, just when they are starting to be useful, they are gone, and then I have to start all over again, training someone else."

She is looking forward to a few months' time, when ITDG will move to larger offices. But meanwhile, she's run out of space. Stacked against the wall are some boxes full of books that she is going to throw out. "There's no room here to keep them," she says. "And why should we keep something that no one reads?"

FOR MORE INFORMATION

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FURTHER READING

There is a wide range of books on agricultural information and communication in developing countries, and in Africa, the Caribbean and Pacific in particular. Here is a list of some recent ones.

References and contacts for information on the individual organizations described in this book follow each chapter. They are not included here.

English

Agricultural Research and Extension Newsletter. Agricultural Administration Unit, ODI, London, UK.

Blackburn, D.J. (ed). 1994. *Extension Handbook: Processes and Practices*. Thompson Educational Publishing, Toronto, Canada.

Blum, A. 1996. *Teaching and Learning in Agriculture*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

Boeren, A. and Epskamp, K. (eds). 1992. *The Empowerment of Culture: Development Communication and Popular Media*. CESO Paperback 17. Centre for the Study of Education in Developing Countries (CESO), The Hague, The Netherlands.

Bolliger, E., Reinhard, P. and Zellweger, T. 1994. *Agricultural Extension: Guidelines for Extension Workers in Rural Areas*. Swiss Centre for Development Cooperation in Technology and Management (SKAT), St Gallen, Switzerland.

Burke, A. 1999. *Communications and Development: A Practical Guide*. Social Development Division, Department for International Development (DFID), London, UK.

Calvert, P. (ed). 1996. *The Communicator's Handbook: Tools, Techniques and Technology*. (3rd edn) Maupin House, Gainesville, Florida, USA.

Christoplos, I. and Nitsch, U. 1996. *Pluralism and the Extension Agent: Changing Concepts and Approaches in Rural Extension*. SIDA, Stockholm, Sweden.

CTA. 1995 and 1996. *Agricultural Extension in Africa*. (2 vols) Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

CTA. 1995. *Radio at the Service of the Rural World in ACP Countries*. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

Diagne, D. and Pesche, D. (eds). 1995. *Peasant and Rural Organizations, Forces for the Development of Sub-Saharan Africa*. Ministère français de la coopération, Paris, France.

Eponou, Th. 1993. *Partners in Agricultural Technology: Linking Research and Technology Transfer to Serve Farmers*. ISNAR, The Hague, The Netherlands.

FAO. 1994. *Participatory Rapid Appraisal of Farmers' Agricultural Knowledge and Communication Systems*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. *Communication for Development*. Case Studies. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

- Fraser, C. and Restrepo-Estrada, S. 1998. *Communicating for Development: Human Change and Survival*. IB Tauris, London, UK.
- Hope, A. and Timmel, S. 1984. *Training for Transformation: A Handbook for Community Workers*. Mambo Press, Harare, Zimbabwe.
- IIRR. 1996. *Recording and Using Indigenous Knowledge: A Manual*. International Institute of Rural Reconstruction (IIRR), Silang, Cavite, Philippines.
- Journal of Agricultural Education and Extension*. International Journal on Changes in Agricultural Knowledge and Action Systems, Wageningen, The Netherlands.
- Kaimowitz, D. (ed). 1990. *Making the Link: Agricultural Research and Technology Transfer in Developing Countries*. Westview, Boulder, Colorado, USA.
- Leonard, D.K. 1977. *Reaching the Peasant Farmer: Organization Theory and Practice in Kenya*. University of Chicago Press, USA.
- McKee, N. 1993. *Social Mobilization and Social Marketing in Developing Countries: Lessons for Communicators*. Southbound, Penang, Malaysia.
- Merrill-Sands, D. and Kaimowitz, D. 1990. *The Technology Triangle: Linking Farmers, Technology Transfer Agents and Agricultural Researchers*. ISNAR, The Hague, The Netherlands.
- Montagnes, I. 1998. *An Introduction to Publishing Management*. Working Group on Books and Learning Materials of the Association for the Development of Education in Africa, London, UK.
- Moris, J. 1991. *Extension Alternatives in Tropical Africa*. Occasional Paper 7. Agricultural Administration Unit, ODI, London, UK.
- Nelson, J. and Farrington, J. 1994. *Information Exchange Networking for Agricultural Development: A Review of Concepts and Practices*. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.
- Parada, C., with Garriott, G. and Green, J. 1997. *The Essential Internet: Basics for International NGOs*. InterAction, Washington, DC, USA.
- Powell, M. 1999. *Information Management for Development Organisations*. Oxfam, Oxford, UK.
- Pradervand, P. 1989. *Listening to Africa: Developing Africa from the Grassroots*. Praeger, New York, USA.
- Pretty, J.N., Gujit, I., Thompson, J. and Scoones, I. 1995. *Participatory Learning and Action: A Trainer's Guide*. IIED Participatory Methodology Series. International Institute for Environment and Development (IIED), London, UK.
- Richardson, D. and Paisley, L. (eds). 1998. *The First Mile of Connectivity: Advancing Telecommunications for Rural Development through a Participatory Communication Approach*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.
- Richardson, D. 1997. *The Internet and Rural and Agricultural Development: An Integrated Approach*. Communication for Development. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.
- Rivera, W.M. and Daniel, J.G. 1991. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change*. Elsevier, Amsterdam, The Netherlands.

Rural Extension Bulletin. University of Reading, Reading, UK.

Scarborough, V., Killough, S., Johnson, D.A. and Farrington, J. (eds). 1997. *Farmer-led Extension: Concepts and Practices*. Intermediate Technology Publications, London, UK.

Starkey, P. 1997. *Networking for Development*. International Forum for Rural Transport and Development, London, UK.

Umali, D.L. and Schwartz, L. 1994. *Public and Private Extension*. World Bank Discussion Paper 236. Washington, DC, USA.

Van den Ban, A.W. and Hawkins, H.S. 1996. *Agricultural Extension*. (2nd edn) Blackwell Science, Oxford, UK.

Van Veldhuizen, L., Waters-Bayer, A. and de Zeeuw, H. 1997. *Developing Technology with Farmers: A Trainer's Guide for Participatory Learning*. Zed Books, London, UK.

Venketasan, V. and Kampen, J. 1998. *Evolution of Agricultural Services in Sub-Saharan Africa: Trends and Prospects*. World Bank Discussion Paper 390. Washington, DC, USA.

French

Banque Mondiale. 1996. *Systèmes d'information sur l'environnement en Afrique sub sabarienne: investir dans le future*. Findings 24. Washington, DC, USA.

Beau, C. and Idoux, A.C. 1998. *Savoirs paysans et savoirs scientifiques*. Editions Charles Léopold Meyer, Paris, France.

Berqué, P., Foy, E. and Girard, B. 1995. *La passion radio*. Editions Syros, Paris, France.

Brosseau, J.M. and Soncin, J. 1999. *Créer, gérer et animer une radio*. Collection Guides Pratiques. Editions GRET, Paris, France.

CRDI. 1995. *La communication participative pour le développement: un agenda ouest-africain*. Editions CRDI (International Development Research Centre), Ottawa, Canada.

CTA. 1994. *Atelier sur les réseaux de documentation agricole en Afrique: rapport de synthèse*. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

CTA. 1995 and 1996. *La vulgarisation agricole en Afrique*. (2 vols) Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

CTA. 1995. *La radio au service du monde rural des pays ACP*. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

CTA. 1996. *Le rôle de l'information pour le développement rural des pays ACP: bilan et prospectives*. International seminar, Montpellier, June 1995. Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, The Netherlands.

FAO. 1991. *Les mille et un mondes: manuel de radio rurale*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1994. *La communication, pour un développement à dimension humaine*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1996. *Approche participative, communication et gestion des ressources forestières en Afrique sahéliennes*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1996. *Atelier international pour le développement de la radio rurale en Afrique*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1996. L'informatique et la foresterie. *Revue Unasylva* 189. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1998. *Comment concevoir et réaliser des supports de communication de proximité*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1998. *Internet et le développement agricole et rural: une approche intégrée*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1999. *La communication pour le développement: étude de cas N° 16: Centre de services de production audiovisuelle (CESPA) au Mali*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO. 1999. *La vidéo: manuel à l'usage des responsables de la communication, de l'animation, de la formation et de la vulgarisation*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO, CESPA and PNUD. 1999. *Manuel de communication pour le développement*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

Fra, D. and Gérer, E.N. 1999. *Créer et animer une publication*. Collection Guides Pratiques. Editions GRET, Paris, France.

INADES and Developing Countries Radio Network. 1998. *Repertoire des radios et revues rurales d'Afrique francophone*. INADES, Abidjan, Cote d'Ivoire.

Jogand, A. and Berqué, P. 1994. *L'audiocassette et ses usages: Un outil de communication au service du monde rural*. Collection Guides Pratiques. GRET, Paris, France.

Van den Ban, A.W., Hawkins, H.S., Brouwers, J.H.A.M. and Boon, C.A.M. 1994. *La vulgarisation rurale en Afrique*. Karthala/CTA, Paris, France.

ACRONYMS

ACCT	Agence de coopération culturelle et technique (France)
ADAP	Agricultural Development in the American Pacific
AEPJLN	Association des éditeurs et promoteurs des journaux et revues en langues nationales (Burkina Faso)
AIC	Agricultural Information Centre (Kenya)
ALIN	Arid Land Information Network
ALO	Agricultural Liaison Officer (Pacific)
AMAP	Agence malienne de presse et de publicité
ANOPACI	Association nationale des organisations professionnelles agricoles de Côte d'Ivoire
APACE	Appropriate Technology for Community and Environment (Australia)
APIC	Appui à l'instruction civique (Mali)
ARTO	Archivage de la tradition orale (Mali)
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AVRDC	Asian Vegetable Research and Development Center
BNDA	Banque nationale de développement agricole (Mali)
CARDI	Caribbean Agricultural Research and Development Institute
CARIS	Current Agricultural Research Information System (Caribbean)
CELTHO	Centre d'études linguistiques et historiques par tradition orale (Mali)
CESAO	Centre d'études économiques et sociales d'Afrique de l'Ouest (Burkina Faso)
CESO	Centre for the Study of Education in Developing Countries (Netherlands)
CESPA	Centre de services de production audiovisuelle (Mali)
CIAT	Centro Internacional de Agricultura Tropical
CIERRO	Centre interafricain d'études en radio rurale de Ouagadougou (Burkina Faso)
CMDT	Compagnie malienne de développement des textiles (Côte d'Ivoire)
CNCR	Conseil nationale de concertation et de coopération des ruraux (Senegal)
CORAF	Conference des responsables de recherche agronomique africains
CTA	Technical Centre for Agricultural and Rural Cooperation
DANIDA	Danish International Development Assistance
DDC	Direction du développement et de la coopération (Switzerland)
DFID	Department for International Development (UK)
DGIS	Directoraat-Generaal Internationale Samenwerking (Netherlands)
ENDA	Environment, Development and Action (Senegal)
EZE	Evangelische Zentralstelle für Entwicklungshilfe (Germany)
FAO	Food and Agriculture Organization of the United Nations
FENOP	Fédération nationale des organisations paysannes du Burkina
FONGS	Federation des organisations non gouvernementales du Sénégal
FRAO	Fondation rurale pour l'Afrique de l'Ouest
GhRRM	Ghana Rural Reconstruction Movement
GRAD	Groupe de réalisations audiovisuelles pour le développement
GRET	Groupe de recherche et d'échanges technologiques (France)
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)
ICIPE	International Centre for Insect Physiology and Ecology

ICRAF	International Centre for Research in Agroforestry
IDRC	International Development Research Centre (Canada)
IICA	Inter-American Institute for Cooperation on Agriculture
IIED	International Institute for Environment and Development
IIRR	International Institute of Rural Reconstruction
IITA	International Institute of Tropical Agriculture
IMF	International Monetary Fund
INADES	Institut africain pour le développement économique et social (Burkina Faso)
IRETA	Institute for Research, Extension and Training in Agriculture (Pacific)
ISNAR	International Service for National Agricultural Research
ISRA	Institut sénégalaise de recherches agricoles
ITDG	Intermediate Technology Development Group (UK)
JADE	Journalistes africains pour le développement (Burkina Faso)
KACE	Kenya Agricultural Commodity Exchange
LABE	Literacy and Adult Basic Education (Uganda)
MTEA	Multi-Purpose Training and Employment Association (Uganda)
MTN	Mobile Telephone Networks (Uganda)
NANEC	National Network of Cassava Workers (Uganda)
NARO	National Agricultural Research Organization (Uganda)
NGO	non-governmental organization
NRI	Natural Resources Institute (UK)
OAU	Organization of African Unity
PANA	Pan-African News Agency
PEFA	Programme d'échange de formation et d'appui (Senegal)
PELUM	Participatory Ecological Land-Use Management Association (Zimbabwe)
PIAJ	Pacific Index to Agricultural Journals
PIMRIS	Pacific Islands Marine Resources Information System
PRIMAC	Prix du marché du café et du cacao (Côte d'Ivoire)
PROCICARIBE	Agricultural Science and Technology System of the Caribbean
Residel	Réseau d'informations internet sur la décentralisation et le développement local (Senegal)
SACCAR	Southern African Centre for Cooperation in Agricultural and Natural Resources Research and Training
SAILD	Service d'appui aux initiatives locales de développement (Cameroon)
SCAINIP	Standing Committee on Agricultural Information Networking in the Pacific
SIDA	Swedish International Development Agency
SKAT	Swiss Centre for Development Cooperation in Technology and Management
SPC	Secretariat for the South Pacific
SYCOV	Syndicat des producteurs cotonniers et vivriers (Mali)
SYFIA	Système francophone d'information agricole
TEEAL	The Essential Electronic Agricultural Library
UNDP	United Nations Development Programme
Unesco	United Nations Educational, Scientific and Cultural Organization

UNFA	Uganda National Farmers' Association
USAID	United States Agency for International Development
VITA	Volunteers in Technical Assistance (USA)
WARDA	West Africa Rice Development Association
WWF	World Wide Fund for Nature
ZIMACE	Zimbabwe Agricultural Commodity Exchange