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CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION

Second Semi-annual Report
for the period March-August, 1989

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EXECUTIVE SUMMARY

This period has been one of consolidation and improved efficiency. In-house production systems of the Development Communication Report have become more routine, and we produced two issues during this six months (see attachments). The cataloguing of the library has proceeded smoothly, and we now have approximately 20% of the documents on the computer. Information search and retrieval systems in response to external requests have been made more efficient as we have perceived more clearly the pattern of requests. A computer system linked to the CDIE library has expanded our range of information and its speed of retrieval. Small efficiencies such as identifying remarkably lowcost providers of services to truck the printed Development Communication Reports from Pittsburgh and to sort and mail them overseas have had a cumulatively beneficial effect on morale as well as saving time and money.

In this period paid membership subscriptions quadrupled over the first six months, equalling new free membership requests.

The CDC staff have settled into their jobs and have become more productive in terms of both efficiency and creativity. They have largely found their own solutions to technical problems. They have aggressively searched for new sources of knowledge and opportunities to collaborate and serve.

The actual expenditures for the first year are 10% (or $30,000) within our projected costs, but the discrepancy can largely be accounted for by $20,000 that the fourth DCR and other deliverables will cost and that we owe AID.

Some problems persist and some new ones have surfaced.

The mailing list is very out-of-date, and the task of updating it is time-consuming. The Information Specialist is working on it.

After eighteen years, the CDC library remains largely inaccessible. The materials are extremely dated: only 4.2% of 1000 documents sampled from eight shelves were published within the last five years. One would expect a proportion closer to 30%.

Production of the Development Communication Report and other publications, and responding to individual requests for information, are important but do not in our opinion constitute real dissemination.

Organization and dissemination of the knowledge in the library will be handled together: cataloguing the contents is a first step and we have now catalogued 3000; putting the contents into a manageable, interactive form that can be shipped to users and researchers all over the world is our best chance of making the knowledge in the library more widely available. Consequently, we have embarked with the Communication Support Project on the task of assembling a Digest of what has worked in development communication similar to that designed by the Learning Technologies Project.

This report is structured according to the various functions of the Clearinghouse on Development Communication.

1. Information collection and organization
2. Information retrieval and dissemination
3. Relations with other projects and programs
4. Publications
5. Marketing of CDC services
6. Finances
7. Activities during the next six months

1. INFORMATION COLLECTION AND ORGANIZATION

Information collection and organization is managed mainly by Mr Stephen Mitchell, who is responsible for this section of the report.

Acquisitions

Acquisitions are used to build collections. Materials may be purchased directly with funds budgeted for this expense, they may be unsolicited donations to the library, or they may be solicited by the library staff as review copies or merely requested free of charge from authors and publishers. However, a collection development plan is needed to direct acquisitions. The plan should reflect the interests and needs of a library's patrons. The Clearinghouse can be considered a special library, with a single area of interest, that being development communication. In the past six months the Clearinghouse has acquired a total of 1,433 documents. Excluding new periodical subscriptions and exchanges and single issue acquisitions of various newsletters, we have added 1,390 new titles to the collection.

A collection development plan can also be used to help strengthen a portion of a collection that is not well represented or one in which a renewed or continuing interest demands greater coverage. While still covering the broad spectrum of development communication, a special emphasis was placed in this period on acquiring materials in the subject areas of the environment, substance abuse and distance education. In the area of the environment, we acquired 303 documents; in substance abuse, 590. The Clearinghouse already had a number of documents in distance education, to which 119 new titles were added.

While many acquisitions are routinely made through contacting authors and requesting copies of the desired documents, the Clearinghouse has also acquired numerous papers by less usual means. In one instance, a conference was attended by a staff member who returned with copies of every paper delivered at the conference on international development communication. Conference papers and journal articles generally present the latest findings in the various fields within development communication, and are an invaluable resource for our patrons. Many new acquisitions are journal articles. Clearinghouse staff regularly review all journals and newsletters received by the Clear-

inghouse. Pertinent articles are identified and forwarded to the librarian to be photocopied and added to the collection.

In addition to the usual print materials (books, reports, journal articles, research studies, etc.) the Clearinghouse also acquired 16 posters, 5 audiocassettes and 11 videocassettes. Foreign language materials also were acquired in Spanish, French, German, Portuguese, Italian, Korean, Japanese, Swedish and Finnish.

While we are able to meet many of the needs of our patrons without incurring much cost, there is a need to improve the ready reference section. Primarily, we need to acquire new and updated versions of many directories, especially those covering development resources in Europe, Africa and Latin America.

Cataloging

Cataloging is a technical services operation in which documents are identified by various access points to enhance their retrieval by patrons. Common access points include author, title, and subject keywords. The Clearinghouse is computerizing all catalog records, and now has 3,000 document records in the MicroDIS data base.

It is common practice, when converting to an online, automated library system, to catalog new acquisitions as they arrive. The retrospective conversion of older records is done as time permits. New acquisitions are cataloged as they arrive in order to make the most current information available. Subject areas for retrospective conversion are chosen by a perceived demand from patron requests for information. Approximately one third of the online records are new acquisitions. The remainder have been added from the subject areas of television and radio broadcasting, educational technology, distance education, adult education, family planning, health education and health communication.

In cataloging, each document must have a unique identifier which is its call number. The call number is used to identify each document in the catalog as well as to determine its placement on a shelf. Each document is also identified by bibliographic format, title, author, place of publication, publisher, date of publication and keywords.

There are two types of keywords, descriptors and identifiers. Descriptors are subject keywords, while identifiers are reserved for region and country names. Each document may have up to ten descriptors and ten identifiers assigned to it.

There are sixteen fields on the data entry sheets, and the time needed to catalog each document ranges from 3 - 7 minutes, depending upon the depth of cataloging required to adequately describe the subject content. Books and conference proceedings may take 10 - 15 minutes, or longer, as it is necessary to scan all introductions, forewords, tables of contents and chapter headings to determine complete subject content. Data entry itself takes 2 - 3 minutes per record, but the time that it takes for the system to incorporate each record increases with the number of document records added to the system.

The greater the detail of each catalog record, the better the chance that patrons will be able to retrieve more relevant materials. On the system we have adopted, it is now possible to search for documents by author, title, and keyword, and to limit a search to a specific bibliographic format and date. For example, if a patron requested that a search be performed for documents on consumer education in the Caribbean, but wanted only those documents that were audiocassettes produced after 1986, the system would yield one record. Searches can also be very broad, and a request for radio broadcasting documents would yield over 500 documents.

While the environment, substance abuse, and distance education were emphasized in acquisitions, no substance abuse documents have yet been cataloged. There are, however, 303 document records on the environment, and 476 on distance education.

A sampling of the bibliographic formats of the documents that have been cataloged is given below:

Bib Format and Number of Documents

Directory 33

Conference Proceeding 67

Bibliography 58

Progress Report 152

FinalReport 149

Monograph 699

ResearchReport 679

Journal Article 444

Audiocassette 53

Filmstrip 51

Poster 27

Videocassette 21

Of those documents in the database, approximately 30% are five years old or less. This is due to the practice of adding new acquisitions as they arrive: of the 3,000 documents in the system, some 1,000 are new acquisitions.

However, it is important to distinguish between the age of documents which have been catalogued, and the age of all the documents in the library. We conducted a random survey of 1000 documents drawn from eight shelves. The materials are extremely dated: only 4.2% of 1000 documents sampled from eight shelves were published within the last five years. One would expect a proportion closer to 30%.

Breakdown of collection in the database by five year periods

Years	# Docs	% Total
85-89	909	30.3
80-84	574	19.1
75-79	484	16.1
70-74	309	10.3

Recommendations

Cataloging is the most time consuming task, and it alone could be a full time job. The process could be enhanced with the addition of a library aide to be responsible for technical processing. This consists of data entry, filing data entry forms, typing up call number labels, and affixing call number labels to the cataloged documents. In this way it would be possible to process more documents, increasing the value of the Clearinghouse collection to its patrons. The time spent actually cataloging documents is equalled and often exceeded by the amount of time required by technical processing.

Another suggestion to make the cataloging of the collection more manageable is to weed the collection, discarding outdated items which take up valuable shelf space. Weeding the collection will ensure that only the most relevant documents remain in the collection and will reduce the number of records that need to be retrospectively converted to the online data base.

The age of the collection is of major concern. Effectively, the acquisition program during the 1980s slowed to a standstill compared with the previous decade. We face two options: first, to write off that period and concentrate on acquiring new publications; second, to design a program of retrospective acquisition to fill the gaps. Our recommendation would be for the latter, but this recommendation has budget implications since we did not expect to meet this problem when we developed the budget. We will look to the Office of Education for guidance in this matter.

2. INFORMATION RETRIEVAL AND DISSEMINATION

Information retrieval and dissemination is largely managed by Andre Roussel, who has compiled the major part of this section.

During the reporting period efforts have been made to streamline the Clearinghouse's information retrieval mechanisms to better serve the needs of users. To that end, we have put in operation an on-line access system to the AID/CDIE Library database, and 250 libraries on the Clearinghouse's mailing list have been requested to send their acquisition lists on a regular basis. A directory of resources and a catalog of books reviewed in the DCR are being maintained on computer for easy reference and retrieval. Finally, access to the

Clearinghouse's resources has improved with the use of the library's computerized catalog which now holds over 3,000 entries.

Information Systems

a) the resources directory

Most inquiries received at the Clearinghouse include a request for referrals to other sources of information within a specific field of expertise. For easy consultation purposes and to better serve the networking functions of the Clearinghouse, we are developing a directory of resources on computer. The information is compiled from the DCR, materials, journals and correspondence received at the Clearinghouse. The directory is divided into the same broad sectors as the library. Each entry typically mentions an address and person to contact, a description of activities and areas of expertise, the name of the major publications produced.

b) bibliographic references

Most inquiries received at the Clearinghouse involve bibliographic searches. To address those requests, we complement our use of resources available at the Clearinghouse with those available from the AID/CDIE Library, and other libraries from our network of DCR subscribers.

Over 3,000 bibliographic citations can now be retrieved from the Clearinghouse library computer under the following classifications: Broadcasting, Education, Health Communication, Family Planning, Environment, Communication Research, and Information Technologies.

To complement the information retrieved from our computer catalog, we are retroactively maintaining a compilation of books reviewed in the DCR which provide the reader with abstracts not available from the Clearinghouse's catalog citations. Also, since May, the Clearinghouse has been linked to the AID/CDIE library database and is able to retrieve information on-line from the AID documents collection, the AID projects information database, and from the non-AID publications database. This additional facility allows us to provide the Clearinghouse's users with a packet of bibliographic information, including ordering information, which they can use to identify and order the documents needed. Finally, in order to better track up-to-date information and meet the needs of the users of the Clearinghouse, we are actively requesting the lists of recent acquisitions from the network of about 250 libraries on our mailing list, including the International Telecommunications Union Library, the Johns Hop-

kins University Population Information Program, the International Institute of Rural Reconstruction Library, the UNICEF Regional Office for South Central Asia Documentation Unit. In addition, we have established personal contacts with institutions, such as the International Development Research Centre in Canada, Johns Hopkins University Population Information Program, which on an ad-hoc basis provide us with access to their databases and off-line query service.

The retrieval tools now being used by the Clearinghouse contribute to increasing the speed of access to information at hand, and providing the user with better selection criteria, as well as reducing the need for exhaustive and unnecessary reproduction of materials at the Clearinghouse.

Information Requests

For the reporting period a total of 83 requests for information were received at the Clearinghouse, which, divided by regions and by months give the following tables:

a) by regions:

- U.S.A/Canada 44
- South America/Caribbean 14
- Europe 7
- Africa 6
- Asia/Oceanic/Pacific 10
- Middle East 1

TOTAL 83

b) by months:

- March 11
- April 8
- May 16
- June 10
- July 18
- August 20

TOTAL83

Information searches

We distinguish between information requests, which are requests for booklets, reports and other sources of information where the titles are known and the task is merely one of compiling and mailing them, and information searches where the request is for "everything you have on a specific topic". Recent examples are requests from the Office of Education for information on direct broadcast TV using satellites and on the Japanese assistance programs to developing countries in broadcasting and education.

Direct Broadcasting Satellite TV

There were very few items in the data base on this subject, limited as it was to developing countries. The television broadcasting section, which had been cataloged, yielded a few pertinent documents, but the satellite technology section has yet to be cataloged.

Until such time as the entire collection is online, requests for information contained in the uncataloged sections will continue to require manual searches. In this case, four shelves of satellite technology documents were examined by hand to locate appropriate DBS materials. Additionally, back issues of several

journals were searched for relevant articles. In the end, the Clearinghouse was able to assemble a 141 page document, containing 42 current, relevant reprints with a complete bibliography appended. All of the documents were culled from Clearinghouse resources, and the completed search was forwarded to AID the next day.

Survey of Japanese assistance to broadcasting and education

An intern contacted the Japanese Embassy for information. Information contained in a series of reports was analysed to provide a concise synthesis by country, nature of the activity, and magnitude of funding for both education and broadcasting and presented to the Office of Education within two days.

3. RELATIONS WITH OTHER PROJECTS AND PROGRAMS

New Exchange Agreements

We have established new agreements to exchange publications with 26 institutions. Titles of the periodical received are:

Rural Development in Practice, Bexhill-on-Sea, England

Child-to-Child, Institute of Education, London, England

Children's Defense Fund Reports, Washington D.C.

The Savory Letter, Albuquerque N.M.

Rodale Institute publications, Emmaus PA.

Nexus, Atlantic Center for Environment, Ipswich MA.

Tropical Coastal Area management, Asean-US Coastal Resource, Manila, Philippines

Network News, FAO, Port-of-Spain, Trinidad & Tobago

International Marine Science Newsletter, Unesco, Paris

Reeflections, Great Barrier Reef Marine Park, Townsville, Queensland, Australia

RRA Notes, and the Gatekeepers (International Institute for Environment and Development), London, England

PRELUDE, Montreal, Canada and Bruxelles, Belgium

DESFIL, Washington, D.C.

Action Alert, and Bread, Bread for the World, Washington, D.C.

Briefing Papers, ODI London, England

Education For All

The Clearinghouse has been called upon to provide a small amount of logistical assistance to the World Conference on Education For All in Bangkok next year. We designed and printed letterhead, for example, and are researching and acquiring visual resources on girls' access to education for AID's round table on women in development. We have provided advice on the presentation of concepts and products.

Collaboration with AID Projects

During our first year, our approach to disseminating information on AID projects in the DCR has been low-key and with due regard for context. We have avoided "selling" them, and have included activities of other donors, grassroots organizations, governments and religious groups.

This policy of impartiality and inclusiveness has in fact lead to greater coverage of AID activities than before, especially of activities by Missions and other AID/Washington offices.

We have produced a supplement dedicated to interactive radio. We have provided accounts of the Natural Resources Management project activities in three countries. We reported on USAID/Liberia's radio project, USAID/Ecuador's Fundacion Natura, BRIDGES' distance education for teacher training, USAID/Nepal's work in literacy, S&T/Population's IMPACT project, and USAID/India's work on environmental education. The upcoming issue will contain reports on the S&T/Ed's CTTA project, and the Radio Learning Project's

work in Bolivia. Discussions have been held with IEES regarding collaboration on appropriate themes. As mentioned above, we are assisting the WID office.

AID's Training Division worked closely with the Clearinghouse on its recent workshop on sustainable development, and we included the report done by the CDC containing summaries of key sessions, the DCR on environmental communication and a letter from the Director of the Training Division in a special mailing to all Mission Directors.

S&T/Rural Development requested 25 copies of the last DCR (as did the World Resources Institute). USAID/Liberia expressed its appreciation of the DCR on local radio.

UN agencies

UNICEF has produced a series of technical health messages called Facts For Life which are intended to be generic messages for both health specialists and non-specialist communicators. We will be featuring them in the next DCR.

UNESCO has asked for our assistance in developing a series of training materials for development communicators.

FAO was appreciative of our job advertisement for a position that they wished to fill. They received an overwhelming response from DCR readers.

Training

The assistance to AID's Training Division was described above. Cornell University asked for a presentation to 20 foreign participants in a media planning course, and was well pleased with the three presentations made by the DCD and the LTP. The Voice Of America's training division regularly asks for CDC presentations for its overseas broadcasters and journalists in Washington for short training courses.

Visitors to the Clearinghouse

During the reporting period, a total of 70 visitors have come to the Clearinghouse:

Visitors by Country of Origin:

- Bangladesh 1
- Benin 2
- Bolivia 1
- Brazil 3
- El Salvador 1
- Indonesia 1
- Mauritius 1
- Morocco 1
- Mozambique 1
- Panama 1
- Philippines 2
- Peru 1
- Thailand 1
- U.S. 53

Among the visitors were:

17 international graduate students from Cornell University, Department of Communication, accompanied by Dr. Royal Colle,

Mr. Dulliparsed Suraj Bali, Director General of Mauritius Broadcasting Corporation,

Mr. Rudrayya B. Gaddigamath, Indian FAO Fellowship recipient,

Shannon Timmers, Director of International Program Development for the Council on Distance Education in Norway,

Ms. Marie Constance Egbo-Giele, Director of Radio, from Benin,

Julien Djosse, Director of the Biblioth/que Nationale of Benin,

Dr. Alexander Flor, Assistant Professor in Development Communication at the University of the Philippines,

Emilie Mead, Janice Blank, Christine Hangen of the World Wildlife Fund, Washington, D.C.,

Alan Poole, from the Instituto Electrotecnica e Energia of the University of Sao Paulo, Brazil,

Susan Leibtag and Hugh Rigby, Johns Hopkins University/Center for Communication Programs

Nora Quebral, AIDSCOM Project Director, University - Laguna, Philippines,

Clark Lewis, researcher at Cornell University,

Joseph Ripley, Assistant to the President, VITA,

Ali Asker Quoreshi, Executive Director of "Mukti" Drug addicts & Care Center, Dhaka Bangladesh,

Gina Machado, Margarida Machado, Funda'ao Roberto Mariso, Rio de Janeiro, Brazil.

4. PUBLICATIONS

The production of publications is managed by Desiree de Graeve, who largely drafted this section of the report.

Development Communication Report

The Clearinghouse has produced two Development Communication Reports in this period: Issue No. 64 (Community Radio); Issue No. 65 (Environmental Communication). We anticipate that by the publication of Issue no. 66, expected in late October 1989, the Development Communication Report will be "on schedule".

All the DCRs produced under the new contract have been produced using desk-top publishing as originally proposed--resulting in substantial savings of time and money to the contract. Quality and production coordination with the Walden Graphics and Duquesne University Press have improved with each issue. (Based in part because of the quality of the DCR, Walden Graphics has been approached to produce printed materials for another A.I.D. project, PRITECH.) Both vendors have been flexible, understanding and conscientious, helping to produce a better product. Duquesne, the printer, is concerned however, about the length of the Report. Issue No. 65 (Environmental Communication) was twenty pages long; Duquesne cautions that, with the present paper weight, going beyond 20 pages will become problematic and a newer, more light-weight paper will have to be used.

Since the Development Communication Report's production time has been shortened, more time is now spent on improving the content and ensuring that each edition presents a comprehensive and well-rounded sampling of the issues of the given theme. The Editor can also make major lay-out changes on short notice, adding, deleting or moving whole articles in one afternoon. The format of the DCR is essentially the same as under the previous contract. However, the quality and unity of the issues are superior since the Editor can see the lay-out and design as it develops, improving the visual quality of the issues. Some structural adjustments have also been made to bring greater continuity to the DCR. A Principles into Practice section has been added to stress applications of development communication in the field; A What's New, What's Coming section has been added for development communication and related announcements so that the newsletter is more "newsy"; a resource section has also been added that focuses on specialized resources related to the current DCR's theme to reinforce the Clearinghouse function of the DCR: to tell people where to go for additional information. An effort to include photos and graphics specific the DCR themes has been made to catch the readers attention and imagination. The Editor maintains a file of journals, newsletters and publications with other formats and styles that might be incorporated into the DCR to "update" and improve the newsletter's overall appearance.

Reprints of DCR articles include:

"Rethinking Development Support Communication" by Sylvia Balit (1988/3) in Outpost: Newsletter of Communication Ideas for Winrock International, March 1989.

"Power to the People: Not Just in Development Countries" by Dean Stephens (1989/1) in Vanguardia, July 1989.

"Local Radio in India" by Shri K. Anjaneyulu, (1989/1) in the National Federation of Community Broadcasters Newsletter July 1989.

"A design studio for an agricultural project" by Cliff Morris (1988/3) and "Conference Focuses on Agricultural Communication" by Gail McClure both in the UN Agricultural Information Development Bulletin, June 1989.

Information Technology Questionnaire

The 67th issue of the DCR will focus on the applications of information technology to development. To prepare for that issue, the Clearinghouse sent out an information technology questionnaire on the uses and applications of information technologies for development to DCR subscribers in developing countries. The CDC decided to poll DCR readers to assess the state-of-the-art among readers and involve readers more directly in DCR content. The questionnaire was produced in-house by the DCR editor with input and suggestions from Clearinghouse and IIR staff and was sent only to readers in developing countries. Approximately 3,500 were sent; 202 have been returned as of September 11, 1989 (Response rate of 5.8%). The results will be analyzed using SPSS statistical computer software to test the feasibility of the Clearinghouse undertaking more comprehensive survey and statistical research in the future. Summarized results will appear in DCR issue no. 67 (Information Technology). The DCR will also attempt to focus attention on the technologies readers are indicated they are most interested in. A detailed report of the findings will be prepared in-house and mailed to the respondents who requested a complete set of results. The CDC will make the report available for a slight fee to interested individuals and organizations. A copy of the questionnaire appears in the appendix.

Distance education bibliography

The bibliography on distance education, compiled by Andre Roussel and Desiree de Graeve, is in the final stages of editing and production.

Development broadcast management and marketing

The monograph on development broadcast management and marketing, being written by Michael Laflin, is in its first draft.

The Communication Digest

The Communication Digest, on which the Communication Support Project and the Clearinghouse are collaborating, is still in its early stages, although sections on nutrition communication and education and folk media are nearing completion.

Direct Broadcast Satellite Television

The document responding to the abovementioned information search is being edited into a compendium.

Directory of educational technology courses

Compiled by Dr Jenny Johnson for AECT, the Clearinghouse has agreed to purchase 100 copies at $10 each to make available to Clearinghouse members and AID Missions at cost.

The Liberian Rural Communication Network Kit

Produced in conjunction with the Communication Support Project, and packaged in an attractive presentation box, the LRCN Kit contains a videotape, audiocassette, project description, evaluation report and outlines of radio campaigns carried out by the Network. Kits will be sent to each Mission and AID/Washington offices, and selected international agencies.

5. MARKETING OF CDC SERVICES

Special promotions

We have mailed promotional copies of each DCR to specialised audiences who would be especially interested in that issue. We detail the results below.

Membership of the Clearinghouse on Development Communication

During the reporting period a total of 506 new membership subscriptions were registered, consisting of free and paid subscriptions is equal proportions.

There is a steady demand for membership from developing countries. However, during this period paying memberships have increased four-fold compared to the first six months.

New Paying Subscriptions: 113 (30 in the first semester)

Renewals: 132 (27 in the first semester)

Since subscribers receive a copy of the Development Communication Report along with a subscription form and a letter, it seems reasonable to assume that there is increased reader approval. The response over the longer term will provide better evidence.

New free subscriptions totalled 230, and new exchange agreements with publishers of other journals totalled 26, as compared with 11 during the first six months.

6. FINANCES

Projected expenditures during the first year were $286,416. Actual expenditures were $257,050. The discrepancy of $30,000 can be accounted for by two explanations:

1. We produced three, not four, DCRs during this period, and owe AID other deliverables. This was due to the need to focus on improving the efficiency of Clearinghouse operations and train a new team. The deliverables will be produced without difficulty, but their cost should be counted against the budget for the first year, and account for approximately $20,000 of the $30,000 discrepancy. The other $10,000 is comprised of small discrepancies in other line items.

2. We have been extremely careful to monitor our project budget.

The outcome is that we have delivered CDC services during the first year within at the costs projected in our proposal.

7. ACTIVITIES DURING THE NEXT SIX MONTHS

During the next six months the Clearinghouse will continue to solicit documents covering all aspects of development communication. New acquisitions will be cataloged and added to the data base to keep the most current information available to our patrons. The 590 substance abuse documents are slated for cataloging, and the retrospective conversion will focus initially on the satellite technology section.

There will be a DBS report written up by the staff. The journals and newsletters will be reorganized, while the staff continues to forward the most relevant articles to the librarian for cataloging.

Development Communication Reports will include issues on technology-based training (Issue No. 66) and planning has begun for Issues No.67 (Information Technology) and No. 68 (Literacy). The 68th issue will highlight A.I.D.'s work in

educational technology for basic education to coincide with the World Conference on Education for All (WCEFA) to be held in March in Thailand. This issue will be produced ahead of schedule so that it can be made available to participants at the conference.

Issues for fourth and fifth six-month periods are tentatively focusing on communicating preventative health messages that focus on human behavior and lifestyle rather than specific health problems (#69); formative research and evaluation (#70); and women in development communication (#71).

The major thrust in special publications will be directed towards the communication digest since we regard this as the potentially most useful tool that we can develop. Linked with the digest will be a manual on conducting a communication sector study, developed through participative experience with Clearinghouse members overseas.

CDC INFORMATION REQUESTS LOG
Second Semester
From March 1989 to August 31, 1989

LOG DATE & DCR ID #	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
030689-1	Francisco Fabres Communication Program, Santa Rosa No. 11610, Paradero 33, Santiago de Chile, Chile	La Platina Experimental Station	Incorporating Communication in the Context of Agricultural Development Programs, H. Ray, AED, PP in Ag.
030989-2	Nicole Matiation, 5975 Ch. Cote St. Antoine, App. 15, Montreal, Quebec H4A 1S6, Canada		Documentation on the use of computers in Health Distance Education & Services, invoice # 030989-16
030989-3	Duncan Shaw, 507 Morgan Creek Road, Chapel Hill, NC 27514		Doc. on Health Communication, invoice # 030989-15
031689-4	Julie Rea	A.I.D.	Book Network for Intl. Dev. & Educ. Guide to Networking
031689-5	Patricia Cervantes, Apdo. Postal 1193, San Pedro Sula, Honduras	FHIA	ref. to Sara Stuart, Martha Stuart Communications, Inc.
031789-6	Christine Matthews, 802 Rhode Island Ave., N.E. Washington DC 20018	Bread for the World, Institute on Hunger and Development	Publication Exchange Agreement
032089-7	Alvarado Caballero, Casilla de Correos 3147, Asuncion Paraguay	Comite Paraguay Kansas	Ref. on training for farmers in financial management (FAO doc., The NFE Exchange, Issue 19 - 1980
032189-8	George Fiuerberg, Book Sellers, Dekker van de Vejt Plein 1944, No 129, 6511 JG Nymegen, Holland		Ref. to AED Beyond the Flipchart
032189-9	Susan Williams, 416 Commonwealth Ave. apt. 303, Boston, MA 02215		Doc. on China's One Child Policy, Invoice 032189-20
032289-10	Pr. Milton Garcia Sosa, Casilla de Correos 33003, Las Piedras, Uruguay		Doc. on Health Communication, ref. to HEALTHCOM

032789-11	Mohammad A. Attiyat, Director of Educational Technology, Amman, Jordan	Min. of Education	Copy of 30 documents from the Educational Technology collection
041389-12	Dr. Royal Colle, Dept. of Communication, 307 Roberts Hall Ithaca, NY 14853-5901	Cornell University	Proj. Profiles
041489-13	Ms. Dorte Wollard, 44 Columbia Avenue, Athens, OH 45701		Reference on literacy in Nicaragua (title)
041889-14	Tom Dewey, P.O.B 4185, New York, NY 10163	Children of Alcoholics Fdn.	Catalog + CDC information
041889-15	Margarita Ramos & Gina Machado, Ave. Paulo Frontin 568 Rio de Janeiro, RJ 22471, Brazil	Fundaçao Roberto Marino	Reference on TV and Radio environment programs for children
042189-16	Alvin Hutchinson, 527 St. Paul Place, Baltimore MD 21202	Johns Hopkins, Center for Communication Programs	Catalog
042089-17	Michael Pejsach, 1501 Canal Street, New Orleans, LA 70112	Tulane University, School of Public Health	Video cassette: A New Voice in the Village
042189-18	Sarah Adkins	BLNCH/HEALTH-COM, AED	Bibliographic reference on Basic Village Education in Central America
042189-19	Billai Laba, 62 Bay State Road, Apt. 7 Boston, MA 02215		Catalog, CDC Information
050489-20	Joan Bennett, 718/622-9400		Statistical information on TV/VTR in Barbados
050589-21	Anita Hyams, 251 East 32nd street, #9D New York,NY 10016		Bibliographic Information on Video use in Developing Countries, DCR #53, 58,59,60,61,62
050989-22	Roberto Ronchi, La Paz 260, 3100 Parana, Entre Rios, Argentina	Asociacion Argentina de Educacion a Distancia	Proj. Profiles
050989-23	Claudia Guerra, casilla 167-11, Santiago, Chile	Educacion Popular en Salud	Project Profiles

050989-24	Dr. Thomas Cangan, Jaipur India	Indian Institute of Health Management Research	Video tapes: Marketing Ideas, Selling Nutrition, A Way to Bridge the Distance
050989-25	Dr. Susan Meritt, 1 Martine Avenue, White Plains, NY 10606	Pace University, School of CSIS	Catalog, Cover to Cover
050989-26	T.R. Bandre, 303 Vanjari Nagar, Nagpur 440 003, India		Bibliographic references on "Communications and Foreign Trade"
051689-27	Viola Morgan, 61-25 98th street #8E, Rego Park, Queens New York 11374		Bibliographic references on "Development Communication Support to Rural Women"
051689-28	Beth Beckner, 1629 K street NW Ste. 602, Washington, DC 20006	RONCO Corp.	36 copies of: Bulletins #7,6 CDC catalog, DCR #51 CDC Brochure
051689-29	Jacqueline Lederman, 18 rue de la Sablonnière 1000 Bruxelles, Belgium	COTA	Project Profiles: Agriculture, Education, Integrated Development
052289-30	Marie Riley, Burnaby British Columbia V5A 1S6, Canada	Simon Fraser University	Project Profiles
052389-31	Beverly Hinds, 9 Kitchener Street, Hoodbrook, Trinidad & Tobago		DCR back issues Bulletin #5 Project Profiles
052589-32	Alvaro Caballero, Asuncion, Paraguay	CompaÑero de las Americas, Comite Paraguay-Kansas	DCR #22
052589-33	Jim Harris, 512 B Chicopee street, Chicopee, MA 01013		Bulletin #4
053189-34	Eve Brigitte Bessier, 625 Adams street #3, Davis, CA 95616		Bulletins #4, 7
053189-35	Dolores Alvino, 55 Chapel Street, Newton, MA 02160	EDC	50 copies of DCR#63 Supplement
060189-36	Neelam Bhardwaj, Pantnagar 263145 India	G.B. Pant University	Project Profiles CDC Brochure
060189-37	A.I. Mohammad, Dept. of Masds Communication	Boston University	Project Profiles

060289-38	Frances Klippel, P.O.Box 141, E. Kingston, NH 03827		Bulletin #4
060689-39	Dale W. Kietzman, 1539 E. Howard Street, Pasadena, CA 91104	William Carey Int'l. University	50 DCR #63 Supplement
061289-40	William Procter, Arecibo, Puerto Rico, 00612	Amoz Gibson Training Center	Bulletin #4, 7 CDC catalog, brochure
061289-41	Arthur van den Elzen, Hintham 22a 5246 AG Rosmalen, The Netherlands		RADECO book
061689-42	Qaisar Abbas, 808c Eagle Heights, Madison, WI 53705		DCR back issues Cover to Cover Bulletin #4
061689-43	Asha Kambon, Port-of-Spain, Trinidad, W.I.	National AIDS Programme, Health Education Division	DCR back issues on health, Brochure
062689-44	Harold Fisher, 1624 Conneault Avenue, Bowling Green, OH 43402		Project Profiles on Radio LRCN evaluation
063089-45	Diarmuld McClean, 46 Sawkins Road, Rondebosch 7700, Cape Town, South Africa	Farm Health Project Children's Center	Bibliographic references on "Health materials suitable for the classroom and radio broadcast"
070689-46	Harold Fisher, 1624 Conneault Avenue, Bowling Green, OH 43402		Evaluation of Mahaweli Project
070689-47	Beverley Hinds, 9 Kitchener street, Hoodbrook, Trinidad		References to resources on "Drug Prevention and Rehabilitation National policies" and "National Population Policies".
071189-48	Luc M. Schouten, Plevierdonk 8, 5467 CT Veghel, The Netherlands		RADECO book
071389-49	Arjun Sen, 31 St Giles, Oxford, OX1 3LF, England, UK	PLUNKETT Fdn. for Co-Operative Studies	DCR backs, Bulletins #7,9,11,4 Cover to Cover

071389-50	Amelia Dozzi, 403 Sturwood Way, Lawrenceville, NJ 08646		References of contacts in Primary and Health Education, list of journals, catalogs of health education materials and training institutions
071489-51	Paula Pierce, 102 Daisey Lane, Malvern, PA 19355		Bibliographic reference for Andreas Fugelsang
071489-52	André Potworowski, Ottawa, Canada	IDRC, Division des Communications	Bibliographic citation from AID/CDIE database on "Research Utilization in Development"
071889-53	Ruth Epstein, Instructional Designer, Saskatoon, Saskatchewan, Canada	University of Saskatchewan, Extension Division	DCR #63
072089-54	Jorge Remy Padilla, Avenida Salavery 560, Apt. 457, Chiclayo, Peru		Spanish bibliographic references on development communication, Project Profiles
072089-55	Ronald Ayers, P.O.Box 383, Rochester, IL 62563	Christian Education Fdn. of Liberia	References for "Communication and Human Needs In Africa", LRCN evaluation references to resources on "Local Radio Management"
072489-56	Kathy Dusenbury, 1, Eliot street, Cambridge, MA 02138	Harvard Institute for International Developemnt, ADDR	Bibliographic Citation form CDC database on "Interventions for the Prevention and Control of Diarroeal Diseases"
072489-57	Bell Mohammad Bello, Project Director, P.O.Box 6311, JOS. Plateau State, Nigeria	Boy Scouts of Nigeria	Resources on Health education, copy of "Radio in Continuing Education of Primary Health Care Workers", by the University of West Indies, Medical Learning Resources Unit

072489-58	Martha Diase, 320 East 42nd street, New York, NY 10017	Ford Fdn., Developing Countries Program	Copies of resources on "Soap Opera for Development": Telenovelas: a Latin American Success Story, Radio Drama As A Learning Tool, Towards the Social Use of Soap Operas, The Use of Radio in Family Planning.
072689-59	Janet Perkins, 525 23rd street, NW Washington DC 20037	PAHO	Bibliographic citations from CDC database on "Women Health and Information Networking and Information Systems"
071489-60	Emmanuel Ayee, Potshefstrom 2520, South Africa	Institute for Reformational Studies, Potshefstrom University	44 DCR back issues
073189-61	Mizanur Rahman, Consultant 15/4 Central road, Dhanmondi R/A, Dhaka - 1205 Bangladesh	Training Materials Production	LRCN Evaluation
072889-62	John Harris	Johns hopkins University	Reference to World TV & Radio Handbook, Unicef State of the World's Children
073189-63	Sanjay Kalra 652/1 Vishwamitra street, Civil Lines Ludhiana - 141001, punjab India		Cover to Cover, DCR #51, DCR 1988 back issues, Reference to Health & Health Education resources
080289-64	La Rue K. Seims	USAID/La Paz	Books: RADECO, Teaching English by Radio in Kenya, Radio Mathematics project in Nicaragua (2 Vol.), Bulletin #4:Radio: Five Strategies for Use
080389-65	Ray Van Zaag, Box 407103 Ft. Lauderdale, FL 33340-7103	Christian Reformed World Relief Committee	Referral to Francophone Distance Learning Institutions

080289-66	Benit Camacho-Dungca, Coordinator, Telecommunication & Distance Education, University of Guam, Mangilao, Guam 96913	University of Guam	Interactive Radio Instruction demonstration packet
080289-67	N. Bergau P.O. Box 135 Denpasar Bali 80001 Indonesia		Referral to VITA
080389-68	Katherine Dusenbury	Harvard Institute for International Development (ADDR)	Documentation on the use of soap operas in health education
080289-69	Dr. Chombo P.O.Box MP 167 Mount Pleasant Harare Zimbabwe	Department of Adult Education	DCR Back issues
080289-70	Yassin bin Suleiman, Jalan Dato Hamza 70604 Seremban, Malaysia	Education Department Negeri Sembilan	Books: RADECO, Teaching English by Radio
080289-71	Ginny Ubels, B.P. 1299 Yaounde, Cameroun	Societe Internationale de Linguistique	Project Profiles
080289-72	Lindsey Reber	Ohio University Library	Media Use Survey in Malaysia, from DCR #54
080289-73	Jon Erlendsson P.O.Box 7066 127 Reykajvik, Iceland	University of Iceland	CDC Information package
080289-74	Asim Ali, g-41 Ranoji Rao Rd. basavangudi, Bangalore - 560 004, Karnataka, India	"ALL WELL"	DCR back issues, Bulletins #4, 6
080489-75	Robert Postlewaite, 6 Ash street #317, Cambridge 02138	Harvard University	Video tapes on Interactive Radio Instruction
080989-76	Johns Hopkins Program for International Education in Gynecology and Obstetrics	JHPIEGO	DCR back issues
082489-77	Lilia Judith Perez Chavolla Ambato 893 Colonia Linda Vista, Mexico D.F. C.P. 07300 Mexico		Referral to the Brazilian Space Agency (INPE)

082489-78	Lic. Jose Luis Aguirre Alvis 250 North Hyland Apt.2, Ames Iowa 50010		References on Radio and Education: Source Book on Radio in Development, Abstracts form AID/CDIE library collection, Interactive Radio Instruction
082489-79	Arthur Comrie, 3 Windsor Heights, Santa Cruz P.O. St.Elizabeth, Jamaica		References on "Africa and its Education Systems": extracts from IEES sectoral assessment reports, articles from Unesco's Prospects in education, DCR #63
082289-80	Marc Mahoney, 1547 Coombs Dr. Apt 2, Tallahasse3, FL 32308	Project Orbis	LRCN evaluation report
082589-81	Barbara Duncan, Editor 25 E 21st street, New York, NY 10010	International Rehabilitation Review	Referral to Communications and Human Needs in Africa's U.S. distributor
082589-82	Diane Le Griffon, P.O.Box 399C Melbourne, VIC. 3001, Australia	World Vision of Australia	-id.-
082289-83	M.C. Sturrock	University of Reading, Dept. of Agricultural Extension and Rural Development	LRCN evaluation report

Technology and Development

Making a Difference in Development

Questionnaire

In late 1989, *Development Communication Report* will focus on information technologies that are making a difference to the business of development. For this purpose, we define information technology as methods to assist in the collection, exchange, management and dissemination of information needed to administer development activities. In preparation, we ask our readers to complete the following questionnaire and return it to us by August 31, 1989. The Clearinghouse also welcomes responses from non-subscribers, provided they work in a development related field and return their answers on a copy of the questionnaire.

Information Technology and You

1. Which of these information technologies do you use? (Circle No or Yes.) For those you do use, indicate how often (on the average) you use each one in one week.

Telephone:	No	Yes	____	Single-User Computer:	No	Yes	____	Audiotape:	No	Yes	____
Fax:	No	Yes	____	Computer Network:	No	Yes	____	Videotape:	No	Yes	____
Telex:	No	Yes	____	Electronic Mail:	No	Yes	____	Videodisc:	No	Yes	____
Cable:	No	Yes	____	CD-Rom:	No	Yes	____	Microfiche:	No	Yes	____
Regular Mail:	No	Yes	____	Local Messenger:	No	Yes	____	2–Way Radio:	No	Yes	____
Photocopier:	No	Yes	____	Int'l Delivery Service:	No	Yes	____	Packet Radio:	No	Yes	____

2. What information technology(ies) is most important to your work?_____

3. How important are the *benefits* of information technology to your work? Please rate the importance of each benefit to you.

Benefits:	Most Important	Very Important	Important	Less Important	Least Important
Exchanges information quickly	☐	☐	☐	☐	☐
Exchanges information frequently	☐	☐	☐	☐	☐
Exchanges information over great distances	☐	☐	☐	☐	☐
Organizes information efficiently	☐	☐	☐	☐	☐
Stores information efficiently	☐	☐	☐	☐	☐
Reaches many people	☐	☐	☐	☐	☐
Reaches people effectively	☐	☐	☐	☐	☐
Reduces costs	☐	☐	☐	☐	☐
Allows access to sources of information	☐	☐	☐	☐	☐
Allows access to current and accurate information	☐	☐	☐	☐	☐
Allows office work to be completed quickly	☐	☐	☐	☐	☐
Other:_____	☐	☐	☐	☐	☐

4. What *barriers* prevent you from using information technology? Please rate the importance of each barrier to you.

Barriers:	Most Important	Very Important	Important	Less Important	Least Important
Insufficient power	☐	☐	☐	☐	☐
Interruption of power	☐	☐	☐	☐	☐
Inadequate communications infrastructure (i.e. phone lines, etc.)	☐	☐	☐	☐	☐
Initial purchase cost too expensive	☐	☐	☐	☐	☐
Purchase of supplies too expensive (i.e. paper, etc.)	☐	☐	☐	☐	☐
Repair services too expensive	☐	☐	☐	☐	☐
Repair services unavailable	☐	☐	☐	☐	☐
Delays for repairs too long	☐	☐	☐	☐	☐
Technology too complicated	☐	☐	☐	☐	☐
Information too sensitive	☐	☐	☐	☐	☐
Inadequate or unsecured housing for equipment	☐	☐	☐	☐	☐
Equipment being used by someone else	☐	☐	☐	☐	☐
Other:_____	☐	☐	☐	☐	☐

5. If you use a computer, which of the following program applications do you use?

Wordprocessing Programs _____ Desk-top Publishing _____ Database Programs _____ Spreadsheet Programs _____
Project Management Programs _____ Graphics Programs _____ Statistical Programs _____ Accounting Programs _____
Other:_____

Technology and Your Organization

6. How does your organization use information technologies? Circle N/A if your organization does not use this technology. Circle the letter "C" if your organization uses this technology for *collecting* information; the letter "E" for *exchanging or sharing* information; the letter "O" for *organizing* information; and the letter "A" for *analyzing* information. You may indicate more than one use for any technology.

Telephone:	N/A	C	E	O	A	Single-User Computer:	N/A	C	E	O	A	Audiotape:	N/A	C	E	O	A
Fax:	N/A	C	E	O	A	Computer Network:	N/A	C	E	O	A	Videotape:	N/A	C	E	O	A
Telex:	N/A	C	E	O	A	Electronic Mail:	N/A	C	E	O	A	Videodisc:	N/A	C	E	O	A
Cable:	N/A	C	E	O	A	CD-Rom:	N/A	C	E	O	A	Microfiche:	N/A	C	E	O	A
Regular Mail:	N/A	C	E	O	A	Local Messenger:	N/A	C	E	O	A	2-Way Radio:	N/A	C	E	O	A
Photocopier:	N/A	C	E	O	A	Int'l Delivery Serivce:	N/A	C	E	O	A	Packet Radio:	N/A	C	E	O	A

Technology and Your Country

7. In the last three months, how many international telephone calls have you made? _____

8. Is it possible to make telephone calls to all the urban centers in your country that have a population of more than 2,500? _____

9. When you telephone remote towns in your country, how long does it take to get through (on the average)? _____

10. You urgently want to get information from a friend who lives 200 miles away in a remote area of the country. How do you do it?

_____

_____

_____

11. You want to call one hundred professional colleagues to a conference in three weeks time. How would you contact them?

_____

_____

_____

12. You want to send a 500-word message to 20 people who live in 12 different countries. The message needs no reply, but it must be delivered in 3 days. How would you send it? What factors influence your choice(s)? _____

_____

_____

_____

_____

13. You have an unexpected but important visitor. Two colleagues work down the street, 400 yards away, and you want them to join you. You dare not leave your visitor. How would you summon your colleagues quickly? _____

_____

14. What technology do you already have that you would like to use more often? What prevents you from doing so?

_____

_____

15. What information technology do you *not* have now, but would like to have? _____

_____

About You

16. I work for:
- ☐ a government agency
- ☐ a private business
- ☐ an educational institution
- ☐ a nongovernmental agency
- ☐ Other: _____

17. I work in:
- ☐ the capital city
- ☐ a large urban center
- ☐ a small town
- ☐ Other: _____

18. I work mostly with:
- ☐ students
- ☐ other development professionals
- ☐ local communities
- ☐ Other: _____

19. In what discipline/field do you do most of your work?

_____

20. A major part of my work:
- ☐ is concerned with information exchange
- ☐ is not concerned with information exchange

21. I live in (country): _____

22. What is your position or occupation? _____

Highlights of the survey will appear in the Winter 1989 issue of the *Development Communication Report*. If you wish to receive a complete set of the results, please check the box below. (PLEASE CHECK AND GIVE NAME AND ADDRESS ONLY IF YOU WISH TO RECEIVE THE RESULTS.)

☐ Yes, I wish to receive a complete set of the results. My name and address are:

Name: _____ Title: _____

Organization: _____ Address: _____

City: _____ State/Region: _____

Country: _____ Postal Code: _____

Return to: Development Communication Report, Clearinghouse on Development Communication, 1815 North Fort Myer Drive, Suite 600, Arlington, Virginia 22209 USA. Telephone: 703-527-5546. Fax: 703-527-4661.

Development Communication Report

1989/1
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Scaling Down: Local Radio in India

India is a vast country. All India Radio (AIR) is one of the biggest national radio networks in the world. India's regional stations themselves are huge--often retaining two full-time orchestras on staff, for example. It was India that mounted the SITE project, providing educational television via satellite to rural communities. Now, in a remarkable turnaround, India is planning to establish up to 70 local radio stations. Why?

In our first article, Shri K. Anjanyulu describes the establishment of India's first local station at Nagercoil in the southern Indian state of Tamilnadu. Other articles in this issue look at local radio's benefits and limitations as a development communication strategy. However, local radio's greatest asset as a development tool and the characteristic that sets it apart from other communication strategies may be that it is created, sustained, controlled and managed by the people it serves.

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Local Radio: Hard Questions 16

by Shri K. Anjaneyulu

Five years ago, for the first time in its history, All India Radio (AIR) ventured into a new phase of broadcasting, experimenting with the concept of local radio stations. AIR's first local station was established at Nagercoil in the Kanyakumari District in Tamilnadu in October, 1984. The challenge facing the new staff was to adapt expertise gained in national broadcasting to the needs of local radio. This is the story of how we met that challenge.

The area served by the local station at Nagercoil-Kanyakumari District is in the extreme south of Tamilnadu. The area is essentially agricultural and rural, although the population has some urban influences. The District has a population of 17 lakhs--one lakh equals 50,000--and its 65% literacy rate stands second only to the city of Madras. The area's contribution to the enrichment of Tamil literature and culture--ancient, medieval or modern--is significant and substantial. The region's customs and habits, rituals and worships, festivals and ceremonies, legends and myths, songs, stories, and folk arts are those of a distinctive, tradition-bearing culture.

The Official View of Local Radio

Official guidelines on local radio state that since a local station serves a small area, its aim should be "to reach right into the heart of the community of people" it is expected to serve. A local radio station must be "flexible and spontaneous to enable itself to function as the mouthpiece of the local community." It should endeavor to use its microphone to reflect and enrich the life of the society. Its programs should satisfy the local aspirations of the people whom the station serves. In short, local radio should identify itself so completely with the interests of its local population that the heart of the people beats in every pulse of the programs it broadcasts.

Local Radio in Practice

Our broadcasting experiences gained at regional stations had to be supplemented by new procedures and, in some respects, new skills in programming and production techniques for local radio. Many local radio programs are field-based. Besides extra resources such as transportation, extensive field work requires program producers to have physical endurance and the intellectual qualities and attitudes necessary to establish rapport with listeners. Producers need to know how to conduct field work and need to be able to play the role of participant-observer to study the attitudes and culture of local groups.

Though small in number, the Nagercoil Local Radio producers geared up to face the challenges posed by the first ever local radio station in a very short period of time. Staff were allowed to waive the audition rules, to deviate from the Fixed Point Chart--a set of regulations and operating procedures--and to engage part-time comperes and free-lancers for outside broadcasts, reporting, editing and presentation. Nagercoil Radio's success was possible in part because of the latitudes of freedom allowed the station.

Talking to the People

We produced access programs, service programs, specific programs on family welfare, national integration, communal harmony, and other programs with similar themes of specific and immediate relevance to the people of the area. We talked to a wandering mendicant, a laborer on a tea estate, a worker in a cashew-nut factory, a hand-cart puller, a domestic maid, an employee in a remote health service center, a milk vendor, a cobbler, a

(Continued on page 2)

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(ANJANEYULU *from page 1)*

hair dresser, a tailor and a bus conductor. We covered a myth surrounding a local temple, the histories of a church and a mosque, the stories of a poet and a scholar and a sculptor, and details of a controversy between two rival groups of fishermen. All of the programs had a direct bearing on the people's sense of belonging to their community.

Community Service Broadcasts

Community service broadcasts provided opportunities to all development agencies to broadcast matters of importance to the local people. Information on topics such as the distribution of loans under various schemes, the supply of commodities for daily needs, and various development activities was conveyed to the people through these broadcasts. Extension agencies--such as the Social Welfare Department, the Education Department, the Health and Family Welfare, and Fisheries Departments--banks, and cooperatives became actively involved in the station's services. The following examples show how service agencies and the people were linked for the first time through a channel of two-way communication.

- When there was a public grievance about a drainage facility, it was presented on the air along with the reply from the concerned Municipal Commissioner.
- When the public faced problems in obtaining essential commodities from Fair Price shops, their concerns were conveyed to the Civil Supplies Officer. His reply, together with the information on the remedial steps taken, was presented to the listeners.
- When farmers faced problems posed by prolonged drought, the local station aired information from the Farm and Home Unit on forage crops in drought conditions, water management for paddy crops, how to save coconut trees in drought-affected areas and plant protection for vegetables.

Mediating Between Local Factions

Our success did not depend on merely winning the hearts of our listeners. It went much farther than that. The local station's role in resolving a feud between two rival fishing groups reveals the confidence that people began to place on the local radio station at Nagercoil.

In spite of the various loans granted them at two important fishing coasts, a group of fishermen wanted to abandon their surroundings and move to the Mutton Coast to fish. The scramble for fish and market facilities for the catches brought them into direct conflict with other local fishermen who had enjoyed fishing rights in that location for generations. The problem was brought to the notice of the Government, but the solutions suggested were not acceptable to either group. Nagercoil Local Radio interviewed the fishermen on both sides and conveyed their viewpoints to the local Fisheries Department. A meeting was arranged between the rival groups, the government authorities and representatives from AIR-Nagercoil. During the meeting, the misgivings of both groups of fishermen were removed and a happy settlement reached. The entire story of the feud and its resolution, *A Meeting at the Sea Coast*, was then put on the air.

Access Programs

Access programs have attracted broad participation from within the listening community. The relaxation of strict audition formalities has gone a long way to bring promising artists, performers, talkers and troupes to the station. There they exhibit their talent without fear or inhibition, even though for most of them this is their first attempt at broadcasting. More than 50 clubs or associations of children, youth and women have participated in plays, short stories, songs, folk art forms, discussions, dialogues, mimicry, choral music, percussion, instrumental, classical and light music.

The first local radio station at Nagercoil has come to stay. Its vitality and vigor have opened up a new future for broadcasting throughout India. The freedom that it offers to express the sentiments, emotions, ideas and views of its listening clientele have the potential to ultimately transform every local station into a People's Radio Station. ■

Shri K. Anjaneyulu is Assistant Station Director at All India Radio, Nagercoil in Tamilnadu.

Local Radio for Development: Haba Na Haba

There is a Kiswahili proverb that says "Haba na haba hujaba kibaba" or "Little by little we fill the pot." This could be the motto of community radio: tiny, daily increments of development rather than national surges of activity. Local radio stations dedicated to community development have unobtrusively served their audiences for many years: Radio San Gabriel--the voice of the Aymara--in Bolivia and Mahweli Community Radio in Sri Lanka are just two examples. Now, All India Radio plans to open 70 local stations. Is there any hard evidence about local radio's effectiveness to support this trend? We think so.

This article highlights findings from a recent impact evaluation of the Liberian Rural Communication Network. In January 1989, Dr. Dennis Foote and others of Applied Communication Technology, Inc. completed an independent impact evaluation of the Liberian Rural Communication Network (LRCN). DCR has carried articles about LRCN in previous issues, but a short description of the network will serve to refresh readers' memories.

LRCN is a network of three local radio stations--ELRG, ELRZ, and ELRV--located in the Bong, Voinjama, and Grand Gedeh counties of rural Liberia. Total population for the region is estimated to be over 400,000. Each station broadcasts approximately 50 miles in up to six local languages. Development of LRCN was funded by USAID and the Government of Liberia.

Since 1986, the stations have broadcast development information and education about health, nutrition, population, agriculture, and community development. They also carry news, entertainment, outside broadcasts of sports and local events, personal and official messages, music requests, and sponsored campaigns. Many development agencies--local, national, and international--buy airtime and production services. Indeed, one station has already sold all of its available airtime for development programming. A summary of Dr. Foote's evaluation methodology and findings is presented here.

by Dennis Foote

LRCN listenership is large. Fifty-five percent of those questioned by the independent evaluation team listen daily, and at least 80 percent listen several times a week. LRCN's popularity lies in three aspects of its localness: first, the perspectives of the producers--as expressed in program content and the use of local languages--is close to that of the listeners; second, LRCN's signal is stronger than its competitors so that programs sound better; third, the stations' location up-country among listeners invokes a sense of mutuality that brings identification, credibility and affection between listeners and broadcasters.

The research confirmed that there was a high degree of access to radio among the population. Overall, more than half the households had radios, with the level rising to over three quarters among urban households. People were in the habit of listening regularly.

LRCN stations quickly became the most listened-to stations in all three counties. Listenership continued to increase during the 1986-1987 year of broadcasting until, by the end of the year, 87 percent of those who listened to the radio at all reported listening at least part of the time to LRCN stations.

Evaluation Design

The LRCN evaluation's basic design measured changes in the knowledge and behaviors of the rural population. Equivalent groups were sampled from each station's coverage area and measured before and after the first year of broadcasting. No separate control groups were used; the outcomes were compared within groups to see change over time and between groups to see the effect of the different program mixes used by the stations.

The target audience for most LRCN broadcasts was male and/or female adults within the station's broadcast radius. For both the baseline and the post-test, individual samples of approximately 200 households were selected from each of the three stations' broadcast areas. Respondents were selected from men between 20 and 50 and women 15 to 50 years old. Data collection produced a pool of approximately 640 respondents in the baseline and 680 in the follow-up survey, equally divided between men and women.

Measurement of the outcomes was done by trained Liberian interviewers in local languages. The questionnaire consisted primarily of coded self-report items assessing knowledge, information sources, attitudes, and behaviors. Questions for the follow-up study were kept virtually identical to pretest questions in order to maintain strict comparability. Thus, evaluation content was determined at the time of the "before" measures. Choices about the content were based on stations' broadcast plans and included topics in agriculture, health and child survival issues, family planning, and village organizations.

A street in Gbarnga. Children are playing traditional dancing and clapping games. They are singing *Population Growth is Everybody's Problem*, an LRCN jingle.

It is Christmas morning. The local power company in Gbarnga has not turned on the power. With constant technical and fuel supply problems, this is not unusual. Operating on its own generator, ELRG states on the air that, at least on Christmas Day, people should have power. The power is switched on.

Health Programming

Health and child survival issues constituted a major focus of LRCN broadcasting. The evaluation chose a range of health topics from the broadcast plans, including breastfeeding, immunization, oral rehydration therapy, and prenatal care. Some of the health programs were produced by the central production unit, others were local productions. Emphasis on a given topic varied from station to station.

Breastfeeding. Within this topic area, the evaluation looked at the prevalence and duration of breastfeeding, giving of colostrum (the antibody-rich first milk),

(Continued on page 4)

(**FOOTE** *from page 3)*

and general knowledge. Breastfeeding was virtually universal, with only one or two percent of children not being breastfed. The average reported age of weaning of the youngest child increased by more than two months. This is a very large change, particularly since it seemed to have happened within one year; the best interpretation of the change may be that women have learned they should breastfeed longer, rather than that women have changed their behavior suddenly. About four out of five mothers give the colostrum; this did not change over time.

Immunizations. The questions about immunizations were intended to measure knowledge about the reasons for immunizing and the necessity for multiple visits and for bringing the vaccination cards to the clinics.

Knowledge about immunizations showed statistically significant improvement. The number of respondents correctly reporting that immunizations are for the prevention of disease rose from 72 to 84 percent. Correct responses on the necessity for multiple visits increased even more, from 17 to 43 percent. The awareness of the need to bring the "Road to Health" vaccination card when taking children in for immunizations climbed from 34 to 69 percent. These improvements can almost certainly be attributed to radio. When asked where they got their information about vaccinations, the number responding "clinic" actually went down--from 58 to 52 percent--while those responding "radio" went up from five to 28 percent.

Oral Rehydration Therapy. In order to assess changes related to oral rehydration therapy (ORT), the questionnaire asked whether people had heard of ORT, where they learned of it, and the type of treatment they gave for the most recent episode of diarrhea among their children.

Awareness that a home-mixed ORT existed rose from 30 to 50 percent during the year. Respondents who were aware of ORT were asked what their source of knowledge was; radio rose from 21 to 40 percent of the sample. The largest single response category was still health workers, but this fell from 57 to 46 percent as the radio responses rose. Detailed knowledge about the solution was less well learned. The proportion of people able to name any of the ingredients rose only from 63 to 69 percent. Most of that improvement seems to have been among people who had graduated from knowing no ingredients to knowing one. When it came to naming the quantity of each ingredient needed, the situation was not encouraging. Of the four questions that asked about quantity, two items showed no change over time, one went up and one went down.

The type of treatment given for the latest episode of diarrhea among the household's children was recorded to determine behavioral change. The dominant response was "Western medication", meaning the type of drugs one might receive in a clinic or buy in a pharmacy. About two thirds of cases were treated this way both before and after the broadcasts. Home-mixed ORT was mentioned third after traditional remedies, and only accounted for five to eight percent of the cases. These and other measures show that while basic awareness has gone up substantially, there is little improvement in ability to recall details of actual practice.

Family Planning. Family planning information was an important topic with broad general relevance. Questions asked in the evaluation surveys covered assessment of population as a problem, knowledge about the prevention of pregnancy, availability of services, family planning benefits and responsibilities, contact with centers, and sources of information.

A small but growing number of people felt that population growth might present problems for Liberia. Before the broadcasts, 24 percent of the sample named at least one problem population growth might cause. Afterward, 39 percent named one or more problems, a significant increase. People's basic awareness of the existence of family planning was high to begin with--61 percent--and rose significantly to 76 percent after the broadcasts, with growth concentrated in those counties that put emphasis on the program topic. Respondents who had heard of family planning were then asked if they had ever been to a family planning center. About a quarter of them said yes, a level which did not change during the year.

A majority of people--58 percent--said that they got their information about family planning from the radio, with clinics being the next most frequently cited source. When asked where they would turn for additional information, most said they would go to a family planning center or health clinic; radio as a source for more information rated a stable six percent of responses. This is not surprising, given the sensitivity and the complexity of the topic. It demonstrates both the value of radio for introducing and supporting a topic, and the necessity for a parallel infrastructure to pro-

(Continued on page 5)

A clan chief is on trial in Zwedru for extorting payments from local farmers before allowing them to slash and burn a new plot to farm. The aggrieved farmers complain to the County Superintendent. ELRZ broadcasts the hearing in English, with translation into the local language. The clan chief is found guilty. Justice has not only been done, it has been heard to be done.

When ELRV celebrated its first anniversary, the paramount and clan chiefs organized their districts to come into Voinjama. A demonstration started on the outskirts of town and began marching toward the center. Schoolchildren with banners, policemen with banners, the local transport union, soldiers and individuals joined the march. The taxidrivers and moneybus drivers declared a day of celebration. No one could leave Voinjama. ELRV sold 300 audiocassettes of highlights from the year's radio broadcasts. $1500 was collected for the station. Celebrants declared the coming of their local station as the biggest single event in their lives.

Two soldiers bang on the door of the ELRZ Station Manager's house. An announcement that the local military commander wants to broadcast has been turned down by the producer on duty because the soldiers have not paid the required $5. The Station Manager confirms that everyone must pay for announcements and offers to go with the soldiers to the commander so he can pay. They go. The commander pays his $5 with good grace. The Station Manager writes a receipt.

(**FOOTE** *from page 4)*

A Grebo woman disappears with a Krahn army officer. It is widely believed that she has been abducted. Other rumors abound, including that she has been killed. A machete-wielding mob descends on the County Superintendent's house demanding that the girl be produced. Just before violence erupts, the girl is found. ELRZ flashes the news immediately, and follows up with an interview with the girl, defusing what might have been a violent encounter.

vide more complex instruction and interpersonal support.

Agriculture

Two topics were chosen from the broadcast plans to represent the agriculturally-oriented programming from the stations. In Bong County, the station carried programs about the County Agricultural Research Institute (CARI), promoting name recognition and knowledge about what CARI does. In Lofa County, the stations carried programs about fish farming, telling listeners about its benefits, giving them information about where to locate a fish pond, and telling them where to go for help if they wanted to build a fish pond of their own.

County Agricultural Research Institute. Overall awareness of CARI rose significantly as a result of the broadcasts, from 39 to 50 percent. All of the increase was concentrated in the rural areas, which had much lower initial levels of awareness--21 percent before to 38 percent of respondents after. There was no change in the already high awareness levels in the towns adjacent to the Institute itself--74 percent to 71 percent, not a significant difference. Radio was the information source most frequently cited by rural residents. This pattern of results suggests that the broadcasts helped overcome a problem of information availability to rural people and reduced the gap between the urban and rural sectors.

Fish Ponds. Awareness of fish ponds increased significantly, rising from about a quarter of Lofa County respondents before the broadcasts to about a half after the broadcasts. Radio emerged as a major information source for people in Lofa County, with those who knew about fish ponds citing radio as their information source 16 percent of the time before the broadcasts and 59 percent afterward. Although interpersonal sources decline in importance for initial awareness, they continue to dominate as the place to turn for further information. Radio is cited by only eight percent of Lofa County residents as the place to get more information about fish farming.

Village Organizations

Part of Liberia's development strategy has been the establishment and support of local organizations to promote community-based involvement in the development process. The evaluation emphasized two types of village organizations: Village Development Councils and Parent-Teacher Associations. While these organizations might occur in any of the communities in the study, only Grand Gedeh County planned to make community organizations a priority broadcast topic.

Village Development Councils. Overall awareness of Village Development Councils (VDCs) showed a substantial gain during the year, from 42 to 62 percent. This occurred in spite of a significant and difficult-to-explain drop in the rural respondents who reported a VDC in their community. Among those who were aware of VDCs and lived in rural areas, a surprisingly high number reported having been involved in VDC activities--60 percent before and 64 percent after the year of broadcasting (not a significant difference).

The depth of knowledge increased considerably; before the broadcasts 74 percent could name one or more benefits of having a VDC, while after the broadcasts, 91 percent could name one or more. Radio played the central role in disseminating this information. When asked in the follow-up survey about the sources of their information about VDCs, radio was the most frequently cited source, named by 61 percent of the respondents. In general, most of the improvements were seen in all the counties, but the strongest effects were seen in Grand Gedeh, where the topics were a priority. For example, within Grand Gedeh, the proportion citing radio as a source of information was 81 percent, significantly higher than the other counties. This supports the conclusion that the broadcasts have had a strong effect in that county.

Parent Teacher Associations (PTAs). The reported sources of information again show radio playing an important role. Radio was mentioned as a source of information about PTAs by 46 percent of the respondents--nearly as high as for teachers and school administrators. However, within Grand Gedeh where radio programming gave priority to information on community organizations, 75 percent mentioned it as a source of information on PTAs.

An old man comes into ELRV to complain about the explicit nature of programs on family planning. It is offensive to him to hear private functions and anatomical parts such as *uterus* discussed on the radio. The producer convenes a focus group to review the approach taken by the programs, and the field assistant plays the program at Village Listening Groups to get their guidance and suggestions for better ways to present the topic.

What is Local?

Our definition of *local* is behavioral and descriptive and includes the following elements:

- stations are physically close enough to the people they serve for listeners to be able to visit. Actual distances vary depending on season, terrain, the availability of local transportation, etc.;
- stations have an open door policy that encourages local people to visit; producers rountinely leave the station to talk directly with listeners;
- formal structures, such as program advisory groups and listening groups allow local people to regularly express their views on program content;
- stations do not limit their activities to broadcasting only; they organize events and community activities that make the stations an integral and exciting part of local life;

Local means listeners identify with their station. Listenership figures and preferences, listeners' willingness to help raise money for the station, and listener turnout at station-organized events are just some of the way to measure listener support.

(Continued on page 6)

MARKETING DEVELOPMENT RADIO

Three factors were crucial to the successful marketing and promotion of LRCN to development agencies:

1. Statistical data from the Ministry of Health showing the effectiveness of local radio were gathered whenever possible: for example, there was a 300% increase in the number of immunizations through LRCN involvement and a fall in the unit cost of immunization from $4.50 to $0.90. This information was used as persuasive evidence to convince potential clients of LRCN's impact.

2. Promotion and marketing were organized to be effective. A full-time Community Relations Coordinator was appointed. Special promotional pamphlets, fliers and a video were prepared. A list of possible clients was developed, contracts drawn up, and a follow-up visit schedule maintained.

3. The Community Relations Coordinator was trained in negotiation techniques and observed how sales and marketing is handled by commercial and nonprofit radio stations in the U.S. He then passed these principles on to field assistants at the local stations.

(FOOTE *from page 5)*

Generalizations

The evidence that has emerged about the impact of the LRCN stations is consistent and supports several generalizations.

Changes have been strongest in the areas of awareness, knowledge, and attitude. Far less evidence exists to measure changes in behavior. There are three possible explanations for this result, all three of which may be simultaneously valid. First, a year may be too short a time to expect major behavioral changes as a result of this type of intervention, but that behavioral changes will accumulate over time. Second, programming may not yet be focussing in explicit, prescriptive terms on manageable units of action and may need to be redirected to support small, concrete steps listeners can take by themselves. Third, some types of behavioral change may require greater concurrent infrastructure support from available services or need complementary interpersonal communication. Radio inputs may need to be more carefully orchestrated with the activities of existing organizations, such as agricultural extension or family planning centers.

Finally, the evaluation encountered repeated instances where the effect of the broadcasts reduced the differential between urban and rural segments of the audience. Normally, rural areas are disadvantaged; LRCN has begun to demonstrate its ability to redress that imbalance. This is a unique advantage of development communication systems.

In a remarkably short period of time, LRCN has established itself as the preferred radio station in its broadcast areas. LRCN's impact on listeners' knowledge and behavior has been greater--and has happened faster--than original expectations. The evidence is clear and strong. LRCN radio broadcasts have caused significant changes in many of the dependent variables examined by the evaluation. From this perspective, LRCN has been an unequivocal success.

Dr. Dennis R. Foote is President of Applied Communication Technology in Menlo Park, California. A copy of the LRCN evaluation and other materials describing the program, including a videotape and sample audiotapes of broadcasts, are available through the Clearinghouse.

The Voice of Choice: Sustaining Local Radio

If local radio stations are unlikely to receive financial support from central governments, how can radio stations build support from their communities?

- *Recruiting Volunteers.* Half of the production staff at LRCN stations are volunteers. Young, unemployed volunteers can learn new skills and often become paid employees as vacancies arise in the system.
- *Offering Competitive Airtime Fees.* Local radio reaches a smaller audience than national systems; this means local stations charge less for airtime. For development agencies and other clients, it's a better deal since local radio also "reaches the right market."
- *Hustling.* Station staff can build and sustain community support by visiting potential clients first, instead of waiting for them to come to the station. Staff should explain the ways local radio can help their clients get their message across. When talking to clients, local radio stations should sell opportunities, not dwell on funding or other problems.
- *Becoming Indispensable.* Local stations become the voice of choice for local leaders, extension services, clinics and hospitals. They gain listener loyalty and support by staging local events, covering local news and sports, sponsoring contests with prizes donated by local merchants, and broadcasting birth and death announcements.

By learning how to tap and rely on community support from the start, local stations also have a better chance of surviving and growing over the long term, even if government funding is limited.

Expectations for Local Radio : Looking Beyond Immediate Impact

by Richard Burke

Development is a widely participatory process of social change in a society, intended to bring about both social and material advancement (including greater equality, freedom, and other value qualities) for the majority of the people through their gaining greater control over their environment.

Everett M. Rogers

Expectations of Broadcasting

According to Everett M. Rogers, development should bring about social and material change. If this is so, what can we expect community radio to accomplish to help meet this goal?

First, a community radio station has an obligation to act in concert with the national broadcasting service. If the national service can't reach everyone in the country, then it is up to community radio stations to gather national development programs and messages and transmit them to the people who might not hear them any other way. Even if the national service reaches every part of the country, community radio can still *localize* national development programming. *Localization* may mean broadcasting in one or more languages, or more important, it may mean re-interpreting messages to suit local needs and conditions, for example, when the traveling vaccination team will be visiting the community; what prices are being paid in local markets for coffee, beans and bananas; or where to go to register your child for the first day of school.

Second, the manager and producers of a community radio station should spend a large part of each week talking with people in the communities they serve--not just to the mayor, village leaders, and prominent business people--but to small farmers, school children, young parents, and to people whose ideas are sometimes considered unpopular or impractical--day laborers, out-of-school and unemployed youth and others on the fringe of development activities. The radio staff should try to find out what concerns all of the people, what problems they face daily, and what kinds of information they need to make better sense of their lives.

Radio producers can do two things with the information they gather: they can refine it, summarize the most important concerns, and forward it from the community to the appropriate development agency, government office or private organization for further action; and, at the same time, they can re-shape the information into program materials to benefit the community. Programs can be on a wide variety of subjects, of any length and broadcasted any number of times. Messages can be of general interest to the community, or they can be the means of informing families in a distant village that a relative in another village is sick or dying. Announcements can deal with market prices and weather warnings, or simply with birthday, wedding or anniversary greetings from one person to another. In countries with few telephones, irregular postal service and often impassable roads, community radio can serve as an all-purpose means of communication.

Third, radio producers should make it abundantly clear to members of the community that the station does not belong exclusively to the radio staff. The radio station exists to give the community its *own voice*, or, as Robert White, a well-known communications scholar puts it: "Local stations with alert management and good contacts with popular organizations know how to spot peasant or worker actions with social change significance, seek out the people involved, encourage them to speak out, and most important, train representatives to use radio effectively. "

Fourth, the community radio station can be the means of getting development organizations to take off "sectoral blinders". Quite often, a community radio station will have an advisory board or a community council whose members typically include the agricultural extension agent, the public health worker and the teacher of adult education, among others. As these development specialists participate in helping the radio station decide what kinds of programming to produce, they cannot help but realize that individuals don't live their lives in "sectors".

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$1000 RADIO STATION

Village radio stations vary in cost from less than $1000 to more than $10,000. The stronger the signal--and the further it reaches--the higher the cost. A typical mini AM or FM station ranges between $200 and $2,000. A $1,000 station features a four-channel mixer, two microphones and mike stand, a D.C. servo turntable with extra stylus and cartridge, headphones, and four interchangeable portable cassette recorders for both field and studio use. The cost of the studio package can be as little as $385. The transmitter, tuning unit and antenna can be bought for about $375 for either a three-watt AM package or one-half watt FM system capable of covering ten kms. A solar power supply costing $240 and including a 30-watt photovoltaic panel, battery and wiring, maintains the station on the air for up to four hours a day. A more elaborate village radio station might cost $2,000, including $1,000 in studio equipment and a similar amount for a 20-watt AM transmission package transmitter, antenna and tuner capable of radiating 1-to-30 kms or more, depending on frequency, terrain and interference conditions.

Cable Radio Systems. Another type of system, employing "leaky coaxial cable" instead of a radiating antenna, requires an additional $5,000 per mile for the cable. More expensive and complex to set-up, a compact village communication system serving 100 households that includes studio, transmitter, cable, AM receiver in each home, and electric power, can be put together for about $6,000. The radio signal and power for the receivers are sent through a cable going to every dwelling. A central power supply charges a heavy-duty, 100 amp/hour battery to power the station and all the receivers. Despite its complexity, such a system does overcome two of the greatest obstacles to community radio in isolated areas:

- 1) that radio receivers are unevenly distributed; and
- 2) that the majority of the sets in a community lack batteries.

-Dean Stephens

(Burke *from page 7)*

Their lives are complex mixtures of wants and needs, and development agencies can be more effective by responding to the community in a more integrated and holistic manner.

Finally, a cautionary note. Radio people are generally optimistic about the role they can play in promoting development. It is tempting for them to think that if they pour enough information into a community, development will take place. There are, however, many development problems that cannot be solved simply by added amounts of information. Experienced radio staffs must learn how to order information priorities, identify problems that require other kinds of inputs, and avoid problems that, because of constraints on resources, are not possible to solve at the present time.

Measurement of Long-term Change

If we expect community radio to be responsive to the community it serves, to develop productive linkages with development agencies, and to establish a *community voice*, how can we find out whether or not community radio is in fact contributing to long-term development?

I am not talking about *system* features of radio, i.e. the number of listeners reached, the number of programs produced and so forth. Nor am I concerned in this article with measurement of information acquisition--i.e. what messages people recall, and how long they retain the messages. These are obviously important questions, but often lead to the ultimate question in development communication: "So what?" What does community radio contribute to long-term development? How can you measure the degree of participation? Level of self-sufficiency? Amount of individual and community self-reliance? Amount of improvement in the quality of life?

Traditional methods of audience research may not be appropriate to measure the structural impact of community radio. We may need a different set of criteria and a different set of measuring tools. Let us look then, at some of the questions that can be asked about community radio's structural impact.

Taking the Initiative. How many times have individuals, small groups or elected representatives of the community taken the initiative to approach a regional health or agriculture office with a specific request for assistance or a specific proposal for community improvement?

Demanding Better Public Services. Have the national ministries in the capital cities received letters or visits from members of the community in which they express complaints about the quality of services they have been receiving?

...this often leads to the ultimate question in development communication: "So what?"

Using Existing Government Services. Have families in the community responded to specific short-term campaigns that promoted infant vaccination, the acceptance of free fish to stock a home fish pond, or some other tangible benefit?

Cooperating Across Sectors. Have regional development offices which normally operate on a sectoral basis participated in cooperative projects where sectoral lines are diminished or abolished?

Cooperating with Other Communities. Have two or more communities gotten together to improve a road, repair a bridge, or exchange services?

Strengthening Mutual Assistance. Have small farmers started to form marketing cooperatives so they can sell their products at fair prices? Are the cooperatives providing higher incomes for their members?

What Role Does Local Radio Play? In what ways do local people use radio to promote all the above? Does local radio take a leading role in identifying issues and exploring local solutions?

Summary

These are just a few of the questions we can ask about activities associated with long-term community development. It should be possible to get the answers to some of these questions through interviews and observation, but evaluators must be patient. Some of these changes take place after communities have developed a sense of confidence and self-direction. An accelerated pace of development may not be evident in the short term.

Finally, community radio is not a sole, or even a main causal agent of change. But if you can connect advances in community participation, social and material advancement, and greater control over the environment with the programs, campaigns and objectives of broadcasting, then it is not unreasonable to assume that community radio is a significant and valuable contributor to social change and community development.

Note: The reference on development from Everett Rogers is from an article called "Communication and Development: The Passing of the Dominant Paradigm" published in *Communication Research*, Volume three, Number two, April, 1976.

The reference by Robert White is from his article "Communication Strategies for Social Change: National Television versus Local Public Radio" published in *World Communications: A Handbook* edited by George Gerbner and Marsha Siefert (New York and London: Longman, 1984).

Dr. Richard Burke teaches development communication at Indiana University. He has worked in Latin America, Africa and the Middle East.

Power to the People: Not Just in Developing Countries

There are thousands of local radio stations worldwide, many of them tiny one- or two-person commercial stations operating within equally tiny geographical areas. This pattern is repeated in many Latin American countries and in many towns of the rural United States. Generally speaking, these stations copy the urban sound and the values of national broadcasting networks. Dean Stephens discusses a style of local radio that voices, reflects and celebrates the sound of the people.

by Dean Stephens

The invention of the transistor made radio receivers available almost universally. But who participates in the messages radio broadcasts? Who owns and controls it? And what is it used for?

By and large, each of these three questions has the same answer. A small group of owners or civil servants determines what will be broadcast to listeners who are often the rural poor in villages all over the world. Commercial interests purchase airtime to promote patent medicines, baby products and soft drinks. Many of these products are highly inappropriate for the needs and diets of the poor. Packaged entertainment originates in cities. Native languages are often swept away, and indigenous cultures either belittled or ignored.

Even radio dedicated to development has suffered from these maladies, as urban government officials or well-meaning foreign development professionals planned strategies and messages designed to market development to the masses. As campaigns stuttered, often failing to achieve the hopes of the professionals, two schools of thought emerged. One school said, "Let's try to do the same things better." Research techniques were improved, multimedia strategies developed, and lessons about product marketing applied. The other school said, "Well, maybe *we* are the problem. Rural people are neither faceless masses nor ignorant of goals for their *own* development." Words like *access, participation*, and *self-management* came into vogue, and greater efforts were made to involve rural people in development.

As it turned out, involving rural people required some pretty radical thinking. Participation in well digging was one thing, running a radio station quite another.

Radio was traditionally an aloof medium, a one-way transmission of professional-sounding programs from studios in an urban center. *Access* meant taking radio to the people through taped interviews or live outside broadcasts. But this was at best a sporadic process, creating little real participation and less local control of the medium. How could radio really open its doors to the community and truly serve its needs?

The answer was that radio had to become a local institution in each community. Radio had to be scaled to the size and needs of the village. The issues were neither technical nor financial, since inexpensive, relatively simple hardware and technology existed (see *$1000 Radio Station*). The real challenge was philosophical and structural.

This is still the challenge not only in Third World countries, but in the First World as well. Local radio is being successfully used in North, Central and South America to preserve language and cultural values, to educate, and to stimulate and promote community development.

Tiny stations--some licensed, some not--have proliferated in isolated villages in Alaska and northern Canada. These miniature communication centers cater to local music tastes, feature news of community interest, and serve as clearinghouses for messages ranging from medical emergencies to greetings and chatter. Many are totally voluntary in nature, operating from stores and other public gathering places as well as private homes. In both areas, special laws make it possible to obtain a license for low-power community broadcasting: Class 10-watt educational FM transmitters are permitted by the FCC in Alaska, and new license categories have been established in Canada. In several areas, villages are even linked by satellite (*DCR* 36).

- Wataway "northern lights" is a community development network of and for 20,000 Indian people living in 40 isolated reserves and settlements in northern Ontario. The Wataway Native Communications Society began in 1973 to help indigenous people in the region to "develop their communities according to their own culture, beliefs and vision of the future". In addition to providing two-way radio communication services, preparing a monthly newspaper and producing native language programming for the Canadian Broadcasting Corporation (CBC), Wataway has assisted 23 communities to set up village radio stations using 1/2-watt transmitters to broadcast local news, weather and music in the Indian language.

Wataway assists with personnel training and equipment maintenance, while local community councils provide human and material resources for the stations and come together in regional conferences to discuss programming, funding, cultural preservation and other items of mutual interest.

- In Porcupine Butte, South Dakota, Milo Yellow Hair awakens the Sioux each

(Continued on page 10)

(**STEPHENS** *from page 9*)

morning with the *Wakalpi Show*--literally "to warm you up." The broadcasts are in Lakota, and the station is KILI-FM, voice of the Sioux nation. Not all village stations are tiny: this one radiates 100,000 watts from the Pine Ridge Indian Reservation to Sioux listeners scattered over hundreds of miles. Besides Lakota--the language of the Oglala, the largest Sioux tribe--programs originate in English. Only 60,000 people speak Lakota, but the station is teaching it to many more youngsters and non-Indians in neighboring communities. Other programs include *Rumor Control*, which gives voice to the week's newsmakers and troublemakers; *Swapshop*, a radio trading post; job announcements; and music from rock 'n roll to traditional songs and drumming taped by station staff.

Radio has traditionally been an aloof medium, a one-way transmission of professional-sounding programs from studios in an urban center.

Public broadcasting station KILI is the electronic cultural connection of the Sioux, only 6% of whom have telephones. Radios everywhere are tuned to the station for 18 hours per day. "We are not alternative radio," says a station manager Hobart Yankton, "we are the radio." Most of the station's 20 announcers are volunteers, working there for love and gasoline money. KILI, founded by the American Indian Movement, operates independently of tribal control, but tries to respond to both tribal officials and the general audience.

Yellow Hair plays traditional songs that he has recorded at dances, gatherings and in people's homes, sometimes in honor of a veteran or an exceptional student: "You can't see them, but they are out there standing up. I keep an image in my head of an older man, like my grandfather, sharing someone's sorrow, playing music and making someone's life wiser."

- In South America, indigenous stations range from the *bocinas* (loudspeakers) of the plazas and markets in Peru to *radio mineros* (miner's radios) in Bolivia. In Peru, Catholic-sponsored *Radio Onda Azul* (Radio Blue Wave) functions through the participation of indigenous communities around Puno (*DCR* 48), and a program called *Inquietudes* (restlessness) serves as a communication outlet for the *pueblos jovenes* (growing urban areas) in Arequipa (*DCR* 52).

- Free-forum village radio is appearing in one form or another all over the globe. Examples in the United States include the Pacifica group and the old "Krab nebula" of open-access stations: KRAB Seattle, KBOO Portland, KDNA St. Louis, KTAO Los Gatos, and KCHU Dallas. Founder Lorenzo Wilson Milan published a delightful collection of essays called *The Radio Papers* (Mho & Mho Works, San Diego) on the life and times of the nebula:

"KDNA was fearless and magical. It returned the community to the radio studio, it opened its doors to the poets, and musicians, and political freaks--the dispossessed and longing who had been in their seedy rooms too long, waiting for someone to come along and spring them from their isolation. KDNA was radio reversing itself: asking that the people who lived in a city bring the city into the radio station, and cascade it out to the far reaches of men's minds and the horizon ... At its best, KDNA could count on 200 people a week who volunteered around the hard-core of a dozen or so who made the station work. They created the words and ideas and feelings that came out of the hot-house on Olive Street. We could hardly believe our ears.

"Community radio, ... means that there is--or should be--a hole in the dial for us to stuff our words or musics into. Most of the holes have gone: into the hands of the moneymeisters who sell our ears at cost-per-thousand to those who want to sell their wares to us..." Milan's village radio is "the experience of direct communication with our villages of the mind, and it is called 'community-access free-forum radio'" (pp. 109-110). Such stations often operate from listener contributions received in funding drives, from subscriptions, auctions and similar sources.

- All over Europe, low-power *radios libres* (free radios) have sprung up to give ownership as well as access to local community members. In Sweden, *nar*" (neighborhood) stations covering about two and one-half square miles have been authorized. *Nar* radio is strictly non-commercial, operated and programmed by such diverse groups as labor unions, political parties, religious organizations, sports clubs, art and cultural societies, consumer and tenant associations, environmentalists and community colleges. To maintain access, each group must broadcast at least once a week. Community groups combine to build the stations, then share the facilities.

- In Japan, thousands of mini-FM community stations began broadcasting after a man named Tetsuo Kogawa noticed that Japanese law allowed very low-power transmissions without a license in 1981. Setagaya MaMa is one of the hundred or so stations remaining. Located in a middle-class area in South Tokyo, Setagaya MaMa's village is a community of 10,000 or more located within one kilometer of the 1/10 watt transmitter. The station's studio is an open microphone in a small store which serves as health bar and gathering place for neighbors.

... stations of and for the people of each community have achieved immense popularity and acceptance.

Sometimes just background noises are on the air; during other occasions, the store might be filled with community members who have rushed there to take part in some neighborhood issue. "Come in and talk" radio serves a centripetal function, bringing people together who are otherwise isolated by urban systems and by conventional, one-way centrifugal media.

- Radio Baha'i stations are a part of indigenous community life in Africa and North and South America. Local people air programs in local languages, music of the culture, news of interest to the region, and educational and spiritual fare pertinent to the needs and holistic development of the listeners as human beings. DCR has featured several articles on Radio Baha'i Ecuador (40, 42, 44), as well as one on the use of appropriate technology and alternative energy in the facilities (58). These stations, of and for the people of each community, have achieved immense popularity and acceptance. All are non-commercial, with volunteer and semi-volunteer staff, and look principally to the Baha'i community for operating revenue.

(Continued on page 11)

(**Stephens** *from page 10*)

The Future

In Fall River, Massachusetts, two primary school teachers are preparing classroom village radio projects centered around wireless microphones which cost less than $8 with batteries. Although sold as toys, these "micro-power stations" can nevertheless broadcast across a room on a desired frequency on the FM band, helping bilingual Portuguese- and Cambodian-American kindergarten students learn English and adjust to a new culture while retaining the traditions of the old.

Another group of 8-to-12-year-old special needs children will broadcast from the class station to develop self-confidence and learn communication skills. In Canada, one community media entrepreneur has asked why every school in the country should not have a station of its own. Similar village radio projects have been proposed for communities of people in nursing homes, terminal care hospital wards and prisons. The uses of this non-licensed broadcast form are limited only by the imagination.

Many conventional radio systems can be scaled down to village size: indigenous populations might have a station in each community, joining together to form networks and multi-community roundtables from time to time. Very isolated communities, no matter how small and poor, could benefit from low-cost village radio. In fact, the technology exists to not only power a village station from the sun, wind or a small stream, but to extend this power to the community as well: to light a plaza, street, school or center, or to provide low-voltage D.C. energy to a radio receiver in every home.

As this article goes to press, the governments of several countries are studying the possibilities for grassroots development communication using village radio. Inexpensive and appropriate, these people-powered, community-sized tools are about to make their debut.

Director of the Vanguard Trust, K. Dean Stephens is currently Professor of Development Communication at the Amoz Gibson Center in Puerto Rico. Stephens has designed and installed AM, FM and shortwave Baha'i radio stations on three continents. He is preparing ***A Village Radio Owner's Manual*** *for worldwide distribution later this year.*

Development Broadcasters on Development Broadcasting

A recent FAO publication, ***Communication for Rural Development,*** *said, "It has been estimated that less than 5 percent of broadcasting hours in the Third World are devoted to educational purposes--as distinct from entertainment and propoganda." In this article, Heidi Schaeffer talked to producers from India and Indonesia who are making development programs for radio.*

The strategies discussed by development broadcasters here give a strong sense of central personnel visiting local, rural communities. The speakers represent the Development Broadcasting Units (DBUs) of centralized systems that are attempting to reflect the concerns of rural listeners. The program development strategies they describe convey the nature of development broadcasting as it is practiced in most countries.

Compiled by Heidi Schaeffer

A workshop was held in January 1989 in Kuala Lumpur, Malaysia, for broadcasters who are producing development programs. The regional workshop brought together radio producers from Development Broadcasting Units (DBU's) in three countries--India, Indonesia and Papua New Guinea--to share their experiences producing development programs. We recorded their responses to three questions:

- How do you select development program ideas?
- What techniques have you found work best for development radio broadcasting?
- What distinguishes development broadcasting from the programs you made before?

Selecting Program Ideas

At Bandung, in Indonesia, radio producers visit villages to research program ideas. Then these ideas are developed in cooperation with a local advisory council for development programs.

"Ideas are selected that are in keeping with government programs but producers keep their ears open in the villages and are always prepared to gather information on a new topic that has emerged from a village visit."

Ella Nurmaela Judadibrata, RRI Bandung

Not all programs are planned in advance as part of a broader development agenda. Development communicators also deal with immediate issues that are important to their constituents. Mr. R.P. Meena from Kota described how the development of a program at his DBU grew out of a newspaper article.

"One day I saw an article in the newspaper about one village, Naya Gaon,

(Continued on page 12)

(**SCHAEFFER** *from page 11*)

where village people were suffering from the Guinea Worm disease. I went there and saw that 60 percent of people in the village were suffering. I spoke to the Village Headman, who told me that no treatment facilities were available in the village. They felt that no one bothered about their helpless situation. I recorded all these problems and came back to Kota.

"I contacted Dr. B.K. Sharma, Deputy Chief Medical Officer and played back the recorded interview of the villagers. Dr. Sharma and his medical team went to the village. The villagers told him that they get water from the village well. Dr. Sharma found that there were steps so anybody could go in the well. Patients of Guinea Worm were going down into the well easily and thus caused infection.

"Dr. Sharma suggested to the villagers that they use only hand pump water for drinking purposes. They put disinfectant powder in the well and instructed the villagers not to use this well water for drinking. He suggested that this well water be used for irrigation purposes. After some time, I again went to the village and I saw that the steps of the well were covered and people were using only hand pump water.

"I recorded a program, and we got many letters from the listeners.

"After six months, I again went to Naya Goan and the people of the village told me that nobody was now suffering from the Guinea Worm disease. I prepared a follow up program also."

R.P. Meena, AIR Kota

Program ideas often lead to program action by the producer. Development broadcasters are often more than just commentators. Like Meena, Sudiman Bonaparte played the role of middleman between village and development agency.

"We went to visit a village listener/viewer group and by chance I came across a woman who makes key chains from left-over materials she obtains from a nearby chopstick factory. I asked the woman about how she makes the key chains and what problems she faces. She told me the biggest problem is getting a loan to market the key chains. I then contacted the Indonesian business women's association and other organizations on how she could obtain a loan... And the story became the success story of how a woman makes income at her home and the problems that must be overcome."

Sudiman Bonaparte, RRI Bandung

Strategies for Development Broadcasting

"In order to make development programs, one has to be very clear about planning. You have to think a lot about the topics you choose for your programs. You have to ensure that the length of the program and the time it is aired serves the target audience."

Ella Nurmaela Judadibrata

"(Producers) must evaluate the programs after they have been aired to ensure that the programs have reached the target audience or, if not, then how they can make the programs more interesting so that people can get information out of the programs."

Dadang Romansyah, RRI Bandung

The producers also discussed methods for involving the community in their broadcasts. Girish Verma of the Kota DBU finds that giving the tape recorder to the villagers and allowing them to make their own recording is a good way to encourage people's participation. Since working with the Kota DBU, M.P. Modi has changed his interview style to encourage more participation. He uses what is essentially a recorded and edited focus group technique.

"Before, I used the traditional question and answer style. Now I prefer conversations with two or three people where I keep the recorder on and we talk together ... When the time is right you direct the conversation to a specific subject."

M.P. Modi

In Indonesia, getting people's participation can be more difficult. As government representatives, producers cannot freely go to a village and people will not necessarily talk openly with them about problems.

"In approaching a village, we try to merge with the people so that when we come back for recording we will be accepted by the community and no longer be strangers ... so that they are more free to speak with us."

Sudiman Bonaparte

From Broadcaster to Development Broadcaster

Producers compared their current work at Development Broadcasting Units with their former jobs as regular broadcasters. They agreed that considerably more time was being spent on planning and research for DBU programming, than on regular programming.

"In our development broadcasts, we select a problem and we work on that problem for a longer period than with routine broadcasting."

M.P. Modi

This leads to more narrowly focused objectives for broadcasts and a more clearly defined target audience than is customary in general broadcasting.

When asked what additional advice they would give to broadcasters who are just beginning to produce development programming, the DBU producers suggested a number of essentials.

"They must involve themselves very well with the problems of the people. People must feel that these producers are well wishers ... These people are very close to us. Then they will be able to tell everything about their problems. Only then can the producers produce a good program."

M.P. Modi

Heidi Schaeffer is the Project Assistant on the Project for Broadcasting in Development based at Ryerson International Development Centre in Toronto.

Project for Broadcasting in Development

The Asia-Pacific Project for Broadcasting in Development is a five-year project designed to build capacity to implement and carry out development broadcasting in the Asia-Pacific region. The project is based on a partnership between All India Radio; Doordarshan TV; The Papua New Guinea National Broadcasting Commission; Radio Republic Indonesia and TV Republic Indonesia; as well as The Asia Pacific Institute for Broadcasting Development, Kuala Lumpur, Malaysia, and The Ryerson International Development Centre, Toronto, Canada. Funding for the project is provided by the Canadian International Development Agency.

Readers interested in more information should contact: Project for Broadcasting in Development, Asia-Pacific Institute for Broadcasting Development, P.O. Box 1137, Pantai, 9700 Kuala Lumpur, Malaysia.

Videoletters

Local radio for development is the focus of this DCR, but radio isn't the only communication channel open to local people. In this feature, Claire Burkert describes videoletters and illustrates how Nepalese women have used video to effect positive change in their communities.

by Claire Burkert

In remote villages of Nepal, illiterate women have been trained to produce short, videotaped messages or videoletters to communicate village needs and realities to development policymakers, planners and project implementors. In many cases, these letters have been answered with tangible, productive results. In other cases, the replies have given the senders a better understanding of the obstacles facing their needs in the capital, Kathmandu. These videoletters have reduced the communication gap between villagers and central authorities. They have also helped women in Nepal learn how they can play an essential role in the development of their communities.

Women in Nepal are the mainstay of the country's rural economy. Women fetch water, search for fodder and fuel, look after the livestock, work in the fields, cook, care for the children and often generate income in market economies. Women often devote eleven hours a day to work--three to four more hours per day than the average Nepalese man. Few Nepalese women attend village meetings or serve as members of local committees; therefore, they must normally rely on men to act on their behalf within Nepal's legal and governmental systems.

In the village of Ramghat in the Surkhet district in mid-western Nepal, women's isolation from decision-making processes is compounded. Many of the men have left the region to look for work. However, the Ministry of Panchayat and Local Development runs a Production Credit to Rural Women (PCRW) project in Ramghat that helps women start income-generating businesses. But because communication between Ramghat and Kathmandu was difficult, support for the project threatened to be withdrawn. To help the women of Ramghat, Worldview International Foundation (WIF) set up a small communication project. The project's three main objectives were :1) to strengthen communication between PCRW and the Village; 2) to strengthen communication between the village and Kathmandu, and 3) to develop educational materials for village use.

Twelve women from Ramghat participated in the first training session. Using video, the project's participants learned how to establish better dialogue between PCRW beneficiaries and implementors. The women learned how to assemble two camcorders, perform simple maintenance, and conduct interviews. They had to list and prioritize their needs, draw up practical, possible solutions, and discuss how to best use video to convey their messages.

... it convinced the group that they were legitimate representatives of their community; they didn't need videos or cameras to voice their concerns.

In the first video the group produced, each woman spoke directly to the camera, recording their first videoletter to the project sponsors. The letter had an immediate result. One of the producers, a woman with a harsh voice, was shocked to see herself sounding angry when she meant to be giving thanks. The woman softened her voice and her attitude, and as a consequence, the whole group grew more cohesive.

Because the women are illiterate, the letters were shot without formal scripts. Each letter's objective was discussed before shooting. For the first session, the narration and editing were performed in Kathmandu. In the second training session, the editing machine was brought to Ramghat to help the women gain a clearer understanding of the editing process so they could maximize their use of film time.

In the second session, the women decided to focus on legal issues. They began to record a series of interviews with women who had been mistreated by their husbands or who wanted to get divorced and needed legal advice. The video documenting their cases was sent to the Women's Legal Services Project in Kathmandu. They returned taped solutions. The videoletters were also shown to the larger community during Saturday night movie screenings in Tamghat. After that, the women from Ramghat produced videoletters on deforestation, the PCRW program, health and irrigation.

WIF provided additional educational films for screenings on Saturday nights and for smaller screenings organized by each woman for her ward. Short instructional films produced by the women on topics such as fertilizing methods or livestock feeding were also shown. Each woman would arrange for the time and place of the screening, borrow the camera and monitor, and lead fellow ward-members in a question and answer period following the film.

In July 1986, eight months after the project began, the Ramghat women went to Kathmandu for three days to discuss the needs presented on the videos with officials. This trip marked a watershed for the project since it convinced the group that they were legitimate representatives of their community and didn't need videos or cameras to voice their concerns.

Next, the program was extended to the village of Uttarganga. The Ramghat production team took the lead in training the novices from Uttarganga. The Uttarganga women were very quick to learn from women who had similar backgrounds and experiences. The second group began to shoot interviews throughout the village that were then shown during informal workshops in Uttarganga. From these workshops, the women gained the confidence to put forth their ideas and have begun to participate in local political meetings, traditionally an all-male domain.

It was clear that the project's initial aim was met. Two-way communication had been established between villages and the central government and between villages and local agencies. Furthermore, as evidenced by their active participation during their trip to Kathmandu, the women had learned to voice their needs without the aid of a camera.

As Subhadra Belbase, WIF Program Director, said to the women, "It is your personal growth that has taken place and your growth as a group that really matters. That growth has been the greatest achievement of this project. "

■

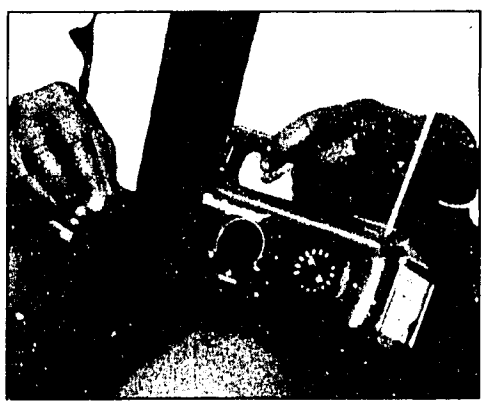
Claire Burkert is a free-lance writer who has lived and worked in Nepal for the past three years. She writes about women and development and development communication issues.

The Wind-up Revolution?

by William Mackie

A frequent complaint from rural radio listeners in developing countries is that batteries for their radios are either unavailable, too expensive, or of inferior quality. The lack of batteries can seriously limit the impact of development campaigns built around the use of radio.

In Malawi, for example, the Malawi Broadcasting Corporation covers approximately 85% of the country, but rural listenership was estimated at only 14% in a 1984 survey. This is a tragic loss to the country's development efforts since MBC broadcasts a wide range of development-oriented radio programs.



The inability of many people to afford batteries is one reason given for low listenership. In Malawi, a set of four batteries costs more than five dollars, a major investment for people living in a country whose annual per capita income is less than $150. This cost becomes even more prohibitive when several sets of batteries would be required to a operate a radio for one year. Also, fresh batteries are not always available in rural areas. These constraints also limit the use of audio cassette players. One solution is to use radios and cassette players that don't need battery power and that are easily recharged.

The Dynamo radio, available from B-N-Genius, contains a nickel-cadmium battery that can be charged from a wall outlet or by cranking a built-in generator. The radio receives AM and FM and also has a built-in flashlight. The Dynamo is reasonably sensitive and selective and has good tone quality for a radio of its size (about 7" x 5" x 3"). However, the speaker size and the level of audio output limit its suitability for group listening. The unit has a telescoping rod antenna and a jack for using headphones or an external speaker.

The Dynamo comes with a power adapter to operate the radio from a wall outlet and for charging the battery. It takes roughly 12 hours to fully charge the battery with the adapter. The radio operates continuously at a moderate volume level for more than 72 hours when fully charged.

The Dynamo's unique feature, however, is its built-in generator. It operates by turning the radio's crank at a rate of 120 revolutions per minute. Tests reveal that the radio will operate for approximately two hours after about 10 minutes of cranking, depending upon the listening volume. In practice, one simply turns the generator crank when the radio stops playing. The longer you crank, the longer the radio will operate.

The retail cost of the Dynamo radio in the United States is $44.95. It is supplied with an AC adapter/charger and an extra flashlight bulb that is stored inside the radio's plastic case. The nickel-cadmium battery is also replaceable. The radio is manufactured in the People's Republic of China.

The TapeTalk cassette player, available from Recording Products, contains no battery at all. It is operated by a built-in generator which powers the unit as long as the crank is turned. This sturdy unit is a play-only device with amazingly good tone and ample volume for listening by relatively large groups, especially when connected to an external speaker through the built-in headphone/speaker jack.

It does require a bit of practice to turn the generator handle at the correct speed, but this is not critical for voice playback. Even music can be reproduced with reasonable fidelity by an operator with a steady hand.

Cassettes can be rewound with the generator crank by turning them over and sliding back the playback head. The unit is monophonic and weighs two pounds and four ounces. It is about the size of a standard portable cassette recorder. The TapeTalk costs $27 in the United States. Tests on both units were conducted by the Institute for International Research (IIR) as part of the A.I.D.-funded Communications Support Project.

William E. Mackie is a Media Production Specialist from Austin, Texas. He has worked in Malawi, Liberia, Botswana, and Nigeria as a radio producer, writer, director, manager and educator.

For more information on the Dynamo Radio or the TalkTape cassette player, contact:

Dynamo Radio
B-N-Genius
22121 Crystal Creek Blvd. S.E.
Bothell, Washington 98021 USA
US$44.95 plus delivery

TapeTalk Cassette Player
Recording Products
800 East Main Street
Santa Paula, California 93060 USA
US$27.00 plus delivery

Communicating about the Environment

The Clearinghouse is looking for samples of development communication materials on the environment. We would especially appreciate copies of comic strips, photonovelas and materials developed specifically for children and adolescents. Please send materials to: Mr. Jim Dunn, Clearinghouse on Development Communication, 1815 North Fort Myer Drive, Suite 600, Arlington, Virginia, 22209 USA.

(YES, BUT ... *from page 16*)

In countries where extension services are breaking down under the weight of increasing costs and diminishing resources, it may make sense to integrate some staff and operational costs into the local radio system *providing it remains local*. If this kind of integration were practiced by several sectors, the amortization of basic communication service costs across the sectors could realize substantial economies and improved effectiveness.

➤ *What It Costs to Run a Local Radio Station.* To keep a station on the air every day with local news bulletins, at least four hours daily of development programs, and music to fill in the rest of the airtime, a station needs a well-qualified manager, a secretary/bookkeeper, a program director, about six full-time producers, the same number of volunteers, and two technicians to maintain the equipment. Commercial stations often have more salesmen--operating on a commission basis to sell airtime and bring in revenues--than producers to make programs. Development broadcasting should bear this in mind since governments rarely provide complete support. Salaries are likely to be at least half of the operating costs, producers in government systems generally earning the same as extension agents and teachers.

Other direct costs include electrical power, transportion for producers, honoria and talent fees, equipment replacement and spare part funds, research costs, and marketing costs.

Communication Strategy Issues

➤ *National vs. Local Radio as a Development Tool.* Where they have operated, local radio stations have generally been more popular than national systems. As accounts in this DCR have shown, given the opportunity, communities have valued and supported local radio stations with an enthusiasm unknown to national systems. Nevertheless, governments in most countries support the broadcasting system that provides them with nationwide coverage before funding local systems, regardless of listener preferences. They believe that national radio systems can supply development information, but on a larger scale. If a local campaign is good, a national campaign is better. It reaches more people, and therefore is both cheaper per person and more effective. Governments tend to think in national terms even when they acknowledge that most development takes place at a local level.

> *... the amortization of basic communication service costs across sectors could realize substantial economies and improved effectiveness.*

➤ *Benefits of Local Radio.* Given that local radio stations constitute an extra cost to development, what extra benefits can the system provide? Dennis Foote's evaluation demonstrates that local radio can be an effective channel to disseminate information and education, but it should operate in conjunction with other systems. Radio's key benefits were found to be:

- that local radio closes the knowledge gap between urban and listeners;
- that although local radio is perceived as a new primary source of information and knowledge, people still want and need traditional face-to-face sources, such as extension agents, teachers or clinics, to answer follow-up questions; and
- that local radio *radically increases* the use of existing development services.

Administrative Issues

➤ *Local Radio and Nervous Administrators.* If a local station is part of a wider system, it will require an uncomfortable degree of autonomy to be effective. Decentralized systems worry administrators because remote locations are difficult to monitor and control. Local stations identify with local populations more than with central institutions. Their staff work early in the morning and late at night when their audience is listening rather than usual office hours. These differences in ethos and practice demand unusual tolerance on the part of those at the center. Central administrators may simply say: who needs these problems?

Conclusion: Is Local Radio Worth All the Trouble?

If investors in development conclude that a) the locus of development activity is essentially agricultural and therefore rural, local and probably remote, and that b) it therefore makes sense to promote information systems that reach local people with maximum efficiency, then it is possible to make a strong case for local radio.

If planners believe that national radio is less expensive and less risky than local radio, and that it is doing an adequate communication job, then they will perpetuate the status quo.

Since 1972, Michael Laflin has worked in Kenya, Kuwait and Liberia in radio production and media systems planning and management. He is currently Director of the Clearinghouse on Development Communication.

New Books

The Mass Media and Village Life (1989) by Paul Hartmann, B.R. Patil and Anita Dighe is an assessment of the potential contributions of communication media to development--What, again??

This book offers unusual details and insights into the role communication plays in the social processes that bear on development. These fascinating case studies conducted in five Indian villages provide both qualitative and quantitative data and track the way that communication--like any other development process--is affected by class structures. It concludes that locally-based rather than centralized strategies for communication show the most promise of success. *Mass Media* is part of a series on communication and human values. Available from Sage Publications, 2111 West Hillcrest Drive, Newbury Park, California, 91320, USA (in New Delhi: Sage Publications, M 32 Greater Kailash Market I, New Delhi 110 048; in London: Sage Publications, 28 Banner Street, London EC1Y 8QE). US$14.00 paperback; US$28.00 hardcover, plus shipping.

Audiocraft: An Introduction to the Tools and Techniques of Audio Production by Randy Thom is an indispensable guide for anyone interested in radio. The 1989 edition explains the basic concepts of audio production from the principles of sound to the production of full scale documentaries and concert recordings. Explanations of technical subjects are clear and easy to understand. Available from the National Federation of Community Broadcasters, 1314 14th Street, NW, Washington, DC 20005 USA. Telephone: (202) 797-8911. US$22.00 plus shipping.

Local Radio: Hard Questions

By Michael Laflin

Local radio may be an effective way, even *the* most effective way, to reach rural people with information for better health, to mobilize community action and resources, or to promote sales of fertilizer, but who supports it? There are two primary professional groups who could act as advocates: broadcasters and development agencies. Broadcasters' careers are bound up in national broadcasting systems, not in the backwaters of local radio. Development agencies disseminate both information and services, and support their own extension services, clinics and schools. In some countries, local communities and private voluntary organizations may be proponents. If we asked development communicators--who rely heavily on broadcasting to get their messages across--to cite five key communication stategies or technologies, would local radio services be on the list?

We can say local radio costs less than traditional means of development communication, such as extension, but national mass media are even cheaper and offer greater coverage. And we can point out the fact that local radio is multisectoral. But if we do, we risk losing the support of the powerful agricultural, health, and population constituencies that sponsor systems in their own sectors.

So, who will pay for local radio? What will it cost? What benefits will it accrue? Let's consider the issues.

Policy Issues

➤ *Broadcasting as a Symbol of Modernity* Broadcasting is a symbol of national development status, like a national airline. A country with television is considered more advanced than one with only radio; color television is better than monochrome. Empirical data says radio is more cost-effective for most development purposes. But, governments want television services, regardless of the cost of programming. Governments respond to the fact that people like pictures with their sound. Audiences the world over prefer television to radio. If there is money to be spent, local radio stations are not going to be the first choice. Local radio will remain low man on the symbolism totem pole until it is recognized as a sign of the growing sophistication of a country's array of media.

➤ *Urban vs. Rural Expenditures.* By local we mean rural radio stations broadcasting perhaps fifty miles at the most. If a government is faced with distributing scarce resources among several rural districts or to a single large urban center, the latter decision is easier to take. First, urban constituencies are more consolidated and powerful. Second, it may not be possible to satisfy all rural districts, and uncomfortable choices may have to be made and justified.

➤ *Ideology.* Governments regard national unity and integration as a priority. Legitimization of local languages and identities often seem destructive to that end. For this very reason, Nicaragua closed down the Miskito station and Kurdish is an outlawed language in Turkey. Most governments sustain, control and protect national broadcasting systems at the expense of local radio stations unless there is a conscious policy to promote the expression of local opinion and to mobilize local communities.

➤ *Local Radio as a Security Risk.* "The safest radio station is securely locked up in the capital city. It can be protected from coup attempts and easily monitored. Local radio is remote, difficult to secure, and might be saying anything especially when it broadcasts in local languages." So the argument goes. Certainly, insurrectionists try to control broadcasting, but they usually target national stations, not a series of little stations that broadcast for only a few miles. On a daily basis, the content and flow of information generally reflect the ownership of the station and the prevailing political ethos of the country.

Cost Issues

➤ *Local Radio as an Expensive Add-on.* In some of the poorest countries, a lack of operating funds has silenced even national broadcasting systems for days at a time. In others, governments essentially divest themselves of radio stations by instructing stations to generate increasing proportions of their budgets from airtime sales. Many government broadcasting systems are inefficient, underfunded and wasteful. Why add to the mess?

The irony is that the poorest countries stand to gain the most from local radio. The same conditions that make it difficult to fund radio systems also create immobile extension services and absentee teachers. In economically constrained countries, field extension staff are usually under-trained and poorly motivated. Information and knowledge just do not reach the people who need them most. Local radio is one of the most efficient ways we know to bridge the gap.

➤ *What it Costs to Start a Local Radio Station.* Dean Stephens proposes a system that costs $1000, assuming a building is available. Religious stations all over the world are constructed for a fraction of the $250,000 spent on each LRCN station in Liberia. This author has seen pirate radio stations in Ireland built in derelict houses and equipped for a few thousand dollars. A realistic figure would be about $100,000 to install a station that accords to generally accepted professional standards, in an existing building, equipped with new recording equipment, a 10 KW transmitter, airconditioning, and a generator.

But here two caveats apply. First, local conditions--i.e. mountains, available frequencies, iron ore in the ground--will affect transmission of the signal and may require higher towers, booster stations or larger transmitters. Second, assumptions about future funds to buy spare parts, routine maintenance practices, and operating conditions--dust, heat, sudden electrical surges, power outages--dictate whether one invests in the best and most durable equipment--which is expensive--or whether one buys something else.

Training needs and costs vary according to the number of people to be trained, their skills, general education on entry to a program, training objectives, and whether the broadcasting system is new or well-established.

Radio stations of any kind do not just appear on the dial and draw an audience. Start-up costs should include marketing activities just as commercial radio stations do.

Radio has three cost features that make it competitive:

- it requires relatively few staff compared to alternative systems;
- it puts out so many hours of programming that, even with a relatively small local audience and modest audience share, the number of listener hours per year is massive; and
- its costs can be amortized across all sectors.

(Continued on page 15)

Supplement

1989/1
Supplement

Nepal: Gearing up for 1990

"I want to be able to teach my children."

"I want to be able to read what I am signing for and write my name myself rather than putting my thumb print on it."

"Look at these three sisters!... How could they go to school? This is a chance for them to learn."

"I want to be able to read the names of the gods before I die."

These are just some of the reasons why children and adults are participating in a pilot literacy program currently underway in Nepal. The pilot project is being tested in the panchayats of Jarbutta, Uttar Ganga, Lati Koili and Barendranager, in preparation for Nepal's National Literacy Campaign set to begin in 1990. Administered by Nepal's Ministry of Education and Culture with help from USAID, the program includes literacy classes for children and adults. With assistance from World Education and Action Aid, the pilot program is developing and testing literacy materials, a teacher training program, and project monitoring and supervision systems. Next year, the program will expand its efforts to cover more territory and include more students as project testing and evaluation continues. Both the Nepal Elders Organization and the Nepal Women's Organization are committed to the Campaign and are helping to recruit teachers and to mobilize support among community leaders. Nepal's National Literacy Campaign will begin in 1990-91. The campaign target could be as great as 10,000,000 participants by the year 2000.

For more information, contact The Clearinghouse of World Education, 210 Lincoln Street, Boston, Massachusetts 02111 USA. Telephone (617) 482-9485 Telex 200178 ISLUR.

Sample from adult literacy meterials currently being tested in Nepal.

Communicating Indigenous Knowledge

Communication between development specialists and local people is the weakest link in the development process. In most cases, communication in development has a one-way focus: from top-level administrators, to researchers, to extension personnel and then finally to the people development serves. Local information and expertise can be lost forever if no one takes the time or makes the effort to record it. An appreciation for and an ability to apply indigenous knowledge is one way to decrease miscommunication and misunderstandings.

The Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD) helps facilitate communication between development specialists and local people. CIKARD collects, documents and makes indigenous knowledge available to researchers, development practitioners and extension agents around the world. It also develops training materials and conducts training courses on the identification, recording and use of indigenous knowledge to promote cross-disciplinary research.

CIKARD is currently calling for papers on ethnoveterinary medicine – folk knowledge and practices for animal health and diseases – for publication in an annotated bibliography and anthology.

Contact: Dr. F. Mathias Mundy, CIKARD, 318 Curtiss Hall, Iowa State University, Ames, IA 50011 USA. Telephone (515) 294-0938.

Supported by the Bureau for Science and Technology, Office of Education, U.S. Agency for International Development

A Communicator's Checklist

by Jerry Domatob

Nigerian and indeed African communication textbook writing is coming of age. In the last two years, over 20 books have emerged in this discipline-comparatively speaking, a remarkable feat.

✔ One of the scholars in the forefront of this breakthrough is Onuora Nwuneli, editor of *Communications and Human Needs in Africa* (1988). The book "... is the result of the first conference on Communications and Human Needs organized by the African Communication Association (ACA) held in Lagos, Nigeria in 1985." *Communication and Human Needs in Africa* is a collection of eight essays by conference participants. The book is divided into two sections: 1) Information Needs in Africa and 2) Food Needs in Africa. Essays included in the collection are: "Media Coverage in South Africa in the Front Line States" by Carlos Cardoso; "PANA Coverage: Liberation Movements and Southern Africa: Isn't the Pen Mightier than the Sword?" by Swaebou Conateh; "All Africa Press Service Case Study" by Mary Beatrix Mugishagwe, "The African Food Problem: Scope Constraints and Solutions" by A.G. Ojanuga, and "Agricultural Communication & the Non-Literate Farmer" by E.O. Soola. The structural organization of the book is exquisite. It is logically organized and chapters flow easily one to the next. The themes are not only topical and relevant but vital for Africa's survival as a people and as a continent. Food and liberation are two major issues for Africans today. This book is a rich source of material for students of mass media and society; media policy, comparative media systems and political communication. Available from the Clearinghouse or in Nigeria from Dr. Onuora E. Nwuneli, Coordinator, African Communication Association (ACA), Department of Mass Communication, University of Lagos, Lagos, Nigeria. Telephone: 41361/604.

✔ At a time when African communication scholars are striving to tackle the problem of textbook paucity through writing, Adidi Uyo has joined in with grand style. His book, *Mass Media Messages In A Nutshell* (1987) is a basic introductory text for students and laymen. According to the author: "the messages of the mass media the book dwells upon are significant for one special reason: their thorough understanding is a prerequisite for writing for the mass media ..." The book consists of a preface and three main chapters. Chapter one provides a conceptual overview of mass media messages; chapter two focuses on messages of newspapers and magazines while chapter three examines messages of radio and television. Each chapter ends with a short exercise--Celebration--which enable the reader to review what was covered in the chapter. Bibliographical notes are also included. Cynics may be tempted to dismiss the book as being too simplistic. They may further suggest that it is just a glossary of terms and their etymology. In the epilogue, Uyo answers this criticism: "You will be damn right if you have observed that what we have traversed in these pages is devoid of theory as well as issues. That is so because all that we intended to do was to present a straight-forward and compact description, indeed a veritable compendium." Adidi Uyo's *Mass Media Messages In A Nutshell* is a splendid introductory text written in lucid, sometimes humorous, colloquial style. It's organization is superb and its content rich; it is an exquisite text for persons interested in knowing what the media's role is society is. Available from Civiletis International, 21 West 80th Street, New York, New York 10024 USA (US$5.95) or from Civiletis Nigeria Ltd., #19 Bombay Crescent, Apapa, Lagos, Nigeria (N10).

Jerry Komia Domatob is the Acting Head, Department of Mass Communication at the University of Maiduguri in Nigeria.

Development Communication Report

The Development Communication Report is a publication of the Clearinghouse on Development Communication. The Clearinghouse is operated by the Institute for International Research (IIR), in association with Creative Associates International, and is supported by the U.S. Agency for International Development, Bureau for Science and Technology, Office of Education.

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Family Planning Resources

Johns Hopkins University's Population Communication Services (JHU/PCS) has developed a sample pamphlet that can be adapted by family planners in sub-Saharan Africa. The text and illustrations have been carefully designed to make them appropriate for most of the peoples living in sub-Saharan Africa, but simple modifications can be easily made to suit local customs and conditions. Some ideas for adapting the pamphlet:

- translating the text into local languages;
- changing the style of clothing to one more typical of the area;
- adding illustrations that reflect local conditions;
- adding a local slogan, address and logo.

The material should be pretested before being reproduced by showing drafts to members of the community to make sure that the messages and pictures are understood correctly. The pamphlet is produced in black and white to facilitate reproduction. Part or all of text and pictures can be used to reflect the types of services different programs may offer. JHU/PCS would like to receive copies of adapted pamphlets and welcomes comments and suggestions from the field. For more information, contact: Patrick L. Coleman, PCS Project Director, Population Communication Services, 527 St. Paul Place, Baltimore, MD, 21202, USA. Telephone: (301) 659-6300; Fax: (301) 659-6266; Telex: 240430 JHUPCS UR.

On File at ERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include papers and reports on the use of radio in developing countries to disseminate information about family planning, agricultural techniques, how families can help their handicapped children, and adult literacy programs. A study of community media in urban areas is also reviewed in this column. These documents are available in microfiche from the **ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia, USA**. They are also available in paper copy from EDRS; paper copies of Unesco publications are usually available through Unipub. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs can be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound. *The ERIC Clearinghouse on Information Resources cannot fill orders for these documents.*

◆ Henry, Kathleen. *Using Radio to Promote Family Planning in Sub-Saharan Africa.* 1988, 31pp. (ED 295 245)

Family planning programs in sub-Saharan Africa--the fastest growing and poorest region in the world with 42 countries and a population of 450 million--need effective communications campaigns to educate people about the benefits of contraception, help change attitudes about family size, and provide information about contraceptive methods and family planning services. An important medium in areas where a strong oral tradition and low literacy exists, radio is an effective way to reach people in sub-Saharan Africa because of its credibility, portability, immediacy, flexibility, and inexpensive production costs. Twenty-seven references are included. Available from EDRS in microfiche for $US.85 or in paper copy for $US4.00.

◆ *Rehabilitation Broadcasts for Rural Areas.* 1986, 51pp. (ED 280 244)

Written in English for radio broadcast in translation to rural village areas in Pakistan, the 14 scripts in this collection educate the public about disabilities and how families can help handicapped children participate more fully in community life. The format typically consists of informal conversations between rehabilitation counselors and parents, village leaders, school headmasters, or disabled adults. Script titles include *One in Ten Is Disabled; The Mentally Retarded Child; People Who Have Fits; The Physically Disabled Child; The Blind Child; Blind Young Men; The Deaf Child; Children with Cerebral Palsy; Speech Problems and Behavior Difficulties; Cause and Prevention of Disabilities;* and *Going to School.* Notes on script adaptation, presentation and the role of the rehabilitation specialist are appended. Available from EDRS in microfiche for $US.85 or in paper copy for $US6.00. Also available from the International League of Societies for Persons with Mental Handicaps, 248 Avenue Louise, Box 17, B-1050, Brussels, Belgium.

◆ Muller, Josef, Comp. *Radio for Literacy: A Reader on the Use of Radio in Literacy Programmes. German Foundation for International Development. Workshop Series.* 1985, 413pp. (ED 265 372)

Designed as a supplement to workshops on radio support for literacy, this reader provides background information on the use of radio in adult literacy education. An overview introduces six reading selections: (1) radio and television for education and development; (2) using radio to help develop and support functional literacy; (3) planning for the use of radio (this includes a two-part questionnaire on radio and television literacy campaigns sent to education and broadcasting organizations around the world, and serves as a checklist for project planning); (4) the Rural Farm Forum, detailing organized group-listening strategies; (5) case studies on the use of radio for literacy programs in Tanzania, Zambia, Ghana, Niger, India, the Dominican Republic, and Colombia; and (6) a brief theoretical framework followed by a list of requirements for an effective educational media project. A bibliography is attached. Available from EDRS in microfiche for $US.85 or in paper copy for $US4.00.

◆ Lewis, Peter M. Ed. *Media for People in Cities: A Study of Community Media in the Urban Context.* 1984, 242pp.

Two propositions formed the basis for this study: (1) that mass media and educa-

(Continued on page 4)

What's New, What's Coming

A classified section will be available for Clearinghouse members to advertise their needs and services. If you need information or have an announcement related to development communication that you would like to share with DCR readers, send it to the Clearinghouse, 1815 N. Fort Myer Drive, Suite 600, Arlington, VA 22209, USA. Submissions should be not longer than 50 words.

Courses

DTCP Short Courses

The Asia and Pacific Office of the UNDP's Development Training and Communications Planning (DTCP) program in Manila is offering three-to-four-week courses this summer in audio-visual production techniques; communication campaign planning; and training and management, supervision, and evaluation of communication programs.

For information, contact: DTCP/UNDP, 5th floor, Bonifacio Building, University of Life Campus, Meralco Avenue, Pasig, Metro Manila, Philippines. Telephone: 673-6401; Telex: 29018 DTCP PH; Cable: UNDEVCOM MANILA

Child Care in War and Disasters

The Institute of Child Health at the University of London is offering a six-week course on the care of children in wars and disasters. The course helps relief workers provide better care for displaced children, orphans, and abandoned children. Course topics include child development; the effects of war, displacement, trauma and bereavement on children; family and community-based forms of care; organizing institutional care; record keeping and tracing families; and assessing needs and planning services.

For more information, contact: Short Course Secretary, Tropical Child Health Unit, Institute for Child Health, 30 Guilford Street, London, WC1N 1EH, England. Telephone: 01-242-9789; Fax: 01-831-0488.

(Continued on page 4)

(**ERIC** *from page 3*)

tion institutions have not adjusted to the problems of newly formed cities or with urban disintegration in older industrialized cities, and (2) that marginal urban groups have a need for greater control over their lives. The introductory chapter provides the rationale for the study and summarizes the characteristics and functions of community media and the internal limitations of community media projects and their external constraints. Nine case studies from Africa, the Arab World, Australia, Trinidad and Tobago, Europe, India, Japan, Latin America, North America, and the Philippines are presented and cite examples of places where a more equitable distribution of power in urban communications has been achieved. Proposals for related, future activities, and further research on this topic complete the report. This Unesco publication is available from EDRS in microfiche only for $US.85.

Barbara B. Minor is the Publications Coordinator at the ERIC Clearinghouse on Information Resources, 030 Huntington Hall, Syracuse University, Syracuse, New York 13244-2340 USA

(**WHAT'S NEW** *from page 3*)

Communication Planning and Strategy

Beginning May 28th, Cornell University will offer a four-week course in communication planning and strategy for ministry officials and communication project leaders. Among the topics to be covered are: developing a communication strategy; analyzing audiences; message design issues; media selection; mobilization of resources; interpersonal communication; mass media and communication research and evaluation. Cornell is also offering six-week courses later this summer, including: Writing for the Media; Photo Communication; Audio and Video Message Design and Production; Investigative Reporting; and Alternative Instructional Media in Distant Learning. This is the ninth year Cornell has offered courses. For more information, contact: Dr. R.D. Colle, CPS-89, Department of Communication, Cornell University, 640 Stewart Avenue, Ithaca, NY 14850, USA. Telephone: (607) 255-6500; Fax: (607) 255-0788; Telex: 6713054.

Conferences

Communication for Community

The World Association for Christian Communication will host the World Communication Congress '89 in Manila, October 15-19, 1989. *Communication for Community* is this year's theme. Field trips planned as part of the conference include visits to Tala Community Radio and Television, a community media system for leper rehabilitation in Caloocan City; the Calariz Multimedia Project, a fishermen's media education and advocacy program in Binangonan in Rizal; Catholic and Protestant broadcasting operations Radio Veritas and Far East Broadcasting; the Mediawatch Collective, a women's media monitoring, education and advocacy unit in Quezon City; and the Integrated Child Care Programme, a Church-based project for urban slum children in Barangay Tambo.

For more information contact: Congress '89, World Association for Christian Communication, 357 Kennington Lane, London SE11 5QY, England. Telephone: (01) 582 9139; Fax: (01) 735 0340; Telex: 8812669; Cable: WACC London SE11.

International Conference on Emergency Health Care

An International Conference on Emergency Health Care Development will be held in Washington, D.C., August 15-18, 1989. The Conference is sponsored by the Pan-American Health Organization, The Federal Emergency Management Agency, the United Nations Disaster Relief Office and other national and international organizations that deal with emergency health care issues. It is open to all emergency health care professionals and planners/managers of health care services and will focus on the development and upgrading of emergency health care services worldwide, building and improving health care system's response to mass casualty incidents and disasters. Representatives of international donor agencies will also review methods of funding emergency health care system improvement.

For more information contact: EHC Conference, Medical Care Development International, 1742 R Street, NW, Washington, D.C. 20009, USA. Telephone: (202) 462-1920; Fax: (202) 265-4078; Telex: 4941288 MCD UI.

Pacific Telecommunications Conference

The 12th annual Pacific Telecommunications Conference will be held January 14-17, 1990 in Honolulu, Hawaii, USA. This year's conference theme, *Pacific Telecommunications: Weaving the Technological and Social Fabric*, will highlight the role telecommunications plays in bringing nations, organizations, and people of the Pacific Hemisphere together. Special focus will be placed on economic, regulatory and social issues, services, systems and facilities. Interested individuals and organizational or research teams are invited to submit proposals for papers to be presented at the conference. Papers co-authored by persons from two or more countries are encouraged. Proposals for papers are due June 30, 1989.

For additional information, contact: Richard J. Barber, Executive Director, Pacific Telecommunications Council, 1110 University Avenue, Honolulu, HA 96826, USA. Telephone: (808) 941-3789; Fax: (808) 944-4874; Telex: 7430550 PTC.

Video

Films from Developing Countries

Third World Television Exchange (TWTE) is the U.S. organizer for *Screening Days*, an annual event featuring recent television and film productions from developing countries. *Screening Days* invites U.S. television and film buyers and distributors to view documentaries and feature films from developing countries. TWTE welcomes submissions from filmmakers in developing countries on culture and the arts; science and technology; history and nature; politics, and issue-oriented documentaries. TWTE is particularly interested in productions on the environment, refugees, and development issues. Productions can be submitted in their original language, provided they are accompanied by a complete script in English. There is no fee for submission. Contact: Third World Television Exchange, Inc., 420 East 64th Street, Suite 32, New York, New York, 10021 USA. Telephone: (212) 935-6419. Fax: (212) 517-4997. Telex: WUI 669121.

Development Communication Report

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Grassroots Communication: Lessons From a Tree-Planting Campaign

by Philip Decker

Tijuana is Mexico's boom town. Urban planning hasn't kept pace with population growth. Residents must organize themselves into neighborhood associations to pressure government authorities and to promote self-help development efforts to meet basic needs such as land tenency, housing, electricity, water, schools, parks, sewage systems, cultural activities, trash collection, health care and economic security.

One of these neighborhood associations, CUCUTAC *(Comité Union de Colonias Unidas de Tijuana, Asociación Civil)* represents more than 5,000 families from a dozen of Tijuana's poor neighborhoods. In the summer of 1988, the largest neighborhood, "El Florido," formed a grassroots communications workshop--*Taller de Comunicación Popular*--to produce media works that would complement community development projects.

To date, the Taller has experimented with an array of media tools--newsletters, flyers, pamphlets, plays, videos, photo-albums, photo-murals--and integrated them all into various community development projects. All the Taller's media works are created by members of the local community. The impact of the Taller's work can be seen in the effect that its products have had on the audiences that read or view them. For example, more people join the housing project and first aid classes thanks to the awareness the Taller's pamphlets and newsletters generate. But the Taller's impact is also seen in the process of creating the materials. Creating within a group stimulates dialogue and investigation among the participants about the community's strengths and weaknesses, problems and resources. Community members who work with the Taller enjoy greater self-esteem and feelings of responsibility for the community. The creative process serves as an effective organizing approach for community mobilization and acts as a catalyst for forming committees for collective action. This article concentrates on one of the Taller's projects--using a photo-mural to promote a tree-planting campaign.

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Biological Wealth and Human Poverty: A Tragic Embrace?

by H. Jeffrey Leonard and Katrina Eadie Brandon

The cumulative actions of humankind are contributing to gradual and inexorable global ecological changes that could profoundly alter life on Earth and the liveability of the planet. Water pollution, toxic industrial waste, ocean contamination and acid rain are a few examples of serious problems recurring around the globe. Three global ecological trends are particularly foreboding:

- the warming of the Earth's climate due to human activities;
- the diminution of the Earth's pool of genetic resources; and
- the declining productivity of much of the Earth's arable land.

Climate Change Scientists now widely acknowledge the prospect of global climate change. The continued burning of fossil fuels, release of chemicals that destroy atmospheric ozone and large-scale clearing of tropical forests are all partial factors. Within the next century, the *greenhouse effect*--increased concentrations in the atmosphere of carbon dioxide plus trace gases such as methane and nitrous oxide--could lead to a global climate warmer than any experienced in human history.

Despite increasing scientific evidence about the imminence of climatic changes, much uncertainty still exists about the regional and local consequences of global warming. We may see widespread alterations in rainfall which will affect agricultural practices, cause rises in sea levels and threaten the survival of plant and animal species. These changes would necessarily affect the economies and societies of developed and developing countries alike and scientists and policy-makers are just beginning to con-

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F/FRED wants you

The Forestry/Fuelwood Research and Development (F/FRED) Project is interested in learning about organizations that produce agroforestry videos, filmstrips and other audiovisual training materials. Contact: Norma Adams, F/FRED Project Editor, Winrock International, 1611 North Kent Street, Suite 600, Arlington, VA 22209 USA. Telephone: (703) 525-9430.

(LEONARD & BRANDON *from page 1)*

template possible responses to their long-term consequences.

Loss of Biological Diversity. An estimated 7.5 million hectares of tropical forest are cut down each year in developing countries and the pace is increasing. The second global ecological threat is the loss of genetic resources caused by the cutting and burning of the Earth's rich tropical forests that house up to three-quarters of the species found on the planet. The irony of this genetic destruction, says sociobiologist E.O. Wilson, is that scientists still do not know the true number of species on Earth because so many plants and insects remain undiscovered and uncatalogued.

... developing countries are still in the early stages of aggressive national campaigns to industrialize ...

Degradation of Productive Land. Soil erosion, salinization and other forms of land degradation are often perceived as less urgent than other ecological threats to the planet. However, the pervasiveness of soil erosion and its endurance despite major interventions in some countries support ecologist Vaclav Smil's view that "soil erosion, rather than climate changes, must rank as the world's leading global environmental worry."

In contrast to climate change or biological diversity, the consequences of worldwide loss of productive land are difficult to measure at the global level. Some estimates suggest that of all the hectares of tropical rain forest cleared and converted to agriculture each year, one-third to one-half will show a fertility decline greater than 50% within three years. And the FAO estimates that without long-term conservation measures, erosion threatens 544 million hectares of cropland in developing countries.

Responding to these global changes will be the greatest ecological challenge to humankind in the 21st century. Although climate change, loss of biodiversity and degradation of productive land can be expressed as separate missions, in reality they are inseparable. Destruction of tropical forests contributes to the impoverishment of the Earth's biological diversity, land degradation and significant releases of carbon dioxide that exacerbate global climatic changes. Industrial pollution not only threatens human health, but also adds a variety of greenhouse gases to the atmosphere and has been linked to the death of forests and to reductions in agricultural productivity. In turn, climate change could lead to accelerated species extinction and diminished productive capacity of many agricultural regions.

The Importance for Developing Countries

Developing countries account for virtually all of the remaining tropical forests that contain most of the Earth's genetic resources. They will also experience the greatest population increases. Many developing countries are poised to undergo rapid industrial development. And it is in the developing countries that the most spectacular incidents of large-scale land degradation on the planet are now found. The Worldwatch Institute has pointed out that in developing countries "human poverty and biological wealth seem locked in a tragic embrace."

While deforestation and chemical emissions are turning downward in the industrialized nations, developing countries are still in the early stages of aggressive national campaigns to industrialize and develop their territories. Thus, while they are not the major contributors of greenhouse gases to the Earth's atmosphere today, their share will increase as industrialization grows and as the clearing of tropical forests accelerates. Rapid, fossil fuel-dependent development and continued forest clearing among the newly industrialized countries such as India, Brazil, Nigeria and Indonesia could add significantly to global carbon emissions. For these and other reasons the cooperation of developing nations will become crucial to concerted worldwide efforts to slow climate change, preserve biological diversity and maintain the Earth's productive soils.

Dr. H. Jeffrey Leonard is Vice President of the World Wildlife Fund and the Conservation Foundation. Dr. Katrina Eadie Brandon is an Associate for Agriculture and Rural Development at the World Wildlife Fund and the Conservation Foundation.

(**DECKER** *from page 1*)

Promoting Tree-planting

In one part of Tijuana, the neighborhood name "El Florido" represents a hope, not a reality. El Florido is not very "florido" (in bloom). On the contrary, although the soil is fertile, El Florido winds through dry, bald, desert hills. Nonetheless, the soil is fertile. One of El Florido's plywood and cardboard homes stood out from the rest; it had a nice garden with several small, healthy trees, rows of medicinal herbs, bright flowers and vines spiraling around the porch. A woman named Alejandra lived there.

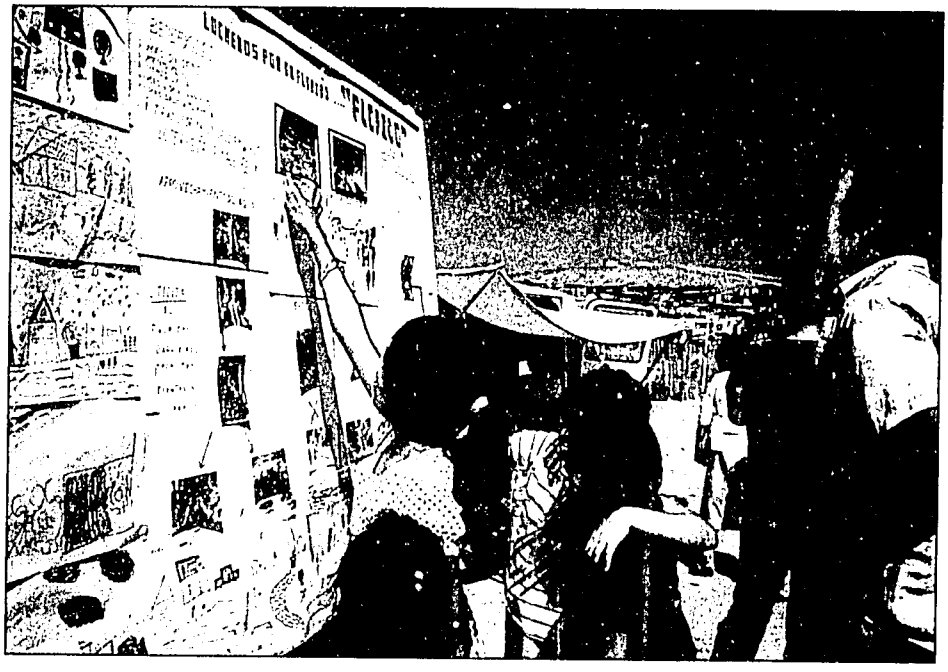
If the group had tried to form a reforestation committee right off the bat, the other community members would have thought it was a crazy idea.

I talked with Alejandra about her garden and asked if she would work with members of the Taller to create a photo-mural. She agreed to host a meeting at her house the following evening. Alejandra also invited other housewives from her block. At the meeting we looked at a manual on photo-murals and began planning. One family took charge of building a large, free-standing wooden bulletin board on which to display the mural. The others concentrated on the mural's design and content.

The group decided to employ visual language with color photos. The message was communicated through a basic juxtaposition of two images, a photograph of houses on barren hills with no green in sight next to a photo of a healthy green tree in front of a house with a garden. Under the first picture was written "Así Esta" (This is how it is), and under the second picture was written "Así Puede Ser" (This is how it could be). Alejandra and her neighbor Rosario decided what to photograph. We took pictures of nice gardens and close-ups of vegetables and flowers. We also took pictures of bald yards and of trash dumped on hillsides.

In addition to showing the good and the bad, the group also decided to use photos to illustrate gardening techniques designed to make more efficient use of costly and scarce water. El Florido residents must pay for household water, which is delivered by truck to each family's plastic barrel. Drinking water is bought in large bottles. The water used to wash clothes, dishes and people is usually thrown into the yard or the street. But used water can irrigate plants. To illustrate, we took a photograph of a man washing clothes with his garden visible beneath the wash basin. Then we took a close-up of a watermelon in his garden. Finally, we took a photo of the man eating the watermelon. When the images were connected by arrows, they represented a cause-and-effect relationship, between the water saved from washing clothes and the watermelon. We also took a picture of Rosario throwing a bucket of used water into the street and a picture of Alejandra throwing a bucket of used water at the base of a tree. Since many community members have had few years of formal schooling, a basic visual language was appropriate. We wrote "No" beneath the first image; we wrote "Sí" beneath the second.

Then the group met to edit the photos, to write the text and to lay out the mural. The group decided on several slogans, such as "Luchemos por un Florido ... 'Florido'" (Let's Work for a Community ... In Bloom); "Transforma lo Seco en Verde, lo Triste en Alegre" (Transform the Dry into Green, the sad into Happy!); and "Pónle Pulmones a tu Comunidad, Creando Areas Verdes" (Put Lungs into Your Community by Creating Green Areas). The photo-mural was then stapled to the bulletin board in the marketplace during a Sunday morning community meeting. The group set up a table next to the photo-mural and invited children to draw pictures of what their neighborhood would look like if there were more trees, gardens and flowers. The drawings were tacked up to frame the mural. Alejandra and her neighbors also stood by to explain the details of the campaign and to take down the names and addresses of people interested in helping out. The mural was hung on three consecutive Sundays, until it became too tattered to use again.



Community members view a photo-mural

The photo-mural was seen by several hundred neighbors. People strolled by, all day long, stopping to look at it. The mural was almost always read and viewed collectively--unlike newsletters, which are understood alone. Small groups would gather around, discuss the photos and make comments while other groups listened and responded.

The Impact of the Process

Evaluating the impact of the photo-mural was not just a matter of measuring the number of neighbors who signed the mailing list or the number who came to subsequent meetings. Instead, the biggest

(Continued on page 4)

Traditional Theatre and Environment

In 1986, the Asian Mass Communication Research and Information Centre (AMIC) initiated a project to test the feasibility of using traditional folk media to communicate environmental messages to mass audiences. With support from the United Nations Environment Programme (UNEP), the project evaluated the effectiveness of traditional theatre to generate awareness of environmental issues through traditional storylines, dialogues, songs, skits, riddles and debates.

The project was conducted in three countries. In Indonesia, environmental messages were presented to local audiences through ketoprak performances--characterized by comic satire, social criticism, colorful costumes and acrobatic movement and dance. In Thailand, Lakon Saw (sung drama) performances with environmental themes were televised to test the possibilities of using traditional media combined with a mass medium to reach large audiences. And in the Philippines, messages were integrated into traditional dula (folk drama) theatre--dulang nakakatawa (comic sketches); balagtasan (debate in verse); kuwentuhan (storytelling); tula (folk poetry); tula-dula (drama in poetic form); and bugtungan (riddles).

A summary of the project *Using Traditional Media in Environmental Communication* by Victor T. Valbuena (Occasional Paper No. 21) is available from AMIC. This publication highlights project methodology, selection of media and performing groups, production workshops, collaboration with other groups and agencies, pre-testing and evaluation, including sampling of audiences, simple questionnaires and other indicators of increased awareness and knowledge. The report also describes the difficulties of mounting traditional media performances with developmental messages.

For more information, contact: the Asian Communication Research and Information Centre (AMIC), 39 Newton Road, Singapore 1130, Republic of Singapore.

(DECKER *from page 3)*

impact the mural had can best be seen in the process of creating it.

The collaborative process of creating the photo-mural proved to be an effective catalyst for organizing the community. During the meetings, Alejandra, her neighbors and members of the Taller entered into a productive dialogue concerning the lack of trees and gardens in their community. They discussed the campaign's benefits, they shared water-saving techniques and they decided how to pitch the campaign to other members of the community. While taking the photos, they were actively investigating community problems and explaining their efforts to their neighbors.

Most important, in order to write the action section of the photo-mural, they had to decide where to go once the mural was taken down. After investing several evenings in the project, it made no sense to just hang it up and leave it at that. It was evident that those who gathered to create the photo-mural now shared an interest in working for a more beautiful El Florido.

The group had to propose a plan for further action. And once they had proposed a plan, responsibilities had to be divided and carried out. At that point, the idea of forming a reforestation committee to facilitate and legitimize a tree-planting campaign was suggested.

A reforestation committee was formed. Members of the committee went to visit government authorities to solicit participation in the government's tree-donation program. After waiting a few months, a truck arrived in the neighborhood to distribute about 200 small trees, now firmly planted in El Florido's soil. And the government has promised more trees for El Florido in the future. Committee members also organized a pilot project in family gardening. They obtained technical help from gardening specialists working for a local development agency. Fifteen families have planted model organic vegetable gardens. And these families will continue to spread their knowledge throughout their community. (The total cost of materials for the photo-mural did not exceed US$30.00 dollars.)

Making the photo-mural proved to be a creative organizing strategy. If the group had tried to form a reforestation committee right off the bat, the other community members would have thought it was a crazy idea. But by first working together to create the photo-mural, we began a rich dialogue and collaboration within the community. We invested time and energy working toward a shared goal. And we had lots of fun. It became a natural step for El Florido's residents to formalize their work by selecting a committee and by planning future activities. What started out as a simple photo-mural grew into a solid new community development project.

Philip Decker is the Director of Enlace: Centro de Comunicación Fronteriza, an organization that promotes grassroots communication and development projects in Tijuana. He also teaches communication-for-development courses at the Universidad Iberoamericana in Tijuana and at the University of California, San Diego.

What Are Debt-for-Nature Swaps?

A funding mechanism to finance conservation activities in developing countries, debt-for-nature swaps usually occur when non-profit environmental organizations buy a portion of a country's external commercial bank debt. The debt is converted into local currency and used to fund local conservation projects. For example, environmental groups recently purchased US$5.4 million of one country's debt at 17% of the face value. Local currency bonds were then issued for 75% of the face value. The bonds will mature in five years and will pay an average of 25% annual interest. The difference between the purchase price of the debt and the redemption value in local currency causes a multiplier effect, increasing the amount available to fund conservation efforts. The commitment of the host governments to improving the management of their countries' natural resources is the most important criterion for success. The money is used to fund a variety of conservation activities, including improving the management and administration of national parks, conserving buffer zones in remote areas, establishing research and training facilities, and increasing public awareness of environmental problems. Other development organizations are exploring the possibility of using similar financing to fund activities in other development fields. Also, debt-for-nature financing is not limited to environmental non-profit groups. Two European governments have already initiated debt-for-nature swaps.

Population and Environment: A Global Report

[illegible]

International Dateline, [illegible]

[illegible]

Decade Watch, [illegible]

[illegible]

Worldwatch, [illegible]

[illegible]

Population, [illegible]

[illegible]

Animal Kingdom, [illegible]

[illegible]

by Winthrop P. Carty

How are Third World editors writing about population and the environment? Do they stress one issue in favor of the other or do they tightly link the two problems? IMPACT, an AID-funded project of the Population Reference Bureau, communicates population information to LDC leadership groups. IMPACT planned to focus attention on the link between population and environment by asking members of the international press to join us in addressing the theme on a global basis.

We asked 11 editors of national publications in Third World countries to join us in Nairobi, Kenya, for a seminar co-hosted by the United Nations Environment Programme (UNEP). UNEP's participation increased the project's acceptability. We asked the editors to work on a special supplement publication for their journals that would focus on population and the environment. The supplement, called ***Global Edition***, would be 16 pages long. *Sustainable Development: The Challenge of Our Times* would be the first theme.

The first eight pages of Global Edition focused on worldwide issues. Many editors won't publish articles that smack of family planning advocacy, so the first section stressed population data and demographic information only. The theme "Child Five-Billion," a symbolic Third World newborn, was used to write about how societies will need to draw on environmental resources to support "Child Five-Billion" and the other children that will follow. The piece was written in cooperation with all of the editors, who requested only minor changes.

The second eight pages focused on regional considerations. The editors each prepared an eight-page section exclusively for their own publication. Final supplements were printed in Arabic, Bengali, English, French, Spanish and Thai. Including pass-on readership, the supplement had the potential to reach two million readers in 25 nations.

Different Sides of the Story

National journals often face manifest problems of censorship. They also may need to cater to special religious, political, economic or tribal interests. Stories about the degradation of the local environment or the failure of family planning programs can easily be construed as intolerable criticism of the government. In this regard, it was interesting to see how individual editors played the story.

One editor from Kenya, where the press recently has been under government pressure, wrote that "the solution of Kenya's population problem seems to lie more in a pragmatic approach to the hardened attitudes of the majority of the childbearing population and less in the area of...indiscriminate importation of drugs and technology." He concluded that poverty was the basic cause of the environment's destruction. He added, somewhat ambiguously, that Africa must reduce its population growth, "but it is erroneous to think that reducing population will decrease poverty. Only the rationalized utilization of local resources, much of it locked up in the energies of youthful populations, can create the much-sought-after wealth." The problem is presented as the poor's resistance to change. "Foreign gadgets and personnel have not been able to come to grips" with a complex issue. The government, lavished with funds for family planning and pursuing a develop-

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A Children's Magazine

By Jim Dunn

To promote health and environment education in Kenya's primary schools, the Mazingira Institute, a non-governmental organization based in Nairobi, publishes an annual magazine for primary school children. Mazingira Magazine uses articles, short stories, songs, games, puzzles, comic strips, illustrations and competitions to communicate health and environment messages. In 1986, with support from Canada's International Development Research Centre, the Institute conducted an evaluation of the magazine. Using the competitions included in the magazine as a survey tool, the Institute measured readers' existing knowledge about water and sanitation practices. Based on this information the Institute prepared a special issue focusing specifically on water and sanitation messages that emphasized water quality, disease prevention, rainwater harvesting, sanitation and diarrhea treatment and oral rehydration therapy. A teacher's guide and orientation were developed to help teachers use the materials in the classroom.

A second survey revealed that the magazine had a moderate impact on children's knowledge and behavior. Despite teachers' orientation emphasizing the practical uses of the magazine in the classroom, a majority of the teachers considered the magazine an extra-curricular activity that students should study on their own. When teachers did use the material in class assignments or discussion, impact was much higher.

About 60 percent of the children brought the magazine home to share with their parents and of those, 60 percent attempted to relate the material to their parents. Newly acquired knowledge wasn't generally shared with brothers or sisters. Girls were more likely than boys to discuss behavioral change with their parents--usually their mothers. Suggestions were received with less resistance from girls than from boys.

While the evaluation did not focus specifically on communication techniques, the study clearly indicated that students enjoyed the articles and short stories the most, followed by the comic strips. Half of the students had trouble understanding the magazine's games, contests and articles; however, they still enjoyed them. Students viewed the magazine as study material rather than as entertainment. Educational messages had the greatest impact when they were conveyed repeatedly using several communication modes--e.g. comic strips, illustrated text, games. And the magazine was more successful at imparting specific terminology and activities than wider concepts or analytical skills.

Jim Dunn is a research assistant at the Institute for International Research. For more information, contact: Mazingira Institute, P.O. Box 14550, Nairobi, Kenya. Telephone: 47066 or 47097.

Development Communication Resources

World Neighbors is a private, non-profit organization that helps people in developing countries analyze and solve their own problems. By providing training materials at a low cost, World Neighbors tries to counteract three basic problems in development:

* inadequate supply of development materials that can be understood by local groups;
* insufficient training by local peoples in communication and nonformal education methods; and
* lack of inexpensive, reliable teaching materials.

Word Neighbors offers filmstrips, books and other materials on community improvement, water, health and nutrition, family planning, small animal raising, agriculture, trees and soil conservation. World Neighbors also publishes two newsletters, the quarterly *World Neighbors in Action* and *Soundings*, a biannual communication exchange newsletter. Subscriptions are available for free for readers in developing countries and for US$5.00 for readers in industrialized countries.

For a copy of their training materials catalogue or subscription information, contact: World Neighbors, 5116 North Portland Avenue, Oklahoma City, OK 73112 USA. Telephone: (405) 946-3333. Telex: 5106002674.

(**CARTY** *from page 5*)

ment-at-all-costs policy, is caught in the middle.

The editor from Zimbabwe was a clear advocate of family planning and conservation. He wrote: "Economic growth will now have to be sustained and efforts to keep population growth under control continued... if the country is to start tackling its enormous problems of unemployment, uneven development and growth that have built up over the last few years." In addition, the Zimbabwean supplement had no trouble pointing out the shortcomings of neighboring governments' population and environmental programs. The editor focused very sharply on what Africans should and could do about their problems, virtually without mention of outside factors.

Stories about the degradation of the local environment or the failure of family planning programs can easily be construed as intolerable criticism of the government.

Different Approach

The two national journals from Africa were very different in tone and content. Differences of personality and opinion surely existed, but it is difficult to say to what extent self-censorship and anti-government sentiment played a part in shaping opinion. A London-based participant, whose magazine circulates in English-speaking Africa, wrote that "the two major problems facing Africa are desertification and the population explosion. Both these problems feed on each other to create the nightmare scenario for Africa's future." The editor advocated a "vigorous" family planning program for the region. The magazine's sister publication for the Middle East, however, treated population and environmental issues very gingerly. Except for Egypt, the magazine doesn't circulate in nations where the readership is popularly concerned about population. In general, magazines sold in the Arab world must be careful about stirring passionate feelings.

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(**CARTY** *from page 6*)

The editors from Colombia, Mexico and Thailand--countries where family planning is now widely accepted--focused more attention on environmental issues. The Colombian, as well as the editor from Bangladesh, tended to think that environmental degradation was the product of broad economic effects. The Mexican and Thai participants, by the way of contrast, thought that their societies should do much more to defend their own environment. Some of the editors had also asked environmentalists to contribute signed pieces to the supplement. The conservationists completely ignored or greatly down-played the link between environment and population.

Future Editions

The Nairobi seminar was instructive. I was surprised at how easily the meeting produced a sense of common purpose among the 11 editors. What they had originally thought were national or strictly regional problems turned out--in most cases--to be universal ones. Most of the editors brought copies of their publications to the meeting, allowing everyone to see that they were indeed working on global issues. In part for this reason, the editors wanted more and better information on international environment issues to strengthen their ability to write more authoritatively on the world scene.

Does the Third World press link environmental problems to population growth? There seems to be no pat answer. My hunch is that editors are often reluctant to burden environmental issues with the taboos of population. Urban environment was suggested as the next topic for ***Global Edition.*** The group quickly agreed. One editor then suggested global warming. Initially, the other editors rejected the topic as too futuristic and abstruse for nations whose poor are fighting to survive the week. Some editors felt that global warming was strictly an issue for industrialized countries. But after kicking the idea around, agreement began to develop: global warming was an important and immediate issue that could be made accessible to readers.

Winthrop P. Carty is the Population Reference Bureau's Director of Publications. Formerly, he was Director of Communications for IMPACT.

Television for the Environment in India

by Kreg Ettenger

India is a rich tapestry of cultural and ecological diversity. With many climates, landscapes and peoples, India also faces considerable environmental challenges. A population of 800 million takes a heavy toll on India's natural resources. But India is taking steps to protect her natural and cultural heritages while providing for the needs of her people by educating her citizens about the country's environmental problems and possible solutions--using video.

Television in School

India is in a strong position to carry out this goal. Growing availability of television sets and expanded ground and satellite transmissions have increased India's television audience by over 1000 percent in the last ten years. Many of India's schools now have access to television and video players. So, in collaboration with the U.S. Fish and Wildlife Service (FWS), the Indian Government has begun to develop environmental television programs for the country's school systems. The Children's Environmental Education Television Project (CEETV) combines advances in educational technology with up-to-date environmental information to promote knowledge and awareness about the environment among India's youth. CEETV will produce a series of educational videos focusing on various aspects of India's environment as part of larger environment education modules. The modules will also include teachers' guides, workbooks and other classroom materials targeted to reach Indian school children 10-14 years old. The project is administered by the Centre for Environment Education (CEE). Phase I of the project--development of topic ideas, production and pilot testing of the first module--is near completion. Phase II, production of the remaining modules, their distribution and broadcast and evaluation of the project is set to begin soon.

Form and Structure

A major goal of the project is to create a sense of individual capability and motivation among the students. Modules are designed to encourage open classroom discussion and active participation. Students should believe that they can improve their environment and be given the knowledge and skills to do so. Teachers are also encouraged to develop their own activities and lessons to complement the program.

A network of TV- and VCR-equipped schools is being formed for initial testing and evaluation. CEE is also training personnel from non-government organizations (NGOs) throughout India to hold teacher-training workshops. Participating teachers and schools will provide important feedback for evaluating and modifying modules. Plans also include airing the programs on India's national television network.

Each video is researched by project team members at CEE. CEE has produced materials for urban and rural schools, mass media, several national parks and the Government of India's annual National Environmental Awareness Campaign. CEE staff work with the episode producer to develop story ideas and decide on locations. The producers in turn work within CEE guidelines for length, content and specific learning objectives. Beyond this, producers are largely free to choose approaches that suit their style and the topic.

The format for the videos was developed by looking at existing Indian programming and at educational television programs from around the world. The project settled on a magazine format. Each program consists of individual segments tied together by a major theme. Programs can feature segments of real people in actual settings, puppets or animated sequences. The segments don't follow a rigid structure and are connected by storylines and major themes. Common opening and closing credits, theme music and characters used throughout the series provide additional

(Continued on page 9)

Environmental Education: A Fast-Growing Field in Latin America

by Diane Walton Wood

Nonprofit conservation organizations have proliferated throughout Latin America in the past ten years. Non-governmental organizations--NGOs--are taking the welfare of their countries' natural resources into their own hands. Some are well staffed, well funded, internationally recognized organizations; others are small, underfunded, volunteer groups operating with little outside recognition. However, all are committed to protecting and managing their countries' biological resources--resources that are disappearing at an alarming rate.

Latin America's NGOs are diverse. They cover national park management, protection of wildlife, reforestation, environmental contamination and other pressing issues. Some groups work closely with their governments, implementing complementary programs that fill gaps left by limited public sector funds. Others are activists, monitoring government policies and denouncing environmentally unsound policies. Some groups have united forces while others resist collaboration and compete for territory. They all share a respect for environmental education and recognize its potential for getting conservation messages out to the people who make the biggest difference. Latin America's NGOs understand the value of environmental education to bring about behavioral change and positive action. In Latin America, environmental education has become an integral part of natural resource conservation programs. And NGOs are gaining credibility as effective voices to address severe environmental problems.

Growing Networks

In Guatemala City there are at least 14 operating conservation NGOs. To coordinate their activities, they have formed the Conservation Federation of Guatemala and are now part of the Regional Network for Non-Government Organizations for Sustainable Development (REDES). At least half of the NGOs in the Federation identify environmental education as a priority. Several are planning a joint venture to establish a permanent environmental education center. REDES has also identified environmental education as a major objective. When funding becomes available, REDES plans to place an environmental education coordinator in each member country.

NGOs are gaining credibility as effective voices to address severe environmental problems

Latin America's environmental education programs are as diverse and creative as the NGOs that are implementing them. Perhaps the most sophisticated program is that of Fundación Natura, an NGO established in 1978 by citizens concerned about Ecuador's natural heritage. Launched in 1980 with a grant from the U.S. Agency for International Development, Natura's environmental education program attempts to raise the environmental consciousness of Ecuador's high-level decision makers. The program has been so successful that, in 1983, Natura implemented a second phase of the project designed to reach government decision makers, industry, school children, universities and the general public. Over the past four years, Natura has produced hundreds of education materials: slide programs, television spots and programs, booklets on Ecuador's flora and fauna, a complete primary school curriculum in collaboration with the Ministry of Education, a series of educational posters, radio programs and a comprehensive profile of the state of Ecuador's environment. Natura has also sponsored numerous seminars and conferences including Ecuador's first national congress on the environment in 1987.

Using Radio for the Environment

Of the media used in its education campaigns, Fundación Natura's radio series deserves special highlight. Composed of 12 thirteen-minute presentations, the program Mister Halley Superstar broadcasts conversations between Halley's Comet and a satellite as they lament the environmental demise of planet Earth. The comet and the satellite discuss the changes that Mister Halley has seen on Earth as he passes by every 76 years. Series titles include "Drowning in Trash" and "What Will the Future Bring?" Mister Halley has also been translated into Portuguese for use in Brazil.

Equally creative is the series Amergildo and His Truck. In this program of 64 four-minute presentations, environmental messages are communicated by Amergildo, a truck driver who picks up various passengers as he drives around Ecuador. Amergildo shares his observations about Ecuador's deteriorating environment with his passengers and with program listeners. The messages cover many topics including the environmental impact of industrialization, mass transport and deforestation. The language is pitched to the campesino, using regional colloquialisms and humor. Natura's director of its environmental education program, Marco Encalada, a specialist in mass communication, is the mastermind of these popular programs.

they understand the value of environmental education to bring about behavioral change

What makes Natura's Programs so Successful?

Aside from the creativity and excellent technical qualities of the materials produced, Natura's success is a result of a conscious effort to analyze its target audience and tailor its programs to their needs and priorities. Natura didn't undertake its education programs with preconceived notions of what had to be communicated or how best to communicate its messages. Instead, Natura researched how people best receive information. Findings were documented, analyzed and stored in a database that became integral to project design. All of the radio programs were pilot tested before final dissemination and were followed up with evaluation questionnaires. As an indication of the program's effectiveness, 100% percent of 45 radio stations surveyed indicated that Natura's radio programs were appropriate for their audiences.

Reaching Rural Communities

By Natura's own admission, the areas not adequately reached have been rural

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(**WOOD** *from page 8*)

communities. Natura doesn't have the staff or resources to maintain a strong presence in rural Ecuador. As a national organization based in Quito, it is difficult for Natura to implement effective programs in rural areas. This is not uncommon for conservation NGOs. Some national NGOs are tackling the challenge by establishing environmental education programs in rural communities through alliances with development assistance organizations. For example, Bolivia's Center for Interdisciplinary Community Studies (CIEC) has joined forces with the Bolivian League in Defense of the Environment (LIDEMA), an association of conservation groups established in La Paz in 1985. An NGO dedicated to researching social factors that influence rural life, CIEC has teamed up with another LIDEMA member, the Beni Research Station, to carry out environmental education programs in the Beni Biosphere Reserve. With funding from the World Wildlife Fund and Conservation International, CIEC has developed a multiphase project to diagnose the socio-educational status of school-age and adult individuals in the Beni Reserve area to develop environmental education programs in 11 schools and to train teachers in environmental, health and community organization issues. Extension services, public awareness and education programs are also planned. CIEC relies on the Beni Research Station for the ecological content of the program. The Research Station in turn benefits from CIEC's expertise in understanding and working with rural communities. Such alliances are critical to the effective protection of wild areas where sensitivity to human needs must be balanced with long-term ecological priorities.

Rural-based Conservation Groups

In the last few years, there has been a surge in the number of rural-based conservation groups that are undertaking their own environmental education programs on local and highly effective scales. The examples given here are only the tip of the iceberg and the influence of these groups is just beginning to emerge. These groups have begun to develop specialized materials such as coloring books, short stories, posters and booklets addressing the environmental problems of local communities. As alliances between development NGOs and conservation groups increase and grow stronger, there is room for optimism. The growing wealth of creative environmental education materials and programs in Latin America has begun to have an impact--and may begin to outrun the pace of environmental destruction.

Diane Walton Wood is Director of Latin American and Caribbean Programs at the World Wildlife Fund. More detailed information about Fundación Natura's programs can be found in ***Final Evaluation of Environmental Education Project II*** *and* ***Mid-Term Formative Evaluation of Environmental Education Project EDUNAT II*** *produced for USAID/Ecuador.*

Tree Growing by Rural People (1988) highlights forestry activities that directly benefit rural peoples in developing countries. The book is divided into three parts: 1) Trees in the Rural Context; 2) Strategies to Encourage Local Tree Growing; and 3) Developing a Sound Basis for the Introduction of Rural Forestry Innovations. Available for US$9.00 in English, French and Spanish from FAO Distribution and Sales, Via delle Terme di Caracalla, 00100 Rome, Italy.

Also from the FAO, *Community Forestry: Lessons from Case Studies in Asia and the Pacific Region* explores social and technical issues that are keys to community forestry success. Thirteen case studies cover lessons learned from India, Indonesia, Korea, Nepal, Pakistan, Papua New Guinea, Philippines, Taiwan and Thailand. To order, contact the Regional Forestry Officer, FAO Regional Office for Asia and the Pacific, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand.

Conference for Environmental NGOs

Environmental Education for Sustainable Development is the theme of a conference planned this fall by the International Society for Environmental Education. The conference will be held October 3 through 6, 1989 in Goa, India.

For more information, contact: Dr. Desh Bandhu, P.O. Box 7033, New Delhi, India 11 00 02.

(**ETTENGER** *from page 7*)

continuity. In this way, the magazine format remains cohesive while allowing for creativity of individual program producers.

The first video was produced and directed by noted Indian filmmaker Sai Paranjpye. The video tells the story of Somu, a young villager and his cow Drakhi. When a prolonged drought severely affects his village, Somu is forced to take the cow to a public cattle camp. During his journey, Somu learns about drought, its effects on the environment and how he can help his village prepare for the next one. "Drakhi" was completed earlier this year.

Essential Lessons about the Environment

Print materials that expand the ideas expressed in the videos are developed at the CEE. Materials include teachers' guides, workbooks and activity plans for the classroom. Like the videos, the print materials are designed to stand alone. However, using the videos and print materials together will yield maximum benefits, especially when teachers have been trained to use the materials at project workshops. As part of the project, CEETV has developed *Essential Learning in Environmental Education*, a handbook containing over 600 environment lesson ideas. Used to develop CEETV program content and objectives, *Essential Learning* will soon be available in book form and as a computer database from the National Association of Environmental Educators (NAEE) late in 1989. Another resource, *Experiences of Children's Television*, developed by CEETV, compiles findings and opinions from the field of children's educational TV worldwide. No doubt CEETV will serve as a model for future efforts, but CEETV addresses only one aspect of the need for educational television programs that address environmental, political and social problems. There is much room for further work.

Kreg Ettenger is a research assistant and Master's degree candidate in environmental communication at the State University of New York (SUNY) Syracuse. CEETV is a collaborative effort of the Centre for Environment Education (CEE) in Ahmedabad, India and the State University of New York, College of Environmental Science and Forestry (ESF) in Syracuse, New York USA. The U.S. Agency for International Development also supports the project.

The Chonogololo Club: Environmental Education On the Air

Since 1953, the Wildlife Conservation Society of Zambia (WCSZ) has promoted conservation awareness whenever manpower, skills, money and enthusiasm have allowed. In 1981, WCSZ began broadcasting the Chonogololo Club of the Air (CCOA), a 30-minute weekly conservation radio program in English for primary school-age children. The broadcasts are based on Chonogololo Magazine, an environmental education program that provides basic information about nature and conservation to young people. The magazine and radio programs are organized in three-year, 18-issue cycles, to keep costs down. Over 800 primary and 100 secondary schools receive regular issues of the magazine, accompanied by teachers' guides.

WCSZ relies on sponsorship, donations and membership subscriptions for funding. From scriptwriting to recording, WCSZ staff volunteer their time and skills to produce the radio programs. In addition to school students, CCOA reaches children who cannot go to school to learn about conservation. As of December 31, 1988, membership stood at 18,332. In 1987, WCSZ began producing the programs in two local languages, boosting annual membership totals by well over 200%. An analysis of addresses showed increased membership came from the regions where the local languages were spoken. But because of financial constraints, the programs were discontinued. Increased sponsorship has seen the re-introduction of one of the programs (in Bemba). The Society also produces an array of educational materials, encourages members to participate in research surveys, provides a weekly conservation column to the national Sunday newspaper and produces the Society's official magazine. A small library of 16 mm films and slide shows is maintained at the national office. As an added service to the clubs, WCSZ also operates a bus to transport members on field trips. Contact: the Wildlife Conservation Society of Zambia, P.O. Box 30255, Lusaka, Zambia. Telephone: 254226.

Pesticide Communication in the Cotton Fields of Nicaragua

Flipchart developed in Nicaragua sparks discussion in Ecuador.

Much of the attention environmental issues have received in industrialized countries in the last few years has increased public awareness and pressured changes in legislation and industry. Here Merri Weinger describes a communication project that increased Nicaraguans' awareness about an environmental issue. More importantly, the project also succeeded in bringing about positive behavioral change--something that many developed countries' environmental awareness campaigns have yet to undertake.

by Merri Weinger

In a community near Leon, Nicaragua, a fifteen-year-old boy was applying methyl parathion to his father's small parcel of cotton using a backpack sprayer. He began to feel nauseous in the morning. When he returned home at the end of the day, he still felt ill and went to bed. By the time his father got home that evening, the boy was dead.

This is not an uncommon story in Nicaragua, where the incidence of human poisoning and deaths is one of the highest in the developing world. Historically, pesticide use in Central America has been concentrated in cotton production. As the region's leading producer of cotton, Nicaragua also leads Central America in the volume of pesticides used--with dramatic consequences for both the human population and the environment.

In 1985, Nicaragua initiated a multidisciplinary pesticide health and safety project involving several governmental ministries and the largest farm worker and small farmer organizations. The project was financed by Nicaraguan, Canadian and Norwegian government funding with assistance from several private voluntary organizations, including CARE Nicaragua, the American Friends Service Committee and Oxfam. In addition to a strong educational component, the project also developed improved systems for pesticide mixing and loading, for medical monitoring to screen workers for overexposure to pesticides and for data collection and record keeping.

Educating Workers and the Community

Project educators were challenged to develop effective and creative methods and materials for reaching farm workers and the community with information about pesticides, their hazards and safe use. The information had to be accessible to large

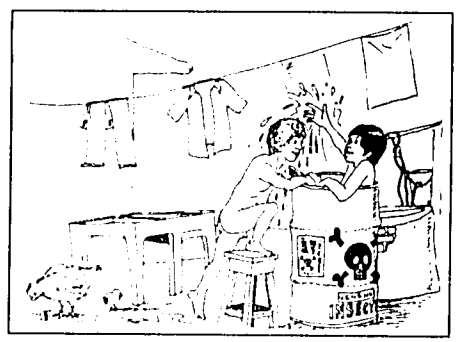
(Continued on page 11)

(WEINGER *from page 10*)

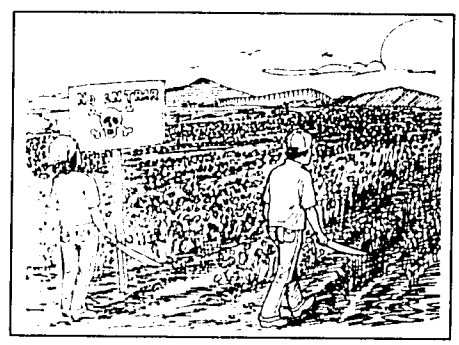
numbers of pesticide users with low levels of literacy. To provide more than one source of information, the educational program developed curriculum materials and conducted workshops to train trainers or "multipliers"--technicians, health educators and inspectors who could spread information within their communities. These new trainers helped train hundreds of farm workers and health promoters.

In coordination with the farm workers union, posters were also developed using photographs to present hazard information and safety guidelines. This article focuses on worker education, but the broader communication strategy also included radio public service announcements, special programs on pesticides by popular radio artists, newspaper interviews with Nicaraguan project staff and the development of a pesticide curriculum for schools.

Drawing 1



Drawing 2



Drawing 3

Popular Education Methods

The methodology which shaped the program, known as popular education, has become quite familiar in Nicaragua. It is a collective or group process, where the teacher and students learn together, focusing on the concrete experiences of the participants and reflecting on these experiences to effect positive change. Project educators utilized this approach in the development of curricula and materials. They also needed visual educational tools that were easily portable for use in the field and in conjunction with medical screening. A flipchart was designed and then assembled by participants in one of the training-of-trainers workshops. The flipchart included 18 drawings that used familiar images or problems to convey the health risks of pesticide exposure, common causes of poisoning and prevention advice. Designed for use as discussion starters, each picture had specific objectives and key questions that were outlined in an accompanying guide for instructors.

Some of the drawings were designed to provide factual information. Drawing 1--depicting one route of entry of pesticides into the body--was used to provide information and to generate analysis of how people are poisoned and what can be done about it. A series of inductive questions invited participants to identify the problem, project themselves into the situation presented, discuss their own experiences, analyze the causes of problems and suggest strategies to address them.

Pictures are most effective when they mirror the reality of the learners. Participants are more likely to analyze and identify with situations that portray scenes, actions and characters that are similar to themselves. Drawing 2 was inspired by a photograph of two children bathing in an old pesticides barrel. The introduction of two or more people into a drawing--Drawing 3: two people entering a recently sprayed field--encourages discussion of suspected motivation and feelings. "Why is she reading the sign? Why did he go right in?" With effective visual images, the same picture may trigger a variety of discussions depending upon the group.

Interactive Training

The training component of the program was equally interactive. One of the basic principles of popular education is that learning is most successful when it's active and participatory. In the classes, many of which were conducted on farms, the instructors acknowledged training participants' experience by inviting volunteers to demonstrate their knowledge: the correct use of the backpack sprayer or how to dress for working with pesticides. During demonstrations, classmates offered advice and jokingly critiqued their peers' performances, leading to a lively interchange. Other skills were taught using role plays or scenarios. For example, two volunteers were asked to come to the aid of a third who had been doused with pesticides in the field. They advised him to remove his contaminated clothing and wash with soap and water.

Both trainers and farm workers learned to read pesticide labels in small groups. Where literacy skills were limited, readers assigned to each group read the labels out loud and led discussions on what the labels meant. Participants were also encouraged to use warning symbols and color codes to assess the relative hazards of products.

Based on their experiences, trainers were encouraged to develop their own educational materials, such as posters or games, for use in their communities. A very successful puppet show entitled "It's Better to Prevent than Lament" became the finale for the program, with both the puppets and script created by trainers. The story, typically enough, involved a conscientious worker and a careless worker. The careless worker goes to work with a hangover--increasing his susceptibility to poisoning--doesn't wear his protective equipment, smokes on the job and dies as a result. Although the story seems morbid, it's told using jokes and familiar expressions--an entertaining delivery of a very serious message. The discussion that followed used the same processes employed with the flipchart to pose and analyze the problem and identify a plan of action.

Education for Action

Probably the most important principle of popular education is that it promotes action and change. Before developing the

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program, it was important to identify issues or problems that could become obstacles to change. As part of the needs assessment, the project team visited farms throughout the cotton-growing region to observe and analyze common work practices and the ways pesticides workers could become exposed to pesticides. The team also listened for emotional issues that might prove to be barriers to action--issues that make people angry or frustrated such as the unavailability of personal protective equipment, lack of access to soap and water and the absence of viable alternatives to chemical pesticides. People are more inclined to take action on issues which they feel strongly about.

Listening to people before the program began helped identify people's perception of risk and the prevailing beliefs that could effectively block communication.

Listening to people before the program began also helped identify people's perception of risk and the prevailing beliefs that could effectively block communication. Many farmers in Nicaragua believe that bathing after work causes the flu, arthritis and a variety of other maladies. Other farmers believe that milk can prevent poisoning as well as serve as an antidote. Bathing at the end of the work day is one of the most economic and effective prevention tools. Although a valuable nutrient, milk does not protect against poisoning.

Following the listening phase, these key issues and themes were translated into visual images for use in the flipchart and poster. The appropriateness of the images was key to their success. Testing prior to use was essential. In training, key issues were also incorporated into the puppet show, the case studies, role plays and slides shows. For some examples, the careless worker in the puppet show claimed that he was not vulnerable to poisoning since he drank milk. What's more, he had been working with pesticides for years without any problem. Similarly, a case study for inspectors asked how they would respond when encountering the same attitudes on farms. Responses were generated and practiced in class.

Adapting the Model to Other Settings

The educational approach used in Nicaragua's cotton fields is applicable to other settings from Texas and California to Costa Rica and Ecuador. In 1986, the flipchart travelled to the highlands of Ecuador and was used to train agricultural extensionists there. These trainers have now developed their own visuals and use them in their communications efforts.

When implementing a pesticide communication program, a commitment to understanding the audience--their perceptions of risk and the issues that can prevent change--must precede program development. Program participants often have a good understanding of the issues and should be involved in the development of materials and curricula whenever possible. When barriers are identified, they should be translated into discussion starters--pictures, slide shows, case studies, skits--for analysis by the group.

A multidisciplinary approach is also essential. Education and communication efforts without enforcement strategies, engineering controls, medical monitoring and investigation into alternatives will be ineffective. Simply understanding the risks without the legal, technical and medical support to prevent them will lead to increased frustration.

Patience is another prerequisite. While the project observed a general increase in the level of awareness and preventive activities on the part of farm workers, national organizations and the government, it will be several years before these changes are reflected in a decrease in the number of pesticide poisonings. In fact, the number of reported poisonings continues to increase as surveillance systems improve--a feature common to educational programs to prevent pesticide-induced illness. On a positive note, the application of popular education methods to pesticide health and safety is a major contribution to communication efforts in the field. n

Merri Weinger, MPH, is an occupational and environmental health specialist with the California Department of Health in Emeryville, California. She has worked in environmental health, education and communication for the past 15 years, in the U.S. and overseas.

Conservation in Context

Costa Rica has one of the best conservation programs in Latin America, but it also suffers one of the highest rates of deforestation. Nearly one quarter of the country is designated park or protected area. But pressures for quick resource exploitation caused by debt problems, combined with population surges into vulnerable forested areas, threaten remaining forests. Despite conservation efforts and donor assistance for research and environmental protection, the role that small farming and rural Indian communities play in rainforest protection hasn't received much attention--until now.

Production is underway on a new film that will focus attention on the conflicts, opportunities and frustrations of rural communities living on the "resource frontier". Conservación en Contexto (working title) is a dramatic film, flavored by popular culture, rich in romance, music, heroics and humor. The film seeks to strengthen Costa Rican grassroots initiatives in rainforest preservation and to encourage campesino participation in forestry conservation. People are more likely to model the behavior of characters with which they can identify, so a dramatic format instead of a documentary was chosen as the best approach. Support for the project has been overwhelming. The project has received input and guidance from Costa Rican grassroots environmental groups during every stage of production. Conservación en Contexto is expected to appeal to a wide audience. The inclusion of local figures in the subplot--doctors, teachers, religious leaders and local officials--further legitimizes the message.

Interlock Media Associates and Costa Rican co-producers Fundación Argos and Comunicación Alternativa Vision are producing the film. When completed, it will be distributed to conservation groups and aired on Costa Rican national television. An English subtitled version and a dubbed version in Portuguese are planned. For more information, contact: Interlock Media Associates, P.O. Box 619, Cambridge, MA 02238 USA. Telephone: (617) 491-3111

Reporting on the Environment

by Mike Laflin

A new book from the Asian Forum of Environmental Journalist, (AFEJ) *Reporting on the Environment: A Handbook for Journalists* sets out to acquaint journalists with key concepts in environmental issues and journalism, to establish "a kind of uniformity and consistency of reporting on a sustained basis" and to point out the subtle differences between general reporting and environmental reporting.

The handbook begins with a discussion of broad environmental issues. Journalists are warned against focusing solely on the political and social aspects of environmental issues and are told to educate themselves about the technical aspects of their subject. The coverage of the Three Mile Island nuclear reactor incident in the USA is cited: at the time, journalists knew little about how a nuclear reactor worked, did not understand radiation terminology or concepts and did not know which experts to seek out nor what questions to ask. The book makes the important point that journalists need to educate the public, but in order to do so they must first educate themselves.

The book stresses that the reporter has the role of watchdog as well as educator. This requires persistent, long-term monitoring of problems that need to be kept in readers' minds. Follow-up stories three months later are as important as headlines. Moreover, not every environmental story is about a supertanker spilling oil. Instead, for example, it can be about the number of myna birds exported from north-east Thailand and can require that the reporter learn about international treaties concerning endangered species, government policies and the myna bird's place within the ecosystem.

That environmental reporting often deals in uncertainty is another important point. Experts may not be able to explain the source of pollution or may disagree on how to stop deforestation while still providing fuelwood for local people. Environmental stories are often complicated. There can be many sides to a story that can build over time. Environmental stories are usually more technical than other issues and use jargon unfamiliar to most readers. For example, how do reporters deal with post-Chernobyl exports of dried milk from Poland to Nepal and Bangladesh without reference to the number of bequerels per kilogram to measure radiation?

Reporters must try to balance a multiplicity of viewpoints and provide equal coverage to each one even though objective validity is difficult to measure. Often viewpoints are highly emotional or controversial--people's safety or jobs may be at stake. The reporter may find it hard to remain objective or to avoid being manipulated. The book also reminds readers that the imperative to sell newspapers can encourage sensationalism and controversy and can discourage responsible coverage.

The central section of the book deals with technical issues facing journalists: sources of information, how to simplify complex information and how to deal with journalistic constraints on environmental writing. There are checklists for reporters working on environmental stories.

Finally there is a section called "Brief Guides to Environmental Issues." The handbook devotes between two and five pages to acid rain, air pollution, deforestation, ecosystems and the web of life, the greenhouse effect, ground water and surface water, overfishing, ozone and the atmospheric ozone layer, pesticides, radiation and toxic chemicals and metals. The descriptions are clear and objective. For example, when describing toxic chemicals, the effects on people are described this way: "Entry by inhalation is the most dangerous route. When a person breathes in a toxic chemical, as did the people in Bhopal, it goes to the lungs and straight into the bloodstream in almost a 100-per cent concentration."

The same section provides practical advice to journalists on how to handle the issues. For example, they are cautioned against oversimplication." One of the most difficult tasks a journalist faces is explaining safe and harmful doses of toxic chemicals." Several problems are then listed. "You should be aware of these problems, particularly when interviewing scientists who often resist giving "yes" or "no" answers to journalists looking for clear-cut answers. Often the reason they do not give clear-cut answers is because the situation is so complex they cannot."

The handbook ends with a glossary of terms and a bibliography that for the most part includes technical environmental reference works rather than books on communicating environmental issues.

We recommend this small but tightly written text. If there were only one book that practitioners could read, we would suggest that they choose this one.

Reporting on the Environment: A Handbook for Journalists *is published by the Asian Forum of Environmental Journalists in cooperation with the U.N. Economic and Social Commission for Asia and the Pacific (ESCAP), 1988.*

The Asian Forum of Environmental Journalists (AFEJ) was formally constituted in January 1988. It provides workshops, publications, a newsletter and clipping service, technical assistance, journalist exchange programs and awards for excellence. ***Reporting on the Environment*** *contains a list of the national chairmen. Copies are being distributed to members of the mass media in developing countries free of charge. There are plans to translate it into national languages of the 11 national environmental forums of the Asia region.*

Write to the Senior Expert on Environment, Environmental Coordinating Unit, United Nations/ESCAP, United Nations Building, Rajadamnern Avenue, Bangkok 10200, Thailand.

Award for Environmental Reporting

The Asian Forum of Environmental Journalists (AFEJ) is sponsoring the Best Story Award for environmental reporting in Asia in cooperation with the Friederich Naumann Foundation. Print, television and radio reports are eligible. A cash prize of US$4,000 will go to the winner. All stories published or aired before December 31, 1989 are eligible.

For details, contact: AFEJ, GPO Box 3094, Kathmandu, Nepal. Telephone: 977-1-410419. Telex: 2567 KMTNC NP. Fax: 977-1-226002 Nepal.

Glossary of Environment Terms

Agroforestry: the use of woody perennials as agricultural crops on a farm in a spatial or sequential arrangement which permits economic and ecological interactions between woody and non-woody components.

Biodegradable: any substance that can be readily decomposed by living organisms.

Biodiversity: the sum total of all species that creates and maintains ecosystems.

Community Forestry (Social Forestry): the use of communal or public lands for tree growing in cooperation with a forestry department to meet community needs.

Conservation Farming (Regenerative Farming): a system of farming that aims to be productive and self-sustaining by conserving natural resources of soil, rainwater and nutrient recycling.

Deforestation: the mass clearing of trees from forests and woodlands, which contributes to soil erosion and species extinction through the reduction of biodiversity.

Desertification: the process by which lands that have been disturbed by natural phenomena (drought, flooding) or human intervention (improper farming processes) are converted to deserts.

Ecosystem: a group of plants and animals occurring together plus the physical environment with which they interact. Example ecosystems include: aquatic (rivers, ponds), coastal, desert, forest, grassland and tundra.

Farmer Participatory Research: direct involvement of farmers in research, via surveys and interviews concerning their indigenous technical knowledge, to tailor agricultural technology development to their needs.

Farming Systems Research: a method of applied problem-solving, assessment of potential technology change and field experimentation to identify opportunities for appropriate technology change among farmers.

Integrated Rural Development: a project format in which a project is limited to a specific area and target group, but involving multi-sectoral activities and community participation.

Land Degradation: the reduction of land quality and productivity through human activity, improper land use and natural degradation.

Ozone: a variant of oxygen concentrated in the stratosphere. It absorbs harmful ultraviolet (UV) radiation which is damaging to plant and animal life.

Ozone Depletion: the destruction of the ozone layer caused primarily by the release of chlorofluorocarbons (CFC's) to the atmosphere. Chlorine and other gas molecules break down ozone in a chemical reaction.

Salinization: the accumulation of mineral salts in soil. This is generally caused by the evaporation of irrigation water and can impair soil fertility.

Soil Erosion: the process which moves soil from one location to another by wind, water or other natural action, often accelerated by poor farming and development practices. Soil erosion reduces soil fertility and increases water pollution and flooding.

Soil Fertility: the capacity of soil to supply nutrients to plants.

Sustainable Development: the concept of meeting present needs while preserving the capacity to meet future needs. In an environmental context, this includes maintaining ecological processes, preserving biodiversity and protecting species and ecosystems.

Watershed: the land area that drains into a stream or stream system, outlined by the highest ridges around a stream.

Windbreak: rows of trees, bushes or tall grasses planted at a perpendicular angle to the wind which reduces windspeed at the soil surface, thereby reducing soil erosion.

-Stephen Mitchell
Librarian

Resources for Environmental Communicators

- ACCIS (Advisory Committee for the Co-ordination of Information Systems for the United Nations) has produced *A Guide to United Nations Information Sources on the Environment.* It lists the sources of United Nations environment information and UN depository libraries for 154 countries. It also lists the addresses of on-line hosts for United Nations databases. For ordering information, contact: ACCIS Secretariat, Palais des Nations, 1211 Geneva 10, Switzerland.

- L' Association des Trois Mondes produces a French edition of the *Moving Pictures Bulletin* (see separate entry). L' Association is an audiovisual information center specializing in film and video from developing countries. L'Association des Trois Mondes, 63 bis, rue du Cardinal Lemoine, 75005 Paris, France. Telephone: (1) 43 54 78 69.

- *BIOCENOSIS*, a quarterly environmental education newsletter for all of Latin America is published in Spanish and focuses on children's materials, biodiversity, marine resources and protected areas. Write: the Editor, *BIOCENOSIS*, Programa de Educación Ambiental, Universidad Estatal a Distancia, Apdo 474-2050, San Pedro de Montes de Oca, Costa Rica.

- *Biological Diversity in North Africa, the Middle East and Southwest Asia: A Directory of Organizations and Institutions* lists conservation organizations from 24 Middle-Eastern countries. For information, write: Brunn/Montague, HLCF, 969 Park Avenue, New York, NY 10028 USA.

- CARE currently administers agriculture and natural resource projects in 31 countries. For information, contact CARE, 660 1st Avenue, New York, NY 10016 USA. Telephone: (212) 686-3110. Fax: (212) 690-4005. Telex: ITT 4900000050 CARUT.

- *Caribbean Conservation News* is the quarterly publication of the Caribbean Conservation Association (CCA), Savannah Lodge, The Garrison, St. Michael, Barbados, West Indies.

CONNECT is the quarterly environmental education newsletter of UNESCO

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CONNECT, 7 Place de Fontenoy, 75700 Paris, France.

- The A.I.D.-funded DESFIL (Development Strategies for Fragile Lands) provides technical assistance to groups and individuals in Latin America working to slow the degradation of fragile lands using sustainable technologies. The project also produces a newsletter. Contact: Project Manager, DESFIL, c/o Development Alternatives, Inc., 624 Ninth Street, NW, #600, Washington, DC 20001 USA. Telephone: (202) 783-9110. Fax: (202) 783-2962. Telex: 424822 DAIIU. Cable: DEVALT.

- *Directory of Environmental NGOs in the Asia Pacific Region*, produced by Sahabat Alam Malaysia (Friends of the Earth-Malaysia) lists the names, addresses, activities and publications of Asian environmental NGOs (US$7.00 plus postage). Sahabat Alam also publishes the Environmental News Digest, a compilation of news and articles from over 300 periodicals and magazines on development and the environment (US$30.00). Order from Sahabat Alam Malaysia, 37 Lorong Birch, Penang, Malaysia.

ECOFORUM is a bimonthly newsletter for non-governmental environmental organizations around the world to share information and ideas about the environment and sustainable development. *ECOFORUM* is published in English, Spanish and French by the Environment Liaison Centre (ELC), P.O. Box 72461, Nairobi, Kenya. Telephone: 24770 or 340849 or 336989. Telex: 23240 ENIVICENTE.

- A.I.D.'s Natural Resources Management Support (NRMS) project is preparing a series of special studies including reports on successful local-level sustainable development efforts, forestry management projects and the roles of local NGOs in conservation. For more information, write: NRMS, c/o EDI, 1400 "I" Street, Suite 700, Washington, DC 20005 USA. Telephone: (202) 289-0542. Fax: (202) 289-7601.

- The Environment Policy Institute (EPI) publishes *NGO Directory: Tropical Forest and Multilateral Development Bank Campaigns*. EPI, 218 "D" Street SE, Washington, DC 20003 USA. They have also prepared *Bankrolling Success: A Portfolio of Sustainable Development Projects* in collaboration with the National Wildlife Federation.

Friends of the Earth, 26-28 Underwood Street, London N1 7JQ England, has produced *Tropical Forest Conservation and the Timber Trade* as part of their Campaign to Save Tropical Rainforests.

The *Environmental Sourcebook* from Island Press offers over 130 current books on global warming, hazardous waste, water management, solid waste and incineration, sustainable development, public lands, wildlife, forestry and biodiversity. For a copy of the catalogue, write: Center for Resource Economics/Island Press, 1718 Connecticut Avenue NW, Suite 300, Washington, DC 20009 USA.

- *Flora, Fauna y Areas Silvestres* is a publication of the FAO Regional Office of for Latin America. Published in Spanish three times a year, *Flora* reports on environmental news and activities from throughout Latin America. Contact: FAO Regional Office for Latin America/Caribbean, Avenida Santa Maria, 6700 Casilla, 10095 Santiago, Chile.

Haramata is a quarterly publication in English and French that focuses on arid lands management. Its free from the International Institute for Environment and Development (IIED), 2 Endsleigh Street, London WC1 0DD England.

The International Environment Information System (INFOTERRA) has published the sixth edition of the *International Directory of Sources*. Write: the United Nations Environment Programme (UNEP), P.O. Box 30552, Nairobi, Kenya. UNEP also maintains an environment clearinghouse at the same address.

Climate Change Discussions

In response to growing concern about the potential health effects of climate change, the World Health Organization invited a small group of experts to take part in initial discussions in Geneva this past June.

Under the auspices of the World Meteorological Organization (WMO) and the United Nations Environmental Programme (UNEP)—the Intergovernmental Panel on Climate Change is working on a comprehensive report on the effects climate change could have on agriculture, society and the global economy. The report will be presented at the World Climate Conference in late 1990. For more information, contact WHO Media Service, 1211 Geneva 27, Switzerland. Telephone: 791

ECOVISION '89

In May, the European Centre for Environmental Communication (ECEC) hosted ECOVISION '89, the fifth European Environmental Film Festival at Lille, France. The festival highlighted European films on the environment and also showcased films on sustainable development from Third World countries. ECOVISION '89 also demonstrated specialized audiovisual and environment databases including CORINE, ECOTHEK, ECODISC, ARCHIMAGES, GENERIQUE and VENICE. The ECEC supports increased collaboration cooperation and information sharing in environment fields. For more information, contact: ECEC, 55 rue de Varenne, F75341 Paris, Cedex 7 France. Telephone: (33) 1 45 44 40 60. Fax: (33) 1 42 22 65 54. Telex: 201220 FECPAR.

- In cooperation with the U.S. Fish and Wildlife Service, the International Institute for Environment and Development (IIED) has developed two publications: *A Directory of Selected Environmental Education Materials* and *How to Plan a Conservation Education Program*. Both are available in Spanish. Titles include *Thinking Globally and Acting Locally: Environmental Education Teaching Activities; Teaching Soil and Water Conservation: A Classroom and Field Guide* and *A Manual of Environmental Education: Practical Guide for Educators* (from Bolivia). Most of the materials listed in the directory have been developed in the U.S. It is available for free from the Office of International Affairs, Fish and Wildlife Service, United States Department of the Interior, Washington, DC 20240 USA, or from the International Institute for Environment and Development (IIED)-North America, c/o World Resources Institute, 1709 New York Avenue, NW, Washington, DC 20006 USA. Telephone: (202) 638-6300. Fax: (202) 638-0036. Telex: 64414 WRIWASH.

Moving Pictures Bulletin is a quarterly guide to films on development and the environment. Produced by the Television Trust for the Environment (TVE), the bulletin summarizes the contents of each film and gives information on how to order films from distributors free of charge or for a small fee. TVE also maintains a database on environment and development films.

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Contact: Television Trust for the Environment (TVE), 46 Charlotte Street, London W1P 1LX England. Telephone (01) 637 4602. Fax: (01) 580 7780. Telex: 291721.

The Panos Institute works with journalists, NGOs and decision-makers to tackle the problems of sustainable development by disseminating information on environment and other problems in Third World countries. The Institute prepares case studies on sustainable development and provides articles, news stories, photographs and graphics on development and environment topics to leading newspapers and magazines in 90 countries. Many of the reports are written by Third World authors. It also publishes *Panoscope*, a bimonthly magazine on sustainable development (US$18.00) and various books on urgent development issues. The Panos Institute, 8 Alfred Place, London WC1E 7EB England. Telephone: (01) 631 1590. Fax: (01) 436 8293. Telex: 9419293 PANOS G. L'Institute Panos, 31 rue de Reuilly, 75012 Paris, France. Telephone: (1) 43 79 29 35. The Panos Institute, 1409 King Street, Alexandria, VA 22314 USA. Telephone: (703) 836 1302. Telex: 4900008533.

Partners of the Americas has produced *A Natural Resources Directory, Latin America and the Caribbean* (US$15.00) which lists over 400 conservation organizations. Partners of the Americas, 1424 "K" Street NW, Suite 700, Washington, DC 20005 USA.

The Smithsonian Museum of Natural History publishes a free monthly newsletter emphasizing biodiversity and tropical forests. Issues include a bibliography of recently published articles in related fields. *Biological Conservation Newsletter*, Smithsonian Institution, Department of Botany, NHB 166, Washington, DC 20560 USA.

Unesco's Division of Marine Sciences publishes the International *Marine Science Newsletter* in English, Spanish, French, Russian and Chinese. Free from: IMS Newsletter, Division of Marine Sciences, Unesco, 7 Place de Fontenoy, 75700 Paris, France.

SPORE, the bimonthly bulletin of the Technical Centre for Agricultural and Rural Cooperation in the Netherlands, focuses on environmentally sound, sustainable agriculture techniques. Published in English and French. Contact: Technical Centre for Agricultural and Rural Cooperation (CTA), Postbus 380, 6700 AJ Wageningen, the Netherlands. Telephone: (31) 8380-20484. Telex: (044) 30169.

The United Nations Development Programme's (UNDP) journal *Development in Action* often features environmental news. *Development in Action*, United Nations Development Programme (UNDP), Division of Information, One United Nations Plaza, New York, NY 10017 USA.

In addition to the International Environmental Information System (INFOTERRA), The United Nations Environment Programme (UNEP) houses the Oceans and Coastal Areas Programme, the Industry and Environment Office (IEO) and the Desertification Control Programme (UNEP). All maintain libraries and databases and produce quarterly newsletters and other publications. Contact: the United Nations Environment Programme (UNEP), Box 30552, Nairobi, Kenya.

Our Common Future: From One Earth to One World: An Overview by the World Commission on Environment and Development is the 1987 report by the United Nations Commission on Environment and Development. For information on how to obtain a copy, contact: Oxford University Press, Walton Street, Oxford OX2 6DP England, or the UNEP Information Service, Publications Unit, Box 30552, Nairobi, Kenya. The Commission's original papers are now available to users of the BIBLIOL library database at Canada's International Development Research Centre (IDRC).

VITA Publications has produced five books as part of a series on environmentally sound, small-scale development projects. The series offers guidelines for planning community-based agriculture, water, forestry, energy and livestock projects. For information, contact: VITA Publication Services, 1815 North Lynn Street, Suite 200, Arlington, VA 22209 USA. Telephone: (703) 684-7937.

The World Resources Institute is a research and policy organization helping governments, business and environmental and development organizations address the fundamental question: How can societies meet human needs and nurture economic growth while preserving natural resources? In collaboration with the United Nations Environment Programme (UNEP) and the International Institute for Environment and Development (IIED), it publishes World Resources: *An Assessment of the Resource Base that Supports the Global Economy* which includes statistical data from 146 countries. It also produces numerous excellent policy and research reports on specific environmental topics. For a catalogue of publications, write: WRI Publications, P.O. Box 620, Holmes, PA 19043 USA. Regional distributors in Bangladesh, Israel, Japan, Malaysia and England also carry WRI publications. For more information, contact: World Resources Institute, 1709 New York Avenue NW, Washington, DC 20006 USA. (202) 683-0300. Fax: (202) 638-0036. Telex: 64414 WRIWASH.

The Worldwatch Institute is another excellent resource for information on environment and development. The annual *State of the World*, a report on progress toward a sustainable global society, assesses the Earth's vital signs focusing on the state of global resources. Worldwatch publishes a bimonthly magazine, *World Watch*, that often reports on Third World environmental issues and also produces a series of policy papers on development and the environment. Recent policy paper titles include *Action at the Grassroots: Fighting Poverty and Environmental Decline; Reforesting the Earth; Planning the Global Family*; and *Beyond the Green Revolution: New Approaches for Third World Agriculture*. A subscription to *World Watch* (US$25.00) includes the annual State of the World report and all Worldwatch papers. (Add US$15.00 for overseas mail.) Contact the Worldwatch Institute, 1776 Massachusetts Avenue NW, Washington, DC 20036 USA.

The World Wildlife Fund (WWF) makes small grants available to grassroots conservation efforts in developing countries that directly contribute to biological diversity and the sustainable use of resources. They also provide technical assistance to conservation and sustainable development efforts through the Wildlands and Human Needs and Biodiversity projects. With support from A.I.D., the Conservation Foundation (CF) operates the Environmental Information Service (EIS) to provide developing countries with technical assistance and information on environmental issues. The Foundation also produces a newsletter. For more information on WWF/CF programs, contact: The World Wildlife Fund/Conservation Foundation, 1250 24th Street, NW, Washington, DC 20037 USA. Telephone: (202) 293-4800. Fax: (202) 293-9211. Telex: 64505 PANDA.

What's New, What's Coming

Communication for Rural Development

The Communications Division of the Inter-American Institute for Cooperation on Agriculture (IICA) in Costa Rica regularly offers courses on development communication, among them: *Mass Communication for Rural Development* focusing on radio and audiovisual production techniques and printed materials development, planning and methodology; *Planning Communication Projects to Support Rural Development* including training strategies for Latin American farmers, basic elements of message analysis, community communication and integration of farmer experiences into project planning; *Video Production* including basic components of audiovisual production using film and editing equipment and *Principles of Distance Education*. IICA is also developing distance education courses in agriculture and health care for Costa Rican farmers in cooperation with the Radio Nederland Training Centre.

Contact: Antonio Cabezas E., Dean of Studies, IICA-RNTC, Apartado 55-2200 Coronado, Costa Rica. Telephone: (506) 29 0222. Fax: (506) 29 3486. Telex: 2444 IICA. Cable: IICA San Jose.

Forestry Conservation

The Institute of Forest Conservation at the University of Philippines at Los Banos (UPLB) offers a series of short courses in forestry techniques including: Research Techniques in Agroforestry, Forestry Extension Officers Development Course, Agroforestry, Applied Communication Development, Reforestation Planning and Plantation Establishment and Management, Management of Agroforestry and Community Forestry Projects and Forestry for Community Development. For more information and applications, write Cesar Nuevo, Director, Institute of Forest Conservation, UPLB College of Forestry, College Laguna 4031, Philippines.

Helping Learners Learn

The Fifth Annual Conference on Teaching at a Distance will take place August 8-10, 1989 in Madison, Wisconsin. This year's theme is *Helping Learners Learn at a Distance*. For more information, contact: Chris Olgren, Coordinator, Continuing and Vocational Education, University of Wisconsin-Madison, 225 North Mills Street, Madison, WI 53706 USA. Telephone (608) 262-5526.

Student Support in Distance Education

The International Council for Distance Education and the British Open University will host an international conference on *Interaction and Independence: Student Support in Distance Education and Open Learning* September 19-22, 1989 at Downing College, Cambridge. For more information, contact: Alan Tait, Open University, East Anglia, Cintra House, 12 Hills Road, Cambridge CB2 1PF England. Telephone (44) 223 64721.

Distance Education Conference

The International Council for Distance Education will hold its fifteenth world conference in Caracas, Venezuela, November 4-10 1990. The conference theme will be *Distance Education: Development and Access*. Special topics will include building political support, distance education and human resources development, addressing the needs of the private sector, literacy, media choices, materials development, student support, technology applications, joint ventures, networking and consortia. The conference will be held in Spanish and in English. This year's organizer is Venezuela's Universidad Nacional Abierta.

For more information, contact: Armando Villarroel, Oficina de la XV conferencia ICDE, Apartado 797, Caracas 1010A, Venezuela. Telephone: 58-2-573-1346 or 58-2-571-0186. Fax: 58-2-573-6642. Telex: 26111 UNA VC.

Community Radio Conference

The Second International Congress of the European Federation of Community Radios (FERL) will be held August 6-13 in Forcalquier (Provence), France. Community radio groups will have the chance to display and exchange their programs, demonstrate unique innovations and attend a radio flea market. Among conference themes are: how can communication be developed in the Third World so that it serves the people?; culture: forms of resistance against North American uniformity; and regaining access to and control of technology. For further information on FERL and the Congress in English, Spanish, French, German or Portuguese, contact: FERL, Les Quatre Reines, B.P. 42, 04300 Forcalquier, France. Telephone: 92 76 05 98. Or in England: Alain Hertzmann, 7 Montague Road, London E8 2HN England. Telephone: (01) 249 9718.

20th Annual Communications Conference

The twentieth Annual Conference of the International Institute of Communications will be held in Paris, France, September 6-9, 1989. The conference will focus on telecommunications, broadcasting and information services. Among conference topics: Cables and Satellites: Who Needs Them?; Telecom Trade: Why New Rules are Needed and New Telecom Services: Who Benefits? For more information, contact: Gerry Jayasuriya, Assistant Director, International Institute of Communications (IIC), Tavistock House South, Tavistock Square, London WC1H 9LF England. Telephone: (01) 388 0671. Fax: (01) 380 0623. Telex: 24578 IICLDN G. Cable: Widecast London.

International Conference on Telecommunications

The International Telecommunication Union has begun plans for TELECOM 91, a major convention on international telecommunications and electronics to be held October 8-15, 1991.

As part of TELECOM 91, the ITU will host the sixth International Film and Video Festival on Telecommunications and Electronics--Golden Antenna 91. The Fes-

(Continued on page 18)

(**WHAT'S NEW** *from page 17*)

tival will be held during TELECOM 91 and will highlight film and video productions on telecommunications and electronics and their impact on socio-economic development. Films entered in the festival must be less than five years old. They can be in black and white or in color. Films must be either on 16 or 35 mm videotape that conforms to PAL, SECAM or NTSC standards; videos must be U-MATIC, VHS, or BETA compatible. Entry categories include public information, publicity and advertising, technical resources for telecommunications or electronics techniques and vocational training. An official catalogue with information on all the productions presented will be published and made available on request.

The fourth World Book and Audiovisual Fair on Telecommunications and Electronics--Book Fair 91--will take place at the same time, highlighting books, publications and technical literature on telecommunications and electronics. The fair is open to all publishers. Some categories are radio, satellite technology, computers, electronics, fibre optics, high definition television and telephones.

For more information, contact: Golden Antenna 91 or Book Fair 91, Public Relations Division, International Telecommunications Union, Place des Nations, CH-1211 Geneve 20, Switzerland. Telephone: (+41) 22 730 52 48 or (+41) 22 730 52 36. Telex: +421 000 uit ch. Fax: (+41) 22 733 72 56.

Health

Low Cost Health Materials

Teaching Aids At Low Cost (TALC) has an extensive list of health education materials available to developing countries at low costs. The list includes books on health care services, AIDS education and communication, mother and child care, nutrition and child growth, education and communication, disability and appropriate technology and medicine. TALC also provides teaching transparencies, flannelgraphs, oral rehydration spoons, arm circumference tapes, weight charts and technical slide sets for doctors, nurses and health workers.

Contact: Barbara Harvey, TALC, P.O. Box 49, St. Albans, Herts AL1 4AX England. Telephone: 0727 53869. Telex: 266020 CORALP G Ref. TALC.

Films and Videos for Medicine

The deadline for entries in the British Medical Association (BMA) Film and Video Competition is July 31, 1989. The competition was established in 1957 to encourage the production of outstanding medical films. Entries are judged for creativity, subject accuracy and educational effectiveness. Entries from the UK must be less than two years old; entries from other countries must be less than four years old. BMA also maintains a medical film library. Contact: Media Resources Officer, BMA Film and Video Library, The Nuffield Library, BMA House, Tavistock Square, London WC1H 9JP England. Telephone: (01) 388 7976. Fax: (01) 388 2181.

Publications

Development Communication Case Studies

The Food and Agriculture Organization (FAO) in Rome has completed five development communication case studies: 1) *Education through Entertainment: The British Radio Drama Series 'The Archers-An Everyday Story of Country Folk'* describes the uses of radio and entertainment to reach rural audiences with agriculture messages. It also explores applications for rural broadcasters in developing countries. 2) *Filmstrips in Extension and Traning in Burkina Faso* discusses the introduction, problems, effects and results of using filmstrips as a communication tool to reach rural farmers. 3) *Perspectives on Communication for Rural Development* details the FAO's Development Communication Support (DCS) unit, its services and how DCS information and training programs are implemented. 4) *A Rural Communication System for Development in Mexico's Tropical Lowlands* examines the strengths, weaknesses and lessons learned from this highly successful project. 5) *Rural Radio in Mauritania* outlines the goals, methodology and implementation of a radio project for rural development

For additional information or copies of the studies, contact: FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Environment Newsletter from the World Bank

The World Bank recently began publishing *Environment Bulletin*, a bimonthly newsletter focusing on the regional and departmental environment activities of the Bank. For more information, contact: *Environment Bulletin*, The World Bank, Room S-5029, 1818 H Street NW, Washington, DC 20433 USA.

Hazardous Waste Manual

The World Bank, the World Health Organization (WHO) and the United Nations Environment Programme (UNEP) have published a new three-volume manual on hazardous waste disposal entitled *The Safe Disposal of Hazardous Waste: Special Needs and Problems of Developing Countries*. It will be available from World Bank Publications, P.O Box 7247-8619, Philadelphia, PA 19170-8619 USA.

Environmental Accounting

In June 1989, the World Bank will publish *Environmental Accounting for Sustainable Development*, a collection of selected papers from five joint UNEP/World Bank workshops on the environment and resource accounting.

Coping with Disasters

The World Health Organization (WHO) recently published *Coping with Natural Disasters: The Role of Local Health Personnel and the Community* (pp.92; ISBN 92 4 154238 1). *Coping with Natural Disasters* is a well-structured collection of facts, advice and recommendations to help local communities manage disasters by explaining what communities can do for themselves to save lives immediately after disaster strikes. The book includes information specific to various natural disasters including earthquakes, volcanic eruptions, floods, hurricanes, gales, tidal waves and droughts. Produced in cooperation with the League of Red Cross and Red Crescent Societies, *Coping with Natural Disasters* is available in English and French and can be ordered from WHO publications sales agents worldwide.

For the agent nearest you, contact the Clearinghouse or write: WHO, Distribution and Sales, 1211 Geneva 27, Switzerland. (Sw.Fr.18; US$14.40. Order no. 1150310.)

(**LAFLIN** *from page 20*)

The "green" issues, such as the extinction of species both known and as yet unidentified and global warming, will have long-term effects that are harder to quantify. Most development agencies have not yet fashioned a response to green issues, although some have experimented with debt-for-nature swaps or mounted projects to tackle issues in biodiversity. Gene banks have been set up. Nevertheless, the response to green issues has been rhetorical rather than real and is likely to remain so until developed nations put their own houses in order as a preface to serious international agreements.

Long-term Strategies for Sustainable Development: Necessity or Pipedream?

As arable lands decay and supplies of firewood dwindle, it is the poorest people in developing countries who feel the effects of environmental degradation most keenly. Governments lurch from one economic crisis to another. It is hard under these circumstances to consider long-term environmental remedies.

Ideally, countries would develop collaborative long-term plans that would integrate economic and environmental security. Agricultural, population and industrial policies would take into account economic, human and environmental needs that everyone could understand and work toward. In practice, the realities of industrial and economic development are usually in conflict with environmental concerns. Short-term decisions must choose between death or survival for the woman who needs fuelwood to cook for her family; profit and employment vs. bankruptcy for the factory that belches fumes and toxic waste; or between making or defaulting on interest payments for governments that are devastating forests for the hard currency that timber exports bring.

For most of the world's population, therefore, human accommodation to the environment is centered on sustaining the production of sufficient food and fuel and access to clean water. Saving whales, elephants and the Amazonian forest is a concern for richer societies that can afford such angst. Do the world's poor objectively believe that life for their children will be better or worse than their own? Do they believe that their present actions will significantly affect that future? If they do, then what technical solutions are available to them? These are key questions for environmental planners and communicators because it is individual and community decisions to consume and pollute or to conserve and regenerate that determine the future.

What Role Should Communication Play?

Awareness. The media have been successful in raising the consciousness of the developed world that there is an environmental problem. Beginning with the success of the "Greens" in West Germany, a political party whose reason for existence is based on concern for the environment, the environmental movement has gained credibility and political influence throughout the West. At both national and local levels, elections are fought increasingly on environmental matters.

Fundacion Natura in Ecuador has mounted sophisticated multimedia campaigns; Kenya has produced newspapers for children focused on environmental education; and middle-class urban dwellers in most countries have been exposed to media reports on the environment. By and large, it is true to say that awareness messages have been directed at the educated middle-classes. It is also true that denial of responsibility is manifest in most countries. It is "they" who destroy forests, massacre elephants, whales and gorillas, drive big cars, dump toxic waste. While there may be an acceptance that "we" are responsible, the major step of acknowledging that "my" actions matter is dependent on being reassured that "they" will also play their part.

Community Mobilization. Communication strategies to support specific actions, such as planting trees, have been designed to promote community mobilization. Decker's Mexico case study, described on page one of this DCR, is a good example. Such strategies are one component of a community-based plan to accomplish concrete environmental goals, developed and agreed upon by the community. The role of communication is to inform, popularize, legitimize and report on these goals and activities.

Strategies to Promote Individual Behavior Change. The most successful examples of communication to initiate or support individual behavior change have occurred when the behavior in question was relatively simple and susceptible to research, description and then prescription. Environmental change is contingent on changing whole lifestyles and industries.

Individual and community values and behavior interact continuously to determine the quality of water supplies, the use of wood and soil, the use of pesticides, waste disposal and the choice of local enterprises. Communication strategies must take account of the fact that decisions made today will produce consequences that may last for generations. They must also take into account that the same or similar decisions will be made and remade many times over in the years to come. For all these reasons, communicators must weigh very carefully which communication and education strategies are appropriate to transfer from other development sectors.

Two Major Constraints

Policy. Life for the communicator is made much simpler when there is a clear-cut, coherent policy from which to develop messages and identify audiences. For environmental communicators, the situation is rendered problematical by:

- lobbying groups who believe that their cause is the most important when it is but one of many;
- agricultural policies which are unclear, contradictory, plainly unsustainable or nonexistent; and
- the compartmentalization of governments and aid agencies into agriculture, health, population, forestry or education sectors which makes coordinated approaches to sustainable development difficult.

Communication Infrastructure. While policy and legislation may be influenced at the national or central level, the locus of action is mainly at the community level. Most investment in communication infrastructure has been in national and urban systems. If sustainable development is to become a reality, then low-cost local communication systems will have to be developed, sustained and operated by their communities.

Michael Laflin is Director of the Clearing House on Development Communication.

Environmental Communication: New Roles, Hard Choices

By Mike Laflin

Many donor and lending agencies have stated that environmental concerns will provide the foundation for development planning in the next decades. What does that imply for development communicators?

While we talk about the environment, what we do about it carries different names, each name reflecting the emphasis of those who use it. *Conservation* of the environment suggests maintaining the status quo or returning to a previous--presumably better--one. It reflects most strongly the belief that the planet is endangered.

Natural resources management is more neutral and calming, implying that the Earth's resources can be managed. It raises such questions as to whom they belong and who should be managing them and perhaps misleads by implying that there are scientific management solutions to problems that are enormously complex. Managers of large corporations also face complex issues, but usually have the power to solve them. In this field, one might ask, "Where are the managers?"

We prefer the term *sustainable development*. Environmental issues have served to remind us that development policies need to look beyond the present generation, that we all belong to the same world and that the destinies of all nations are linked. Indeed, it is possible that global environmental issues may reshape relationships among nations. Responding to environmental concerns makes policies of self-interested isolation more difficult and reinforces the need for long-term policies rather than short-[illegible] strategies in economic and political relationships.

Sustainability has an evident time dimension. Some development planners take a distinctly short-term view: for them, sustainability is equated with food sufficiency. First, feed the world, then worry about sustaining the natural resource base. Others see sustainable development as an ecological issue. Systems which deplete, pollute or disrupt the ecological balance of natural resource systems cannot be sustained. They see the physical environment as finite and would restrain population and human practices to levels that the ecosystem can bear. Indeed, some see environmental degradation purely as a function of population growth: stabilize population growth and environmental issues will disappear.

Other schools of thought see sustainable development in much broader terms. They place greater emphasis on issues such as participation in decision-making and the political process, the quality of justice, population control, preservation of flora and fauna, the efficient use of energy and the quality of life for present and future generations. Sustainable development embodies participatory principles exemplified for many years by the most successful community-based projects and grassroots organizations. They have demonstrated that efficient and effective development can be sustained if technical objectives are linked to the social and economic needs of the participants. It is in these terms that we view sustainable development.

How Serious Is The Problem?

Leonard and Eadie Brandon (page 1) point to three global ecological trends:

- the warming of the Earth's climate due to human activities;
- the diminution of the Earth's pool of genetic resources; and
- the declining productivity of much of the Earth's arable land.

We know that these trends are real, but what perspective should we take? Is the world in crisis? How much time do we have to take corrective action? Is the increase of the world's temperature by a few degrees really going to make a difference? If the polar caps begin to melt, will significant areas of land disappear under water? So what if global warming implies changes in agriculture? The whole history of agriculture is one of change and adaptation to circumstance.

The economies of many countries declined during the last decade and millions of young people under the age of fifteen can look forward to a quality of life that may be worse rather than better than that of their parents. Under the broader rubric of sustainable development, how do specifically environmental concerns fit in with longstanding issues of poverty, infant mortality, economic stagnation, illiteracy and injustice?

Should we devote funds specifically to environmental concerns and if we should, should those funds be brokered through environmental agencies? Or should the implementation of environmental policy become part of the fabric of traditional sectors such as agriculture, population, education and industrial development?

Are There More Fundamental Issues?

Perhaps this is simply a global population issue. There are vastly more people burdening the world's resources today than at the beginning of this century. Many parts of the world can no longer sustain growing populations.

As well as more people demanding more resources, extra ingredients have been added to the ecological mix. For example, we have invented new toxic wastes that we cannot get rid of. We have introduced ecologically aberrant behavior, such as burning gasoline and squirting aerosols, that until now the planet has tolerated. But their cumulative effect is becoming overwhelming.

Will we change our behavior? Or have we become so socially and economically dependent on the new patterns of consumption, especially in richer nations, that we are unwilling to change?

...efficient and effective development can be sustained if technical objectives are linked to the social and economic needs of the participants.

"Green" vs "Dirty" Issues

In terms of policy and funding, we are better at cleaning up our messes than controlling our excesses. The "dirty" issues, such as pollution and how to dispose of human and chemical waste, are tangible and can be quantified. The costs of ignoring the hazards of sewage or toxic waste can be counted in both human and economic terms. Bhopal and Chernobyl tragically illustrate the penalties for not controlling toxic materials.

(Continued on page 19)