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FY-79

ANNUAL REVIEW

THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT  
LATIN AMERICA & THE CARIBBEAN REGIONAL NETWORK  
TECHNICAL INFORMATION FOR DEVELOPMENT  
PROJECT NO 598-0572

MANAGED BY  
THE NATIONAL TECHNICAL INFORMATION SERVICE  
FOR  
THE DIVISION OF EDUCATION & HUMAN RESOURCES  
OFFICE OF DEVELOPMENT RESOURCES  
BUREAU FOR LATIN AMERICA



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Technical Information Service**  
425 13th Street, N.W., Room 620  
Washington, D. C. 20004

January 25, 1980

Dr. Robert W. Smail  
Chief, Office of Human Resources  
USAID  
Room 2245 - New State  
Washington, D. C. 20523

Dear Dr. Smail:

Attached is NTIS' FY 1979 Annual Report pertaining to International Technical Information Network Project No. 598-0572 (PASA No. CZ/LAR-0572-1-1977). The report examines what the Staff has done over the past year to meet the overall goals of this project which is "to broaden and maximize the use of scientific and technical information in solving development programs in Latin America, with special emphasis upon appropriate technology." It is divided into three sections: an overview of NTIS activities that concern the Project; a review of network agency operations in Latin America and the Caribbean; and a series of attachments reporting on the status of specific work being completed.

A log frame was designed to summarize the project objectives when it was initiated three years ago. Despite the lack of funding in the first year, I believe you will agree the project objectives have generally been surpassed. The Network has grown to eighteen subsidized and unsubsidized agencies, as agencies in Paraguay, Barbados and Jamaica joined the Network in 1979, compared to the initial objective of fifteen agencies. The Western Hemisphere Network operations, with the exception of Guyana, now encompasses every South and Central American country in which USAID has a mission. Moreover, Barbados provides services to many smaller areas in the Eastern Caribbean in which USAID has interests.

There are four regional networks now in operation, three outside the United States, Central America, including Mexico and Panama; the Andean Pact countries, together with Paraguay and Brazil, and the Caribbean, where it is expected that Haiti will join the Dominican Republic, Barbados and Jamaica agencies early in 1980. NTIS is the final regional network.

NTIS organized regional seminars with representatives of the Latin America network in both of the past two years. The South and Central American operations have generally been combined in instances such as these meetings for economy, language compatibility and because most of the agencies have similar interests and are able to effectively learn from each others experience. The attendees review the progress of the project and discuss how to improve services.

In addition, Staff officers attended a September 1979 seminar with officials from a number of Caribbean nations. It was sponsored by the Caribbean Development Bank which, using a large USAID grant, recently established a technology-unit to provide appropriate technical information to Eastern Caribbean groups and individuals. NTIS used this first-time seminar to discuss the USAID project with an interested audience of over 40 individuals.

Over the years, staff visits to the agencies have proven, although often arduous and time consuming, to be the most effective and efficient way to provide support to local agencies. A determination can be made whether the agencies are working within the understanding of the USAID project, local training is given and seminars held before interested local citizens. Staff members were able to visit every country, except Nicaragua, at least once during the past year.

A major goal of the program is to provide appropriate technology to the poorest of the poor in Latin America. The Staff has been especially pleased with the Latin American and Caribbean agencies growing interest in this aspect of the project. The agencies have now learned that, through USAID subsidies, they have quick and easy access to publications on technical information appropriate to disadvantage groups. They also are more willing to promote technology as they realize the advantages that it can bring to even the poorest sector of society. Other local social organizations as well have been using NTIS material to help solve local problems. This awareness is reflected in their requests for over a thousand appropriate technology publications during the last half of FY 1979.

The increased demand for appropriate technology documents for regular NTIS products and services demonstrates the growing Latin American responsiveness to acquiring U. S. sponsored research and development. Much of this enlarged demand can be directly related to the continuing growing popularity of AMTID, which is the project's principal means of disseminating information on technical publications that can be put to use in developing countries. The rise in demand for AMTID has been particularly strong in 1979. Over 11,000 English copies are distributed each month; to our great satisfaction, almost 13,000 more copies of the Spanish version, which is translated and printed by INFOTEC in Mexico, are mailed every month. In addition to AMTID, NTIS also publishes ACCESS which is distributed to the overseas network agencies, the overseas and local USAID offices and to other interested offices.

NTIS staff officers held user education seminars with local citizens in Honduras, Chile, Panama, the Dominican Republic, Jamaica, El Salvador, Barbados and Peru. More than one seminar was held in many of these countries during each visit and, in the past year alone, 384 people attended these meetings. Additionally, NTIS holds a semi-annual Information Systems Workshops and has trained 35 employees from the Latin American and Caribbean network agencies. These various sessions have proven to be an excellent means of introducing the USAID program and proving knowledge about U. S. and worldwide information sources.

A book listing many of the global appropriate technology organizations and sources was published by NTIS and provided to the network agencies and their contacts. An even more important accomplishment during the past year was the compiling and publishing of an appropriate technology bibliography. The publication provided information on material within both the NTIS data base and out and had a worldwide distribution. This publication, as well as the global listing and back issues of AMTID and ACCESS, were provided by LA/DR with the 1979 quarterly reports.

Network agencies, as well as outside appropriate technology organizations, have provided the NTIS collection with useful appropriate technology documents and publications which have been input into the NTIS data base and are now available worldwide. In addition, several valuable English publications have been translated into Spanish so they could be more widely distributed to lesser developed areas needing technical information.

Sincerely,



Terrance L. Lindenmann  
Foreign Affairs Administrator

FY 79  
ANNUAL REVIEW

THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT  
LATIN AMERICA & THE CARIBBEAN REGIONAL NETWORK  
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## BACKGROUND

The National Technical Information Services and the Agency for International Development have worked closely together since late 1971. It was then that the USAID Office of Science and Technology first funded NTIS activities to broaden developing country access to scientific and technical information. The initial program was small. However, after a few years the USAID International Technical Information Network became operational in Latin America, as NTIS established a good working relationship with a number information centers.

In 1975 the Secretary of State spoke before UNCTAD in Nairobi and stated that the U. S. would take the initiative in transferring technology to developing countries. An affirmation of this policy has been made in subsequent speeches by other U. S. Government officials. AID was one of the major U. S. Government agencies given the responsibility of fulfilling these promises.

In 1976 AID favorably evaluated the network project and recommended a five year extension. AID, in line with the Secretary's speech and with the knowledge that NTIS had extensive experience with information centers in developing countries, decided to expand the scope of the program when it came up for renewal in FY 1977. It felt that NTIS had established the best means available to provide technical information to developing countries.

AID approved a three year Science and Technology Information Transfer Program to broaden the Latin American and Caribbean access to U. S. scientific and technical information. An additional part of the project was to promote the concept of "appropriate technology" resulting from world-wide research and development. This new element reflected the Congress' interest in providing appropriate technology to developing countries at the least possible cost.

Project funding was delayed until late September 1977. Therefore, much of the planned network activity did not in fact begin until FY 1978. During that year, the operating network of Latin American cooperating agencies was augmented and efforts initiated to actively disseminate technology appropriate to developing countries. In addition, a contract was issued to perform case studies of the results of the Project and, in placed on the AID program, a separate Developing Country Staff was established.

The three year USAID program operates under the following general objectives:

- (1) Identify and appoint agents willing and capable of promoting availability of U. S. scientific and technical information, while developing and implementing appropriate marketing strategies and serving as an in-country focal point for U. S. scientific and technical information.
- (2) Sponsor scientific and technical information awareness seminars in project countries.
- (3) Conduct workshops at NTIS for cooperating agency officers to acquaint them with U. S. scientific and technical systems and NTIS operations.
- (4) Provide cooperating agencies with technical advisory services, including user education and marketing support, that will strengthen institutional capabilities.
- (5) Publish and distribute special announcement bulletins, Application of Modern Technology to International Development (AMTID).
- (6) Give priority handling to LDC transactions with NTIS and administer air mail postal subsidy.
- (7) Provide special information materials and equipment compatible with cooperating agency capabilities.
- (8) Develop selected case studies for assessment of program benefits.

Progress with these and other objectives will be fully covered in the body of the report.

## INTRODUCTION

Fiscal year 1979 was marked by numerous advances within the USAID International Technical Information Network that the NTIS Developing Country Staff has established with cooperating agencies in Latin American and the Caribbean. The Network is now essentially complete as NTIS has signed agreements with organizations in every major Latin American and Caribbean developing country with an AID Mission, except Guyana. Guyana representatives have been reluctant to sign any sort of official agreement with the U. S. Government but in September, NTIS staff members attended productive meetings with interested Guyana officials at a seminar in Barbados. They may eventually initiate direct relations with NTIS but will presently use the Barbados cooperating agent as their contact.

NTIS held excellent regional meetings with cooperating agencies and others not directly connected with the USAID Network. The first meeting occurred in Panama with representatives from the Latin cooperating agencies. The second occurred in September in Barbados with individuals from affiliates of the Caribbean Development Bank. In addition, a number of employees from the agencies attended the April and September NTIS Information Workshops while several others visited the NTIS office in Washington on the occasion of other business. NTIS staff visited all of the cooperating agencies, except Nicaragua, at least once during the year.

The Developing Country Staff has been particularly pleased with its successful efforts during the year to increase the dissemination of appropriate technology to developing countries. under the AID document acquisition subsidy to benefit the urban and rural poor. Prior to the February meeting in Panama, most of the cooperating agents did not have a clear understanding of the AID appropriate technology program, and little use was made of the service. AID and NTIS officials explained the program at the conference and there has been a marked increase in the use of the service since then.

NTIS has also been in contact with a number of other government and private organizations which disseminate appropriate technology documents. With some, including several U. S. Government offices, discussions will have to continue: with others, agreements have been reached to include their documents in the NTIS data base. In addition, NTIS has contracted for the translation into Spanish of many useful publications, from various sources around the world, which include technology appropriate to developing countries. Many of these translations have been finished and have been well received by recipients.

AMTID, which announces most of the available publications that NTIS has using appropriate technologies, has been distributed to an increasingly large number of individuals and organizations. NTIS has prepared and published a bibliography of appropriate

technology publications for developing countries and a listing of many of the world-wide technology organizations and sources. In keeping with the appropriate technology goal, NTIS increased its contact with local appropriate technology organizations such as VITA.

On other matters, NTIS has been involved and attended several UNESCO meetings this year and will manage the fourth UNESCO meeting on the Planning and Implementation of National Information Activities to be held in May 1980 in Washington. Representatives attended UNCSTCD meetings in the U. S. and lectured at a UNESCO regional conference in Mexico City as well as a seminar at Case Western University in Ohio.

Details on these accomplishments and others as well as program information of interest in the past year is discussed in detail in the following pages.

PART I

NARRATIVE REVIEW

PROJECT NO. 598-0572

LATIN AMERICA & THE CARIBBEAN REGIONAL NETWORK

TECHNICAL INFORMATION FOR DEVELOPMENT

## APPROPRIATE TECHNOLOGY

One of the major priorities of the FY 1979 USAID program was to enrich the Appropriate Technology (AT) collection at NTIS by first identifying or locating, then acquiring and finally disseminating technological information appropriate to Latin American developing countries. The specific program goal is "to improve Latin American access to appropriate technology information resulting from worldwide research and development" To enhance the NTIS performance, the Developing Country Office contracted Mr. Paul Bundick, an Appropriate Technology specialist, in August 1978 to work with the staff.

Mr. Bundick laid the groundwork for the program during the next several months. The first major undertaking was a mailing to more than 2,000 domestic and foreign AT groups informing them of the USAID regional network and inviting them to cooperate in the acquisition and dissemination of appropriate technology information.

NTIS had already begun infusing an Appropriate Technology component into the program since the project began, with a certain reluctance on the part of the cooperating agencies to allocate resources to this activity. The main reason was precisely a scarcity of resources, including manpower, to perform the needed outreach to AT intermediary organizations. NTIS tried to alleviate this by establishing a subsidy fund for the acquisition of AT documents to benefit the urban and rural poor. Special program supports were also discussed, such as translations and consultancies. There was a general increase in program cooperation on this point.

The program was fully explained at the Panama Regional Directors Conference. An agreement was reached stating that the cooperating agencies would attempt to identify and establish continuing contact with individuals and institutions working with the rural and urban poor. The agencies will help and encourage them to use appropriate technology information. During the same meeting, the recently available USAID subsidy was summarized and the agencies agreed that it would be of considerable benefit to local groups wanting to acquire needed information.

### 1. Identification

The NTIS data base includes scientific and technical information which is useful in a wide variety of highly specialized applications. At the same time, it has a number of NTIS publications appropriate for the technologies in developing countries but these documents had not previously been specifically identified as such. A contract was made

with VITA to search the data file and compile a selected bibliography of the NTIS appropriate technology holdings.

As a result of the search, the Developing Country Office published two editions during the year called "Selected Appropriate Technologies for Developing Countries". The first, a pilot project with approximately 100 citations, listed titles considered to be of special relevance to development programs in the LDC's. It was superseded in June 1979 by a much more comprehensive book with a total of 1,500 citations and multiple indices. Most of the listed publications are available from NTIS; those not available were noted and information was given how they might be ordered. (A copy of the latter publication was provided to LA/DR in the third Quarterly Report; Publication Number: PB 294-160).

The first copy was distributed to the cooperating agencies and AID missions while the latter was distributed to over 700 worldwide development organizations, with a particular emphasis on Latin America. It is available free of charge to both AID program countries and groups working in developing countries. A manual search of the NTIS archives was initiated in the last quarter of FY 1979 to locate and evaluate AT information since the number of AT publications available from NTIS is constantly increasing. An updated version of the bibliography will be released in the first quarter of FY 1980.

## 2. Acquisitions

The project had varied success obtaining AT documents from various sources for input into the NTIS data base. The number of acquired documents increased, particularly during the second half of FY 1979. One hundred and fourteen selected documents were acquired and entered in the second quarter of FY 1979, one hundred eighty-one in the third quarter and one hundred and fifty-two in the fourth for a total of 447 documents. The titles will appear in future AT bibliographies and in AMTID.

Although the acquisition program has been reasonably successful, a number of problems have also occurred ranging from copyright clearance difficulties to NTIS pricing regulations. Some U.S. and overseas agencies are not in agreement with the prices NTIS charges, by failing to realize that the system must pay for itself in order to cover the many extra charges such as small publication runs, life-time storage of the publication, etc. Institutions and individuals within LDC's also are suspicious of the U.S. Government intentions as they now realize that information is valuable and do not want to provide it without receiving what they feel is a fair payment.

These restrictions and concerns will necessarily limit the AT information that NTIS can obtain from the private realm. NTIS, will therefore, have to invest even more effort into acquiring all the Latin American Governmental information sources. When placed into the NTIS system, the information will become available world-wide. NTIS will also work with other world-wide organizations in the public domain.

Although NTIS experienced difficulties obtaining documents from some sources, there are still numerous organizations which can provide information of use to developing countries throughout the world. Mr. Bundick and other members of the NTIS staff have been in constant contact with a number of national and international organizations working with appropriate technology.

Included among them are the World Bank, the Inter-American Foundation, Appropriate Technology International (ATI), National Center for Appropriate Technology, Groupe de Recherches sur les Techniques Rurales (GRET), the American Society of Engineers, Experience Inc., U. S. Department of Agriculture, Council for International Urban Liaison (CIUL), Socially Appropriate Technology Information Systems (SATIS), Delft University of Technology in the Netherlands, National Swedish Board for Technical Development, the Intermediate Technology Publications (ITP) LTD of London, Technische Ontwikkeling Ontwikkeling Landen (TOOL) of the Netherlands and Volunteers in Technical Assistance (VITA). Mr. Bundick also participated in a meeting of the American Association for the Advancement of Science where the NTIS AT program was detailed. Some of the above organizations submitted AT documents after having the AID program explained to them, while negotiations are continuing with others.

The discussions generally centered around the appropriate technology component of NTIS and possible cooperation in the cosignment of AT documents to the NTIS data base. NTIS has ascertained that many of these organizations have published AT documents which would be extremely useful in developing countries. However, these publications are not presently available where they are needed due to the publishers lack of distribution systems in the LDCs. Others have excellent documents which they have not published because the distribution would be low and the cost therefore prohibitive for printing. NTIS is particularly interested in obtaining the above publications because they would be useful for the countries in the AID network. As a point of discussion, the Developing Country Staff mentioned that NTIS is able to publish the documents, even though the distribution may be low, and has the facilities to disseminate them world-wide. In addition NTIS microfiches all the documents in order to make them available for future use, a service not available from most other institutions.

A particularly promising field of cooperation is with the USDA which perform numerous searches for developing countries and is a rich information resource for network participants interested in agriculture. The USDA offers technical information assistance and world-wide searches for AID missions. NTIS has begun entering useful USDA information into the NTIS data base so that it can be used by developing countries.

A significant event during the year was the separate agreement that NTIS made with ITP, the world's most famous AT publishing group. It permits NTIS to disseminate both selected ITP Spanish and French paper copy translations and microfiche copies of all English publications. Thirty-one publications have already been entered into the NTIS bibliographic data base and are available in microfiche; three of these, Lime and Alternative Cemenet, Metodos Simples para Fabricar Velas and Un Manual Sobre Mantenimento de Edificios Tomo I are also available in paper copy.

The Developing Country Staff has also had several meetings with CIUL regarding its well thoughtout plan to acquire and prepare the World Bank collection of AT information for inclusion in the NTIS data base. Delft University will place some of its unpublished reports from both the University and the AT center into the NTIS system.

More than 100 French/English documents from AID's Regional Technical Aids Center (RTAC) series were added to the NTIS collection base early in the year. Negotiations are under way to input 5000 more RTAC documents using outside contractors. Many of the documents were written in the 1950's but are still pertinent to the needs of developing countries.

The USAID program also encourages the cooperating agencies to send local appropriate technology documents to NTIS in order to publish and place them in the data base. (Attachment 4). In general, this part of the program has been less successful, reflecting some local apprehension (as also seen with other less established groups) about "giving away" technology to the U. S. NTIS looks forward to a change in attitude once the agencies realize that NTIS is one of the few if only ways to widely disseminate information to developing countries.

### 3. Dissemination

The AT dissemination program was fully explained at the Panama conference and the NTIS staff has stressed the program when visiting the cooperating agencies. Mr. Bundick visited a number of Central American Countries to discuss the program and to develop related activities. During one trip he also attended the International Engineers Symposium in El Salvadoe on "Technology Appropriate to Underdeveloped Countries."

The cooperating agencies, as well as other organizations in developing countries working with the poor, often lack funds to pay for technical information. The USAID AT subsidy program is geared toward this audience and the receipt of such publications has benefited other AID projects within developing countries. The cooperating agencies, and the institutions with which they are in contact, markedly increased their requests for appropriate technology information during the past year. The demand rose from 60 documents in the first quarter and 66 in the second to 581 in the third quarter and 451 in the fourth. A more thorough breakdown, including a listing of the recipient countries and AT publications most in demand may be found in Attachment 2.

In October 1979 NTIS will sign an agreement with the Grupo de Tecnologia Aproprida (GTA), from Panama to outreach, train, acquire and disseminate appropriate technology information in Latin America. Sam Bern, the Executive Director of GTA, already has a number of contacts in the area, as he is an experienced appropriate technology specialist familiar with many world-wide appropriate technology organizations. He is also familiar with NTIS, attended the most recent LA Director Conference and will visit Central American agencies in support of AT programming.

The Developing Country Staff made arrangements during the year for the translation of several AT publications into Spanish so they would be of more use when disseminated in Latin America. The Spanish version is also listed in the NTIS data base. Several of the USAID cooperating agencies were involved in this translation effort. NTIS is generally satisfied with the program and will request more translations from the agencies which performed the best job on the first ones. (Attachment 3)

There was a widespread response to the mailing to the 2,000 AT organizations early in the year. Using them, the staff prepared the publication "A Global Listing" of Appropriate Technology Organizations and Sources" in line with the objectives of the International Technical Information Network. It is an impressive though still not comprehensive listing of addresses of worldwide organizations, research institutions and development groups significantly involved in some respect of AT. The publications was distributed at no cost to numerous organizations, including the cooperating agencies. A major objective of the publication was to encourage outreach activities and networking among those groups interested in contacting AT organizations both in their region as well as in other part of the world.

NTIS also proposed that the Peace Corps Directors in Latin American and the Caribbean assign Peace Corps volunteers to NTIS cooperating agencies to facilitate the dissemination of appropriate technology

information. Follow-up contacts were made in several countries, including Barbados in September.

Finally, NTIS participated in the Washington, D. C. April 27-May 1, 1979 Appropriate Community Technology Fair/Conference. The NTIS display contained printed information on NTIS products and services as well as terminal which was used to conduct on lines searches of several different computerized data bases.

During the past year the Developing Country Staff has contacted a large number of international organizations which are actively interested in the distribution of scientific and technical information to developing countries. The NTIS Director, Melvin S. Day, and this office's Administrator, Terrance L. Lindemann, attended several planning sessions for the U. S. Committee meeting of UNESCO/PGI (United Nations Educational Scientific and Cultural Organization/Programme General d'Information).

Mr. Day also headed the U. S. Delegation to the second session of UNISIST II (United Nations World Information System for Science and Technology) during May of this year. The original concept of UNISIST was to bring together a voluntary world-wide cooperative network of scientific and technical information systems--an indirect objective, on a smaller scale, of the USAID network program in Latin America and the Caribbean. Nevertheless, many of the underdeveloped country organizations which represented the Governments, displayed more interest in how the various systems and services of UNISIST can be used to assist them rather than how to interrelate amongst each other.

The U. S. PGI committee officially agreed to host the fourth UNESCO meeting on Planning and Implementation of National Information Activities. UNRSEC and NTIS will jointly organize the seminar in Washington, D. C. in May 1980 with UNESCO paying most of the expenses and NTIS doing the managerial work. The theme will be "the Assessment of Information Needs for Development as a Basis for Information Policy".

Many of the Latin American and the Caribbean USAID Network members will be invited to attend the seminar. Ms. Lida Allen, the Director of AID's Office of Development Information and Utilization, included funds in the AID budget to support the cost of bringing candidates for developing countries in Africa, Asia and the Near East. The arrangements for the payment of the Latin American candidates expenses has not been completed but funding problems are not anticipated. The staff also had separate meetings with A. A. Winters and Victor Montviloff of the Paris UNESCO office and Ms. Judith Werdel of the National Academy of Sciences to review the U. S. obligations in hosting the UNESCO sponsored conference.

An NTIS representative also attend a State Department meeting of the Interagency Working Group of the UNESCO Science Sub-committee. In addition, Mr. Frank Post delivered a paper, "On-line Searching for Developing Countries", at a Mexico City UNESCO regional conference on the Transfer of Technical Information in Latin America.

Among the participants were representatives from INDOTEC (Dominican Republic), INFOTEC/CONACYT (Mexico), COLCIENCIAS (Colombia) and CII (Honduras). He also participated in a NTIS, UNESCO and OAS jointly sponsored seminar on Information Management and Systems at Case Western Reserve University in Ohio.

Mr. Lindemann participated in UNCSTD (United Nations Conference on Science and Technology) preparatory meetings with the U.S. Coordinator, Ambassador Jean Wilkowski. Another staff member met with Hans Glassman of the OECD to discuss how their new guidelines governing transborder data flows would effect LDC's. In addition, a staff member attended a World Bank seminar on its Science and Technology (STPI) Project. The seminar reviewed the criteria, methods, accomplishments and conclusions of a three and a half year project in developing countries which was funded by IDRC of Canada but carried out in its entirety by developing country personnel.

The Staff attended a number of preparatory meetings of the US/Mexico Bi-lateral Commission. The Commission itself, whose purpose is to promote economic and technical cooperation between the U.S. and Mexico, met in June. The Commission is of particular significance to NTIS because the 1976 meeting led directly to the signing of the NTIS cooperative agency agreement with INFOTEC of Mexico.

The staff participated in a number of meetings, including one at the State Department Office of Environmental Services, and provided a number of papers and briefings for Dr. Frank Press' mission to Latin America. The Assistant Secretary of Commerce, Jordan Baruch, will accompany Dr. Press who is the Presidential Science Advisor. One subject of conversation will be the attempt to open a flow of Brazilian government research to the U.S.

Ms. Vietta Dowd attended a meeting at the National Academy of Science of the U.S. National Committee to the International Committees for Building Research, Studies and Documentation. She is a member of the Executive Committee of that organization. She and others from NTIS also attended several meetings of ASIS (American Society for Information Science). Arrangements have been made for a member of the staff to brief a number of foreign Embassy science counselors at an American Association for the Advancement of Science (AAAS) meeting; many attendees are expected to come from developing countries.

Dr. Fetzer, an OAS program specialist, visited NTIS during the past quarter; other visitors have come from the World Bank, the Ministry of Industry in Ecuador and from the cooperating agencies in Ecuador and Venezuela. Eiti Sato from the Instituto de Pesquisas Tecnologicas do Estado de Sao Paulo, the major STI user in Sao Paulo, also visited the office. He agreed to forward selected research reports

to NTIS. Several members of VITA toured the NTIS facilities and had meetings to discuss NTIS/VITA initiatives in less developed countries.

The Staff briefed a number of Foreign Service Commercial Officers from the State Department but relatively few AID overseas officers visited the NTIS facilities during the year. One, David Straley of Costa Rica, did visit and was apparently pleased with the operations. He stated that he now had a greater understanding of the NTIS capabilities to meet AID's information needs in Costa Rica. New efforts are planned to provide briefings to AID personnel.

The Staff also has had a number of meetings with the Denver Research Institute (DRI) to review case study and user education projects and to consider educational and training project activities in FY 1980. A proposal will be forthcoming regarding pilot user education programs in Latin America. In addition, representatives of the firm, Tippetts-Abbott-McCarthy-Stratton (TAMS), met with the NTIS staff concerning the input of a large series of TAMS documents on African Water Resource Utilization. This meeting represented one of the few cases of active cooperation from private businesses. These studies should be of considerable use in Latin America.

## CONFERENCES AND TRAINING

The most effective way for NTIS to accomplish AID program objectives in Latin America and the Caribbean is to personally contact individuals from both our cooperating agencies and the interested public. In one or two days of meetings, subjects can be covered that take days, weeks and often months to accomplish by mail, telex, or even telephone with the resultant increase in operational efficiency.

NTIS uses three different approaches to meet cooperating agency personnel, each of which has its own advantage. The first is annual conferences of the regional directors from all the Spanish speaking cooperating agencies (NTIS may institute similar meetings with the English speaking network as it increases in size); the second, semi-annual workshops to train individuals from the cooperating agencies; and the last, direct visits to the countries by staff of this office where meetings can be held not only with the cooperating agencies but also with private individuals (see the next section on the activities of the cooperating agencies for further information on this approach).

The 1979 Regional Director's Conference was held February in Contadora, Panama. CEDECANI, the Network's then newest cooperating agency, hosted the meeting. Representatives from both AID and non-AID countries attended from all over the hemisphere. Other attendees included several from NTIS, one from the USAID Office of Development Resources and another from the U.S. Patent Office.

The principal purpose of the meeting was to review the previous year's activities and plan the following. It included discussions on program development and evaluations. Significant contributions and/or comments were made by most attendees. These general meetings have proven valuable because individuals from each agency are given the opportunity to become better acquainted with others working in the same field of interest.

The agency representatives, as mentioned earlier, left with a better understanding of the network appropriate technology program. In addition, the meetings emphasized the need for the agencies to cooperate more fully with each other so that an overall Latin American information network might develop--a secondary AID program goal which needs continual development. The fact that AID brings the individual groups together under the auspices of NTIS is significant in itself as the officials return to their countries with a better understanding of how to help the poor. (See second quarterly report for further details.)

The Caribbean Development Bank, another new cooperating agency, sponsored a second regional seminar in which NTIS

participated. It took place in September in Barbados. Attendees from NTIS included Terrance L. Lindemann, Frank Post, and S. Dickson Tenney. More than forty people attended from a number of countries including most of the Leeward and Windward Islands as well as Guyana, Jamaica and Trinidad/Tobago. Invitees included CDB staff from throughout the Caribbean as well as industrial and agricultural extension workers, information disseminators and university chancellors and professors. Representatives from a number of Caribbean technology organizations attended as well as graduates from the semi-annual NTIS workshops.

The CDB has regional offices from the Eastern Caribbean to Belize. It recently received a large AID grant and has used it to establish a Technology Unit (TU) to support technology projects and operations throughout the area. The project's aim is to assist the poor of the area. Furthermore, CDB, with the aid of NTIS products and services, will disseminate appropriate technology information to the Eastern Caribbean lesser developed countries.

CDB, at the same time it introduced its new technology unit, invited NTIS staff members to make a presentation on the NTIS program. The officers described the NTIS operations, discussed transfer of appropriate technology as well as how the developing countries can effectively use it and discussed how NTIS would work with CDB. In addition, the officers established some excellent personnel working relations with various of the attendees during and after the sessions.

A second manner of meeting with the cooperating agencies is through the semi-annual NTIS Information Systems Training and Orientation Workshop. The workshops meet in both Springfield and Washington. Subjects generally covered during the sessions range from operating procedures such as how to order and manage the deposit account to the presentation of NTIS products and a thorough description of marketing and promotion. NTIS bibliographic tools are thoroughly described as are the on-line terminal operations. The use and distribution of appropriate technology are emphasized. The Volunteers in Technical Information (VITA), Smithsonian Science Information Exchange (SSIE), and the Education Resource Information Clearinghouse (ERIC) often make presentations on their organizations. The attendees visit the Library of Congress, Library of Medicine and the National Agricultural Library.

The advantage of these meetings is that they give NTIS the opportunity to provide two weeks of intensive training to officials of the cooperating agencies. Twelve technical information specialists from eleven countries participated in the September workshop, including six from cooperating agencies in the region: Barbados, Colombia, Costa Rica, Ecuador, Honduras and Panama. This was one of NTIS' most successful seminars, a great deal of which can be attributed to the bright and interested attendees who actively participated in the sessions. The Latin American and Caribbean attendees also profited from the exposure of the African and

Asians attendees who came from larger and more experienced organizations. Attachment 5 lists the attendees at both the April and September workshops.

NTIS developed a workbook for use in the workshop. It was first used in the April sessions. Subjects covered within include a listing of the products and services available from NTIS; instructions how to search and process documents into the NTIS bibliographic data files; how to order NTIS products and general information on marketing and promotional activities. The Peru cooperating agency recently completed a Spanish translation of the workbook and it will be printed during the first part of FY 1980 for use as a training tool within the Latin American cooperating agencies.

A series of training videotapes have been written and produced to be used in conjunction with the workbook. They will be finished and distributed during FY 1980. The tapes cover major topics within the field and to conduct overseas training with cooperating agency staff and other national information specialists. Each agency also received "About NTIS", a set of slides and narrative which they may use in presentation to others.

A NTIS representative met with officials of the World Intellectual Property Organization (WIPO) and the U. S. Patent and Trademark Office. They discussed the establishment of training workshops to facilitate use of the U. S. patent files by users in developing countries. A representative from the Patent Office will hold a seminar in Ecuador during the first quarter of FY 1980 to explain the patent office program. If successful, further sessions will be held in Latin America. Discussions were also held on the advisability of the Patent Office providing briefing and training to the workshop attendees; the agencies were asked for their observations on the demand for such training.

The Case Western Reserve University Library School agreed to accept NTIS cooperative agency participants at a week long seminar sponsored by UNESCO and OAS on world-wide sources of technical information. A similar contact was made with the American Society for Information Science. The seminars would be held in June and October and the travel and per diem would be paid from other than project resources.

## ACTIVITIES AT THE COOPERATING AGENCIES

The third method NTIS uses to meet individuals from the cooperating agencies and outside is through personal visits to Latin America and the Caribbean. Staff from the Developing Country Staff visited every cooperating agency during 1979 except Nicaragua. These personal contacts provided the staff the opportunity to give personal undivided attention to the problems and needs of each cooperating agency; an indirect indication of the value of these meetings was the marked rise in the use of NTIS services that usually occur shortly after such visits.

The visits customarily are scheduled so that NTIS can make year-end reviews of the local operations and complete agreement renegotiations. In addition, the NTIS personnel visit the local AID staff and, when appropriate, the Peace Corps Directors Office.

A staff member met with representatives of INFOTEC in Mexico City when lecturing at an UNESCO conference. General procedural matters were discussed at that time. In Central America, staff personnel visited both INTECAP and ICAITI in Guatemala to discuss proposed changes in the cooperating agency agreements. An user education seminar (briefings to individuals from the public and private sectors on NTIS products and services) was presented in Honduras to approximately 40 participants. The Banco Central Information Center was also visited to make informal arrangements for it to operate as a quasi-NTIS sub-agent in the chemistry and agricultural sectors.

NTIS was represented at the "International Symposium on Engineering: Technology Appropriate to Underdeveloped Countries" in El Salvador. The staff member there introduced the NTIS program to participants from 35 countries and made valuable contacts with individuals from other organizations, both national and international, working with appropriate technology. In February, meetings were held in Costa Rica with the Instituto Tecnológico de Costa Rica (ITCR), the new cooperating agency, the Consejo Nacional de Ciencia y Tecnología, the previous one, and a number of local AT groups. The transfer of the cooperating agency to ITCR was arranged in a visit to Costa Rica early in 1979. ITCR is a particularly active technology organization, sponsoring among other things a "Semana del Sol" (Sun Week) fair on the campus of the Costa Rican Institute of Technology in Cartago; NTIS supplied exhibit information on the practical application of solar energy. CEDCANI in Panama sponsored the Contadora Director's meeting. Various NTIS staff personnel also met with local Panamanian AT organizations before and after the conference.

The NTIS staff made at least one visit to every South American country in which AID has a mission, except Guyana, in an attempt to strengthen the ties between the local cooperating agencies and the AID network. Paraguay joined the network during the year. NTIS personnel visited Paraguay early in 1979 to identify a local agency for inclusion on the USAID network. An agreement was finalized in the fourth quarter with the Instituto Nacional de Tecnologia y Normalizacion for it to join the Network. A visit was made during the quarter to provide formal training to the staff.

Activity picked up in Bolivia with the appointment of a new head of the Division General de Normas y Tecnologia; NTIS personally visited La Paz several times during the year. The trip in the fourth quarter was made to train the staff and hold user education seminars. The latter was cancelled due to political unrest that occurred during the visit.

A staff member visited Peru to review the appropriate technology program with Novoa Ingenieros Consultores, the local cooperating agency, as well as with local organizations interested in appropriate technology such as ITINTEC and the Banco Industrial de Peru. The latter is working with NOVOA in a rural development project; together they ordered 79 NTIS publications for use in the project. NOVOA also expressed an interest in establishing small AT libraries in rural Peruvian areas and discussed possible sponsorship with the Saudi Arabian al'Diriyyah Institute and its contractor, Wakefield Associates. NOVOA recently moved into expanded quarters; NTIS visited those new facilities in the fourth quarter and, at the same time, met with local AT organizations and reviewed the progress of several NTIS funded translations.

NTIS briefly met with a representative of the Columbian cooperating agency on a stop-over en route to Ecuador. Several problems were discussed and solved then. In addition, a COLCIENCIAS official attended an international technology and transfer conference in Mexico City and met there with an NTIS representative; another attended a NTIS workshop. In Quito, NTIS and CENDES, the local Ecuadorian cooperating agency, provided training to the staff of the Documentation Center at the Escuela Politecnica, the recently named NTIS sub-agency. In addition to the Director of CENDES, Dr. Vactor Martinez, visited the Washington NTIS office several times during the year to discuss both the NTIS program and the CENDES relations with the AT sub-agent in Quito. He also met with Patent Office members to discuss collaboration in a patent training program.

A successful NTIS user education seminar was held for 135 participants in Santiago, Chile. Other meetings with INTEC/CHILE covered an appropriate technology program and the development of a regional computer network, the latter idea was temporarily

discarded due to high cost of local computer facilities. Melvin S. Day, the NTIS Director, attended a meeting of the Venezuelan Institute for Science for which he is a honorary member. Another staff member visited Venezuela during the fourth quarter to consult with the local cooperating agency.

Brazil graduated from the AID pilot program but BARROSLEARN, the local cooperating agency, continues to participate in the Network on a regional basis. An NTIS representative traveled to Brazil at the request of the Brazilian National Research Council (CNPq) (and with the interest of the U. S. Embassy) to discuss the relationship of the NTIS program with the U. S. Brazil bi-lateral agreement. In a short visit during the fourth quarter, meetings were held with the network agency to review several recurring problems, in part caused by the fact that BARROSLEARN is a commercial operation rather than a government subsidized program. NTIS then met with several new individuals actively involved in the day-to-day operations. In addition, the possibility was discussed of having other Brazilian organizations act as sub-agents.

The greatest changes in FY 1979 in the USAID Network occurred in the Caribbean. Organizations from Jamaica and Barbados joined the Network and negotiations were completed for one in Haiti. Final action in Haiti is expected in early FY 1980.

The Caribbean Development Bank in Barbados joined the network in January 1979. NTIS personnel traveled there in February to provide start-up orientation and to assure a rapid and smooth project initiation. In a July visit, plans were made for a September CDB regional meeting at which time the NTIS program was to be officially introduced to CDB affiliates from throughout the Eastern Caribbean. For further seminar details, see the section on CONFERENCES and TRAINING. The Jamaican Scientific Research Council (SRC) joined the Network during the first quarter of FY 1979 and continues to expand its activities. Several representatives attended the September CDB meeting; in addition, a NTIS representative visited Jamaica in July and participated in four SRC organized user education seminars.

NTIS held interviews with several potential cooperating agencies in Haiti during the spring of this year. After considerable negotiations, an agreement was reached with the Bureau National de Technologie, a Haitian Government office in Port au Prince, for it to become the newest member of the USAID network. The final agreement should be signed in early 1980.

INDOTEC in the Dominican Republic, the oldest cooperating agency in the Caribbean although it only joined in FY 1978, became much more active during FY 1979. NTIS personnel visited the agency during the year to present user education seminars (92 end-user

attended), to discuss the AMTID guest editor program and to determine the feasibility of holding the third annual Regional Directors Conference. Relations with the agency remain excellent although the AID mission has not yet approved appropriate technology programming.

## NETWORK AGENCY AGREEMENTS

There were some notable changes in the USAID Network during the past year as institutes from three countries joined the Network. Another has agreed to join and will do so once the paperwork is completed. A new more active agency replaced one that was not specifically interested in working with the poor and, finally several organizations that have the capability and interest in disseminating appropriate technology have entered into various negotiation stages regarding their entry into the system.

The new agencies are the Caribbean Development Bank from Barbados which joined the network in January 1979, the Scientific Research Council from Jamaica which joined in November 1978 and the Instituto Nacional de Tecnologia y Normalizacion from Paraguay which joined in August 1979. An agreement was reached in Haiti with the Bureau National de Tecnologia for it to join the Network but the final papers will not be signed until 1980.

In February 1979 the Instituto Tecnologico de Costa Rica, the former AT sub-agency in Costa Rica, officially replaced the Consejo Nacional de Investigaciones Cientificas y Tecnologicas (CONICIT) as the Costa Rica cooperating agency. The transfer of responsibilities was completed smoothly and the agencies continue to work well with one another. The Instituto Centroamericano de Investigaciones y Tecnologia Industrial (ICAITI) still provides access to STR to users in Guatemala although its overall interest are more regionally oriented towards Central America activities. NTIS reviewed the desirability of ending the official ICAITI status, but decided to work with both ICAITI and the Instituto Tecnico de Capacitacion (INTRCAP), since most local operations are best handled through the latter organization.

Negotiations continue with both the Panama and Mexico cooperating agencies on up-dated agreement. No problem is anticipated despite the lack of any firm agreement. Early this year, AID was ordered to terminate many of its projects in Nicaragua and NTIS had to suspend its relationship until a determination was made whether this program was effected. It was not and the benefits were reestablished. The agreement has since expired by NTIS has allowed it to continue in force without an official renewal pending the stabilization of the political situation. Meetings were held with representatives of the University of Guyana library to determine its interest in becoming the cooperating agency in Guyana there has been increased and new initiatives are expected soon.

Cooperating agreements were either extended or completed with all the other agencies during the year. Included among the countries are Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Peru and Venezuela. NTIS has also had conversations with several organizations to determine their interest in acting as sub-agents for the dissemination of appropriate technology information.

through agreements with the existing cooperating agencies. Negotiations were finalized with the Escuela Politecnica in Ecuador and continue with CEMAT in Guatemala, ITINTEC in Peru and several organizations in Brazil. The Grupo Tecnologia Apropiada in Panama entered into direct relations with NTIS and will sign a separate contract for program support in FY 1980.

The Peace Corps, following a suggestion from NTIS, placed several of their volunteers in ITCR in Costa Rica to work on AT development projects. If the pilot project is successful, it could serve as a prototype for future operations in other developing countries.

APPLICATION OF MODERN TECHNOLOGY TO INTERNATIONAL DEVELOPMENT (AMTID)

AMTID announces new technical reports on appropriate technology of particular interest to development countries. It has proven to be NTIS' most effective tool for notifying USAID target audiences about available appropriate technology information which can be used by less developed countries. It has received a number of compliments from organizations interested in providing technology which can be used by the world's poor. NTIS, in an endeavor to further improve the newsletter, contract Mr. Paul Tuebner during the fourth quarter of FY 1979 to work full time on the publication.

The AT material described in AMTID can be ordered directly from NTIS, at no cost to the user if the material is to be used to assist the poor, or from numerous other recognized organizations such as VITA and ATI. AMTID also refers readers to other private sources of materials. The Latin American cooperating agencies have estimated that AMTID generated more than 90 percent of the demand for NTIS' AT materials and that each issue is seen by approximately five individuals.

The AMTID mailing list continues to grow, particularly for the Spanish version. INFOTEC/CONACYT, the Mexico cooperating agency, translates the AMTID into Spanish, preparing final art, printing and distributing it directly to Latin America. Distribution takes place approximately 6-8 weeks after the mailing of the English version. The number of mailed copies in Spanish increased from 6,975 (and 2,500 for handouts) in the beginning of the year to over 12,800 mailed copies at the end of FY 1979. Distribution is as follows:

<u>Country</u>	<u>Distribution</u>
Bolivia	875
Brazil	4
Chile	950
Columbia	800
Costa Rica	500
Dominican Republic	500
Ecuador	1,300
El Salvador	1,000
Guatemala	1,175
Honduras	500
Mexico	2,550
Nicaragua	500
Panama	500
Peru	500
Venezuela	1,000
United States	185
TOTAL	<u>12,339</u>

The English version is printed in Washington. It was mailed to approximately 11,000 individuals and firms during the fourth quarter. A list of all the AMTID's produced during FY - 1979 is included in Attachment 6 together with copies of those issues in English and Spanish not previously submitted to LA/DR/USAID. Two French versions of AMTID were translated and published during FY 1979 and mailed to over 1,800 individuals and organizations in Africa, as well as Haiti in the Western Hemisphere. The first version concentrated on energy and natural resources; the second on water resource development.

## NETWORK COMMUNICATIONS

There were seven issues of ACCESS, a bulletin for the U.S. AID technical information network, distributed during FY-1979. They were sent to the USAID cooperating agencies, AID missions and other network participants. The following subjects were featured during the year:

October	1978--	Appropriate Technology
January	1979--	Introduction to the new NTIS Director, Melvin S. Day
February	1979--	Interview with Lida Allen, Director of AID DS/DIU
April	1979--	Ambassador John McDonald's comments on Technical Cooperation among Developing Countries
May	1979--	Presentation of the Contadora Regional Conference and data base discussions in Peru
June	1979--	The Appropriate Technology Fair in Washington, D.C.
July	1979--	Congressman Clarence D. Long's comments on Capital-Saving Technology. Rep. Long is an economist and a leading U.S. advocate of appropriate technology utilization. He is chairman of the House Foreign Operations Sub-committee for Appropriations.

The latter issue is included in Attachment 5 along with the new AMTIDs.

Other NTIS publications printed and distributed to the cooperating agencies included the brochure "Technical Information for Development" which describes the AID Network activities to aid international development, and an updating and translation to Spanish of the manual "How to use the NTIS Order Processing System". The latter was completed after receiving comments, corrections, and suggestions from various NTIS line personnel.

Two documents, "Directory of Federally Supported Information Analysis Centers" and "Information Services on Research in Progress" were sent without charge to the agencies as were monthly copies of the NTIS Best Sellers List. The latter contains 100 report titles every issue.

## PROGRAM EVALUATION

In the past year several studies were funded and completed to first survey the needs of the LDC information user community and then evaluate the effectiveness of the USAID program. Work was also done to evaluate the effectiveness of particular NTIS documents distributed to institutions or individuals needing appropriate technology.

The major studies, "Scientific and Technical Information Needs for LDCs" completed by the International Science and Technology Institute, Inc. and "A User Survey of Foreign Clients for U. S. STI in Developing Countries" by King Research, were thoroughly reviewed in the NTIS quarterly reports.

The King study surveyed requirements of the user communities in the developing countries. The researchers ascertained that NTIS products and services were heavily used, that NTIS was the most known and used foreign information source, and that individuals using the publications associate a high level of value with the information obtained. Furthermore, there was a markedly higher level of use of NTIS reports in those countries which had cooperating agencies.

The ISTI study was more general. It was designed to provide network participants with a better understanding of their constituencies as well as a basis for program planning and evaluation. ISTI was generally satisfied with the structure of the ISAID program although it did recommend expansion of the program in order to cover more countries and provide more extensive services to those countries with cooperating agency agreements. The study also emphasized the general world-wide disorder of appropriate technology programs, particularly in developing countries where neither individuals nor firms have a good idea what is needed and are unaware of what other countries and organizations have to offer appropriate to lower levels of sophistication in economic development. In part, the authors attributed the problem to the large number of smaller international and private organizations that have become "experts" in the appropriate technology field.

In addition to the above, the Developing Country Staff began a number of case studies to determine the effectiveness of the NTIS appropriate technology publications. Initially NTIS contacted the cooperating agencies in both Latin America and Asia and requested them to recommend firms and individuals that have used NTIS reports. This procedure was not always successful as the "recommended" organizations were often ones that agencies thought NTIS "would like to meet" rather than ones using appropriate technology information.

NTIS reviewed the program and decided to correlate the publications sent to users in developing countries with the NTIS bibliography of AT publications. The staff now requests personal interviews only with those individuals or organizations in the developing countries which are found to be using appropriate technology information from the NTIS data base. This method of approach was successfully used when a staff member visited several countries during FY 1979.

The NTIS staff member in charge of case studies, Francisco Pardo de Zela, has frequently written several Latin American cooperating agencies to elaborate and up-date the various case studies he had performed in El Salvador, Ecuador and Columbia. The plan to release a "Case Studies Handbook", which narrates the effective use of U. S. technical information by foreign nationals, was delayed due to a revision of the methodology. The manual is expected to be available early in 1980.

The NTIS DEveloping Country Staff also had several meeting with the LAC/DR office of USAID to evaluate the effectiveness of the program. A particularly significant briefing was one given by Messers Day and Lindemann to the Deputy Assistant Administrator for Latin America, Edward Coy, and his staff on the progress of the LAC/DR project.

PROJECT MANAGEMENT

NTIS staff and contact personnel working on the project full or part-time were:

Terrance L. Lindemann - Foreign Affairs Administrator

Frank Post - Foreign Affairs Officer, Latin American and Caribbean

Vietta A. Dowd - Information Systems Specialist

S. Dickson Tenney - Foreign Affairs Analyst, Central America

Paul Tuebner - AMTID Editor

Comer Heine - International Services Specialist

Paul Bundick - Appropriate Technology Specialist

Rita Cunningham - Administrative Assistant

Marioa Janniche - Administrative Assistant

Nancy Dolphin - Secretary

Pauline Gilmer - Customer Inquiry

Mildred Johnson - Order Processing

Messes. Tenney and Tuebner joined NTIS during the fourth quarter of FY 1979 while Mr. Heine transferred from NTIS Springfield late in the same quarter. John Hounsell and Richard Garcia were others who made significant contributions to the project during the year.

PART II

NETWORK AGENCY REPORTS

PROJECT NO. 598-0572

LATIN AMERICA & THE CARIBBEAN REGIONAL NETWORK

TECHNICAL INFORMATION FOR DEVELOPMENT

## COUNTRY REPORTS

The following country reports describe the program activities of twenty South American and Caribbean information agencies who have contributed to Network activities from this region. Several noteworthy developments occurred during the year which effected most of the agencies at one time or another. Included among them were the February Director's Conference in Panama; the April and September Information Systems Workshops, and the sharp increase in demand for appropriate technology publications under the AID subsidized program to benefit disadvantaged groups.

### Mexico and Central America

The Mexican Network agency (INFOTEC/CONACYT) is an active, aggressive and innovative information agency and has close ties with NTIS. It translates AMTID into Spanish and distributes it throughout Latin America. It also provided a number of other support activities such as translations and hosted a UNESCO seminar on technical information in Mexico City.

The NTIS and Central American agency relationship continues to expand as the agencies become accustomed to working directly with NTIS rather than indirectly through ICAITI in Guatemala. A new agency joined the Network in Costa Rica and several others changed personnel. All have given a high priority to use of appropriate technology documents and cooperated closely with other local organizations working directly with appropriate technology.

### The Caribbean

FY 1979 was a year of great activity in the Caribbean as agencies in Barbados and Jamaica joined the Network; A Haitian agency agreed to join in 1980 and the Dominican Republic agency strengthened its association. An outstanding Caribbean Development Bank seminar was held in Barbados with its Caribbean affiliations. In addition, agencies from both Guyana and Trinidad/Tobago again expressed interest in joining the Network.

### South America

A number of changes took place in this region as one new agency and one sub-agency, working with appropriate technology, joined the Network (Paraguay and Ecuador respectively) and another changed directors and became considerably more dynamic (Bolivia).

The demand for NTIS reports by the Andean countries grew or dropped markedly in each country during the year reflecting a continuing recession and reorganization of the units (down in Peru, up in Chile, Columbia and Bolivia). All the agencies continue to express enthusiasm for working with the AID agencies program and several have been extensive users of the AID funded appropriate technology program.

BARBADOS  
Network Agency

Caribbean Development Bank (CDB)  
Technology Unit  
P.O. Box 408  
Wildey, St. Michael  
Barbados, W.I.

Deputy Director: Mr. Bernard Gouveia  
TU Director: Dr. Jeffrey Dellimore  
TU Technicians: Ms. Adelle Blackman; Ms. Ingrid Douglas  
USAID Mission Liaison: Mr. Steve Ryner, Capital Development  
Officer

#### BACKGROUND

The UN originally established the CDB, and its branch offices from the Eastern Caribbean to Belize, to grant loans to local industry, attract outside investment and complete feasibility studies of industrial projects. CDB, over the years, evolved into a Caribbean institute with Caribbean employees and funding sources. AID entered into an LA/Regional Employment Investment Promotion project with CDB to support intermediate technology development throughout the Caribbean and to expand its Industrial Information Center in order to supply more technology appropriate for the area.

NTIS had no Network member in the area prior to FY 1979. The signing of the AID/CDB project fit in well with NTIS plans to expand the AID Network into the Eastern Caribbean so negotiations were initiated with CDB.

#### ACTIVITY

The CDB signed a bilateral agreement and joined the International Technical Information Network in January 1979. Its operations will cover Barbados and many other areas in the Caribbean where CDB has affiliates or local offices including: Antigua, Belize, Dominica, Grenada, Montserrat, St. Kitts-Nevis, St. Lucia, St. Vincent, the British Virgin Islands, Cayman Islands, the Traks and Caicos Islands, the Bahamas and Guyana.

The CDB/USAID relationship is expected to serve as a useful point to distribute appropriate technology throughout the Caribbean. The CDB immediately began preparation to have their employees learn about the NTIS system, sending two, Adelle Blackman and Jerome-Singh, to the April Information Systems Workshop and one, Ingrid Douglas, to the September session.

An NTIS staff member went to Barbados early in the year to provide start-up orientation and help assure a rapid and smooth project initiation. In July, NTIS staff went to make preliminary

arrangements with CDB officials and others for a September regional meetings with CDB subagents from throughout the Caribbean. Meetings were also held with CADEC, a local Catholic AT action group, and with the AID mission staff.

The two day September seminar was attended by over 40 individuals. CDB introduced its new technology unit, which will provide technical assistance to area countries, as well as NTIS staff. The staff led discussions about NTIS operations, its products and services as well as the appropriate technology program.

The meeting was extremely successful and the initial relationship with CDB has proven to be quite smooth. The CDB Technology Unit will be the Network's major contact although it has not completed its personnel recruitment. It has good leadership and appears highly interested in the Information Network. Twenty-one AT publications were sent to it and other local organizations under the AID subsidized program to assist the poor.

BOLIVIA  
Network Agency

Direccion General de Normas y Tecnologia (DGNT)  
Casilla 4430  
La Paz

Director:	Dr. Gregorio Bernal
Chief, AID/NTIS Project:	Ing. Carlos Garvizu
USAID MIssion Liaison:	Mr. Howard Handler, Program Director

#### BACKGROUND

DGNT joined the Network in 1976. It has not been one of the more active institutions in the system but has remained cooperative. The Minister of Planning established SYFNID (Sistema y Fondo Nacional de Informacion para el Desarrollo) in 1977 to work with DGNT on international programs. Its first duties were to inventory existing trchnical information and train information specialists. It was considered at one time that it might be a rival to DGNT's leadership in STI in Bolivia.

#### ACTIVITY

There has been a striking change in the level and quality of activity of DGNT since Dr. Bernal was appointed its head during early 1979. The organization has ordered a number of NTIS publications during the time and appears to have developed a number of new contacts within Bolvia, as well as moving to more spacious quarters with a larger staff. DGNT has demonstrated interest in the program and appears to have the required level of competence. The comperitiveness between it an SYFNID appears to have subsided and the two are now cooperating on various efforts.

Problems continue to recur due in part to the political/economic situation and in part to internal institutional turmoil. DGNT and SYFNID were to co-sponsor a user education seminar in July to introduce the organization, the local national technical information system and NTIS operations. An NTIS representative went to Bolivia to make the presentation but the seminar had to be cancelled at the last moment due to political disturbances revolving around the Presidential election.

BRAZIL  
Network Agency

BARROSLEARN, Producoes Didaticas  
Rua 24 de Maio, 62-5 andar  
Sao Paulo, Brazil 01041

Technical Information Network Project Officer: Mr. Jose Perez, Jr.  
USAID Mission Liaison: Mr. David Campbell

BACKGROUND

During the middle 1970' NTIS contacted several Brazilian federal agencies working with technical information management to determine their interest in entering the Network. Upon receiving declines from all the contacted agencies, NTIS extended the agreement it has had with Barroslearn since 1974. Barroslearn has participated from the beginning in the program without an AID subsidy; the agreement has now been converted to commercial dealer status. It is a well established training and consultancy organization and has markedly increased its sales of NTIS and other technical information products in the past several years.

ACTIVITY

There has been a change in attitude by the Brazilian government and some pressure put on NTIS to sign a Network agency agreement with a governmental rather than a private agency. The pressure appears to have slackened off recently. A staff member visited Brazil at the request of Brazil's National Research Council (CNPq), and with U. S. Embassy interest, to discuss the relationship of the NTIS program to the US-Brazil Bi-lateral Agreement. Arrangements were discussed which would allow CNPq and Brazilian government access to the NTIS data base.

Dr. Jose Vencovsky, one of the founders of CNPq, joined Barroslearn during the year as the head of the firm's information operations. Barroslearn also participated in the CNPq sponsored Second Brazilian Meeting on Information Science.

Adelaide Paes de Barros, an employee of Barroslearn, attended the Panama Director's Conference. A NTIS officer stopped over in Brazil in the fourth quarter to discuss the day-to-day relations between NTIS and Barroslearn as well as to clarify several problems.

Statistics generally confirm that Barroslearn has taken an active and impressive interest in promoting U. S. technical information. For this reason, the account was transferred to the Developing Country Staff from the NTIS's Office of Product Management in order to better integrate the Brazilian activities with the rest of the hemisphere.

Eiti Sato of the Instituto de Pesquisas Tecnologicas do Estado de Sao Paulo, Brazil's leading research organization, agreed to provide NTIS selected Institute reports.

CHILE  
Network Agency

Instituto de Investigaciones Tecnologicas (INTEC?CORFO)  
Casilla 667  
Avenida Santa Maria 06500  
Lo Curro, Santiago

Program Officer: Mr. Guillermo Quiroz  
Chief, Technical Information Network Project: Mrs. Margarita Barraza

USAID Mission Liaison: Mr. Ault Nathaniels

BACKGROUND

INTEC became a member of the Network in 1976. It is a dynamic Latin American information center and works closely with the NTIS network. U. S./chile government relations have frequently been buffeted by political differences, but other business relations have expanded. INTEC maintains an active information access and dissemination program which includes promotion of NTIS and other U. S. agencies.

ACTIVITY

A staff member visited INTEC during the year to review the activities of an on-line search center which INTEC has available for the public in downtown Santiago. It provides access to more than 100 computerized data bases via the DISLOG and ORBIT systems. Discussion were held regarding the establishment of a sub-regional computer access program but the cost of connection time is very high, making the proposal unfeasible.

INTEC is severing its official ties with CORFO, its parent organization, and will have to run its activities on a pay-as-you-go basis. It has signed a contract to begin a new AT program in Chile and during the year ordered 38 AT documents from NTIS. It also sponsored an NTIS user education seminar at which a total of 135 persons attended. The staff also did a highly professional job translating into Spanish the "Manual of Methods for Chemical Analysis of Water and Waste". In addition, Guillermo Quiroz attended the Panama Conference and led a working group concerning on-line searching.

COLOMBIA  
Network Agency

Fondo Colombiano de Investigaciones Cientificas (COLCIENCIAS)  
Transversal 9, No. 133-28  
Apartado Aereo 051 580 - 29828  
Bogota D.E.

Director: Mr. German Escorcia  
Chief, NTIS/AID Project: Mrs. Isabel Forero de Moreno

BACKGROUND

When COLCIENCIAS joined the network in 1974, it had an eminent place among South American scientific institutions. A new political administration took over in 1975 and made an extensive reevaluation of the program; little was accomplished during the long and intensive review leading to a deterioration within the program. The Colombian National Technical Information Network was subsequently revised and COLCIENCIAS again has an active enterprising program.

ACTIVITY

COLCIENCIAS is now located on the outskirts of Bogota, making physical access relatively difficult. The long range plan is for it to disseminate information through sub-systems which are to be organized sectorally. The organization of these sub-systems is proceeding slowly and access to them is often difficult. COLCIENCIAS shuns regional sub-agencies since they were characteristic of a previous structure which did not work out. This leaves clients in other cities with constrained accessibility to COLCIENCIAS and will take time to rectify.

The NTIS staff had little opportunity to visit Colombia but in a fourth quarter stopover, problems and opportunities were discussed. In addition, Isabel Moreno attended the September Information Systems Workshop and the Panama Conference, where she led the session on program evaluation. Lic. Esther Restrepo of COLCIENCIAS also attended the Mexico City UNESCO Conference on the Transfer of Technology Information in Latin America.

The AID Mission in Colombia, at the request of the Colombian Government, is in the process of closing down and no further interaction will take place between AID/B and COLCIENCIAS. However, COLCIENCIAS continues to demonstrate great interest in expanding its appropriate technology background, ordering forty-six AT documents under the AID subsidized program. In addition, it has been one of the most active providers of AT documents for the NTIS AT data base.

COSTA RICA  
Network Agency

Instituto Tecnológico de Costa Rica (ITCR)  
Centro de Informacion Tecnologica  
Apartado 159  
Cartago

Chief, AID/NTIS Project: Ing. Gerardo Mirabelli  
USAID Mission Liaison: Mr. David Straley

#### BACKGROUND

NTIS has had network agreements in Costa Rica since 1975, first through the sub-regional network established by ICAITI from Guatemala and then through CONICIT (Consejo Nacional de Ciencia y Tecnologica). The latter agency had become the national focal point for most technology transfer programs but it did not perform the development activities itself. It generally had a low involvement in the Network program.

#### ACTIVITY

An NTIS staff officer visited both CONICIT and ITCR early in FY 1979 to propose that the Network Agency agreement be transferred to ITCR. ITCR would first be an appropriate technology sub-agent to CONICIT and then the sole NTIS representative. CONICIT agreed with the proposal. It recognized that it was not staffed to handle the NTIS program, particularly with regards to transferring appropriate technology. On April 1, 1979 ITCR became the sole agent.

The ITCR effort has been greatly assisted by Peace Corps Volunteers assigned to the agency, one of whom is an AT specialist. The others work in various technical specialities including alternative energy, metallurgical engineering, small scale livestock production, soil science and wood technology. ITCR and the Peace Corps Volunteers, as well as a number of other Costa Rican organizations using appropriate technology, have been heavy users of AT documents, subsidized by the AID program to benefit disadvantaged groups; one hundred and eighty-five were ordered during FY 1979. Many of these were used at the Semana de Sol (Sun week) exhibit which ITCR held on the campus of the Costa Rican Institute of Technology. NTIS supplied information to the exhibition on the practical application of solar energy.

Geraldo Mirabelli from ITCR and Zulma Valenzuela from CONICIT attended the Panama Conference. Meetings were held with them to discuss the Network agency transfer. Mirabelli also led the discussion on cooperation with the Peace Corps. Jesus Torres Redondo attended the April Information Systems Workshop and Mirabelli the September session. David Straley of AID Costa Rica visited the NTIS facilities and left expressing a better understanding how NTIS could assist the AID program in Costa Rica.

ITCR has an established clientele of users, a competent staff and a willingness to work. It has been extremely active since becoming the sole NTIS representative. It has built up an extensive AT library and is active in the research and dissemination of AT information. It is a young organization with great potential.

DOMINICAN REPUBLIC  
Network Agency

Instituto Dominicano de Tecnologia  
Industrial (INDOTEC)  
Ave. Nunez de Caceres  
Esquina Jose Amado Soler  
Apartado 329-2  
Santo Domingo

Chief, AID/NTIS Project: Sr. Enrique Leyba, Sub-Director  
Information Officer: Ing. Jeanne Bogaert de Perez

USAID Mission Liaison: Mr. John Clary, Program Officer

BACKGROUND

INDOTEC joined the Network in March 1978. It is an active unit within the Dominican Central Bank, quickly establishing its role by presenting a strong science and technology program with considerable emphasis on appropriate technology. Cooperation between NTIS and INDOTEC has progressed despite the low priority of the local AID office for the Network and appropriate technology.

ACTIVITY

Several staff members visited Santo Domingo during the year, one to perform training for the INDOTEC staff, give user seminars to which 92 end users attended and meet with the local AID and AT organizations; another to brief INDOTEC on AMTID and ACCESS operations and discuss AT questions.

INDOTEC held several meetings with local industries and businesses to explain their services as well as how NTIS information could aid local industry. Mrs. Perez chaired the session on Network Operations and Customer Services at the Panama Conference. In addition, Enrique Leyba attended the Mexico City UNESCO Conference on the Transfer of Technology Information to Latin America.

ECUADOR  
Network Agency

Centro de Desarrollo Industrial de Ecuador (CENDES)  
Garcia Aviles 217 y 9 de Octubre  
Apartado 5833  
Guayaquil

Director: Dr. Victor Martinez  
AID/NTIS Project Officer: Mr. Jorge Medina

AT-Sub-Agency

Escuela Politecnica Nacional (EP)  
Instituto de Investigaciones Tecnologicas  
Apartado 2759  
Quito

Director: Ing. Jaime Velasquez  
Head of EP Document Center: Ing. Elman Lopez

USAID Mission Liaison: Mr. Michael Hirsch  
Capital Development Officer

BACKGROUND

CENDES joined the Network in 1973 and Dr. Martinez used the experience gained working with OAS technology transfer programs to help design the USAID project. Due to the nature and sophistication of the CENDES' operations, AID subsidies for air mail are no longer granted. This is in keeping with the principle of "graduating" countries from the subsidies. CENDES remains eligible to receive North American prices as Ecuador has been reinstated as an AID recipient country.

ACTIVITIES

CENDES often deals with organizations and people beyond AID's target audience. For that reason, EP was approached to become a CENDES sub-agent with the principle responsibility of handling AT information and publications with a secondary responsibility of general access to the people in the Sierra. Discussions were initiated in early FY 1979 and in May a general agreement on the operational terms was reached. The final document, a memorandum of understanding, was approved in July and EP will initiate operations in early FY 1980. NTIS representatives had to visit Ecuador at each stop along the way to assure that the negotiations would be successfully concluded.

Dr. Martinez is a well known information manager with a very successful operation and staff knowledgeable of Network operations. He visited Washington several times during the year to discuss training programs for the AT sub-agency.

personnel (personally provided to Lopez in the July visit), production of audiovisual aids for his firm and development of patent training activities in the NTIS program (the Patent Office will present a program in Ecuador in early 1980).

Jorge Medina attended both the Panama Conference, leading the discussion of sub-agency relations, and the April Information Systems Workshop; Angela Suarez from CENDES attended the September sessions. A number of Ecuadorian organizations working with appropriate technology ordered 109 AT documents under the AID subsidized program.

EL SALVADOR  
Network Agency

Centro Nacional de Productivad (CENAP)  
Servicio de Informacion y Transferencia de Tecnologia  
Avenida Espana 732  
San Salvador

Director:  
Chief, AID/NTIS Project:

Ing. Roberto Solorzano  
Mr. Gustavo Valle

USAID Mission Liaison

Mr. Jesse Synder

#### BACKGROUND

CENAP has been a member of the Network since 1975, first working as a sub-agent through ICAITI in Guatemala and then separately as a member agent in its own right. The program has been interrupted several times, most notably when there was a year lapse in AID funding, but CENAP built up its own internal organization during this period.

#### ACTIVITY

The beginning of the year was marked by deteriorating program activity with CENAP, attributed to communication and political problems. Other problems were CENAP's misunderstanding of network operations as well as ordering difficulties. NTIS was unclear about reasons for the problems until an officer visited the country. As had happened in the past, many of the problems dissolved once the individuals concerned met privately and the issues were clarified.

The NTIS officer also attended the "International Symposium on Engineering: Technology Appropriate to Underdeveloped Countries", other attendees included scientists and engineers from over 30 countries. He introduced the AID program and made valuable contacts with a number of AT organizations working in Central America.

Ing. Solorzano was appointed in the fourth quarter as the new CENAP director; relations have particularly improved since his appointment. AT organizations, including CENAP, have also actively used the AT subsidy to order technology publications appropriate for disadvantaged groups. Ninety-two publications were mailed during FY 1979.

GUATEMALA  
Network Agency

Instituto Tecnico de Capacitacion  
(INTECAP)  
Apartado Postal 709  
Guatemala City

Director: Mr. Mario Leal P.  
Chief, AID/NTIS Project: Ing. Gustavo Chang  
Documentation Chief: Lic. Francisco Ralon

Instituto Centroamericana de  
Investigacion y Tecnologia  
Industrial (ICAITI)  
Documentacion y Informacion Dept.  
Apartado Postal 1552  
Guatemala City

Director: Sra. Rocio Marban

USAID Mission Liaison: Mr. Dan Master, Loan Officer  
Mr. Tom Stukel, Program Officer

#### BACKGROUND:

ICAITI originally served as the NTIS regional network agency with sub-agencies in most of the other Central American countries. The relationship proved unsatisfactory and NTIS signed individual agreements with agencies in each of the countries. The Network Agency program responsibility in Guatemala was taken over by INTECAP but relations between the two agencies are very close and ICAITI handles INTECAP's accounting.

#### ACTIVITY

Several staff members visited Guatemala during the year in an endeavor to re-establish a smooth and functional program. The visits were not entirely successful. ICAITI, for instance, generally does not work directly with the public and, while part of the network, did not devote the time nor allocate the resources to make the USAID project successful.

On the other hand, INTECAP's operational goals are often more compatible with the project objectives. It has extensive contacts with the Guatemalan industry, including the small scale handicraft industry, and works more closely with the public. However, it only recently included provisions for distributing appropriate technology to the poor and the information unit was understaffed. It is expected that these problems will be alleviated shortly as a new administration took charge in August 1979.

The Centro de Estudios Mesoamericano Sobre Tecnologia Apropriada (CEMAT) agreed to have its publication Simposio Internacional Sobre el Terremoto de Guatemala placed into the NTIS data base.

NTIS representatives also met with several other Guatemalan AT organizations. These meetings were in part responsible for the large demand for AT publications under the AID subsidized program to benefit disadvantaged groups. A total of two hundred and four publications were sent during FY 1979.

Francisco Ralon of INTECAP and Ernesto Rossbach of ICAITI both attended the April NTIS Information Services Workshop; Rossbach also attended a seminar on information management and systems at the Case Western Reserve University. Elias Hill, an expert on appropriate technology at ICAITI, attended the Panama conference.

GUYANA

Network Agency Pending: Served by a sub-regional agreement  
with Caribbean Development Bank

No AID representative

ACTIVITY

The University of Guyana library tentatively agreed to become the NTIS Network agency in Georgetown early in 1979 but unanticipated problems occurred and arrangements were cancelled. An NTIS representative met with Mrs. Yvonne Stephenson of the Library at a UNESCO seminar in Mexico City. They agreed that it would be best for Guyana to forego signing separate agreement with the NTIS program. It will instead purchase publications through the Caribbean Development Bank in Barbados.

NTIS staff members met with University of Guyana officers, including Mrs. Stephenson and the vice chancellor of the University, at the September Barbados CDB seminar where new interest was expressed in establishing direct ties. In addition, informal meetings were held with the head of a local Guyana AT organization. New initiatives will be pursued with them.

HAITI  
Network Agency (Pending)

Bureau National de Technologia (BNT)  
Avenue Panamericaine No. 14, Apt. 9 et 10  
Petion-Ville, Haiti

Director: Mr. Jacques Lorthe  
NTIS Project Director: Mr. Rene Desrouleaux  
USAID Mission Liasion: Mr. Tibor Nagy, Chief Engineer

#### BACKGROUND

Except for preliminary visits made to Haiti in 1978, NTIS had little prior contact there. This reflected in part the fact that NTIS had not located a suitable Network agency in the country and in part the lack of expendable funds within Haiti.

#### ACTIVITY

NTIS staff officers went to Haiti twice during FY 1979, the first time to meet with various potential NTIS agents when the program was reviewed and local agency participation considered. The second trip, in the last days of September, was to reach a final agreement with BNT, the new local network agent.

The Haitian government created BNT to fill the information needs of a \$2 million AID project for the research and development of appropriate technologies. It will also act as an information office for the country. BNT fits the needs of NTIS better than other agencies within Haiti and, once it was established, it was only a matter of coming to a full agreement on the terms of the contract. The agreement still has to be officially prepared in the final English and French form but the Developing Country Staff will institute steps so that the agreement can begin immediately.

The staff met with other Haitian AT groups, briefing them on the AID program. Several organizations have begun using the service, ordering nine AT documents under the AID subsidized program to benefit disadvantaged groups.

HONDURAS  
Network Agency

Universidad Nacional Autonoma de Honduras  
Centro de Informacion Industrial (CII)  
Tegucigalpa

Director: Ing. Hernan Arguello  
Chief, AID/NTIS Project: Ms. Patricia Duron

USAID Mission Liaison. Mr. JOHN L. Lovass, Program Officer

BACKGROUND

CII has been a member of the Network since 1975 first as part of the ICAITI network run from Guatemala and then, since September 1977, as a network agency on its own. It works principally with the local industrial sector and its primary goal is to strengthen the countries industrial sector by making technical information available. In addition, CII is a regionally known source of appropriate technology.

ACTIVITY

Relations between NTIS and the agency have been very active this year despite the resignation of Tito Hernandez, one of the main information people there. Relations with the AID Mission had suffered from poor communications, but have improved greatly since a visit by an NTIS staff member early in the year. This visit resulted in expanding contacts between CII and several organizations helped by local AID Missions. One problem recognized by all, but not solved, is the abysmal phone service to CII--this difficulty has to be lived with as CII remains the most qualified agency in Honduras.

The program continues to gain momento in Honduras. CII and other local AT organizations have been heavy users of the AT subsidy provided by AID for disadvantages groups, ordering 178 publications during FY 1979. A user seminar was presented by NTIS before approximately 30 participants from the public and private sectors.

Tito Hernandez attended the Panama Conference and provided valuable leadership in the AT discussions. CII also sent Edgar Gorita to the Mexico City UNESCO Conference on the Transfer of Technology Information in Latin America and Patricia Duron to the April and Thomas Olson to the September Information Systems Workshop.

JAMAICA  
Network Agency

Scientific Research Council (SRC)  
P. O. Box 350  
Kingston 6  
Jamaica W.I.

Director:	Dr. Arnold Ventura
Technical Information Officer:	Mrs Ouida Mae Lewis
USAID Mission Liaison	Mr. Jerome Huleman

#### BACKGROUND

The SRC officially joined the Network in November 1978. However, the organization's personnel were reasonably familiar with NTIS services prior to that time, as SRC had previously ordered a number of NTIS publications

#### ACTIVITY

The SRC program became increasingly more active during the year as the agency's awareness of the Network's operation grew. Ouida Lewis attended the April workshop, and 87 people attended several user seminars which a NTIS officer presented during the fourth quarter. The officer also met with officials from AID and USICA.

Mrs. Lewis also attended the September Caribbean Development Bank seminar in Barbados and offered some valuable insights into SRC's experience with NTIS and to the general collection and dissemination to technical information.

MEXICO  
Network Agency

INFOTEC/CONACYT  
Apartado 19-194  
Mexico 19, D.F.

Director: Mr. Jose Quevedo P.  
Chief Technical Information Network Project: Ing. Jorge Cepeda  
AMTID Editor: Ing. Carlos Izaquirre

#### BACKGROUND

The NTIS Director participated in a 1974 U.S./Mexico bi-lateral commission meeting and, as one of the Commerce Department's contributions to the committee efforts, guaranteed that Mexico orders would only be charged North American prices. Mexico orders were sent to NTIS from a number of different organizations during the next several years. In 1976 a further bi-lateral meeting was held and, in an endeavor to better organize the order system, an agreement was reached for INFOTEC/CONACYT to become an exclusive member of the Network. It has never, however, received AID subsidies.

There has been a large increase in Mexican demand since then, almost entirely attributable to the inclusion of INFOTEC as the national access point. Although originally subsidized by CONACYT, its parent organization, INFOTEC is now self-sustaining and has significant contacts within the Mexican economy.

#### ACTIVITIES

Jorge Cepeda was one of several INFOTEC/CONACYT officials to visit Washington during the year. He attended the U.S./Mexico bi-lateral commission preparatory meetings. Considerable activity took place during the year within both NTIS and other organizations as preparations were made for the June meeting of the U.S./Mexico Commission in Science and Technology. The Network agency agreement was extended during those meetings.

Paula Rucinski-Cartas and Javier Salas attended the April workshop. Jorge Cepeda attended the Panama Conference and led the discussion on marketing and promotion. He also revealed the results of a recent study of AMTID use in Mexico.

INFOTEC/CONACYT hosted a regional UNESCO Conference on the Transfer of Technology Information in Latin America. A member of the NTIS staff delivered a paper on "On-line Searching for Developing Countries"; Network agencies from Mexico, Dominican Republic, Colombia and Honduras were represented.

INFOTEC translates AMTID into Spanish and distributes it to the Latin American member agencies. In addition it has completed several small translations for NTIS and one large one of the ITP book, The Cement Industry. The latter publication has proven to be of considerable interest to developing countries.

NICARAGUA  
Network Agency

Centro Nicaraguense de Informacion Tecnologia (CENIT)  
Banco Central de Nicatagua  
Apartado 2252, Banco Central  
Managua

Director: Mr. Francisco Vega Jackson  
Industrial Analyst: Ms. Dora Elena Gonzales

BACKGROUND

CENIT was one of several Central American agencies which had sub-regional arrangements with ICAITI in Guatemala. It officially joined the Network on its own in the first part of 1978 but, due to the strained condition of the U. S./ Nicaraguan Government relations, it has been in and out of the program.

ACTIVITY

The difficulties of the previous year continued into FY 1979; AID program benefits were temporarily suspended early in the year. Dora Elena Gonzales was, however, able to attend the Panama conference before this occurred.

Nicaragua was subsequently reinstated into the information network with full benefits. CENIT continued to function until early in the summer when the civil disorders became more serious. It is expected, now that the country has settled down, that the business relations will again improve.

PANAMA  
Network Agency

Centro para el Desarrollo de la  
Capacidad Nacional en la  
Investigacion (CEDECANI)  
Estafeta Universitaria  
Universidad de Panama  
Panama City

Director: Vacant  
Chief, AID/NTIS Project: Mrs. Nitzia Barrantes

USAID Mission Liaison: Mr. Don Inos, Education Officer

#### BACKGROUND

NTIS and CEDECANI entered into the first working agreement in February 1978. However, a final agreement has yet to be signed due to a number of circumstances:

1. The former Director refused to sign without the prior signature of the Minister of Education. For that signature, the agreement had to be translated and then notarized. Three separate Ministers of Education took office before anything substantial could be accomplished.

2. The CEDECANI Director and sub-Director both resigned leaving Mrs. Barrantes without any defined authority and further confirming the already noted lack of leadership.

3. Through these reorganizations CEDECANI was the principal object of several AID initiatives, including developments of some AT prototype projects. NTIS has supported this effort although lacking a signed agreement.

#### ACTIVITY

CEDECANI was quite active during the year despite the lack of a signed agreement. This activity must be credited entirely to the efforts of Mrs. Barrantes. She managed to run the organization despite the above problems as well as a lack of funding. The latter problem was in part solved because NTIS allowed the deposit account to run a negative balance so that orders might be processed and AMTID distributed.

A considerable amount of appropriate technology information has been ordered from Panama, some from CEDECANI but more from the Grupo de Tecnologia Apropiada (GTA) which is a volunteer organization deeply involved with appropriate technology. A total of 116 AT documents were ordered during FY 1979 under the AID subsidized program to benefit disadvantaged groups.

Mrs. Barrantes and CEDECANI acted as an extremely competent host to the Second Annual Meeting of Regional Director's Conference. NTIS met with a number of local AT organizations before and after the Conference. The most promising meeting was held with Samuel Bern of GTA.

NTIS had seen the need to have people living and traveling in Latin America, acquiring, disseminating and consulting about information on appropriate technologies. Mr. Bern signed an agreement to begin such work during FY 1980. He will also be responsible for showing local organizations how they may obtain appropriate technology information from other worldwide organizations. The contract was made in line with the objectives of the AID project with NTIS.

The CEDECANI Situation deteriorated seriously during the year and NTIS considered transferring the network agency operations to GTA. NTIS made preliminary arrangements by inviting another member of GTA to attend the April Information Systems Workshop; Nitzia Barrantes, who would probably have moved to GTA if it became the new CA, attended the September session.

The NTIS decision to transfer the agency was deferred at the request of one section of the Panama Aid office. The CEDECANI responsibilities have been transferred to a new office at the University called the Division of Research and Post Graduate Studies and a new director has committed himself to making this arrangement work. Although the agency is still within the University, leaving it open to political problems, NTIS will remain with the agency at least until the end of 1979 to see if the leadership improves.

PARAGUAY  
Network Agency

Instituto Nacional de Tecnologia y Normalizacion (INTN)  
Avenida General Artigas y General Roa  
Casilla de Correo 967  
Asuncion

Director: Dr. Jose Martino  
Chief, NTIS Section: Miss Adelina Schetina

USAID Mission Liaison: vacant

BACKGROUND

There was no network agency in Paraguay prior to 1979 and very few sales to other local institutes.

ACTIVITY

A NTIS staff officer visited Paraguay in January to identify a local network agency. He met with several local organizations, including INTN whose director in 1978 had expressed interest in working with NTIS upon learning that AID had reinstated Paraguay into their program. INTN is considered to be the key Paraguayan technology institute, with experience working with AT programs, and with links with both the OAS projects in Science and Technology and the local AID program.

INTN was invited to join the network and did so in May 1979. A follow-up visit was made in August to provide staff training and an introduction to NTIS operations. There has been little initial business but in late September, Paraguay did order two AT publications through the AID subsidized program to benefit disadvantaged groups.

PERU  
Network Agency

Novoa Ingenieros Consultores, S. A. (NIC)  
Los Colibries 104  
Lima 27

Director: Ing. Alfredo Novoa Pena  
Chief, AID/NTIS Project: Mr. Douglas Chiriboga

USAID Mission Liaison: Ing. "Eddie" Alarcon,  
Program Officer

#### BACKGROUND

NIC became an NTIS network agency in 1976 at a particularly awkward period, as U. S./Peruvian Government relations were shaky, and it was difficult for Peruvian individuals or organizations to cooperate with a U. S. Government agency. NTIS approached several government organizations at that time (including the Instituto de Investigacion Tecnologica Industrial y de Normas (ITINTEC) which is a government institute working with AID) to determine whether they would be interested in becoming a member of the Network. All refused because of political reasons.

NIC, a private consulting firms, has grown to be one of the most active and innovative agencies in the Latin American Network. It maintains good relations with the local USAID mission and with a number of Peruvian government agencies. Despite the original mistrust of the U. S. Government intentions, NTIS has since been criticized by government agencies for continuing the agreement with NIC because it is a private, not public, firm. Some officials particularly questioned the advisability of the U. S. attempting to assist the Peruvian people through a private firm; the pressure has lessened in the past year.

#### ACTIVITY

The generally slow sales in the past year reflect the recession and occasional political unrest that has occurred in the country. There should be an increased use of NTIS services as soon as the economic situation improves. End user seminars given by NTIS have demonstrated that people are interested in U. S. technical information but did not have sufficient available funds. Despite the slowdown, the various local AT organizations remain interested in the AT documents, ordering 143 publications under the AID subsidized program.

NTIS staff members traveled to Peru twice during the fiscal year including once in July 1979. Meetings were held with a number of different agencies including NIC and ITINTEC. The latter agencies formally agreed to work more closely with each other; NIC will supply several NTIS products to ITINTEC and in general make arrangements for a Network agreement between the two.

NTIS also met with local AT organizations. In addition, the officers reviewed the new NIC offices to which it moved in June; they are much more commodious and, because it is on the street level, it provides greater day-to-day access.

NIC continues to work closely with the Industrial Bank of Peru on a rural development project. It will also work with an AID and ITINTEC rural appropriate technology project. NIC actively backed installing the NTIS data base so it could be used by the Peruvian public but the plans to do so have been, at least temporarily, shelved since the existing local telephone network cannot provide quality computer connections.

The then-chief of the NTIS project in Peru, Emiliano Otero attended the Panama conference where he chaired the session on relations with USAID. Marco Fernandez Baco attended the April NTIS Information Services Workshop. The May issue of ACCESS headlined discussions which Mr. Novoa had with NTIS Director Melvin Day on data base collections.

VENEZUELA  
Network Agency

Red de Informacion de Ingenieria, Arquitectura y Afines (REDINARA)  
Colegio de Ingenieros de Venezuela  
Apartado Postal 2006  
Caracas

Director: Dr. Anibal Gomez  
Chief, Technical Information Network Project: Econ. Francisco Rizo  
New York Office Director: Ing. Jorge Ustariz

#### BACKGROUND

Venezuela was already an AID graduate country when the USAID technical transfer program began. The NTIS program is generally low-key in Venezuela although NTIS does receive a number of orders from REDINARA.

#### ACTIVITY

REDINARA recently expressed renewed interest in the NTIS program and even advertized its NTIS relationship in the September issue of the "Colegio de Ingenieros de Venezuela". NTIS has proposed that REDINARA become a foreign commercial dealer because Venezuela no longer needs to receive the developing country benefits as it has reached a significant level of development in many technical areas. This idea was discussed both in a fourth quarter Caracas meeting with the new NTIS Coordinator, Econ Rizo, and with the N.Y. office of CONICIT which has an indirect working relationship with REDINARA in Caracas.

The director of NTIS, Melvin S. Day, also attended a Caracas meeting of the Venezuelan Institute of Science.

PART III

ATTACHMENTS

PROJECT NO. 598-0572  
LATIN AMERICA & THE CARIBBEAN  
REGIONAL NETWORK  
TECHNICAL INFORMATION FOR DEVELOPMENT

ATTACHMENTS

1. Demand for NTIS US Government-Sponsored R & D Information Items from Latin America and the Caribbean
2. Distribution of Appropriate Technology Documents
3. Commissioned Translations
4. Latin American Appropriate Technology Acquisitions
5. Participants at 1979 NTIS Information Systems Workshop
6. AMTID and ACCESS
7. NTIS Field visits to Latin America and the Caribbean in FY 1979

DEMAND FOR NTIS U. S. GOVERNMENT-SPONSORED R & D INFORMATION ITEMS  
FROM LATIN AMERICA AND THE CARIBBEAN

Since the project was initiated in FY 1977, total Latin American and Caribbean demand for products and services available from NTIS has increased significantly. The total FY 1976 demand for this region before the inception of the project was \$40,278. In FY 1977 this figure jumped to \$119,129.26 to \$139,464.88 in FY 1978 and to \$163,709.74 in FY 1979. This reflects an overall increase of 306 percent over the three-year scope of the project. Total demand for the region increased by 17 percent from \$139,464.88 in FY 1978 to \$163,709.74 in FY 1979.

The total value of FY 1979 demand from the USAID assisted project countries in Latin America and the Caribbean showed a substantial increase over FY 1978. This 28 percent increase was from \$38,560.59 in FY 1978 to \$49,567.27 in FY 1979. This increase reflects the energy devoted to the project countries and is especially significant when compared with non-assisted countries in the region.

Total demand for non-AID assisted countries (Argentina, Brazil, Chile, Mexico, Uruguay and Venezuela) rose by 13 percent from \$100,904.29 in FY 1978 to \$114,142.47 in FY 1979.

Most project countries are in their formative stages of developing their Information Systems and economics may account for the disparity in demand between USAID assisted and non-assisted countries. Individuals and organizations from twenty-three Latin American and Caribbean countries ordered documents with first time orders coming from Barbados, Guyana and Haiti.

There are network agencies in eighteen of the ordering countries while another, in Haiti, has agreed to join the network in 1980. There are no agencies in two other countries which have AID missions (Guyana and Trinidad/Tobago), but orders can be made through Barbados; two countries, Argentina and Uruguay, are excluded from the Network.

Chile, Columbia, the Dominican Republic and Mexico markedly increased their product demand from the third to the fourth quarter in FY 1979. Demand by other countries dropped noticeably during the quarter reflecting such problems as political instability, internal financial problems and, in some cases, a reduced demand during seasonal vacations. Because of this quarterly rise and fall in demand occurs frequently, the yearly demand figures are more representative of countries need for NTIS products. In general, the final demand increased from almost every country.

Mexico and Brazil remain the largest users of U. S. technical information. The increase in demand by Mexican customers was particularly striking, rising by almost \$9,700. Countries with largest percentage increases in demand including El Salvador (217 percent), Panama (108 percent), Argentina 84 percent), Bolivia (72 percent),

Costa Rica (58 percent, Uruguay (51 percent), Honduras (34 percent), Chile (28 percent), and Columbia (27 percent). The growth in Central American demand reflected the activities of the new Costa Rica network agency and the increasing familiarity for the other Central America agencies with NTIS services.

Demand from several countries dropped during 1979, quite often reflecting local economic and political difficulties: Nicaragua had severe internal political difficulties, Peru has had a long and profound recession, Ecuador had a period of political instability during a Presidential election and the Venezuelan agency experienced changes in management. These conditions are expected to either improve or not be in existence during FY 1980.

The increase demand over the last two years from many of the new agencies which are located in countries at which this project is mainly targeted is of the most long-run significance. This spurt has occurred despite the almost universal problems of inflation and depletion of expendable foreign exchange caused by higher import bills for petroleum. These demand figures would be higher if they included the numerous shipment of appropriate technology reference sent to many of the USAID countries (see Attachment II for a dissemination breakdown).

Central America had some of the larger two years rises, (1977-78--1978-79), including El Savador (667 percent), Panama (307 percent), Costa Rica 217 percent), Honduras (132 percent), and Nicaragua (44 percent--despite the recent political instability). Other USAID countries with large increases in demand were the Dominican Republic (894 percent) and Columbia 115 percent).

There was little increase in demand in several countries or, in some cases, an actual reduction. Some of the more mature agencies which are not subsidized by USAID, have show the most sluggish activity, i.e. Venezuela and Brazil. The actual reduction in demand (Venezuels) and very small rise in Brazil skew the actual two year percentage increase in demand because the countries are large consumers of U. S. information products. Taking out these country figures, as well as the 1979 Argentina demand as no figures were available in 1977, the overall demand in two years increased by an impressive 55 percent rather than 37 percent.

Other USAID project countries with a reduced demand were Ecuador, where subsidies are being withdrawn, and where political problems effected not only the country but also the local agency operation as the extremely competent director was forced to leave his position; Peru, which has had a severe recession bordering on bankruptcy for more than two years; Guatemala, where the drop was an aberration which reflects other Central American agencies ordering directly from NTIS rather than through ICAITI in Guatemala; and Bolivia, where demand has increased greatly this past year but has not yet returned to the levels of two years ago when the country was more politically stable.

The first of the attached tables presents the fourth quarter demand in various categories such as paper copy and microfiche sales, and then compares the results of the fourth and third quarters. The second table shows the 1979 demand by quarters and compares the final FY 1979 sales with previous years.

The information market in some countries has reached a level of sophistication where information centers can operate effectively to develop their local markets without subsidized assistance, a major objective of the program. However, the majority of the countries in the region still require support assistance to develop local information markets. In these countries, the data which follows shows that this USAID project has proven to be very effective in helping cooperating agencies to acquire financial support and skills necessary to introduce modern information systems to local conditions.

DEMAND FOR STI AVAILABLE THROUGH NTIS  
FROM  
LATIN AMERICA & THE CARIBBEAN

4TH QUARTER - FY-79

COUNTRY	4TH QTR (FY-79) Workload Demand (PC & MF)		4TH QTR (FY-79) Standing Orders SUBSCRIP. SRIM		4TH QTR (FY-79) TOTAL \$ DEMAND	3RD QTR (FY-79) TOTAL \$ DEMAND	CHANGE
	Amount	Value	Value	Value			
Argentina	151	\$ 1,625.00	\$ 380.23	32.30	\$ 2,037.83	\$ 2,129.09	\$ (91.26)
*Barbados	--	--	122.49	--	122.29	122.42	.07
*Bolivia	74	526.60	83.87	--	610.47	564.15	46.32
*Brazil	487	9,215.20	2,071.92	2,630.10	13,917.22	13,553.36	363.86
*Chile	384	3,998.00	507.06	--	4,613.06	2,819.37	1,793.69
*Colombia	302	2,390.60	143.37	--	2,533.97	1,587.01	946.96
*Costa Rica	64	533.00	123.06	--	676.06	1,461.81	(785.75)
*Dominican Republic	223	1,557.75	218.50	--	1,776.25	940.72	835.53
*Ecuador	94	791.50	213.73	--	1,005.23	892.97	112.26
*El Salvador	42	528.50	50.18	268.45	847.13	969.44	(122.31)
*Guatemala	64	468.50	125.55	--	594.05	1,129.21	(535.16)
Guyana	01	10.50	--	--	10.50	165.00	(154.50)
Haiti	04	71.00	43.97	--	105.97	42.69	63.28
*Honduras	38	325.75	61.23	--	386.98	689.23	302.25
*Jamaica	--	--	61.23	--	61.23	377.47	(316.24)
*Mexico	1,366	10,711.45	900.56	122.10	11,734.11	7,685.18	4,048.93
*Nicaragua	--	--	100.41	--	100.41	828.95	(728.54)
*Panama	08	63.00	102.24	--	165.24	885.39	(720.15)
*Paraguay	08	50.25	--	--	50.25	--	50.25
*Peru	66	548.60	498.84	248.40	1,295.84	2,237.02	(941.18)
Trinidad/Tobago	--	--	86.30	--	86.30	104.87	18.59
Uruguay	44	335.50	--	--	335.50	86.59	248.91
*Venezuela	35	656.00	1,030.35	404.40	2,090.75	3,097.15	6,006.40
TOTALS	3,454 a	\$34,426.90	\$6,925.09	3,705.85	\$45,048.84	\$42,369.09	\$ 2,787.25

NOTE: The above totals do not include the approximately 466 documents shipped between July 1, 1979, and September 30, 1979, under the AID Appropriate Technology Program.

a - Third Quarter workload demand total (PC & MF) was 2,676.

\* - Indicates participation in LAC/DR project as unsubsidized graduate of subsidized agency.

CUMULATIVE DEMAND FOR NTIS PRODUCTS

FY 1979 AND PREVIOUS FISCAL YEARS

COUNTRY	OCT-DEC 1978	JAN-MARCH 1979	APRIL-JUNE 1979	JULY-SEPT 1979	FY 79 TOTAL DEMAND	FY 78 TOTAL DEMAND	FY 77 TOTAL DEMAND	FY 78 to FY 79 CHANGES
*Argentina	936.20	2,042.42	2,129.09	2,037.83	7,145.54	3,879.00	*	3,266.54
*Barbados	—	2,432.10	122.42	122.49	2,677.01	—	—	2,677.01
*Bolivia	40.82	565.15	564.15	610.47	1,780.59	1,035.50	2,165.50	745.09
*Brazil	9,256.37	10,250.97	13,553.36	13,917.22	46,977.92	46,900.01	42,260.82	77.91
*Chile	1,926.08	3,418.57	2,819.37	4,613.06	12,777.08	9,959.05	10,493.45	2,818.03
*Colombia	1,140.07	1,351.99	1,537.01	2,533.97	6,613.04	5,207.56	3,077.90	1,405.48
*Costa Rica	401.81	426.75	1,461.81	676.06	2,966.43	1,871.71	939.06	1,094.72
*Dominican Republic	318.07	156.74	940.72	1,776.25	3,191.73	2,904.84	321.23	286.94
*Ecuador	565.57	398.67	892.97	1,0005.23	2,862.44	4,089.59	4,636.83	(1,227.15)
*El Salvador	728.85	470.71	969.44	847.13	3,016.13	951.75	393.00	2,064.38
*Guatemala	430.73	465.81	1,129.21	594.05	2,619.80	2,790.37	3,508.50 a	(170.57)
*Guyana	—	481.05	165.00	10.50	656.55	—	—	656.55
*Haiti	—	—	42.69	105.97	148.66	—	—	148.66
*Honduras	92.57	2,033.34	689.23	386.98	3,202.12	2,382.10	1,381.01	820.02
*Jamaica	174.49	5,039.90	377.47	61.23	5,653.09	—	—	5,653.09
*Mexico	7,012.90	11,248.11	7,685.18	11,734.11	37,680.30	27,982.99	22,951.26	9,697.31
*Nicaragua	345.57	880.37	828.95	100.41	2,155.30	2,467.52	1,498.76	(312.22)
*Panama	298.32	2,666.37	885.39	165.24	4,015.32	1,934.03	986.52	2,081.29
*Paraguay	37.50	176.75	—	50.25	264.50	—	—	264.50
*Peru	587.80	1,141.75	2,237.02	1,295.84	5,262.41	12,925.62	8,797.66	(7,663.21)
Trinidad/Tobago	80.00	—	104.87	86.30	271.17	—	—	271.17
Uruguay	32.00	72.24	86.59	335.50	526.33	349.00	**	177.23
*Venezuela	1,408.30	2,439.10	3,097.15	2,090.75	9,035.30	11,834.24	15,717.76	(2,798.94)
West Indies	122.15	313.05	1,190.02	585.71	2,210.93	**	**	**
TOTALS	25,036.17	48,471.91	43,559.11	45,742.55	163,709.74	139,464.88	119,129.26	24,244.86

\* - Indicates participation in LAC/DR project as unsubsidized graduate of subsidized agency.

\*\* - Not Available

a. - Includes demand from other Central American countries..

## DISTRIBUTION OF APPROPRIATE TECHNOLOGY DOCUMENTS

A principal objective of the Regional Network program is to disseminate appropriate technology information to benefit developing countries. NTIS has taken several steps to advance the program, all of which were covered earlier in this report or in previous quarterly reports. The Developing Country Staff publishes AMTID to introduce appropriate technology publications; in addition this office printed several bibliographies of selected appropriate technology publications.

The AID program subsidizes the distribution of AT documents to the developing Latin American and Caribbean countries. The following charts and lists demonstrate the distribution range of AT documents to the countries within which AID missions are located. The most popular AT publications distributed during FY 1979 are also presented (significantly several were translated into Spanish under the Network Project) and included is a country distribution of the most popular AT documents.

QUARTER

DEMAND IN FY 1979 FOR APPROPRIATE TECHNOLOGY DOCUMENTS

COUNTRY	Oct-Dec. 1978	Jan-March 1979	April-June 1979	July-Sept. 1979	Total
BARBADOS			21		21
CHILE			23	15	38
COLOMBIA			08	51	59
COSTA RICA	17		124	44	185
ECUADOR			96	11	107
EL SALVADOR	12	07	34	39	92
GUATEMALA	04		102	98	204
HAITI	09		05	04	18
HONDURAS	04			174	178
PANAMA	13	36	53	24	126
PARAGUAY				02	02
PERU	01	23	116	03	143
TOTAL	60	66	581	466	1,173

AT Documents Most in Demand by Latin America and the Caribbean

- 1.) PB 263 349 Teaching Manuals: School Gardens and Nutrition.  
(Manual Didactico: Huertos, Escolores y Nutricion)
- 2.) PB 271 714 A Complete Disposal-Recycle Scheme for Agricultural Solid Wastes.
- 3.) PB 247 819 Agricultural Machine Development Program.
- 4.) PB 263 840 Improved Practices in Corn Production: A Guide for Peace Corps Volunteers.
- 5.) PB 260 763 An Evaluation of the Use of Agriculture Residues as An Energy Feedstock, Vol. 1
- 5.) PB 276 507 Manual Talla de Madera. (Wood Carving Manual)
- 7.) PB 262 928 Glossary of Environmental Terms: Spanish-English, English-Spanish.
- 7.) PB 175 541 Plant Requirements to Set Up and Operate a Job Machine Shop
- 9.) PB 214 508 Nonpoint Rural Sources of Water Pollution.
- 9.) PB 276 055 Appropriate Technology and Agriculture in the United States.
- 9.) PB 269 049 Contabilidad para la Micro Empresa: Manual de Ensenanza.  
Accounting for Small Business: Teaching Manual.
- 9.) PB 283 958  
PB 207 441 Manual de Tecnologia Para la Comunidad.  
Village Technology Handbook.
- 13.) PB 262 748 Library Research of Japanese Fishery Research Publications.
- 13.) PB 268 987 Freshwater Fisheries: Program Planning.
- 13.) PB 264 900 A Study of Run-off from Small Rural Watersheds in Response to Completed and Proposed Land Use Changes.
- 13.) PB 258 499 Fuels and Energy Production by Bioconversion of Waste Materials -- State of the Art.
- 17.) PB 278 351 Sugar Cane Production Residues: Assessment of Methods for Technology and Economic Conversion to Utilize Energy Forms.

- 17.) PB 175 531 A Small Sawmill Enterprise.
- 17.) PB 238 103 Technology for Conversion of Solar Energy to Fuel Gas.
- 20.) TID 27164 Bio-Conversion of Agricultural Wastes for Pollution Control and Energy Conservation: Final Report.
- 20.) PB 179 327 Handbook for Building Homes of Earth.
- 20.) PB 206 800 Small Scale Power Supplies for Rural Communities in Developing Countries.
- 20.) PB 264 457 Biological Productivity or Renewable Resources Used as Industrial Materials.
- 20.) PB 280 196 The Performance and Economic Feasibility of Solar Grain Drying Systems.
- 23.) COM 73-  
50645 1 The Technological Basis for Development of Aquaculture to Produce Low-Cost Food Fish.
- 23.) PB 267 970 Appropriate Technology -- A Directory of Activities and Projects.



## COMMISSIONED TRANSLATIONS

One of the tasks of the PASA Scope of Work Statement was to translate appropriate NTIS documents into Spanish so they would be useful to a wider range of groups and individuals in Latin America. Various USAID Network agencies were commissioned to accomplish the translations.

The following lists the initial eighteen documents which were selected for translation because they included technology information appropriate and in demand for developing countries of Latin America. It also gives the current status of the work.

COMMISSIONED TRANSLATIONS

<u>Title</u>	<u>Translation by:</u>	<u>Status</u>	<u>Document #</u>
A Manual on Building Maintenance: Vol. 1	ICAITI (Guatemala)	Input	PB-296-655
A Manual on Building Maintenance: Vol. 2	" "	Being revised	
Ferrocement: Applications in LDC's	CENIT (Nicaragua)	Not received	
Feasibility Test of an Approach and Prototype for Ultra Low Cost Housing	" "	" "	
Guide for Field Crops in the Tropics and the Subtropics	CENAP (El Salvador)	Not received	
The Cement Industry	INFOTEC (Mexico)	Input	PB-287-064
Manual of Methods for Chemical Analysis of Water and Wastes	INTEC (Chile)	Input	PB-291-858
An Inexpensive Economical Solar Heating System for Homes	NIC (Peru)	Being re-typed	
State of the Art of Delivering Low Cost Health Services in Developing Countries	" "	" "	
Energy for Rural Development.: Renewable Resources and Alternative Technologies for LDCs	DGNT (Bolivia)	Pending needed corrections	
Underexploited Tropical Plants with Promising Economic Value	INDOTEC (Dominican Republic)	Input	PB-298-481
Solar Heating of Buildings and Domestic Hot Water	" "	Input	PB-295-087

<u>Title</u>	<u>Translation by:</u>	<u>Status</u>	<u>Document #</u>
Small Wells Manual	CII (Honduras)	Input	
An Investigation of the Interaction of Rock and Types of Rock Bolts for Selected Loading Conditions	NIC (Peru)	Being re-typed	
Simple Methods of Candle Manufacture	GTA (Panama)	Input	PB-296-654
How to Obtain Infor- mation in Different Fields of S & T: A User's Guide	COLCIENCIAS (Colombia)	Input	PB-298-717
Consultancy for Small Businesses	NIC (Peru)	Being typeset in Peru	
Workbook for NTIS In- formation Systems Work- shop	" "	Being typed	

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## LATIN AMERICAN APPROPRIATE TECHNOLOGY ACQUISITIONS

A major objective of the AID/NTIS program is to acquire appropriate technology publications resulting from world-wide research. They are printed by NTIS and listed in the NTIS data base. Once published by NTIS, the information, previously only available locally, can be used by concerned individuals or organizations working with the poor in other sectors of the world. The program fulfills a major AID Science and Technology Information Transfer Program task: "to improve Latin America access to appropriate technology information.

NTIS urges the Latin American and Caribbean cooperating agencies and local appropriate technology organizations to forward AT publications to this office. The following is a representative sample of the publications sent by several Latin American countries.

ACQUISITIONS

<u>Accession Number</u>	<u>Country</u>	<u>Title</u>
PB 287 060	Chile	Envases para Alimentos Industrializados Chilenos. Tomo I.
PB 287 061	Chile	Envases para Alimentos Industrializados Chilenos. Tomo II.
PB 287 062	Chile	Envases para Alimentos Industrializados Chilenos. Anexos.
PB 289 986	Panama	Diagnostico para el Desarrollo de Servicios de Informacion Cientifica y Tecnologica en Panama
PB 289 989	Peru	Construyendo con Ladrillo
PB 290 423	El Salvador	Manual de Administracion para la Industria del Vestuario
PB 290 424	Peru	La Investigacion Tecnologica Industrial en la Peru: Analisis y Comentarios
PB 290 425	Colombia	Memoria del Seminario sobre Desarrollo de Tecnologia Industrial
PB 290 426	Colombia	Ciencia, Tecnologia y Desarrollo, Vol. 2 Numero 1: Enero-Marzo, 1978
PB 291 858	Colombia	Manual de Metodos para el Analisis Quimico de Aguas y Desechos
PB 296 721	Honduras	Estudio Tecnico-Economico para la Fabricacion de Cal en Honduras
PB 297 854	Guatemala	Tecnologia Apropiada: Concepto, Aplicacion y Estrategias
PB 297 856	Peru	Quesos Andinos del Peru
PB 297 857	Peru	Quesos para Regiones Tropicales
PB 297 859	Chile	Programa de Tecnologia Rural Intermedia
PB 297 867	Colombia	Elaboracion de la Panela
PB 297 868	Costa Rica	Reforestacion
PB 297 869	Honduras	Tecnologia para Campesinos Hondurenos: Informe de un Seminario
PB 297 870	Chile	Secado Solar de Uvas: Programa de Tecnologia Rural Intermedia

PB 298 058	El Salvador	Evaluacion Pesquera en el Lago de Ilopango y la Laguna de Olomega
PB 298 059	El Salvador	Estudio Limnologico Preliminar de la Laguna de Aramuaca
PB 298 060	El Salvador	Contribucion al Conocimiento Limnologico Comparativo del Lago de Guija en la Epoca Lluviosa de 1973 y la Epoca Seca de 1974 Volumen II, No. 9.
PB 298 061	El Salvador	Estudios Limnologicos Preliminares de la Laguna Verde
PB 298 470	Colombia	Los Suelos: Su Uso y Manejo: Cartilla Divulgativa para el Agricultor Colombiano
PB 298 525	Panama	Tecnologias Apropriadas para el Desarrollo de Panama

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## PARTICIPANTS AT 1979 NTIS INFORMATION SYSTEMS WORKSHOP

The Developing Country Staff has held a number of semi-annual Information Systems Workshops over the last several years. Attendees come from the entire developing world; some pay their own expenses, while others have their costs subsidized by the AID network and still others receive funds from other international organizations.

This attachment lists the individuals who attended the April and September 1979 sessions; the great majority reside in Latin America and the Caribbean. Some of the individuals have good training in library sciences and speak good English while others have lesser skills. All appear to have benefited from the course. Part of the reason is the exposure gained to individuals from different countries who work in the same field; ideas are exchanged and often taken back to their agency where beneficial developments occur.

1979 WORKSHOP ATTENDEES FROM LATIN AMERICA AND THE CARIBBEAN

APRIL

Adelle Blackman, CDB  
Jerome Singh, CDB  
Jorge Medina, CENDES  
Ernesto Rossback,  
Francisco Ralco Afre, INTECAP  
Particia Elizabeth Duron, CII  
Ouida Mae Lewis, SRC  
Paula Rucinski-Cartas  
INFOTEC/CONACYT  
Javier Salas, INFOTEC/CONACYT  
Glenda Bern, CEDECANI  
Marco Fernandez Baca, NIC

SEPTEMBER

Isabel Forero de Moreno,  
COLCIENCIAS  
Angela Suarez, CENDES  
Gerardo Mirabelli, ITCR  
Thomas Olson, CII  
Ingrid Douglas, CDB  
Nitizia Barrantes, CEDECANI  
Antonio Dayrit, TRC

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The Developing Country Staff publishes a newsletter and a bulletin to provide information about what NTIS can furnish the public, as well as operations of the Staff. They are prepared as part of the USAID sponsored International Technical Information Network program.

The newsletter, Application of Modern Technology to International Development (AMTID), announces new appropriate technology reports which are of particular interest to developing countries. It is distributed to a large number (24,000) of concerned individuals and groups throughout the world and has proven to be the project's most effective tool for announcing available appropriate technology material that can be used world-wide to benefit urban and rural poor.

The bulletin, ACCESS, is prepared by the Developing Country Staff and distributed to the Network agencies overseas and Washington AID offices, and to several other interested individuals and groups. It keeps the members of the Network aware of what others are doing in the field of appropriate technology and has provided other individuals, such as Congressman Long, the opportunity to comment upon appropriate technology.

The AMTID editorial policy as well as the list of the FY 1979 AMTID and ACCESS subjects follows. Copies of the AMTID'S and ACCESS' are attached if they have not been supplied in earlier quarterly reports.

## AMTID EDITORIAL POLICY

The publication, AMTID (Application of Modern Technology to International Development) is an effective tool in facilitating access to information which meets developmental needs. Publications are announced in AMTID from the NTIS data base, as well as many other sources. They are selected for their relevance and transferability to developing countries. As an information network resource, AMTID provides useful information which can be utilized to promote and expand technical know-how in developing countries throughout the world.

### PRIORITIES AND OBJECTIVES

1. AMTID is published to increase the awareness of current and potential users about available, useful technical information.
2. The constituencies, sources, and materials are selected for AMTID on the basis of their relevance to developmental efforts and the ease of transfer of the information cited.
3. AMTID places first priority on "Appropriate Technology" which is defined as small-scale, employment-generating, and energy-conserving technologies relevant to the needs and resources of developing countries. It emphasizes the use of local resources to create employment, to improve production and to increase incomes. Also, the concept implies a humanistic approach to problem solving and considers "soft technologies," such as education, health care delivery, and community development.
4. Exceptions to these criteria will be considered if the target of the information is sufficiently directed toward satisfaction of these countries basic human needs, in particular food, shelter, and health.
5. Reports and other products of extremely high technical sophistication or specifically oriented towards a domestic U.S. environment will be excluded except under special circumstances.

### SOURCES OF INFORMATION

1. AMTID relies primarily on the NTIS data base which is the largest information processing organization in the world. This comprehensive source will provide the bulk of the publications listed in AMTID.
2. Other sources from developed countries and lesser-developed countries will be included for the general information of subscribers, especially those sources which provide information not covered by NTIS.

3. As a matter of policy, AMTID will promote reports prepared by USAID and other developmental agencies from either the United States or abroad.

4. AMTID will give priority promotion to technical information available in French or Spanish, as well as the sources of such information.

CONSTITUENCIES - TARGET GROUPS

1. In order to benefit the poorest section of LDC population's, AMTID will target extension technicians working directly with the poor.

2. To strengthen the national infrastructure supporting the efforts of extension workers and others working to benefit the poor, AMTID will target research and development organizations working in these areas.

3. In keeping with "Appropriate Technology" guidelines mentioned earlier, small agribusiness and industrial enterprise, public and private, will be targeted.

4. AMTID will include information for use by large organizations, public and private, who are involved in social and economic welfare enterprises. AMTID is presently being distributed to NTIS cooperating agencies abroad who are members of the USAID International Technical Information Network. These agencies further disseminate AMTID to local customers within each country.

Through the guidelines stated above, information dissemination to developing countries will be accomplished directly as well as indirectly in helping these nations create their own appropriate technologies to expedite world development.

AMTID

- 78-07 focused on appropriate technology, recapitulating documents from the AID predecessor agency, the International Cooperation Administration;
- 78-08 highlighted current best sellers from the NTIS collection;
- 78-09 dealt with documents relating to various food technologies, including food processing, aquaculture, and protein concentrates;
- 78-10 printed only in French and covered a number of different subjects, highlighting the RTAC series;
- 78-11 dealt with health fields. Topics included books on paramedical programs such as China's Barefoot Doctors Manual and birth control;
- 78-12 highlighted manuals and handbooks in the agriculture, communications, construction, education science and technology fields;
- 79-01 highlighted fertilizers, a theme requested by PASTIC in Pakistan;
- 79-02 a general issue featuring best selling reports;
- 79-03 highlighted computers and informatics;
- 79-04 highlighted urban technology;
- 79-05 focused on the environment/sanitation;
- 79-06 focused on ocean shipping, fisheries and Brazil;
- 79-07 highlighted TECH NOTES and the Government Inventions for Licensing;
- 79-08 featured RTAC Documents; and
- 79-09 highlighted Plant Requirements:

The above AMTIDs, with the exception of issues 78-10, 79-7-79-9, were printed in both English and Spanish and distributed to Latin America. During FY 1979 edition 78-10 was published in French only, while 78-05 on water resources was translated into French. Both were distributed to the French speaking part of developing countries.

ACCESS

October 1978 discussed appropriate technology subsidies and introduced a new NTIS appropriate technology specialist;

January 1979 introduced the new Director of NTIS, Melvin S. Day and announced the Panama Conference;

March 1979 featured an interview with Lida Allen, Director of AID DS/DIU;

April 1979 featured Ambassador John McDonald's comments on Technical Cooperation Among Developing Countries;

May 1979 discussed the Contadora Regional Conference and data base discussions in Peru;

June 1979 introduced the Appropriate Technology Fair in Washington D.C.;

July 1979 presented an interview with Congressman Clarence D. Long of Maryland on capital saving technology and discussed the August UNSCTD Conference;

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## NTIS FIELD VISITS TO LATIN AMERICA AND THE CARIBBEAN IN FY 1979

A particularly effective way to conduct network business in Latin America and the Caribbean is through personal visits to the concerned agencies. Field visits are worth all the time and expense invested in them, and they are the only method NTIS staff members have to meet with all the agency employees and to review local operating problems. Suggestions for improvement in the operations can be made with much more expertise following first-hand review of the local facilities.

It is advisable to visit each agency at least once a year. The visits are coordinated so that year-end reviews can be made of the local operations and agreements extended or renegotiated.

This is particularly true when NTIS is negotiating or signing a new agreement or providing training to local staff on how to operate a technical information facility, i.e. Barbados, Paraguay and the sub-agent in Quito. In some countries visits are made to stimulate lagging operation.

In addition to meeting the agencies, staff officers always brief the local USAID office and attempt to meet other U.S. Government officers, such as the Peace Corp. User seminars (meetings with the public at which NTIS and AID objectives are explained) are held whenever possible and appointments are requested with other user groups, particularly with those working with appropriate technology.

The following lists the countries which the staff visited during FY 1979 and breaks down some of the major efforts in each of the countries.

Of the Total: The Following Was Accomplished

	TOTAL NUMBER OF VISITS	GENERAL VISITS, MEETING LOCAL AUTHORITIES, TRAINING, etc.	AGREEMENT NEGOTIATIONS RENEGOTIATION	USER SEMINAR (NUMBER OF ATTENDEES)
Barbados	3 A	2	2	1 (40)
Bolivia	2	2	1	--
Brazil	2	2	--	--
Chile	1	1	--	1 (135)
Colombia	1	1	--	--
Costa Rica	1	1	1	--
Dominican Republic	2	2		1 (92)
Ecuador	3	3	3	--
El Salvador	1	1	--	--
Guatemala	2	2	--	--
Haiti	2	2	2	--
Honduras	1	1	--	1 (30)
Jamaica	1	1	--	1 (87)
Mexico	1	1	--	--
Nicaragua	--	--	--	--
Panama	1 B	1	--	--
Paraguay	2	2	2	--
Peru	2	2	1	--
Venezuela	1	1	--	--

A. Includes 1 visit of 3 staff members who attended the September CDB seminar;

B. 5 NTIS officers attended the Director's Conference;

SEE #5980572005301 & 5980572006701 FOR CONTINUATIONS