Pan American Network of Information and Documentation in Sanitary Engineering and Environmental Sciences
(REPIDISCA)

Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS)
June 1987
Lima, Peru
CONSOLIDATION OF REPIDISCA NETWORK

I. JUSTIFICATION

The Pan American Information and Documentation Network on Sanitary Engineering and Environmental Sciences (REPIDISCA) is a regional information system aimed to facilitate the dissemination and exchange of available information on Sanitary Engineering and Environmental Sciences. REPIDISCA selects and analyzes bibliographic material with special emphasis on documents generated in Latin America. It includes research and technical reports, thesis, congress papers, technical standards, teaching materials, etc., which are normally of a limited edition and distribution. Thus, REPIDISCA users may have updated information with worldwide advances on subjects of their interest. Special emphasis is applied in the identification and dissemination of documents on water supply and sanitation.

REPIDISCA is a decentralized project operating in each country through governmental institutions acting as National Coordinating Centers together with the national institutions and universities acting as Cooperating Centers, which are responsible for the development of REPIDISCA in their countries. CEPIS carries out a regional coordinating mission, consolidating information on data bases.

During the last four years, significant advances have been made, such as:

- Optimization of national networks in 11 countries: Argentina, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, Mexico, Nicaragua, Peru and Venezuela;

- Implementation of REPIDISCA national networks in nine countries: Bolivia, Dominican Republic, El Salvador, Guatemala, Honduras, Panama, Paraguay, Puerto Rico, and Uruguay;

- Execution of training activities, standardization of processing methodologies, and delivery of network products and services supported by an intensive REPIDISCA promotion campaign.

REPIDISCA as an international network of information can be made effective only by the strengthening of each one of the national networks through the following activities:

- Training of information specialists on technical/methodological aspects, through meetings and conferences;
- Identification and implementation of strategies to expand the marketing of REPIDISCA services;
- Institutionalization of REPIDISCA services networks in each country.
The users are

- Professionals and technicians;
- Consultants and researchers;
- Professors and university students;
- Environmental health planners;
- Supervisors and operators in water systems and sanitation;
- Promoters and community educators;
- Specialists in specialized information management and transfer.

During these last four years, REPIDISCA has made considerable efforts implementing strategies to change our users’ information habits introducing the awareness and need of updated literature to support research projects and academic studies. GTZ financial cooperation would allow the continuation of the ongoing REPIDISCA services:

- Regular remittance of REPINDEX (quarterly index of REPIDISCA bibliographic database, 750 copies), TABCONT (bimonthly publication compiling the Tables of Contents of relevant journals, 500 copies), Collective Catalog of Periodical Publications, (an annual publication, 500 copies), Directories, CEPIS Library Catalog (biannual publication, 500 copies);
- Training courses on REPIDISCA methodology as well as the delivery of REPIDISCA manuals. Throughout 1986, 12 nationals courses were given and approximately 240 persons were trained;
- Photocopy services. CEPIS library provides the cooperating centers with a monthly average of 3,354 photocopies (51% for national institutions, 47% for universities and 2% for private consultancy);
- Bibliographic searches services on specific subjects, authors or institutions, upon requests. 85 bibliographic search requests are being promptly attended every month;
- In-service training on REPIDISCA methodologies;
- Microfiched document delivery service; 1000 documents in microfiche have been delivered to 25 cooperating centers.
- Consult service and reading at CEPIS library. CEPIS has an monthly average of 181 users visiting the library of which 83% are from universities, 6% from national institutions and 1% from private consultancy.

National networks require increasing budgets for information services that are nowadays restricted due to Latin America’s economic crisis. Therefore, it is necessary to collaborate with the National Coordinating Centers in each country to obtain external financing and recommend strategies for self-financing support. The private industry could be a partial financing alternative for REPIDISCA activities sponsoring publications and services.
REPIDISCA faces different realities that can be characterized as:

- Users do not have the habit of using information. Most decision makers undervalue the importance of having an information system and rarely consult technical information. As a consequence, many decisions lack an appropriate technical base;
- The inconveniences faced by present users due to mail delays (three months) in supplying the information which inhibits its timely application.
- Personnel working in the REPIDISCA cooperating centers which are national institutions are constantly rotating. Some countries need more emphasis on personnel training since their information units are managed by non-specialists;
- Our Network is product of the cooperative effort of its Regional Coordinator Center (CEPIS) and the national institutions, which are responsible for the identification of information generated in their countries. Statistics in the remittance of worksheets demonstrate that the response in some countries is very low.
- The REPIDISCA team is overwhelmed by the increasing work and is composed of:
  - REPIDISCA Coordinator, who is responsible for the Network management;
  - Documentalist, who is responsible for the maintenance of the methodological and training instruments;
  - Two librarians working at the CEPIS' library. CEPIS is the REPIDISCA center that most contributes in the identification of the Network's documents;
  - Secretary;
  - Data input clerk;
  - Library assistant in charge of user services
  - Assistant who photocopies and helps in related tasks;

To presently cope with our activities, we have under contract: a part-time Documentalist, two biblioteology students under practical training, four engineering students under practical training, who prepare the document abstracts for its inclusion in the data base.

- The computer overload of our facilities, justifies the need to expand its capacity.

The infrastructure established during the first REPIDISCA years requires an additional support to optimize the network products, services, methodologies, training activities and technical cooperation.

The importance for developing countries to have information services for the provision of timely, efficient and accessible information to sanitary engineering and environmental sciences specialists is clear and GTZ support is critical for the Network consolidation that aims not only to incentivize the use of technical documentation but its production by Latin American specialists.

The financial support to REPIDISCA’S consolidation will benefit the countries participating in the Network and will help to solve the above mentioned problems.
II. PARTICIPATING INSTITUTIONS

- German Agency for Technical Cooperation (GTZ);
- Pan American Health Organization (PAHO), through its Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS).

III. BENEFICIARY INSTITUTIONS

Enclosed herewith the REPIDISCA Cooperating Center Directory, with 181 centers in 21 countries which actively participate in the Network and 228 in the process of being incorporated. These are the beneficiary institutions.

IV. OBJECTIVES

1. Provide a copy of REPIDISCA data bases to each of the cooperating centers.

This is the first step to shorten the time involved between the user information request and the receipt of the document. Cooperating centers may do their own bibliographic searches saving as much as 50% of the time employed in the reply.

To record REPIDISCA data bases in "Compact-Disk/Read Only Memory (CD-ROM), which permits the storage of a great amount of information, like the REPIDISCA data base, and may be accessed by microcomputers. Microisis created by UNESCO will be the software to be employed. Microisis is 100% compatible with Minisis, and is being used by CEPIS.

The CD-ROM recording cost will be shared with the Latin American Information Center in Health Sciences (BIREME) which is also part of the Pan American Health Organization (PAHO), since REPIDISCA data bases do not completely fill the CD-ROM. In this way expenses and efforts between information networks are shared.

Activities

1.1 Microisis' programming for the management of REPIDISCA data bases with the CD-ROM and its recording.

At present we have the Microisis' program sources to adapt the software to access CD-ROM. This work is being carried out by PAHO.

REPIDISCA and BIREME data bases will have to be recorded in the United States since we lack the appropriate equipment. We plan to record 1,000 CD-ROMS.

1.2 Elaboration of manuals for the REPIDISCA package utilization. The preparation of self-training manuals to be used by computer programmers and librarians.
1.3 Workshop on the package utilization. The realization of workshops according to geographical regions will permit a greater participation at a lower cost. National Coordinating Centers will be preferably invited.

1.4 Technical support to countries for the REPIDISCA package installation is foreseen for those centers that in spite of the self-training manual require additional help. Also we will try to identify experts within their countries to carry out this assistance.

1.5 Periodical remittance of disk tapes or cartridges containing new information to countries.

CD-ROM disk can only be recorded once. Therefore to maintain our databases updated, we should continue producing information by magnetic means. Periodicity will be defined according to the necessities of our cooperating centers.

1.6 Equipment

Some cooperating centers already have computer equipment, others might need to expand their capacity and some would need to acquire the entire equipment.

The operation of the CD-ROM requires the following basic hardware specifications:

- Microcomputer compatible with IBM/XT or IBM/AT with the configuration detailed below:

  - a 640 KBytes memory
  - a printing parallel door
  - a RS232 serial door for asynchronous communication
  - a PC-DOS or MS-DOS operative system, version beginning at 2.0
  - a small computer standard interface plate for CD-ROM
  - a CD-ROM reader with connecting cable
  - a High Sierra Standard Driver software
  - a group of technical manuals

2. Formation of a microfiche collection of 7,500 more relevant REPINDEX documents to be distributed among the 25 REPIDISCA Cooperating Centers.

Even when having the data base decentralized, the problem of the document delivery persists. We have lost hope in obtaining a payment mechanism exchange. Even if it could be solved, we still would depend on the mail. Therefore, we think the best alternative is to have relevant documents included in REPINDEX in microfiche, forming the REPINDEX document collection in microfiche in the National Coordinating Centre in each country.

We have to take into consideration that up to March 1987, we had 14,700 documents included in REPINDEX with a 700 document quarterly increase. Fifty percent of those documents are available at CEPIS library
and the rest are scattered throughout the cooperating center libraries in the countries. This document dispersion causes inconveniences for the users. For example from a bibliographic search request, we may retrieve 24 documents, 12 may be available at CEPIS and the remaining 12 could correspond to 10 cooperating centers in 10 countries. The user in order to have copy of those documents must write to CEPIS and to the 10 cooperating centers to obtain the information needed and the average time for getting a document is 109 days. With the REPINDEX document collection in microfiche in National Coordinating Centers, the user will only have to write to his country's National Coordinating Center to obtain the information.

We should try to provide countries' inside cities with these microfiche collections, thus facilitating significantly REPIDISCA information accessibility avoiding centralization within the country. There are 16 microfiches reader/printer that have been distributed in 12 countries. The recipient countries were the following:

- Argentina, Buenos Aire (CARIS);
- Bolivia, La Paz (ANESAPA);
- Brazil, Brasilia (SEMA); Sao Paulo (CETESB);
- Colombia, Bogotá (INSFOPAL);
- Costa Rica, San José (AyA);
- Cuba, La Habana (MINSAL);
- Honduras, Tegucigalpa, D.C. (UNAH-CII);
- Mexico, Mexico, D.F. (SARH-DGUAPC);
- Nicaragua, Managua (INAA);
- Peru, Lima (SENA, UNI, CEPIS); Arequipa (SEDAPAR);
- Dominican Republic, Santo Domingo (INAPA);

Microfiche readers had been previously donated to CIRISCA in Santiago, Chile and UNI in Lima, Peru.

In addition, 1,500 CEPIS documents in microfiche were provided to 25 cooperating centers during 1986.

Initially, the microfiche processing and duplication were done using CEPIS equipment. After a survey on the microfiche processing cost and its quality, we decided to hire a commercial company to accomplish this job with excellent results.

To meet this objective, the following activities should be considered:

2.1 Microfiche master production and microfiches copy reproduction

CEPIS can microfiche, quarterly, 480 documents; master and 25 copies. According to our experience, to produce a microfiche master with 25 copies with 60 pages per document costs US$20 per set. This price is applicable for documents at the CEPIS library.
The cooperating centers can microfiche, quarterly, 145 documents, and the following steps should be taken:

a) Send copy of the documents to the National Coordinating Centers (NCC).
b) The NCCs will send documents to a commercial company to have them converted into microfiche, asking for a master and a copy.
c) The master copy should be returned to CEPIS, who will reproduce the remaining 24 copies. The reason why the reproduction of copies is done at CEPIS is to profit from its import tax exemption.

Since the beginning of the REPIDISCA Network we requested the cooperating centers to send a copy of the document with the data sheet. Unfortunately, as REPIDISCA basically works with non-conventional or grey literature, most of these documents are not published, existing only one copy in the library, which doesn't have financial resources for photocopy and postage expenses for the remittance of the documents. Therefore, few documents have been received at CEPIS and at the National Coordinating Centers.

A selection of the most relevant documents to be microfiched is required according to the following policies:

a) Non-conventional documents in Spanish or Portuguese, which don't belong to periodical publications. We consider that a journal or bulletin, etc. is easier to obtain and we already have our Collective Catalog of Periodical Publications.
b) English documents that are not articles of periodical publications or commercial books.
c) Books or articles of journals in Spanish or Portuguese.
d) Books or articles of journals in English.

Following the above priorities, we have started to microfiche the most recent documents.

2.2 Equipment for national coordinating centers and of cooperating centers located in the countries' inside cities with microfiches readers/printers. Acquisition of ten readers/printers.

Upon consideration of the characteristics of each equipment and the cost of copy reproduction in microfiche the AGFA-Gevaert, COPEX LKL model was chosen because it works with plain Bond paper, facilitating its future maintenance by the recipient centers. When the purchase order was made to our Washington Office, they informed us that the same equipment was sold in the United States, under Bell and Howell trademark, and that PAHO was entitled to a special discount, which price was of US$2,775 plus transport, insurance and customs clearance expenses amounting US$3,500, approximately.

Primarily, the candidate countries for receiving this equipment could be those that don't have a microfiche reader/printer: Chile, Ecuador,
2.3 Index production to be sent to countries for microfiche control purposes and a special REFINDEX.

CEPIS will produce all the indexes for the microfiche and remittance control and at the end of the project a special REFINDEX will be issued containing the documents available in microfiche.

3. REPIDISCA promotion through user education and information service marketing.

We must continue with our intensive Network promotion campaign oriented to university professionals as they have a multiplying effect with their students. We will try to achieve the self-financing of our products by cost-services and through the private industry's support.

Activities

3.1 Updating and translation into English and Portuguese of brochures, posters, guides, educational material, audiovisual and video on REPIDISCA use.

3.2 REPIDISCA promotion through conferences, workshops, seminars, congresses, exhibitions, journals and REPIDISCA news.

3.3 Training workshops on marketing of information services and user education for cooperating centers.

3.4 REPIDISCA promotion and motivation at individual level for professionals and university professors.

3.5 Training workshops to university professors and students concerning the use and value of information.

3.6 Guideline for user's training on the use of information sources about sanitary and environmental engineering.

3.7 Identification of key institutions of the private industry, to offer REPIDISCA services versus the sponsoring of REPIDISCA activities.

4. Development of manual services

Activities

4.1 Bimonthly TABCONT. Publication that compiles every two months the table of contents of journals and magazines received at the CEPIS library.

4.2 Document delivery by photocopies

4.3 Other services to the users
4.4 Document acquisition for CEPIS library

5. Improvement of methodologies and procedures to obtain simplicity, economy and efficiency

5.1 Guidelines for the library automatization using REPIDISCA methodology

5.2 Sanitary Engineering and Environmental Sciences Specialization Course

Oriented to information and documentation professionals of REPIDISCA Cooperating Centers with a duration of 360 hours, to be carried out at the Universidade de Brasilia. The purpose of the course is to give a comprehensive idea of basic concepts related to sanitary engineering and environmental sciences and improve the input quality of our data bases.

5.3 Revision and maintenance of reference manuals and the translation into English of the following documents:

5.3.1 Thesaurus

5.3.2 Indexing Guide and Use of the Thesaurus

5.3.3 Manual for the filling of the REPIDISCA work sheet

5.3.4 Criteria for the Selection of Information for REPIDISCA Data Base Manual

5.3.5 Guide for the Elaboration of Abstracts

6. Technical assistance to improve the coordination and to meet the real needs of each country's Network.

Activities

6.1 Missions to reactivate or incorporate cooperating centers. Includes assistance in the elaboration of projects, center organization, etc. Visit to four countries per year.

6.2 Training workshops on documentary techniques. Seven workshops per year, including those countries that perform their workshops without a CEPIS Instructor.

6.3 In-service training on documentary techniques at CEPIS or at the most developed cooperating centers.

6.4 Consultive Group Meeting to review REPIDISCA operating criterion. Headquarters in the offering country.
7. Development of computerized products and services

We foresee that our data bases in the next three years will significantly increase and our Center will need to expand its computer equipment to continue offering an efficient service. We also plan to develop new data bases.

Activities

7.1 Bibliographic data bases
7.1.1 Work sheet elaboration, quality control, data entry
7.1.2 Quarterly REFINDEX production: Printing and Distribution
7.1.3 Specialized REFINDEX: one per year. Printing and distribution.
7.1.4 National REFINDEX: National publication and distribution: one per year.
7.1.5 REFINDEX Accumulative Indexes. Printing and Distribution.
7.1.6 CEPIS Library Catalog: Annual supplement elaboration.
7.1.7 Bibliographic searches upon request.
7.2 Researcher's data base
   Information updating on:
   a) Research projects
   b) Investigators
   c) Research institutions
Annual elaboration of a water and sanitation research Catalog
7.3 Data base directory catalogs that includes information on:
   - Mailing list
   - Users
   - Institutions
   - Universities and related programs with sanitary engineering
   - Users
7.4 Thesaurus data base: updating and publication of new version.
7.5 Periodical publication data base for acquisition, control, circulation and TABCONT: updating and publication of the Collective Catalog of Periodic Publications.
7.6 Manufacturer and product data base. This new data base is necessary for CEPIS material control quality.
   Data base and entry sheet study and design.
   Manual for the filling of manufacturer and product work sheet.
   Work sheet elaboration, quality control, and data entry.
   Manufacturer directory (self-financed).
   Product catalog (self-financed).
7.7 Searches
7.8 Expand the CEPIS computer system. We require a tape unit to start exchanging information in this manner. At present we have a cartridge unit which is not compatible. We also need to expand our storage capacity on disk as space on disk. The 110 megabyte is not sufficient for our present needs.
<table>
<thead>
<tr>
<th>No.</th>
<th>Activities</th>
<th>QUARTERLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Provide copy of REPIDISCA data bases Microdis programming and CD-ROM recording</td>
<td>X</td>
</tr>
<tr>
<td>1.2</td>
<td>Elaboration of manual for the use of REPIDISCA package programs. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>1.3</td>
<td>Workshop on the Use of REPIDISCA package programs</td>
<td>X</td>
</tr>
<tr>
<td>1.4</td>
<td>Technical support to countries for the REPIDISCA package installment</td>
<td>X X X X</td>
</tr>
<tr>
<td>1.5</td>
<td>Periodical remittance to countries of disks tapes containing information</td>
<td>X</td>
</tr>
<tr>
<td>1.6</td>
<td>Equip national coordinating centers with microcomputers (total or part of them)</td>
<td>X</td>
</tr>
<tr>
<td>2.1</td>
<td>Formation of a microfiche collection of relevant REPINDEX documents Microfiche master production and copy reproduction. Distribution</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>2.2</td>
<td>Purchase of 5 microfiche reader/printers</td>
<td>X</td>
</tr>
<tr>
<td>2.3</td>
<td>Index production for microfiche control purpose. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>3.1</td>
<td>REPIDISCA promotion through user education and information service marketing Updating and translation of brochures, posters and audiovisuals. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>3.2</td>
<td>REPIDISCA promotion in conferences, courses and meetings, journals, etc.</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>3.3</td>
<td>Training of cooperating center's personnel in marketing</td>
<td>X</td>
</tr>
<tr>
<td>3.4</td>
<td>REPIDISCA individual promotion</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>3.5</td>
<td>Training of university professors</td>
<td>X</td>
</tr>
<tr>
<td>3.6</td>
<td>Guideline for user's training on the use of information sources about sanitary and environmental engineering</td>
<td>X</td>
</tr>
<tr>
<td>3.7</td>
<td>Identification of key institutions of the private industry that could be potential sponsors of some REPIDISCA activities</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>No.</td>
<td>Activities</td>
<td>Quarterly</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Development of manual services</td>
<td>X</td>
</tr>
<tr>
<td>4.1</td>
<td>Preparation of 12 TABCON (bimonthly)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>4.2</td>
<td>Document delivery by photocopies</td>
<td>X</td>
</tr>
<tr>
<td>4.3</td>
<td>Other services to the users</td>
<td>X</td>
</tr>
<tr>
<td>4.4</td>
<td>Document acquisition for CEPIIS Library</td>
<td>X</td>
</tr>
<tr>
<td>5.</td>
<td>Improvement of methodologies</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Guideline for library automatization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>5.2</td>
<td>Sanitary Engineering and Environmental Sciences specialization course for information professionals</td>
<td>X</td>
</tr>
<tr>
<td>5.3</td>
<td>Revision and maintenance of reference manual and translation into English</td>
<td></td>
</tr>
<tr>
<td>5.3.1</td>
<td>Permanent Thesaurus updating and translation into English. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>5.3.2</td>
<td>Translation into English of the REPIDISCA Indexing Guide and Use of Thesaurus. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>5.3.3</td>
<td>Translation into English of the Manual for REPIDISCA input elaboration. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>5.3.4</td>
<td>Translation into English of the Criteria for the Selection of information for REPIDISCA data base. Printing and distribution.</td>
<td>X</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Translation into English of Guide for the elaboration of Abstracts. Printing and distribution.</td>
<td>X</td>
</tr>
<tr>
<td>6.</td>
<td>Direct technical assistance</td>
<td>X</td>
</tr>
<tr>
<td>6.1</td>
<td>Cooperating missions and training</td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>Training by national workshops to countries</td>
<td>X</td>
</tr>
<tr>
<td>6.3</td>
<td>In-service training on documentary techniques upon request</td>
<td>X</td>
</tr>
<tr>
<td>6.4</td>
<td>Consultative Group Meeting</td>
<td>X</td>
</tr>
<tr>
<td>7.</td>
<td>Development of computerized products services</td>
<td></td>
</tr>
<tr>
<td>7.1</td>
<td>Bibliographic data base</td>
<td></td>
</tr>
<tr>
<td>7.1.1</td>
<td>Work sheet elaboration, quality control and data entry</td>
<td>X</td>
</tr>
<tr>
<td>No.</td>
<td>Activities</td>
<td>QUARTERLY</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>7.1.2</td>
<td>Automated production of 8 quarterly REINDEX. Printing and distribution</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>7.1.3</td>
<td>Automated production of 2 REINDEX special issues. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>7.1.4</td>
<td>Automated production of 2 national REINDEX. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>7.1.5</td>
<td>Automated production of 1 REINDEX accumulative index. Printing and distribu-</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>tion</td>
<td></td>
</tr>
<tr>
<td>7.1.6</td>
<td>CEPIS Library Catalog. Annual Supplement. Printing and distribution</td>
<td>X</td>
</tr>
<tr>
<td>7.1.7</td>
<td>Bibliographic searches upon request</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>7.2.</td>
<td>Research data base updating and elaboration of a research catalog</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>7.3</td>
<td>Data base Directory and Catalogs. Information updating and printing of</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td></td>
<td>Directories upon request</td>
<td></td>
</tr>
<tr>
<td>7.4</td>
<td>Thesaurus data base, updating and publication of new version</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>7.5</td>
<td>Periodicals data base for acquisition, control distribution and</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td></td>
<td>TACCONT: updating and publication union list of periodicals. Printing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and distribution</td>
<td></td>
</tr>
<tr>
<td>7.6</td>
<td>Manufacturer and product data base. Design and publication of Directories</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>7.7</td>
<td>Expand CEPIS computer equipment</td>
<td>X X</td>
</tr>
</tbody>
</table>
PAHO COUNTERPART CONTRIBUTION AND GTZ SUPPORT REQUEST (REPIDISCA)
(estimates are calculated in Deutsch Marks)

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>GTZ YEAR 1</th>
<th>PAHO YEAR 1</th>
<th>GTZ YEAR 2</th>
<th>PAHO YEAR 2</th>
<th>TOTAL GTZ</th>
<th>TOTAL PAHO</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Human resources-salaries</td>
<td>274,950</td>
<td></td>
<td>274,950</td>
<td></td>
<td>549,900</td>
<td></td>
<td>549,900</td>
</tr>
<tr>
<td>2. Contractual services</td>
<td>46,980</td>
<td></td>
<td>45,000</td>
<td></td>
<td>91,980</td>
<td></td>
<td>91,980</td>
</tr>
<tr>
<td>3. Training and technical cooperation</td>
<td>71,100</td>
<td></td>
<td>71,100</td>
<td></td>
<td>142,200</td>
<td></td>
<td>142,200</td>
</tr>
<tr>
<td>4. Computer: equipment, maintenance, supplies</td>
<td>82,620</td>
<td>5,400</td>
<td>55,038</td>
<td>9,000</td>
<td>137,658</td>
<td>14,400</td>
<td>152,058</td>
</tr>
<tr>
<td>and services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Microfiche: equipment supplies and services</td>
<td>55,800</td>
<td>5,400</td>
<td>47,162</td>
<td>9,000</td>
<td>102,962</td>
<td>14,400</td>
<td>117,362</td>
</tr>
<tr>
<td>6. Office: equipment, supplies, communication</td>
<td>12,600</td>
<td>36,000</td>
<td>12,600</td>
<td>36,000</td>
<td>25,200</td>
<td>72,000</td>
<td>97,200</td>
</tr>
<tr>
<td>and printing</td>
<td>269,100</td>
<td>321,750</td>
<td>230,900</td>
<td>328,950</td>
<td>500,000</td>
<td>650,700</td>
<td>1,150,700</td>
</tr>
</tbody>
</table>