



PAN AMERICAN HEALTH ORGANIZATION

WORLD HEALTH ORGANIZATION



# XX PAN AMERICAN SANITARY CONFERENCE

## XXX REGIONAL COMMITTEE MEETING

ST. GEORGE'S, GRENADA

SEPTEMBER - OCTOBER 1978

Provisional Agenda Item 32

CSP20/3, Corrig. (Eng.)  
22 September 1978  
ENGLISH/SPANISH

PAN AMERICAN CENTERS

### Corrigendum

Please substitute the attached Chart 7 for that appearing on  
Page 14, Annex II.

Annex

Chart 7

CENTER FOR HUMAN ECOLOGY AND HEALTH (ECO) AMRO-2300

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$639,800	\$509,400		\$530,400	
1980	\$609,300	\$295,200		\$314,100	
1979	\$580,300	\$301,200		\$279,100	
1978	\$384,987	\$179,300	\$28,600	\$169,900	\$7,187

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1977	\$310,354	\$127,835	\$ 20,772	\$161,130	\$ 617
1976	\$172,775	\$ 61,197	\$ 12,653	\$ 84,700	\$ 9,225
1975	\$ 91,699	\$ 21,524		\$ 47,976	\$22,199
1974	\$ 12,725			\$ 6,754	\$ 5,971

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF



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8 September 1978  
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PAN AMERICAN CENTERS

In compliance with Resolution XXXI of the XXV Meeting of the Directing Council, which called for a study of Pan American Centers, the Director of the Pan American Sanitary Bureau appointed a Study Group consisting of Dr. Guillermo Arbona, Dr. Alfredo Arreaza Guzmán, Dr. Robert de Caires, and Dr. Myron Wegman, and supported by Mr. Frank Lostumbo of the PASB staff. The report prepared by this Group is attached for the consideration of the XX Pan American Sanitary Conference.

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6. The influence on centers of the current effort to expand technical cooperation among developing countries (TCDC).
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8. Relevance of the centers to the current needs of the countries.
9. Relationship of PAHO Center structure to WHO Collaborating Centers.

## II. INVESTIGATIONS BY THE STUDY GROUP

### A. REVIEW OF PERTINENT DOCUMENTS

1. Those related to centers as a group
  - (a) Background documents prepared for the XXV Meeting of the Directing Council and the discussions of the topic at that Meeting.
  - (b) Background documents and resolutions from previous studies of the centers by the Governing Bodies: CE61.R12 (1969); CD19.37 (1969); CE64.R19 (1970); CSP18.33 (1970).
2. Those related to individual centers
  - (a) A special summary prepared by each center in June 1977 for the study of centers the Director had initiated prior to the Directing Council resolution.
  - (b) The agreement with the host country for each center and, in certain instances, relevant multicountry agreements.
  - (c) Comments on each center by the responsible Headquarters division.
  - (d) Summary records and resolutions relating to the individual reviews carried out for several centers by the Governing Bodies.

- (e) Other Governing Body actions relating to individual centers.
  - (f) Available reports of Advisory Committees.
3. Those related to WHO Collaborating Centers
- (a) The provisions of the WHO manual regarding WHO Collaborating Centers. Relevant paragraphs including functions of these centers and criteria and procedures for designation are contained in Annex I.
  - (b) The Study Group also met with a representative of WHO and were provided with additional background documents and a description of the review of Collaborating Centers being conducted by the Executive Board.

#### B. INTERVIEWS AT HEADQUARTERS

Before starting its series of field visits the Study Group met with the chiefs and certain staff of the various divisions, as a group and individually, regarding their views and perceptions of the center mechanism in general and specifically regarding those individual centers they were responsible for or involved with.

#### C. VISITS TO FIELD

In a series of visits some or all of the Study Group visited each of the centers under study, meeting with the director and key staff members. Discussions were also held with the PAHO representative in the host country and, in a few instances, in countries not serving as host to a center. A limited number of visits were made to various government officials in host and other countries.

##### 1. PAN AMERICAN CENTERS

Basic information on the Pan American Centers visited is presented in Table 1. Further summary information on each individual center, along with its financial history and projections, is presented in Annex II.

Reports on the other discussions held during these visits are included in subsequent sections of this report.

## 2. OTHER CENTERS RELATED TO PAHO

The Study Group reviewed budget document OD-154 to seek existing examples that are related in the same way to PAHO. The search turned out to be difficult because, although some projects clearly fit the kind of definition implicit in CD25.R31, the term "Center" or "Institute" or something similar appears, for what would seem to be sound programmatic reasons, in a number of others. OD-154 shows 14 projects of this type, summarized in Table 2. From the project descriptions they were classified, according to the main purpose of each project, as:

- Type I: A national center, with some international involvement.
- Type II: A national center, carrying out a substantial international function.
- Type III: A center performing an international function, including service to a host country, essentially similar to the centers which are the prime focus of this study.

Four of these centers, one in Type I, two in Type II, and one in Type III, were visited by the Study Group. Summary information on these four is presented in Table 3. Each of them is discussed further in Section V, which deals with "Other Centers."



Table 1

INTERNATIONAL HEALTH CENTERS IN THE AMERICAS ADMINISTERED  
BY THE PAN AMERICAN HEALTH ORGANIZATION

Center and Location	Technical Field	Action by PAHO Gov. Bodies	Orig. Agmt. with Host Country	Initiation of Operation	Review by Governing Bodies
<u>GROUP I - Hemispherewide Centers</u>					
PANAFTOSA Rio de Janeiro	Foot-and-Mouth Disease	CD4.R10 (1950) CSP13.R20 (1950) CSP17.R31 (1966) CD17.R19 (1967) CSP18.R20 (1970)	27/VIII/51	1950	CE66.R4 (1971)
CEPANZO Buenos Aires	Zoonoses	CD8.R7 (1955)	10/VIII/56	1959	CE66.R4 (1971)
BIREME Sao Paulo	Biomedical Information	CD17.R24 CD19.R19	03/VII/1967	1967	-
CEPIS Lima	Environmental Health	*	08/IV/71	1968	CE68.R13 (1972)
CLAP Montevideo	Perinatology	*	01/I/70	1970	CE76.R25 (1976)
CLATES Rio de Janeiro	Teaching Technology in Biomedical Medicine	*	22/IX/72	1972	-
ECO Mexico, D.F.	Impact on Health of Economic & Industrial Development	CD20.R31	22/IX/75	1975	CE78.R20 (1977)
<u>GROUP II - Subregional Centers</u>					
INCAP Guatemala	Nutrition	CSP15.R12 (1958) CD15.R7 (1964) CD16.R14 (1965) CD18.R23 (1968) CD19.R8 (1969)	17/XII/53	1952	CE72.R25 (1974)
CFNI Kingston	Nutrition	*	14/XI/74	1967	CE74.R36 (1975)
CAREC Port of Spain	Epidemiology and Surveillance	*	27/VIII/74	1975	-

\* Program/Budget Approval

July 1978

Table 2

PROJECTS WHICH APPEAR TO BE PROVIDING "CENTER TYPE" SERVICES WHETHER OR  
NOT THE WORD "CENTER" OR "INSTITUTION" IS IN THE TITLE  
(OTHER THAN THE CENTERS UNDER STUDY)

<u>Project No.</u>	<u>Title</u>	<u>PAHO Budget Estimate 1979</u>
Colombia-6900	Center for Education in Health Administration	\$ 130,000
Peru-6201	Center for Training in Physiology and Pathology of Highlands	8,700
Venezuela-2300	Environmental Pollution Research Center	18,240
Jamaica-3600	Regional Drug Testing Laboratory (Caribbean)	24,800
Venezuela-3301	Regional Center for Production of Rabies Vaccine	45,800
AMRO-0500	Leprosy Control (Caracas)	81,600
AMRO-3571	Food Hygiene Training Center (Bogotá)	67,900
AMRO-5403	Latin American Center for Classifica- tion of Diseases (Caracas)	111,400
AMRO-8980	Collaborating Center for Research and Training (Sao Paulo)	48,200
Mexico-8700	Latin American Center for Educational Technology in Health (Mexico)	37,500
AMRO-0901	Research in Insecticides, Resistance and New Control Methodology (Managua)	224,700
AMRO-0902	Research and Reference Center on Vector Biology and Control (Maracay)	252,300
AMRO-6910	Education of Paramedical Personnel (Caribbean)	451,275
AMRO-7301	Regional Reference Laboratory for Production and Control of Viral Vaccines (Mexico)	89,700

Table 3

OTHER CENTERS VISITED

Name	Type	Technical Field	Responsible Authority	International Commitment	Extent of PAHO/WHO Support
Training Center in Immunology* Mexico-6900	I	Immunology	Government of Mexico	Accept occasional foreign students	\$6,000
Latin American Center for Educational Technology in Health Mexico-8700 Mexico City	II	Medical education techniques	Government of Mexico	Some foreign students, and projects in other countries	\$37,500
Research and Training Center for Leprosy and Tropical Diseases AMRO-0500 Caracas	II	Leprosy and tropical diseases	Government of Venezuela and Central University	Foreign students from many countries, advisory services abroad; locus for PAHO Advisor	\$81,600 1 professional post (Regional Advisor)
Research and Reference Center on Vector Biology and Control* AMRO-0902 Maracay	III	Vector control in Chagas' disease and other vector-borne diseases	WHO and PAHO in cooperation with Government of Venezuela	Research, training and information services of worldwide interest	\$252,300 5 professional posts

\*Also serves as a WHO Collaborating Center

### III. COMMENTS ON THE EXISTING SITUATION IN PAN AMERICAN CENTERS

#### A. OBSERVATIONS

From the field visits, study of various documents and extensive interviews, the Study Group recognized that within the single category of Pan American Centers there is a wide range in terms of origin, objectives, method of operation and physical facilities. There was considerable variation among the centers, to be expected in view of their differences in size and role and in their relative significance to the particular PAHO program segment. While each Center seeks in some degree to carry out all of the principal functions of research, training, provision of advisory services, and information dissemination, there is considerable variation in the balance among the existing centers.

Each of the centers has been provided with basic space and facilities by the host government. These vary from completely separate buildings and building complexes to space within an existing institution. Sometimes additional space or specialized equipment has been obtained through specific grants, but the basic facility is a governmental responsibility.

Early in its observations the Study Group realized that while its first view of the centers consisted of visits to the physical facilities, a great part of the work of the center takes place in the field; time did not permit the Study Group to observe this phase. With due regard to this reservation, the Group's observations are presented in the following order: 1. Human Resources, 2. Facilities; and 3. Method of Operation.

##### 1. Human Resources

In general, the Study Group was impressed with the high scientific caliber and dedication of the staff they met. The Study Group has additional comments on appraisal and evaluation further on in the report.

There were frequent comments about shortage of scientific personnel, in particular to respond to the many requests to the center. The Study Group noted, however, that this was a problem common to most PAHO program elements.

The Group was concerned to learn of differences in pay scales and legal rights of local workers at some centers, in comparison with the status of PAHO employees doing similar work in the same locality. While believing that this problem did not come within its terms of reference, the Study Group considered it of sufficient moment to urge prompt consideration and solution.

2. Facilities

Housing for the several centers varies from the excellent to the inadequate.

The following table summarizes the Study Group's views on the present conditions of the physical facilities of centers:

<u>Center</u>	<u>Physical Conditions</u>	<u>Remarks</u>
BIREME	Fair	Additional building is being made available
CAREC	Satisfactory	Programmed expansion of activities necessitates new space
CEPIS	Very satisfactory	Occupying relatively new building
CFNI	Fair; crowded	New building under consideration
CLAP	Satisfactory	Space in two floors of a general hospital
CLATES	Satisfactory	Space in university medical school
ECO	Satisfactory	Interim quarters; new building under construction
AFTOSA	Satisfactory	Adequate, but isolated; move to university area contemplated
INCAP	Satisfactory	Remarkable recovery after earthquake
CEPANZO	Inadequate; dangerous	Location in a general hospital is serious public health hazard

### 3. Method of Operation

There are many and varied views of the roles of the existing centers. Some saw centers as rather isolated and specialized units; others thought the centers functioned well as an integral part of the PAHO program. Individual opinions ranged over the whole spectrum between the two extremes.

The observed variation in balance of functions and funding sources appears to be influenced by historical development and a variety of factors, including the nature and original motivation for establishment of the center, the interest of the director and the staff, the available facilities and resources, the source, character, and adequacy of operating funds, and the degree of interest of the countries in the particular field. Details for each center are given in Annex II.

The way the centers actually work is largely a function of initiative by the director and the staff, and the interest and participation of the Headquarters division most closely involved.

In some centers the Study Group gained the impression that objectives and functions were not clearly defined. This lack of clarity and inadequate understanding of goals among all the staff members leads to improper planning and poor use of resources and personnel.

There is considerable variation in the internal operation of the centers. Some gave the impression of efficiency, well run and effective staff meetings, and clear understanding of roles. In others, the administrative structure within the center seemed more complicated and it was not always clear that elaborate committee structures really resulted in greater staff participation in decision making.

Similarly, the planning and organization of the advisory services, analysis of reports, and background documentation furnished to advisors before going to the field varied, to some extent in relation to the interest of the center in this phase of its activities.

It appears that lines of communication not only to Washington but also to Country Representatives are sometimes sufficiently cumbersome to constitute an impediment to effective operation. What is called for is a clearer definition of the position of centers in PAHO operations and the degree of independence they should have. This matter is discussed further under "Comments and Recommendations."

A significant role is played in some centers by an advisory committee, but the Study Group observed much variation in the way the advisory committees are used. In a few centers they have been meeting regularly for a number of years and in others meetings of advisory committees have just begun. In some centers the advisory committee function is underdeveloped.

A frequent comment from both Country Representative and national authorities was that some centers gave an impression of promising more than they could deliver. In general, there was considerable variation in how much field staff and national authorities know about the functions, operations, capabilities, and scope of each center. To some extent, this is related to geography; host countries usually know a good deal and ask for more services. In addition, however, there appears to be, in some instances, a real problem in communications between center staff and various governments.

#### B. CONCLUSIONS--GENERAL PRINCIPLES

Before entering into comments on the existing situation the Study Group agreed that the following principles should, in their view, be common to all centers.

##### 1. The Center: An Operating Unit and an Integral Part of PAHO

A major axiom, on which all other conclusions should be based, is that PAHO centers are an integral part of the PAHO program. Basically, a center is an organizational modality. Status as a Center carries no program significance, in and of itself, but is a way of achieving program objectives.

##### 2. Relation to Program Priorities

The primary program question is what health areas should have priority; the secondary operating question is whether a given program area would benefit from establishment of a center as one method for achieving the objective. Applicability of the center concept varies in accordance with the stage of development of the program area and whether the benefit of a given center justifies the extra administrative cost of a center structure. The key question is what is the most efficient and effective way to accomplish the goals of the particular program area, not whether there are too many or too few centers.

A discussion of whether PAHO is allocating too much or too little of its resources to centers is incomplete without taking into account overall program content. Otherwise, one might similarly question whether the PAHO program has too many fellowships, or too few advisors, or too many formal training courses. Furthermore, as PAHO program priorities change, centers need to adapt, just as any other PAHO unit would.

### 3. Relation to Division and to Other Units of PAHO

Under current procedures each of the several segments of the PAHO program is assigned to one of the various divisions. It follows that each center program should form a logical part of the efforts of the division in which it is located, but the range of activities of a center may extend well beyond the responsibility assigned to any one division and may relate not only to other centers but to many functional elements carrying out the PAHO program.

For example, the Ecology Center can hardly fail to be as interested in problems of population planning and demography, a Headquarters division responsibility, as in the environmental advisory services of CEPIS or the epidemiological investigations of CAREC.

### 4. Differences which Characterize a Center

The difference is essentially quantitative. At a certain point of program evolution and technology development the combination of functions to be carried out--advisory services, education and training, research, and information exchange--reaches a magnitude where concentrating resources in a special facility for an extended period will lead to greater program effectiveness and accomplishment for the area to be served. New knowledge is essential to health progress, and a well organized center can be an ideal place to carry on effective research.

Within such a facility there can be closer linkage between research and technology transfer. The regular interaction of research personnel and advisory personnel acts as a continuing mutual stimulus, making teaching more objective and research more practical. In this atmosphere the availability of material and information is conducive to demonstration and field trial of key concepts.



Some examples illustrate the influence of these factors and the variation in program balance:

AFTOSA: In 1959 there was a great danger of invasion of Central America and the United States of America by foot-and-mouth disease. The need at that time was for research, for a laboratory to be a reference center and to support control programs, and for related training activities. As progress was achieved, vaccines developed and national laboratories strengthened, advisory services have become more prominent. Coverage has extended to other vesicular diseases.

INCAP: In 1950 the Governments of Central America and Panama recognized that their greatest need in the field of nutrition was, first, for more knowledge of the extent of the problem and the possibility of developing local foods to supply essential nutrients and, second, for the training of appropriate personnel.

As these objectives have come nearer achievement, training programs have changed and direct services to countries have increased. Worldwide recognition of scientific excellence has led to great expansion of grants for research, without cost to governments.

CEPIS: In 1968 more knowledge was needed in the Americas about applying to environmental problems solutions already largely known on a theoretical basis. By concentrating a group of advisors able to provide mutual support and to learn quickly from each other's experience, training programs and information dissemination were facilitated and the stage was set for applied research efforts in technology application.

##### 5. Qualified Independence

The fact that a unit has been established as a center does give it a larger significance and, while planning carried out by a center must be part of the total PAHO program, in its operations a center must have independence to establish collegial relations and develop joint activities with other centers and other units of PAHO or outside PAHO, to further its goals.

##### 6. Relation of Center Director to PAHO

A distinctive characteristic of a Pan American Center is that it is administered by and responsible to PAHO. Thus, the Director of PASB appoints the Center Director and the latter is responsible for the management of the Center, in accordance with

PAHO policies. In this way the international character of the Center and its integral relation to the PAHO Program may be assured.

7. Relation of Center to Host Government

An underlying principle of a Pan American Center is the cooperative arrangement with a host country, which undertakes to provide basic housing, facilities, equipment, and essential support services for the maintenance and operation of the Center. This undertaking involves a substantial investment by the country, compensated by the advantage, both program and economic, of having the center within its borders. It is to be expected that the host country will receive proportionately more of the services because of location and availability and the fact that the country's commitment to act as host demonstrates a special interest in the center's field of activity.

8. Sources of Funding

The basic allotment for core operations comes from PAHO; direct grant funds also come within the PAHO framework. In addition, a host country or a group of sponsoring governments may supply--besides the agreed upon land, facilities, and maintenance--seconded scientific and support personnel to help expand the approved program of the Center.

C. RECOMMENDATIONS

1. Definition of Current Objectives

It is highly desirable that each existing Center redefine its current objectives and functions--advisory services, education and training, research, and information exchange. This need exists whether or not such a definition was made at the establishment of the PAHO center or has been updated since then. This definition must be in writing and ought not to be restricted by any preconceptions as to a standard mix of the four basic functions--advisory services, education and training, research, and information exchange. The actual mix should depend on the established needs of the countries being served, the breadth, specificity, and state of knowledge of the program area, and the foreseeable capacity of the Center. After preparation of the statement of objectives and functions by the center, Headquarters staff should review the document. When agreement has been reached through mutual discussion and interchange, the document will be submitted to the Director for final approval.

The statement of objectives and functions should be periodically reviewed, as part of the review and appraisal process discussed later.

## 2. Budget Projections

Centers should be prepared to make long-range budget projections on the basis of consultation with the national governments and appropriate elements of PAHO staff. These projections should take into account the fact that the PAHO Regular component, while relatively stable, is not likely to provide for significant program increase in the future. Centers should explore increased utilization of grants from various organizations which can be processed through PAHEF and PAHO and will not involve increasing costs to the countries. Care must be taken that such grants contribute to the agreed upon objectives and functions of the center and do not constitute pressure to change the program in ways that are not central to its long range goals and the total PAHO program.

It is also desirable for the centers to explore expansion of the process of secondment by the host country of scientific personnel who can contribute to the program, even though they are not subject to PAHO budgetary control. CLAP makes extensive use of seconded personnel, and CLATES, in essence, does even more through its interrelation with NUTES. (See Annex II.) Some other centers use seconded personnel to a lesser extent. Since this is an important way to amplify the productivity of a center, those not taking full advantage of secondment should look carefully at its possibilities. Budget projections should include estimates of dollar equivalents of such secondment.

## 3. Improvement of Operations

### (a) Center Organization and Management

No single pattern of organization is desirable, or even possible when centers vary so much in scope and technical field. History, local personalities and the mix of tasks to be carried out have all influenced the internal development of the centers.

Many centers, however, can take advantage of recent research on organizational behavior by using techniques developed to increase staff participation in problem solving and

decision making, without diminishing the authority of those charged with final responsibility. Better staff relationships and a higher level of overall efficiency and performance can thus be achieved.

Some centers have been more successful than others in making efficient use of staff available for direct service to the countries, by systematic balancing of country requests and center staff assessment of needs versus staff time that can be made available in the countries. These techniques could be used more widely.

One question raised with the Study Group related to possible duplication of administrative services between a center and a PAHO country or area office in the same city. Unnecessary duplication is undesirable, but a center, by its very nature, needs a basic administrative staff. On the other hand, if the center director and the PAHO representative analyze mutually all the services needed, efficient sharing of certain services, such as travel, might well result. Examples of this kind of sharing already exist.

(b) Availability of Budget Information

In order to make a reliable cost/benefit analysis of the services being provided by a center it is essential that complete information be available on the cost of operation and the cost of providing services. It is necessary to know not only the direct expenditures within the PAHO program, but also in general terms the expenditures by the host country for space, maintenance, utilities and other support costs. In addition, as noted above, the dollar equivalents of seconded services should be taken into consideration.

(c) Personnel

The Study Group repeats its concern, as expressed above, under III.A.2., regarding possible inequities in the treatment of local personnel working at a center. The Group believes that all such personnel should have their working rights protected, either under PAHO Staff Regulations or those of the national government which is

host to the center. The problem of achieving comparable pay scales for PAHO and center employees performing similar work also needs to be addressed.

(d) Advisory Committees

While there may be variations in frequency of meetings or extent of functions in accordance with the field of interest of the center, each center should have a defined plan for using an Advisory Committee and for having regular meetings. It is desirable to establish general guidelines for the kinds of scientific and technical expertise to be drawn upon for the membership of these committees and to define further the geographic areas from which members should come.

Advisory Committees, by their very nature, are likely to be most effective when, over the course of successive meetings, they themselves arrive at a real understanding of how they can make the greatest contribution to achieving the objectives of the center.

The Study Group believes that administrative and management functions of the centers would also benefit from review by Advisory Committees. This could be achieved by adding persons with management skills to the committee membership.

(e) Periodic Review

The Study Group is strongly of the opinion, one shared by most center staff, that there must be periodic reviews, both internal and external, of the operations of the centers. This function is partly served by the reports of the Advisory Committees, but the Group believes that a formal review mechanism should be established. This should be based on self-analysis by the center staff, along with outside review by other PAHO staff members and external consultants, as indicated.

The results of these reviews should be presented to the Director of PASB and, in due course, to the Executive Committee, as it studies the proposed program and budget for recommendation to the Directing Council or Conference.

The problem of periodic review is of course general to all elements of the PAHO program. The Study Group suggests that thought be given to establishment of a regular review mechanism for all elements of the PAHO scientific and technical program, in some way similar to the existing internal audit of procedures and administration.

Periodic review of the centers could form one part of the responsibilities of such a mechanism. This review mechanism should involve both program and management analyses and be conducted by a team of technical and management personnel. The internal review could be conducted on a biennial basis, while an external review involving outside assistance could be carried out in a three to five year cycle.

(f) Delegation of Authority

In an organization like PAHO, where the responsibilities of various levels of operation and lines of authority are well defined, the operating question is the amount of leeway that should be given to the head of each unit at the various levels. In a fundamental sense, delegation of authority to a center is no different from delegation of authority among other PAHO units. On the other hand, the nature and size of most center operations lead to a de facto difference in the relationship of the center director to the head of the division to which the center is assigned.

Proper delegation of authority requires a framework under which the division head does not lose his ultimate responsibility as the overall supervisor. The Study Group believes that within this framework an optimum degree of independence may be achieved only by the development of effective interpersonal relations. These must involve mutual respect and an understanding that, unless the center director takes actions which are contrary to previously agreed upon policies, he should make operational decisions in the expectation that he will be backed up by the division.

(g) Communications with PAHO

A number of comments were made to the Study Group that communications within PAHO were often cumbersome. It is obvious that if one followed strictly the rules for passing all communications through the various levels of authority, the total Organization would grind to a halt. In this respect the problem of the centers is no different from the problem of the total operation of PAHO. The Study Group is concerned that going through too many levels can be both time consuming and frustrating. It commends the subject to the Director's study for all of PAHO in the certainty that the centers would benefit from such a study.

(h) Physical Facilities

Although assessment of physical facilities was not specified within its charge the Study Group calls attention to one instance of unsatisfactory and hazardous facilities--the Zoonoses Center in Buenos Aires. In its meeting with the Secretary of Health of Argentina and his staff it was clear that the Government of Argentina is concerned about the problem and is working to correct it. The Study Group believes the situation is urgent and requires prompt action to achieve an early solution.

(i) Knowledge and Expectation of the Centers

There are two problems in the existing situation. Many countries simply do not have enough understanding of what the centers can provide; others have been led by some centers, perhaps inadvertently, to expect much more than they have the capacity for delivering. To remedy this situation the Study Group believes that a more realistic approach is necessary to the dissemination of information about such centers as part of the total PAHO information process.

It should be recognized that this problem is separate from the resource problem, in which a center may reach the stage where unstimulated but reasonable demands outstrip staff capacity to deliver needed services. To meet these requests requires expansion of staff.

#### 4. Status as a Pan American Center

Formal status as a Pan American Center has been based on either individual resolutions of the Governing Bodies or on the general action involved in approval of the Program and Budget. Since a center, like any other project, is an operating modality of the Organization, approval as part of the Program and Budget constitutes Governing Body recognition of the center's existence.

As pointed out earlier, however, a center, for a variety of reasons, is in a special category, and the Study Group believes that, despite the limitation in program flexibility entailed, separate and specific approval of centers is desirable. If the Conference concurs that establishment or disestablishment of a Pan American Center requires specific action by the Governing Bodies, it would be desirable to put the juridical basis of all existing centers on a uniform basis, with due recognition of previous resolutions, by passing a general resolution at the present time.

#### IV. NEW CENTERS

An examination of the role of centers should involve not only a critical look at those in existence and their justification for continuation under PAHO aegis, but should also consider the possibility that new centers may be proposed. In fact, during their visits, Study Group members heard several suggestions for new centers of interest to some countries. These included suggestions for a center for the maintenance of hospital and other health equipment and a center for research and training in health administration.

The Study Group therefore considers it necessary to recommend a series of prerequisites which should be met before a center is considered, based upon the general principles listed above under III.B., and to outline what steps should be taken before a Pan American Center is established.

##### A. PREREQUISITES

###### 1. Needs

Definition of the need for establishing a new center involves an examination of the kinds of quantitative factors discussed in section III.B., particularly subsection 5. What is required is nice judgement as to the stage of technology development and the requirements of the Member Countries. Similar considerations would apply to the decision to close a center.



## 2. Suitability of a Center Structure

Establishing a center and providing the necessary facility, equipment, personnel and administrative management inevitably costs more than providing individual advisors and consultants through other parts of the Organization. The assessment in each case needs to be whether the extra benefits of the center justify the added costs. Some factors to be considered include geographical location, the relative need for research and advisory services, the existence of other units capable of providing the same service, such as schools accepting international students or other kinds of information banks, and the likelihood that a center structure would shorten the time necessary to achieve program goals.

A center may also be a good way to give needed visibility to a problem over and beyond the usefulness of the center structure to accomplish the specific goals.

A center structure may also serve as a point of attraction for personnel of high caliber who would be willing to work in a unit devoted exclusively to a single problem but not as part of an organization with a very general program.

## 3. Interest and Commitment

For a center to be successful there must be clear interest on the part of both a government and a group within the Organization. This interest must be translatable into a commitment of necessary resources.

## 4. Available Resources

It is essential that a realistic assessment be made of the availability of resources to be provided by the respective parties. This means not only funds for the employment of personnel, but the necessary space, housing, equipment, and maintenance. Another consideration is the availability of enough trained personnel to make the Center operation successful.

## 5. Advocacy

Successful centers have usually been able to count on forceful advocacy of their existence by persons with sufficient ability, scientific standing, prominence and energy to influence decision making. Advocates of this stature may be found in a variety of places, in the public and private sector.

## 6. Other Factors

Among other imponderables which come into play may be included the political climate in the countries and in the Organization, the general prominence of the program area in the minds of lay people as well as scientists, and the human factors involved in moving the project along.

## B. STEPS IN ESTABLISHMENT OF A CENTER

### 1. Definition of Objectives and Functions

With the assistance and participation of PAHO staff a written statement of objectives and functions should be developed and agreed upon by all concerned. The statement should include the scope of activity of the center, the proposed mix of the four basic functions, and the presumed duration, whether indefinite or for a fixed period. Review of objectives and functions should involve the Headquarters units which have any interest in the problem as well as the staff of the country where the center might be located.

### 2. Preliminary Negotiations

Once agreement on objectives and functions has been reached and the Director's approval obtained, preliminary negotiations may be undertaken with governments that have expressed an interest in the program or might be likely to. These negotiations should assess interest and commitment in terms of resources which can be made available.

### 3. Selection of Optimum Site(s)

Assuming that the preliminary negotiations show a likelihood that an effective center can be established, a crucial step is the selection of an optimum site. Factors to be considered are convenience of communications, proximity to the problem, ability of the potential host to provide needed conditions, and the likelihood that this site will be conducive to stability. There may be only one obvious site for a center, but it is possible that two or more may be in competition. The Director will have to make the decision as to which is the optimum, for proposal to the Governing Bodies.

### 4. Consultation with Executive Committee

At this stage the Director should consult the Executive Committee to ascertain their general reaction to the proposal. If the reaction is favorable, formal negotiations can go forward.

5. Commitment of Host Country and Commitment of PAHO

A formal commitment will need to be obtained from the host country in the light of a proposed formal commitment by PAHO. These commitments should indicate the proposed duration of the center, either indefinite or for a defined period. The two commitments are not necessarily the same as far as time is concerned. It is conceivable that a country might wish PAHO participation and management during a formative period and commit itself to take over basic responsibility for the center, as a national center carrying out an international function, after a defined period of years.

6. Action by the Executive Committee and Directing Council

At this stage the whole proposal, including the defined objectives and functions, the plan of operations and the financial commitments of the host country and PAHO, should be presented to the Executive Committee for its examination and transmission to the Directing Council.

7. Formal Agreement

Following specific approval by the Directing Council, the Director and the representatives of the host country may proceed to the signing of a formal agreement.

C. DISESTABLISHMENT OR TRANSFER OF A CENTER

It is possible, or in some cases likely, that the specific needs that have led to the establishment of a center may no longer apply or that other needs may have a greater claim on PAHO funds. The steps to be followed in such cases should include discussions with the host country and a formal recommendation to the Executive Committee, and in turn the Directing Council, that the center be terminated as a Pan American Center. Such termination should not necessarily result in the complete closure of the center. What is involved is that the direct responsibility of PAHO for operation and management of the center will be terminated. The center may continue as an independent organization or as a national center, with or without PAHO "Associated" status, and PAHO may continue to participate actively through various projects and assistance.

#### D. OPERATING GUIDELINES

Centers need to work basically within the PAHO framework of management and personnel procedures and with the regular PAHO principles of policy-making and implementation. The unique factors which apply in relation to a center have been covered, to all intents and purposes, in III.B.--the general principles that apply to all centers.

#### E. PERIODIC REAPPRAISAL AND EVALUATION

The Study Group considers review and appraisal as important for new centers as for existing centers, and therefore includes it here as a separate heading. The recommendations concerning reappraisal and how it should be carried out have already been covered under III.C., above.

#### V. ASSOCIATED NATIONAL CENTERS AND OTHER "CENTERS"

In order to respond to the Directing Council's request for proposed standards and conditions for Associated National Centers, the Study Group reviewed information on the many kinds of "Centers" now related to PAHO but under national auspices (Table II). They range from small to large and have various combinations of national and international functions. Associated National Centers are so related to the situation of national centers in general that the Study Group discusses these as a basis for its Recommendations on Associated National Centers, below.

Four of the Centers listed in Table II were visited by the Study Group. Three are under national auspices--the Leprosy Center in Venezuela, the Immunology Center in Mexico and the Educational Technology Center in Mexico. These are discussed in subsection A. The fourth, the Vector Biology Center located in Maracay, Venezuela, is considered by the Study Group to fall into Type III and is therefore discussed under subsection C.

For convenience, this section is divided into three parts:

A. THE ROLE OF NATIONAL CENTERS

1. Observations

(a) The Immunology Training Center in Mexico

This is not really an international center in the sense discussed throughout this report. It is rather a consortium of immunology laboratories, located in 19 institutions throughout Mexico, carrying on a very useful function with international overtones and influence. By common agreement, although not formally, the unit at the Hospital Infantil takes the lead in making arrangements and signing agreements. This unit has been a WHO Collaborating Center for many years for training in various aspects of immunology. Students are placed, as appropriate, with any of the 19 collaborators in the consortium. Although some students come from other countries, the bulk of the training is for Mexican nationals. The PAHO budgetary contribution is fairly stable at \$6,000 per year. The present arrangement seems quite satisfactory to all concerned.

(b) Center for Research and Training in Leprosy and Tropical Diseases (Caracas, Venezuela)

This Center is both a part of the Division of Public Health Dermatology in the Ministry of Social Welfare of Venezuela and of the Department of Dermatology of the Faculty of Medicine in Central University. Since 1961 it has been a WHO Collaborating Center for leprosy. In 1972 a five-year collaborative project was undertaken with PAHO/WHO. The Center's activities include clinical, epidemiological, and operational research in leprosy, leishmaniasis, onchocerciasis and Chagas' disease.

In 1976 the Directing Council designated the Center as an Associated National Center.

Funding is provided mainly by Venezuela. PAHO contributions are chiefly for fellowships, short-term consultants, and supplies and equipment; the project budget provides salary for the PAHO/WHO Regional Advisor, who is located at the Center. The total current budget of the Center is estimated at \$600,000 per year.

This institute is basically national in orientation and under national control and financing. It has demonstrated stability, excellent support, and, in addition to its national functions, it carries out an important international role. The Study Group was impressed with the expertise, the excellence of its scientific program, and the worldwide recognition accorded to this Center. It forms an excellent base of operations for the PAHO regional advisor in leprosy. All of the facilities of this national center are in fact available, within reason, to expand the work in leprosy research and control throughout the Hemisphere.

- (c) The Latin American Center for Educational Technology in Health (Mexico, D.F., Mexico)

CLATES/Mexico has objectives, methods of operation and general approach very similar to those of CLATES/Rio; one major difference is that CLATES/Mexico is fundamentally an operation of the Government of Mexico, even though PAHO has a collaborating relationship and provides additional support to the Center's operation. The Center has had problems in recent years with stability of leadership, particularly since the center director had not been full time, although it now appears that this question has been resolved satisfactorily. While a majority of students are from Mexico, a number of students do come from Latin American countries, and the Center has field programs and collaborative projects as far away as Argentina. CLATES/Rio and CLATES/Mexico have worked out a modus operandi under which each Center accepts field projects of special interest to it and consistent with its special competence.

The staff of CLATES/Mexico includes 35 persons. The budget for the Center is derived from several sources, with a PAHO contribution estimated at \$37,500 for 1979.

## 2. Comments

- (a) National Centers in General

It is clear from a review of Table II and the field visits that national centers constitute a significant aspect of the PAHO program. They provide additional specialized instruction, research and service in their fields of interest, directed particularly at the nationals of the country in which the project is located, with the possibility of occasionally serving in a limited international role. Such centers are to be encouraged in this role.

(b) An Associated National Center, however, provides a quite different level of service from most national centers since it embraces the four basic functions on an international scale. In effect, such a center extends the Pan American Center concept with far less burden on the program and budget of PAHO.

The only center officially in this category at present is an excellent example of the concept. The contribution of Venezuela constitutes a generous use of national resources to aid the total international program.

The Study Group noted that there are similar examples of this kind of cooperation elsewhere, even though the designation "Associated National Center" has not been used. One such example is CLATES/Mexico which, under its new leadership and plans for increased collaboration with CLATES/Rio, might indeed be considered for possible future designation.

Another example is the Center for Disease Control (CDC) of the Public Health Service of the United States of America, which performs a substantial amount of work in epidemiological investigation throughout the Hemisphere. A recent study from Grenada, for example, describes a collaborative effort of the Government of Grenada, CAREC, and CDC in elucidating the problem of quartan malaria in Grenada.

The Study Group also calls attention to the unique situation of CLATES/Rio, because of its close relationship with the University of Rio de Janeiro's Health Educational Technology Unit (NUTES). NUTES is so closely interdigitated with CLATES that no real program separation is possible, and the Director of CLATES, in fact, refers to all the programs as those of NUTES/CLATES. Thus, in fact, CLATES/Rio has an extensive national component through the personnel employed under NUTES, who are quite comparable to the personnel seconded by national universities to other centers, where there is no mechanism like NUTES. The generosity of the Government of Brazil to the international program is manifest further through the award of Brazilian fellowships directly to students from other countries for study at CLATES.

It is possible that further examination of the situation throughout the Hemisphere would disclose other centers with the capability of performing a substantial international role, where the government might be interested in developing the type of relationship envisioned in the concept of "Associated National Center."

The Study Group believes that the idea of an Associated National Center should be flexible. It is conceivable that an Associated National Center, if the government did not wish to carry full responsibility indefinitely, might be converted into a Pan American Center. Conversely, and perhaps more often, a Pan American Center in a given host country might establish itself so deeply in the national life that the government would wish to take over the basic management and underwriting of costs and to fulfill the international function on a continuing basis. In this way, a Pan American Center would become an Associated National Center. Still another variation might be the assumption of one or the other category for a defined period of time. In considering the possibility of such changes in status, the Study Group calls attention to the importance of stability as an essential for effective work internationally.

At the XXIV Meeting of the Directing Council it was agreed that the term "Pan American" would not be used in connection with an Associated National Center but only for a center directly administered by PAHO. Governments may, of course, use the term in another sense. To clarify the situation, the Study Group suggests that, whatever the title used locally, the additional phrase "An Associated National Center of the Pan American Health Organization," be used wherever appropriate, such as on the Center's letterhead.

### 3. Recommendations--Associated National Centers\*

The Study Group makes its recommendations under two headings: (a) Standards and Conditions; and (b) Procedural Steps for Designation.

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\*It is important to avoid confusion with the term "Recognized National Center" used in the WHO Manual to describe a center which, having achieved the status of recognition by its own government as national, has subsequently also been "recognized" by WHO. This form of international accreditation in no way implies an international function.



(a) Standards and Conditions

Based on the experiences and potential described above, the Study Group believes that, in order to be designated as "Associated," a National Center should have:

- (i) High caliber, as manifested by participation of the staff in international scientific activities; size and character of training activities; previous research accomplished; quality of work produced, assessed by peer judgment; volume and quality of published information, particularly in the scientific press.
  - (ii) Status as a defined organizational unit within the usual framework of the country, for example, a total institution or a significant department within an institution.
  - (iii) A staff of sufficient size to take on added duties.
  - (iv) Facilities that measure up to international standards in quality and quantity.
  - (v) Evidence of financial stability in the past and in future projections.
  - (vi) A center program pertinent to the program of PAHO.
  - (vii) A commitment to undertake the contemplated role for a significant period of time.
  - (viii) Government support in the form of a statement that it considers the center capable of international service.
  - (ix) Acceptance of the principle of both initial and periodic outside review and the joint designation of a broad advisory committee.
- (b) Designation as an Associated National Center-- Procedural Steps
- (i) The idea for such designation may come from any source.

- (ii) Once the proposal has reached PAHO in defined form, there is need for an assessment of capacity for meeting the criteria cited above. At this stage, this might best be accomplished by informal review, including PAHO staff, persons from similar institutions available locally, and outside experts.
- (iii) If the assessment is positive, agreement should then be reached between PAHO staff and the Center staff as to just what aspects of the four basic functions will be Center responsibilities internationally. As in the case of the Pan American Centers, the precise mix of functions will vary with the technical field and the Center's capacities.
- (iv) It is possible that a trial period may be indicated. Such a trial period would probably best be carried out on an informal basis to avoid the complications involved in withdrawing designation.
- (v) Formal steps may be initiated either by PAHO or the government, but the eventual goal is mutual consent to the envisioned arrangement. At this point, succeeding steps would follow essentially the pathway outlined in Section IV above for new Pan American Centers.

#### B. ROLE OF WHO COLLABORATING CENTERS IN THE PROGRAM OF PAHO

WHO Collaborating Centers had their antecedents in 1939 with the designation of two national institutions, one in Copenhagen and one in London, to act on behalf of the Health Organization of the League of Nations as worldwide centers for preparation, storage and distribution of international biological standards. Under WHO, a network has evolved of 57 national laboratories in 38 countries working toward greater use of international standards for biological substances.

From these beginnings the concept was extended to other laboratory activities, and there are currently 400 collaborating centers in 50 countries, primarily to work with the WHO Research Program. These centers, however, vary considerably and comprise a wide range of institutions, departments of institutions, or laboratories within departments, any of which may be designated as a center to undertake specific and defined functions on behalf of the World Health Organization. WHO financing is minimal or even absent, most often consisting of a small cash contribution.

There are 130 WHO Collaborating Centers in the Region of the Americas (95 located in Northern America, 11 in Middle America and 24 in South America). Included are two PAHO centers, CAREC and CEPIS, and the Associated National Center, the Leprosy Center in Caracas. Thirty-nine program areas are covered. The number of centers in each program area is given in Annex III.

The WHO Executive Board has embarked on an Organizational Study of the various sources used by WHO to obtain expert advice, including the Collaborating Centers. That Study is scheduled for completion and presentation to the Board in January 1980, and to the World Health Assembly in May 1980. A member of the Working Group of the Board has also served on this PAHO Study Group.

Although the work of WHO Collaborating Centers did not enter directly into its charge, the Study Group considered the connections close enough to warrant comment. A major point is that WHO Collaborating Centers are not usually involved in providing advisory services directly to countries, so much a part of the PAHO Center concept. At present, WHO tends to call on Collaborating Centers sporadically, although reference laboratories and those related to biological standards may be used more regularly. Any advisory service such a center may render to countries other than its own is a matter for independent arrangement.

Among the broad list of fields covered by WHO Collaborating Centers many are related to PAHO program priorities. If more of the obvious capacity of existing centers in the Americas and the potential of future ones could be tapped for international activities, the PAHO/WHO program would surely benefit.

#### C. OTHER CONSIDERATIONS

The remaining group of "Other Centers," Type III, comprises several projects, now characterized as regional or intercountry programs, which are not categorized as Pan American Centers yet have a mission directed at many of the countries in the Hemisphere. A prototype of this kind of project was visited by the Study Group, which was impressed by the caliber, resourcefulness, and productivity of the staff. The project is described briefly:

The Regional Research and Reference Center on Vector Biology and Control (AMRO-0902) originally was established in

Venezuela as the "Chagas' Disease Vector Research Unit" by the World Health Organization. In January 1977, its status was changed to a cooperative project involving PAHO/WHO and the Government of Venezuela. The program involves research in vector biology and control and reference activities, related particularly to Chagas' disease, malaria, and arbovirus diseases, particularly those transmitted by Aedes aegypti. The effect of various insecticides on these vectors, a search for improved methods and equipment or application of insecticides, and formulation of new insecticides are important aspects of the program.

Most of the laboratory work is carried out in Maracay, where the Government provides space, facilities and support services in the "División de Endemias Rurales." Field studies are conducted in rural areas, chiefly in Venezuela. Cooperative investigations involve several institutions in Venezuela and three in Europe that have similar interests: the Bernhard Nocht Institute in Hamburg, the Molteno Institute in Cambridge, and the School of Hygiene and Tropical Medicine in London.

While the work of the project is fundamentally research, some training and advisory activities are also undertaken.

The staff of 31 includes 27 scientific and technical personnel of whom five are supported by PAHO/WHO. Additional staff are provided as needed by the Government through a technical counterpart system. The total operating budget planned for 1979 from WHO Regular funds is \$252,300. In addition, the staff are working on two projects (AMRO-0903 and -0904) on domiciliary improvements using grant funds of \$498,393 for a two-year period.

The other two projects in Table II considered to be basically international include: 1. Research in Insecticides, Resistance and New Control Methodology, located in Managua; and 2. Education of Paramedical Personnel, in Bridgetown.

While all three of these projects are substantial in size and have budgets on the same order as some of the smaller centers, their objectives can fairly be described as much more limited in scope. When measured against the general principles for a Pan American Center, outlined in III.B. above, this group, although administered by PAHO, does not satisfy one or more of the other essentials.

Without prejudice to future reevaluation, the Study Group concurs with the current pattern of not classifying them as Pan American Centers. It would seem desirable, and help avoid confusion, not to use the word "center" for such projects. For intercountry projects named by PAHO, routine use of a word like "unit" or "program" or something similar would be preferable, reserving the work "center," in PAHO usage, for a Pan American Center established in accordance with the procedure set out in III and IV above.

## VI. FINAL COMMENTS

In the course of its study of centers and preparation of criteria for Associated National Centers, the Study Group became increasingly convinced of the value of centers in selected fields as part of PAHO operations. Under certain circumstances, PAHO's basic services--advisory, education, research, and information exchange--can be better provided through collecting in a central facility, located in one country but with the mission of serving many, a group of highly competent health workers concerned with a particular health problem. Such a concentration makes possible effective applied and basic research, particularly important in some areas, and facilitates continual interchange of field experience, central to technical cooperation among developing countries.

One point needs emphasis--a center is but a method of carrying out the program and must be coordinated with other methods. The first decision is how much effort should be invested in a program area; then comes the decision as to whether a center is a useful part of the action program. Each situation must be examined on its own merits; the Study Group has suggested some principles for use as a yardstick for this examination.

The idea of adapting a national center to a broader international role by a cooperative arrangement with PAHO has many attractions. It is a way for a country to share its expertise abroad, again an effective illustration of the concept of technical cooperation among developing countries. In its conversations with national authorities in host countries, the Study Group was impressed with the pride the countries take in "their" center, whether national or international. The countries provide moral as well as tangible support. Through the device of an Associated National Center, or through seconded personnel to a Pan American Center, countries can expand their international contribution and, in return, receive the benefit of increased technical interchange.

Over time, technology changes and national capacities improve. In view of this changing situation the need for any center, and its national or international status, requires regular reexamination. The Study Group

therefore emphasizes the importance of periodic reappraisal. Furthermore the Group reiterates that stability is essential to continued progress.

The existing centers are performing useful and important services and help significantly in fulfilling PAHO's mission. Those services, while there is certainly room for improvement, are in the main of high quality and are recognized as a real contribution by most of the countries in the Hemisphere. The Study Group has made a number of general and specific suggestions, both as to the present and the future, which it believes are practical and achievable and can help to make the role of the centers still more efficient and effective.

## WHO COLLABORATING CENTRES

### General

- 170           Institutions that possess the necessary expertise and facilities may be requested by WHO to fulfill a specific function or range of functions related to the WHO research programme. (The term "institution", as used in this context, is intended to apply to any institute, department or laboratory, whether independent or part of a larger establishment, that is engaged in research.) Certain of these institutions may, either from the outset or after a preliminary period during which their value and capacity can be assessed, be designated "WHO Collaborating Centres".
- 180           "Designation" of an institution implies that its collaboration with the Organization is formally recognized and that it is entitled to be called "WHO Collaborating Centre". Designation is made with the agreement of the head of the establishment to which the institution is attached or with that of the director of the institution, if it is independent, and after consultation with the national government. An institution is designated initially for a term of three years; the designation may be renewed for a further period of three years. A collaborating centre may be jointly designated by WHO and by another competent and specialized international body, e.g. FAO.
- 190           The selection of an institution for designation as a collaborating centre depends not only on its ability to carry out the functions required of it by WHO but also on a number of other factors, in particular those of stability and the capacity to maintain high technical standards over a long period.
- 200           Designation is independent of financial support being given to the institution by WHO. Grants for research services may be made to any institution that is able to perform a specific research task but this has no relevance to the eligibility or ineligibility of that institution for designation.

### Functions of WHO Collaborating Centres

- 210           Examples of the types of function that may be carried out by WHO collaborating centres are listed below; this list should not be regarded as comprehensive:
- research of interest to WHO programmes but not necessarily being financially supported by WHO;

- standardization of methods, terminology, diagnostic procedures, biological substances, reference strains, etc;
- storage and distribution of standard strains;
- identification of biological material;
- development of new methods and techniques; clinical trials;
- drug screening and monitoring;
- collection, processing and analysis of data;
- provision of consultant assistance to WHO;
- research training in specific areas;
- refresher training for WHO staff;
- organization of scientific meetings on behalf of WHO;
- co-ordination of collaborative studies;
- publication and dissemination of information;
- assistance to WHO in the implementation of WHA25.60 by undertaking some of the functions listed above in the field of biomedical research.

Criteria for Selection of Institutions for Designation by WHO<sup>1</sup>

220 The criteria to be taken into consideration in selecting an institution for designation by WHO as a WHO collaborating centre are:

- 220.1 the standing of the institution at the international and national level in the particular field of research;
- 220.2 the staff and facilities it offers for the services to be rendered to WHO;
- 220.3 its prospective stability in terms of personnel and funds;
- 220.4 its capacity and ability to serve one or several WHO programmes;

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<sup>1</sup>Source: WHO Manual Chap. 7, p. 7.



220.5 its capacity to continue to provide services over a prolonged period and not merely for a single distinct research task.

The weight given to these criteria will naturally vary according to the function or functions to be carried out by the centre; international standing, for instance, would have a high degree of importance for a centre required to propose an internationally acceptable terminology.

Procedure for Designating WHO Collaborating Centres

230           Either Headquarters or regional offices may propose the designation as WHO collaborating centres of institutions considered able to fulfill the the particular function or functions required of them and that meet the criteria listed in paragaraph 220. Both institutions already collaborating with WHO on a research task and those that have had no previous connexion with the Organization but that seem to have highly suitable qualifications are eligible for designation.

## SUMMARY HIGHLIGHTS OF CENTERS

### 1. PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER (AFTOSA)

The Pan American Foot-and-Mouth Disease Center is situated in Sao Bento, in a rather isolated location 40 kilometers north of Rio de Janeiro, Brazil. It is concerned with foot-and-mouth disease and other vesicular diseases of animals.

The Center was created in 1951 as a technical cooperation program of the Organization of American States (OAS), and administered by the Pan American Sanitary Bureau (PASB). In 1968 it became a regular program of the Pan American Health Organization (PAHO), financed by contributions from the Organization's Members. By agreement at that time the various Ministries of Agriculture agreed to be responsible for this part of their country's contribution to PAHO. The Center works closely with the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA). The Center is responsible to the Division of Disease Control.

The Government of Brazil has made available a piece of land and several buildings near Duque de Caxias, outside of Rio. The Center has adequate space for animals and up to now has had reasonably adequate space, with some shortage of equipment, for laboratory work. Staff of the Center, however, suffer from lack of sufficient contact with colleagues in the field of virus diseases. A proposed move to an area close to the Health Services Center of the Federal University of Rio de Janeiro has been held up because of shortage of funds for the new construction necessary. Both Center staff and government authorities have expressed the desire to accomplish the move to the new site as soon as possible.

The program of the Center was originally concentrated on research and the production of vaccines. In recent years much more emphasis has been given to training programs, advisory services to governments and informational materials on the diseases with which the Organization is working.

To accomplish this program the Center is organized in three technical departments: 1. Laboratories, including the Diagnostic Service, and Reference Laboratory; Vaccine Production and Small Animal Laboratory; 2. Training and Information; and 3. Technical Assistance. There is extensive deployment of professionals strategically stationed outside the Center. They coordinate border agreements, provide advisory services and take part in seminars and working groups.

An external Scientific Advisory Committee meets biannually to analyze the Center's program and accomplishments. The activities of the Center are reviewed annually at the Inter-American Meetings, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonosis Control (RICAZ).

The center has 91 scientific and technical and 143 support staff.

The financial history of the Center for the past 10 years and budget projections are as follows:

Chart 1

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER (AFTOSA) AMRO-3200

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*
1981	\$2,735,400	\$2,735,400	
1980	\$2,587,500	\$2,587,500	
1979	\$2,422,400	\$2,422,400	
1978	\$2,350,500	\$2,350,500	

Year	Actual Expenditures	PAHO Regular	PAHO Other*
1977	\$2,297,369	\$2,060,053	\$237,316
1976	\$2,248,309	\$2,075,191	\$173,118
1975	\$1,975,046	\$1,905,938	\$ 69,108
1974	\$2,084,301	\$1,919,218	\$165,083
1973	\$2,014,958	\$1,767,546	\$269,151
1972	\$1,670,303	\$1,559,100	\$111,203
1971	\$1,447,899	\$1,406,942	\$ 40,951
1970	\$1,200,279	\$1,171,708	\$ 28,571
1969	\$1,976,215	\$1,069,035	\$ 7,180
1968	\$ 982,820	\$ 552,649	\$430,171

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

2. PAN AMERICAN ZONOSSES CENTER (CEPANZO)

The Pan American Zoonoses Center, originally in Azul, Argentina, is now located in Ramos Mejía, Buenos Aires, Argentina. It deals with the epidemiology and control of diseases transmissible between animal and man.

This Center was originally a national effort of the Government of Argentina but because of the great interest in zoonoses among all the countries it became a Pan American Center in 1959. Although the quarters in Azul were at that time satisfactory, the isolation from research and epidemiologic work resulted in a move to Buenos Aires in 1966.

The Center operates in cramped quarters on the sixth and seventh floors of a general hospital, in proximity to patients with many afflictions. Both the staff of the Center and Government authorities in Argentina recognize that the present locale is distinctly undesirable and the Government is attempting to find another, more adequate area, thus far unsuccessfully. An experimental field station of about 300 acres, with facilities for large and small laboratory animals, is maintained at Azul, 200 kilometers from Buenos Aires. The Center is responsible to the Division of Disease Control.

The Center is concerned with laboratory and field research on the most prevalent zoonoses, including brucellosis, rabies, tuberculosis, hydatidosis, and leptospirosis; on food microbiology and hygiene; and on management and production of laboratory animals. The Center also provides advisory services on planning, execution and evaluation of control programs relating to all these, engages in relevant training activities, and provides library and reference services. The library has an extensive collection of books and journals, but the quarters are so jammed that the collection is not used to full advantage.

An external Scientific Advisory Committee meets biannually to analyze the Center's program and accomplishments. The activities of the Center are reviewed annually at the Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control.

The Center personnel is composed of 59 scientific and technical and 38 support staff.

The financial history of the Center for the past 10 years and budget projections are as follows:

Chart 2

PAN AMERICAN ZONOSSES CENTER (CEPANZO) AMRO-3300

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$2,650,300	\$1,026,000	\$1,400,000	\$224,300	
1980	\$2,505,700	\$992,100	\$1,300,000	\$213,600	
1979	\$2,334,400	\$930,600	\$1,200,000	\$203,400	
1978	\$2,173,800	\$879,300	\$1,100,000	\$194,500	

  

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	UNDP
1977	\$1,507,010	\$631,611	\$589,397	\$228,453	\$57,547
1976	\$1,311,464	\$516,700	\$295,481	\$252,135	\$247,148
1975	\$1,246,969	\$587,444	\$96,261	\$239,551	\$323,713
1974	\$1,352,967	\$496,351	\$461,052	\$126,059	\$269,465
1973	\$1,204,287	\$503,657	\$351,949	\$98,533	\$250,148
1972	\$934,157	\$378,924	\$230,053	\$97,579	\$227,601
1971	\$935,385	\$218,101	\$307,188	\$106,586	\$303,510
1970	\$822,287	\$134,369	\$286,704	\$81,885	\$307,329
1969	\$766,287	\$126,015	\$4,545	\$87,642	\$303,444
1968	\$624,089	\$114,685	\$188,775	\$62,944	\$257,685

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

3. REGIONAL LIBRARY OF MEDICINE AND THE HEALTH SCIENCES (BIREME)

The Regional Library of Medicine and the Health Sciences (BIREME) is located in Sao Paulo in a building provided by the Escola Paulista de Medicina. Its purposes are to provide a broad range of library services, including documentation, training in bibliography and advice on library organization, to Brazil and other Latin American countries.

BIREME grew out of a recognition in 1967 that library and reference services throughout Latin America were inadequate. The National Library of Medicine of the United States of America was helping to fill some gaps, but recognized its inability to handle the language problems or to provide the advisory services needed. An agreement was reached among the Government of Brazil, the Escola Paulista and the Pan American Health Organization, under which the Escola Paulista turned over its library to BIREME and the Government of Brazil undertook continuing support of the effort. BIREME is responsible to the Division of Human Resources.

The present facilities are crowded, but space is available for staff functions and for some of the ancillary functions envisioned at the beginning. BIREME is now preparing to move to new quarters, which should be more adequate.

The work of BIREME is carried on fundamentally through services provided to other libraries in Brazil and the other countries of Latin America. Twelve institutions throughout Brazil have formed a cooperative network to serve as subcenters in providing better medical library facilities. BIREME has also established formal links with national centers in Argentina, Chile, Peru, Uruguay and Venezuela. As an important part of its service effort, a continuing relationship with the National Library of Medicine in the United States of America has allowed installation of the MEDLINE system, which can provide immediate library resources in many fields. In addition to traditional library service resources and the newer information centers, BIREME has recently extended its activities into the field of oncology. For this purpose, the computer facilities developed to provide library and bibliographic services have been adapted to organize a cancer registry on a pilot basis. This development holds much promise for relating library techniques to public health practice in a practical way. The Center also provides advisory services on library organization and trains librarians at various levels.

An advisory committee to BIREME started regular meetings in 1978.

The Center has 20 scientific and technical personnel and 54 support staff.

The financial history for the past nine years and budget projections are as follows:

Chart 3

REGIONAL LIBRARY OF MEDICINE AND THE HEALTH SCIENCES (BIREME) AMRO-8570

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$1,733,900	\$255,200	\$1,405,900	\$72,800	
1980	\$1,520,900	\$243,200	\$1,208,500	\$69,200	
1979	\$1,354,700	\$233,000	1,058,200	\$63,500	
1978	\$1,246,180	\$198,900	\$962,780	\$84,500	

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	UNDP
1977	\$1,251,799	\$160,132	\$982,260	\$109,407	
1976	\$817,218	\$84,646	\$533,958	\$9,334	
1975	\$707,907	\$116,085	\$343,585	\$139,082	\$109,155
1974	\$659,985	\$153,263	\$441,650	\$65,072	
1973	\$510,236	\$140,238	\$316,502	\$53,496	
1972	\$425,806	\$119,714	\$232,518	\$40,556	
1971	\$299,336	\$70,387	\$152,116	\$76,833	
1970	\$205,523	\$44,676	\$158,847		
1969	\$189,403	\$62,738	\$126,665		

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

4. PAN AMERICAN CENTER FOR SANITARY ENGINEERING AND ENVIRONMENTAL SCIENCES (CEPIS)

The Center is located in the outskirts of Lima, Peru. Its field includes various aspects of environmental health, including air pollution, industrial hygiene, water resources development, water pollution, waste-water treatment, systems analysis and computer sciences.

In 1968 the interest of the Government of Peru in emphasizing environmental sciences and the desire of the Organization to expand programs in new methods of applying environmental knowledge already available led to agreement to establish this Center in Lima. The Government of Peru, inaugurated in 1975, constructed a new building especially for CEPIS, to provide headquarters for its advisory services, adequate locale for training programs, library resources, and needed space for research. The Center is responsible to the Division of Environmental Health.

The attractive building of CEPIS has thus far been adequate for its program, but the in-house research effort has just begun. It is possible that this will overtax available facilities.

CEPIS makes on-site evaluations of environmental problems and presents its recommendations and conclusions through the Organization's Area and Country Projects. In addition to advising national, state and municipal agencies responsible for public health and environmental protection and control programs, assistance is provided in the organization and presentation of in-service and academic training activities designed to increase the supply of skilled manpower and the flow of new technological ideas in developing countries.

At the regional level, CEPIS coordinates the Pan American Air Pollution Monitoring Network and the Regional Program for Analytical Quality Control in Water and Waste-water Laboratories. CEPIS serves as the WHO Collaborating Center for Community Water Supply and Wastes Disposal.

In 1976, an agreement with the International Development Research Center of Canada supported a reference center in sanitary engineering and environmental sciences. The Center is developing a regional network of national information centers (REPIDISCA), and is preparing a Microthesaurus in the environmental field.

There are presently 26 scientific and professional and 22 support staff at CEPIS.

The financial history for the past 10 years and budget projections are as follows:



Chart 4

PAN AMERICAN SANITARY ENGINEERING CENTER (CEPIS) AMRO-2070

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$1,068,500	\$460,400	\$121,700	\$486,400	
1980	\$952,500	\$434,100	\$115,900	\$402,500	
1979	\$907,100	\$422,200	\$110,400	\$374,500	
1978	\$1,047,680	\$465,400	\$287,780	\$294,500	

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1977	\$822,198	\$400,524	\$226,830	\$194,844	
1976	\$918,458	\$465,520	\$185,541	\$267,397	
1975	\$650,933	\$286,799	\$127,844	\$236,290	
1974	\$532,178	\$246,089	\$80,015	\$206,074	
1973	\$415,999	\$220,191	\$49,330	\$146,478	
1972	\$305,589	\$132,280	\$55,947	\$117,362	
1971	\$274,956	\$155,028		\$115,647	\$4,281
1970	\$207,291	\$112,375		\$90,928	\$3,988
1969	\$149,455	\$96,238		\$48,738	
1968	\$38,250	\$38,250			

\* Includes all grant funds, from many sources, which come through PAHO and PAHEF

5. PAN AMERICAN CENTER FOR PERINATOLOGY AND HUMAN DEVELOPMENT (CLAP)

This Center is located in the Hospital de Clínicas in Montevideo, Uruguay. Its purpose is to study the special problems of high mortality and morbidity in the prenatal, natal and postnatal period, to make childbirth a more normal experience for mother and child and to improve public health organization in this field.

The Center was created in 1970, following a successful trial period as a country project, by agreement involving the Government of Uruguay, the University of the Republic, and the Pan American Health Organization. The Center is responsible to the Division of Family Health.

The Hospital de Clínicas, which has a large obstetrical and pediatric service, has made available most of the top two floors to the Center. Clinical material is thus readily available and the competent clinical staff of the hospital can be called on for help and participation in CLAP's work. The Center has recently expanded its space to take over another half floor of the hospital.

CLAP has extensive programs of research at the Center itself, in such fields as ultrasound analyses of pregnancy, fetal monitoring and intensive care of the newborn child. Areas of interest include medical and physiological problems such as low birth weight, birth trauma, infections, drug induced asphyxia. Some of the emotional and psychological problems connected with childbirth are also under study. In addition to research at the Center, training programs are undertaken both in Montevideo and in field stations. A large-scale field study on perinatal services has just been started involving an area in northeast Uruguay and in northeast Brazil. Training programs include nutrition programs at the Center and seminars in other locations. Advisory programs have been undertaken in several countries with professionals from the Center being in residence for periods up to two to three months working on local problems. Because of its outstanding international reputation the Center has attracted many grants from private institutions.

An external Scientific Advisory Committee meet annually to review the Center's activities.

The staff consists of 4 professionals supported by PAHO and 52 professional, and 25 administrative and clerical staff supported by the University.

The financial history of the Center since its inception and budget projections are as follows:

Chart 5

LATIN AMERICAN CENTER FOR PERINATOLOGY AND HUMAN DEVELOPMENT (CLAP) AMRO-1370

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular
1981	\$406,700	\$353,200		\$53,500
1980	\$387,400	\$337,000		\$50,400
1979	\$368,900	\$321,500		\$47,400
1978	\$361,400	\$306,700	\$9,800	\$44,900

  

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular
1977	\$362,592	\$141,113	\$39,073	\$182,406
1976	\$326,434	\$109,926	\$24,542	\$191,966
1975	\$312,398	\$123,456	\$45,799	\$143,143
1974	\$314,482	\$127,135	\$92,985	\$94,354
1973	\$295,038	\$74,663	\$173,117	\$47,198
1972	\$267,449	\$68,169	\$138,406	\$12,301
1971	\$209,928	\$63,371	\$121,157	\$24,400
1970	\$150,083	\$58,089	\$72,794	\$19,200

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

6. LATIN AMERICAN CENTER FOR EDUCATIONAL TECHNOLOGY IN HEALTH (CLATES)

CLATES is located in Rio de Janeiro in one of the buildings of the Medical School of the Federal University of Rio de Janeiro (UFRJ). Its general field is the development of new techniques, methods, and materials for instruction in the health sciences.

The CLATES activity evolved from a project developed within the Institute of Biophysics in the Health Sciences Center of UFRJ under the name of Health Educational Technology Unit (NUTES). In 1973 the program of NUTES was expanded by agreement involving the Government of Brazil and PAHO with a unique arrangement providing for a form of integration of the Brazilian national effort, NUTES, with the international CLATES program. Under this arrangement, the Director of the Center and his administrative assistant are appointed by PAHO while the majority of the staff and most of the resources for activities come through NUTES. Because of this unique situation, it is difficult to separate the functioning of the two units, and both Director and staff usually refer to the two jointly as "NUTES/CLATES." Further evidence of this is given in the financial picture, in which Brazilian sources have assumed an increasing role. International funding was 34 per cent in 1973 and is projected at 11.4 per cent in 1978. Some of the change is due to a diminution in international grant funds, but most of it is related to a sharp growth in Brazilian funds. Over the years of operation of the Center, approximately 20 per cent of the seminars and courses have been held outside Brazil, and an estimated one-third of the persons trained have come from countries other than Brazil.

The Center occupies space on two floors of one of the new buildings of the Health Sciences Center of the Federal University of Rio de Janeiro. Space is provided for classrooms, computer installations, and the preparation of audiovisual aids and other techniques for self-instruction. A large part of the program is related to development of new educational technology emphasizing guided self-instruction, that is, the use of techniques for independent learning, with the presence of instructors for correction and guidance.

An Advisory Committee commenced formal meetings in May 1978. The staff currently consists of 68 persons, of whom the Director and one administrative assistant are on the PAHO budget.

The financial history of the Center since its founding and budget projections follow. They do not reflect the size of the NUTES budget, which has grown from approximately \$300,000 in 1973 to approximately US\$1 million projected for 1978.

Chart 6

LATIN AMERICAN CENTER FOR EDUCATIONAL TECHNOLOGY IN HEALTH  
(CLATES - BRAZIL) AMRO-8700)

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*
1981	\$166,700	\$166,700	
1980	\$153,700	\$153,700	
1979	\$ 94,700	\$ 94,700	
1978	\$ 86,800	\$ 86,800	
Year	Actual Expenditures	PAHO Regular	PAHO Other*
1977	\$ 89,238	\$89,238	
1976	\$ 98,666	\$75,103	\$23,563
1975	\$134,594	\$93,163	\$41,431
1974	\$120,059	\$69,325	\$50,734
1973	\$129,647	\$57,147	\$72,500
1972	\$ 13,847	\$13,847	

\*Includes all grant funds, from many sources, which come through  
PAHO and PAHEF

7. PAN AMERICAN CENTER FOR HUMAN ECOLOGY AND HEALTH (ECO)

Located in Mexico, D.F., the long-range goal of the Center is to help prevent or ameliorate the adverse impact on health resulting from environmental interventions and changes.

Stemming from technical discussions over several years dealing with various aspects of the environment, the XX Meeting of the Directing Council in 1971 urged strengthening of capabilities to cope with health-related problems of the changing human environment. Following the suggestion that a center for human ecology and health be established, negotiations were undertaken leading to agreement with the Government of Mexico on 7 September 1975 for establishment of the Center. The Center began operations that year and has grown slowly. It is responsible to the Division of Environmental Health.

The Center started operation in space rented for it by the Government of Mexico while designs were completed for an independent building to be erected in Toluca. Ground breaking for the Center took place in May 1978. Currently, the Area Office and ECO share quarters in a new building in Polanco, Mexico City, until the Center's facility is ready, projected for 1979.

The Center's current activities deal with analytic studies of major changes, such as dams under construction in various countries, the problems of mines and smelters for various ores, geothermal power plants, the problem of human adaptations to stressful environments such as tropical rain forests, high altitudes or dense urban populations, health problems associated with population growth and migration. The Center is also developing curricula and training programs, varying from short courses for community health workers to post-graduate work for professionals. The Center is not expecting an in-house research program until the new building is completed and facilities are available.

While groups and advisers have met to help in the development of programs for the Center, a permanent advisory committee has not yet been formed; however, one is to be appointed for a first meeting in 1979. Because of the inherently multidisciplinary nature of ecology, most of the Center's activities are undertaken on a team basis.

The current staff totals eight persons, of whom five are scientific and technical personnel.

The financial history of the Center since its founding and future budget projections are as follows:

Chart 7

CENTER FOR HUMAN ECOLOGY AND HEALTH (ECO) AMRO-2300

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$639,800	\$509,400		\$530,400	
1980	\$609,300	\$295,200		\$314,100	
1979	\$580,300	\$301,200		\$279,100	
1978	\$384,987	\$179,300	\$28,600	\$169,900	\$7,187

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1977	\$822,198	\$400,524	\$226,830	\$194,844	
1976	\$172,775	\$ 61,197	\$ 12,653	\$ 84,700	\$ 9,225
1975	\$ 91,699	\$ 21,524		\$ 47,976	\$22,199
1974	\$ 12,725			\$ 6,754	\$ 5,971

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

8. INSTITUTE OF NUTRITION OF CENTRAL AMERICA AND PANAMA (INCAP)

The Institute is located in Guatemala City next to the Roosevelt Hospital of the Medical School of the University of San Carlos in Guatemala. Its main purpose is improvement in human nutrition of the population of the six countries involved through improving knowledge of nutrition and of available and potentially available foods in the Region.

INCAP arose from an initiative of the Governments of Central America and Panama which, with foundation help and the guidance of the Pan American Sanitary Bureau, began in 1946 to confront poor human nutrition as a basic problem in the area. The Governments established the Institute as an independent agency and formally requested the PASB to take over its administration. This agreement has been renewed periodically since. Within PAHO, the work of INCAP is under the jurisdiction of the Division of Family Health.

The Institute started with a single building constructed by the Government of Guatemala and inaugurated in 1949. Since then, a complex of additional buildings, including laboratories, teaching centers, animal quarters, and related services, has been built in the area. The earthquake of 4 February 1976 caused extensive damage to the laboratories, teaching rooms, and the library, 40 per cent of the latter having been destroyed, along with much valuable laboratory equipment. Because of the worldwide prestige of INCAP, a variety of lending sources came promptly to its help, and the Institute has made a remarkable recovery from the damage.

INCAP's program has attempted to balance research on physiology and pathology of nutrition and on the nutritional qualities of various foods available in Central America and Panama. Because of the high caliber of the staff assembled for this work, the reputation of INCAP has grown steadily, as evidenced by the size of the grant funds for these purposes. An important aspect of the research program have been field studies relating to child growth in urban and rural areas and to productivity of agricultural workers in relation to their dietary intake. The training program of the Institute has concentrated on all levels of health personnel, including teachers of nutrition, scientists, and community health workers. Advisory services have been directed at programs in the Member Governments of INCAP, particularly to help the countries formulate national nutrition policies. The technical work of the Institute is divided into 18 major programs, including such areas as food sources, food technology, nutrition and infection, human development, rural development, and the School of Nutrition. Evidence of the worldwide prestige of INCAP was its designation as one of the first institutions of the world to be a site of activities of the United Nations University.

The staff of the Center is composed of 105 scientific and technical personnel and 193 support personnel.

The financial history of the Institute for the past 10 years and budget projections follows. It should be noted that, among the centers, INCAP has a very large grant budget, providing important additional resources but constituting a problem for the Director since, as grants expire, it is necessary to find replacements in order to provide for stability of faithful and productive staff members.



Chart 8

INSTITUTE OF NUTRITION OF CENTRAL AMERICA AND PANAMA (INCAP) AMRO-1430

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular
1981	\$4,712,200	\$733,100	\$3,843,700	\$135,400
1980	\$4,880,600	\$719,700	\$4,033,500	\$127,400
1979	\$4,744,700	\$668,500	\$3,957,000	\$119,200
1978	\$4,232,500	\$647,400	\$2,903,300	\$102,800

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular
1977	\$5,700,339	\$600,279	\$5,038,576	\$71,484
1976	\$5,370,824	\$614,187	\$4,585,028	\$50,947
1975	\$3,670,688	\$583,753	\$3,836,247	\$56,713
1974	\$3,194,772	\$559,243	\$3,356,751	\$62,615
1973	\$3,099,849	\$497,861	\$2,550,020	\$51,968
1972	\$2,818,638	\$536,306	\$2,210,610	\$52,709
1971	\$1,965,606	\$470,342	\$1,495,264	
1970	\$1,773,832	\$480,494	\$1,293,338	
1969	\$1,741,075	\$431,935	\$1,275,480	\$33,660
1968	\$1,782,032	\$424,019	\$1,358,013	

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

9. THE CARIBBEAN FOOD AND NUTRITION INSTITUTE (CFNI)

With the example of the success of INCAP and the political independence of several Governments in the Caribbean area, two of those Governments, Jamaica and Trinidad and Tobago, collaborated with the University of the West Indies, FAO, and PAHO/WHO to establish the Institute as of 1 January 1967. The original agreement was of five years duration and renewable, and charged the Pan American Health Organization with the administration of the Institute. It is designed to serve the English-speaking countries of the Caribbean area and Suriname. In PAHO, the work of the Institute falls under the jurisdiction of the Division of Family Health.

The Center is located at the University in refurbished wooden buildings originally erected for refugees of the Second World War. There is no satisfactory lecture room and conditions are grossly overcrowded. Plans have been drawn up for a permanent building, estimated in 1970 to cost approximately \$500,000, but funds have not yet been obtained. Printing facilities are inadequate and the bimonthly newsletter is produced by mimeograph.

The program of the Center has concentrated on technical assistance in the form of consultation and advice on national food and nutrition policies, development of the food composition table, and publication of a newsletter, useful for professionals and educated laymen. Training activities include a biennial course at CFNI and international and national seminars held elsewhere. Research activities have been mainly in the applied fields in such matters as surveys of feeding practices, food production, and food economics, and all of these are supported by computer studies. A series of applied programs have been carried out in conjunction with the Governments.

Three staff members are permanently stationed at the Field Station in Trinidad. The present staff consist of nine scientific and technical personnel and 17 support staff.

The Institute is served by an Advisory Committee on policy which meets annually.

The financial history of the Center for the past 10 years and budget projections are as follows:

Chart 9

CARIBBEAN FOOD AND NUTRITION INSTITUTE (CFNI) AMRO-1411

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular	WHO Other
1981	\$657,900	\$409,300	\$127,800	\$120,800	
1980	\$627,800	\$375,500	\$137,700	\$114,600	
1979	\$670,750	\$346,800	\$215,550	\$108,400	
1978	\$685,244	\$299,300	\$286,644	\$99,300	

  

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular	WHO UNDP
1977	\$544,073	\$312,376	\$178,564		\$53,133
1976	\$589,106	\$257,495	\$195,647	\$80,796	\$55,168
1975	\$566,155	\$215,500	\$146,571	\$154,290	\$50,066
1974	\$498,381	\$141,156	\$194,168	\$115,687	\$47,370
1973	\$333,527	\$84,944	\$196,740		\$51,843
1972	\$267,818	\$87,484	\$133,595		\$46,739
1971	\$315,791	\$96,107	\$136,728	\$13,866	\$69,090
1970\$	\$166,033	\$75,320	\$58,362		\$32,351
1969	\$156,196	\$59,264	\$69,250		\$27,682
1968	\$81,544	\$57,367	\$12,779		\$11,398

\* Includes all grant funds, from many sources, which come through PAHO and PAHEF

10. CARIBBEAN EPIDEMIOLOGY CENTER (CAREC)

The Caribbean Epidemiology Center is located in Port-of-Spain, Trinidad, in a building adjacent to that country's health department laboratory. Its general field of interest is the epidemiology and control of infectious and non-infectious diseases in the Caribbean area.

Creation of the Center was stimulated by the Government of Trinidad and Tobago, to continue the work of the Regional Virus Laboratory when the Rockefeller Foundation withdrew from this activity. From this beginning grew the much broader concept of developing a center to support a general program of activities, in addition to epidemiologic surveillance. In PAHO, the work of the Center is under the supervision of the Division of Disease Control.

CAREC is located in relatively modern buildings near the center of Port-of-Spain. It is adjacent to the existing health department laboratory and can share some services with that laboratory as well as having interaction with the scientific personnel. The Center does have a mobile laboratory and examining room which can be used in field surveys. The work of the Center falls under four major headings: epidemiologic surveillance, which includes notification of diseases to CAREC and prompt information to the countries of the area; training activities, of which approximately half are held at CAREC and half at other centers; laboratory services, with extensive back up of reference work at CAREC plus advisory service to the various Governments on improving their own laboratories; and a series of research projects covering such problems as gastroenteritis, rabies, and dengue, and the new and important program on the epidemiology of heart disease and coronary risk factors.

An active and effective advisory committee meets annually and makes a detailed report of recommendations to the Center.

The Center staff is composed of 59 scientific and technical and 30 support personnel, including seconded personnel from the Government of Trinidad and Tobago and from other sources, including some outside the Caribbean area.

The financial history of the Center since its establishment and budget projections are as follows:

Chart 10

Caribbean Epidemiology Center (CAREC) AMRO-4370

PROPOSED BUDGET PROJECTIONS AND FINANCIAL HISTORY

July 1978

Year	Amount Budgeted	PAHO Regular	PAHO Other*	WHO Regular
1981	\$1,161,700	\$196,100	\$859,700	\$105,900
1980	\$1,096,000	\$200,200	\$793,400	\$102,400
1979	\$984,400	\$174,700	\$710,500	\$99,200
1978	\$811,550	\$172,800	\$549,150	\$89,600

  

Year	Actual Expenditures	PAHO Regular	PAHO Other*	WHO Regular
1977	\$1,067,767	\$170,659	\$765,385	\$131,723
1976	\$637,924	\$93,046	\$427,022	\$117,856
1975	\$398,686	\$70,271	\$276,218	\$52,197
1974	\$49,407	\$49,407	-	-

\*Includes all grant funds, from many sources, which come through PAHO and PAHEF

NUMBER OF WHO COLLABORATING CENTERS IN THE REGION  
OF THE AMERICAS, BY PROGRAM AREA

Arbovirus Diseases (2)	Mycoplasmas (1)
Biological Standardization (4)	Occupational Health (2)
Cancer (5)	Rabies (2)
Cardiovascular Diseases (8)	Radiation (7)
Comparative Medicine (4)	Human Reproduction (9)
Enterovirus Diseases (2)	Respiratory Virus Diseases other than Influenza (2)
Environmental Pollution and Hazards (3)	Rickettsioses (2)
Food Additives (2)	Smallpox (2)
Food Contaminants (1)	Standardization of Diagnostic Reagents (1)
Food Hygiene (1)	Statistics (classification of diseases) (2)
Human Genetics (2)	Trachoma and other Chlamydial Infections (1)
Immunology (10)	Trypanosomiasis (1)
Influenza (2)	Tuberculosis (1)
Enteric Infections, Bacterial (1)	Vector Biology and Control (10)
Education (1)	Venereal Infections and Treponematoses (2)
Cell Cultures (1)	Viral Hepatitis (1)
Leishmaniasis (3)	Virus Diseases, General (3)
Leptospirosis (1)	Wastes Disposal (9)
Malaria (1)	Water Supply (8)
Mental Health (10)	