PD-ABJ-831

MALARIA CONTROL AND ESSENTIAL DRUGS
Project No. 597-0007
PAHO/AID

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AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C 20523

ASSISTANT
ADMINISTRATOR

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
525 23rd Street, N.W.
Washington, D.C. 20037

Subject: Malaria Control and Essential Drugs
Project No. 597-0007
Grant No. LAC-0007-G-00-5329
Appropriation No. 72-1171021.8
Allotment No. 748-65-597-00-69-71
Obligation No. 7653031

Amendment No. 5

Dear Dr. Guerra de Macedo:

1. This letter is to further amend our Letter of Agreement dated March 28, 1985, as amended, to provide additional grant funds to the Pan American Health Organization (P.A.H.O.), Regional Office of the World Health Organization, in the amount of U.S. $411,100, to be used for support of the Project to strengthen malarial control programs, especially in Honduras, El Salvador, Guatemala, and Belize, and to improve essential drug procurement, distribution, quality control and utilization programs in the Central American region.

2. This amendment No. 5 to the Grant for additional funds is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of Project objectives during the period beginning with the effective date and ending March 31, 1989.

3. A.I.D.'s total contribution to the Project will be provided in increments not to exceed a total of Seven Million Eight Hundred Sixty Thousand United States Dollars (US $7,860,000) during the period from March 30, 1985 through March 31, 1989. The first tranche of funds, US $2,000,000, was made available in March 1985, the second tranche of US $2,580,000 was made available in July, 1986, the third tranche of funds, US $136,000 was available August 28, 1986, and the fourth tranche of US $1,500,000 was made available April 16, 1987. With this Amendment No. 5, the total amount of Grant funds provided to date is US $6,627,100. Subsequent increments will be subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. Funds granted hereunder will be used for the Project activities outlined in Attachment C.

5. The A.I.D. Technical Office responsible for monitoring this Grant is the Health and Nutrition Division, Office of Development Resources, Bureau for Latin America and the Caribbean, A.I.D./LAC/DR/HN, Room 2247-NA, Department of State, Washington, D.C. 20523.

6. In all other respects, the Grant Agreement remains in full force and effect.

7. Please indicate your acceptance of this Grant Amendment No. 5 by signing the original and eight (8) copies of this Letter in the space provided below and returning the original and six (6) copies to the Grant Officer. Two copies may be retained for your files.

THE UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

By: Malcolm Butler
Dwight A. Ink

Title: Assistant Administrator
Bureau for Latin America
and the Caribbean

Date: AUG 21 1987

Enclosure: Attachment C

ACCEPTED:

PAN AMERICAN HEALTH ORGANIZATION

By: [signature]

Title: Director

Date: 24 Aug. 1987

ATTACHMENT C (1)

Estimated AID Contribution - Central America Malaria Control
(in thousands US Dollars

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Applied Field Research		450	300	200	950
Research and Training Center	500	300	250	189,35	1239,35
Short Term Training	100	200	100	100	500
Technical Cooperation	310,65	100	100	100	610,65
Advisory Committee	50	50	50	50	200
TOTAL	960,65	1100	800	639,35	3500

Estimated AID Contribution - Central America Essential Drugs

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Technical Cooperation	363,85	200	115	100	778,85
Training	230	450	350	256,15	1286,15
Reference Materials	15	15	15	15	60
Pricing Network	50	20	20	20	110
Prototypes	250	150	---	---	400
Drug Utilization Software & Studies	100	165	100	---	365
TOTAL	1008,85	1000	600	391.15	3000
EVALUATION		110		110	220
CONTINGENCY/INFLATION			600	540	1140
GRAND TOTAL	1969.5	2210	2000	1680.5	7860

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

87 APR 23 P2:04

ASSISTANT
ADMINISTRATOR

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
525 23rd Street, N.W.
Washington, D.C. 20037

Subject: Malaria Control and Essential Drugs
Project No. 597-0007
Grant No. LAC-0007-G-00-5329
Appropriation No. 72-1171021.8
Allotment No. LDHA87-35597-KG14
Obligation No. 7653030

Amendment No. 4

Dear Dr. Guerra de Macedo:

1. This letter is to further amend our Letter Agreement dated March 28, 1985, as amended, to provide additional grant funds to the Pan American Health Organization (P.A.H.O.), Regional Office of the World Health Organization, in the amount of US $1,500,000 to be used for support of the Project to strengthen malarial control programs, especially in Honduras, El Salvador, Guatemala, and Belize, and to improve essential drug procurement, distribution, quality control and utilization programs in the Central American region.

2. This amendment No. 4 to the Grant for additional funds is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of Project objectives during the period beginning with the effective date and ending March 31, 1989.

3. A.I.D.'s total contribution to the Project will be provided in increments not to exceed a total of Seven Million Eight Hundred Sixty Thousand United States Dollars (US $7,860,000) during the period from March 30, 1985 through March 31, 1989. The first tranche of funds, US $2,000,000, was made available in March 1985, the second tranche of US $2,580,000 was made available in July, 1986, and the third tranche of US $136,000 was made available in August, 1986. With this Amendment No. 4, the total amount of Grant funds provided to date is US $6,216,000. Subsequent increments will be subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. Funds granted hereunder will be used for the Project activities outlined in Attachment C.

5

5. The A.I.D. Technical Office responsible for monitoring this Grant is the Health and Nutrition Division, Office of Development Resources, Bureau for Latin America and the Caribbean, A.I.D./LAC/DR/HN, Room 2247-NA, Department of State, Washington, D.C. 20523.

6. In all other respects, the Grant Agreement remains in full force and effect.

7. Please indicate your acceptance of this Grant Amendment No. 4 by signing the original and eight (8) copies of this Letter in the space provided below and returning the original and six (6) copies to the Grant Officer. Two copies may be retained for your files.

THE UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

By: Malcolm Butler
Dwight A. Ink

Title: Assistant Administrator
Bureau for Latin America
and the Caribbean

Date: APR 16 1987

Enclosure: Attachment C

ACCEPTED:

PAN AMERICAN HEALTH ORGANIZATION

By: Robert Evans

Title: Deputy Director

Date: 21 April 1987

ATTACHMENT C (1)

Estimated AID Contribution - Central America Malaria Control
(in thousands US Dollars

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Applied Field Research		450	300	200	950
Research and Training Center	500	300	250	189,35	1239,35
Short Term Training	100	200	100	100	500
Technical Cooperation	310,65	100	100	100	610,65
Advisory Committee	50	50	50	50	200
TOTAL	960,65	1100	800	639,35	3500

Estimated AID Contribution - Central America Essential Drugs

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Technical Cooperation	363,85	200	115	100	778,85
Training	230	450	350	256,15	1286,15
Reference Materials	15	15	15	15	60
Pricing Network	50	20	20	20	110
Prototypes	250	150	---	---	400
Drug Utilization Software & Studies	100	165	100	---	365
TOTAL	1008,85	1000	600	391.15	3000
EVALUATION		110		110	220
CONTINGENCY/INFLATION			600	540	1140
GRAND TOTAL	1969.5	2210	2000	1680.5	7860

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

ASSISTANT
ADMINISTRATOR

AUG 28 1986

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
525 23rd Street, N.W.
Washington, D. C. 20037

Subject: Malaria Control and Essential Drugs
Project No. 597-0007
Grant No. LAC-0007-G-00-5329
Appropriation No. 72-1161021.8
Allotment No. 648-65-597-00-69-61
Obligation No. 6653701

Amendment No. 3

Dear Dr. Guerra de Macedo:

1. This letter is to further amend our Letter Agreement dated March 28, 1985, as amended, to provide additional grant funds to the Pan American Health Organization (P.A.H.O.), Regional Office of the World Health Organization, in the amount of US $136,000, to be used for support of the Project to strengthen malarial control programs, especially in Honduras, El Salvador, Guatemala, and Belize, and to improve essential drug procurement, distribution, quality control and utilization programs in the Central American region.

2. This Amendment No. 3 to the Grant for additional funds is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of Project objectives during the period beginning with the effective date and ending March 31, 1989.

3. A.I.D.'s total contribution to the Project will be provided in increments not to exceed a total of Seven Million Eight Hundred Sixty Thousand United States Dollars (US $7,860,000) during the period from March 30, 1985 through March 31, 1989. The first tranche of funds, US $2,000,000, was made available in March, 1985, and the second tranche of US $2,580,000 was made available in July, 1986. With this Amendment No. 3, the total amount of

Grant funds provided to date is US $4,716,000. Subsequent increments will be subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. Funds granted hereunder will be used for the Project activities outlined in Attachment C.

5. The A.I.D. Technical Office responsible for monitoring this Grant is the Health and Nutrition Division, Office of Development Resources, Bureau for Latin America and the Caribbean, AID/LAC/DR/HN, Room 2247-NA, Department of State, Washington, D.C. 20523.

6. In all other respects, the Grant Agreement remains in full force and effect.

7. Please indicate your acceptance of this Grant Amendment No. 3 by signing the original and eight (8) copies of this Letter in the space provided below and returning the original and six (6) copies to the Grant Officer. Two copies may be retained for your files.

THE UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

By: Dwight Ink
Dwight Ink

Title: Assistant Administrator
Bureau for Latin America
and the Caribbean

Date: August 28, 1986

Enclosure: Attachment C

ACCEPTED:

PAN AMERICAN HEALTH ORGANIZATION

By: Thomas Tracy

Title: Chief of Administration

Date: 29/VIII/86

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
525 23rd Street, N.W.
Washington, D.C. 20037

Subject: Project No. 596-0136 (Original No.)
597-0136 (Revised No.)
597-0007 (New No.)

Grant No. LAC-0136-G-00-5329
Revised Grant No. LAC-0007-G-00-5329

Amendment No. 1

Appropriation No. 72-1161021.8
Allotment No. 648-65-597-00-69-61
Obligation No. 6653700

Dear Dr. Guerra de Macedo:

1. This letter is to amend our Letter Agreement dated March 28, 1985, to provide additional grant funds to the Pan American Health Organization (P.A.H.O.), Regional Office of the World Health Organization, in the amount of $2,580,000, to be used for support of the project to strengthen malarial control programs, especially in Honduras, El Salvador, Guatemala and Belize, and improve essential drug procurement, distribution, quality control and utilization programs in the Central American region.

2. This amendment to the Grant for additional funds is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherence of Project objectives during the period beginning with the effective date and ending March 31, 1989.

3. A.I.D.'s total contribution to the Project will be provided in increments not to exceed a total of $7,860,000 United States Dollars, during the period from March 30, 1985 through March 31, 1989. This estimated total contribution has been increased from $6,500,000 to a new total of $7,860,000 in order to fund both evaluation and contingencies for this project. The first tranche of funds, $2,000,000 was made available in March, 1985. With this Amendment No. 1, the total amount of Grant funds provided to date is $4,580,000. Subsequent increments will be subject to availability of funds to AID for this purpose and to mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. The additional funds for the project provide up to a total of $220,000 for two evaluations, a mid-term and final evaluation (see Attachment C (1)). The independent evaluations are to be conducted by individuals or a firm(s) who are not associated with the management or implementation of the project. The timing of the evaluations, terms of reference, reporting requirements, budget, and persons selected to be members of the evaluation teams must be acceptable to both P.A.H.O. and A.I.D.

5. A.I.D. has instituted a new project numbering system which necessitates changing the project number for a second time. We regret any inconvenience that this may cause your staff.

6. Funds granted hereunder will be added to the Project activities outlined in Attachment C(1) and the Estimated Budget for Year II which are attached to this amendment.

7. The AID Technical Office responsible for monitoring this Grant is Paula Feeney, AID/LAC/DR/HN, Room 2247, Washington, D.C. 20523.

8. In all other respects, the Grant Agreement remains in full force and effect. Please sign the original and eight (8) copies of this letter in the space provided below to indicate your acceptance of this Grant Amendment, and return the original and seven (7) copies to the Grant Officer.

THE UNITED STATES OF AMERICA

BY: [illegible]

DATE: JUL 30 1986

Enclosures: Attachment C (1)
Estimated Budget Year II

ACCEPTED:

Pan American Health Organization

BY: Robert F. Knowles

TITLE: Deputy Director

DATE: 31 July 1986

ATTACHMENT C (1)

Estimated AID Contribution - Central America Malaria Control
(in thousands US Dollars

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Applied Field Research		450	300	200	950
Research and Training Center	500	300	250	189,35	1239,35
Short Term Training	100	200	100	100	500
Technical Cooperation	310,65	100	100	100	610,65
Advisory Committee	50	50	50	50	200
TOTAL	960,65	1100	800	639,35	3500

Estimated AID Contribution - Central America Essential Drugs

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Technical Cooperation	363,85	200	115	100	778,85
Training	230	450	350	256,15	1286,15
Reference Materials	15	15	15	15	60
Pricing Network	50	20	20	20	110
Prototypes	250	150	---	---	400
Drug Utilization Software & Studies	100	165	100	---	365
TOTAL	**1008,85**	**1000**	**600**	**391.15**	**3000**
EVALUATION		110		110	220
CONTINGENCY/INFLATION			600	540	1140
GRAND TOTAL	1969.5	2210	2000	1680.5	7860

Estimated Budget - Year *

A.I.D. Contribution

Component I: Malaria Control

Short term consultants		$207,836
Duty Travel		38,800
Contractual Services		33,500
Supplies and Equipment		87,300
Courses and Seminars		601,510
Grants		450,000
	SUBTOTAL	$1,418,946

Component II: Essential Drugs

Short term consultants		$485,508
Duty Travel		38,000
Contractual Services		547,400
Supplies and Equipment		151,600
Courses and Seminars/Fellowships		192,603
Grants		37,500
	SUBTOTAL	$1,452,611

Project Management

Project Manager		73,875
Administrator		37,025
Secretary		25,675
Project Management/National Level		20,000
	SUBTOTAL	$156,575
	TOTAL	$3,028,132

Overhead (13%)		393,658
Evaluation (includes Overhead)		110,000
	GRAND TOTAL	$3,531,789

* Includes reprogramming of funds which were not utilized during the first year of the project.

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ATTACHMENT C (1)

Estimated AID Contribution - Central America Malaria Control
(in thousands US Dollars

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Applied Field Research		450	300	200	950
Research and Training Center	500	300	250	189,35	1239,35
Short Term Training	100	200	100	100	500
Technical Cooperation	310,65	100	100	100	610,65
Advisory Committee	50	50	50	50	200
TOTAL	960,65	1100	800	639,35	3500

Estimated AID Contribution - Central America Essential Drugs

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Technical Cooperation	363,85	200	115	100	778,85
Training	230	450	350	256,15	1286,15
Reference Materials	15	15	15	15	60
Pricing Network	50	20	20	20	110
Prototypes	250	150	---	---	400
Drug Utilization Software & Studies	100	165	100	---	365
TOTAL	1008,85	1000	600	391.15	3000
EVALUATION		110		110	220
CONTINGENCY/INFLATION			600	540	1140
GRAND TOTAL	1969.5	2210	2000	1680.5	7860

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

ASSISTANT
ADMINISTRATOR

AUG 30 1985

Dr. Carlyle Guerra De Macedo
Director
Pan American Health Organization
525 23rd Street, N.W.
Washington, D.C. 20037

SUBJECT: Malaria Control and Essential Drugs Project Grant No. 596-0136 Grant Letter of Agreement Amendment No. 1

Dear Dr. Guerra de Macedo:

Attachment B to the original Agreement is hereby deleted and replaced by the following:

Attachment B

Payment - Letter of Credit

(a) Payment under this grant shall be by means of a Letter of Credit (LOC) in accordance with the terms and conditions of the LOC and any instructions issued by AID's Office of Financial Management, Program Accounting and Finance Division (M/FM/PAFD).

(b) As long as the LOC is in effect, the terms and conditions of the LOC and any instructions issued by M/FM/PAFD constitute payment conditions of this grant, superseding and taking precedence over any other provision of this grant concerning payment.

(c) Reporting:

(1) A "Financial Status Report" SF-269, shall be prepared on an accural basis and submitted quarterly no later than 30 days after the end of the period, in an original and two copies to AID/M/FM/PAFD, Washington, D.C. 20523. If the grantee's accounting records are not normally kept on the accrual basis, the grantee shall not be required to convert its accounting system, but shall develop such accural information through best estimates based on an analysis of the documentation on hand. The final report must be submitted within 90 days after the conclusion of the grant to M/PM/PAFD. In cases where grants are Mission funded, the Grantee will forwarded an information copy to the AID Mission accounting station at the same time the original and one copy are mailed to M/PM/PAFD, AID/Washington.

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(2) The grantee shall submit an original and one copy of SF-272, "Federal Cash Transactions Report," within 15 working days following the end of each quarter to M/FM/PAFD. Grantees receiving advances totaling more than $1 million per year shall submit the SF-272 on a monthly basis within 15 working days following the close of the month. Grantees shall report all cash advances in the Remarks section of SF-272. Those cash advances in excess of immediate disbursement requirements in the hands of subrecipients or the grantee's field organizations shall be supported by short narrative explanations of action taken by the grantee to reduce the excess balances.

(d) Revocation of the LOC is at the discretion of the authorized LOC certifying officer of M/PM/PAFD after consultation with the grant officer. Notification of revocation must be in writing and must specify the reason for revocation. FM/PAFD shall provide the grant officer a copy of the revocation notice and a recommendation for an alternative method of payment (periodic advance or cost reimbursement) based upon the reasons for the revocation. The grant officer shall immediately amend this agreement to provide for an appropriate alternative method of payment. The recipient may appeal any such revocation to the grant officer.

Except as specified above, the project description and all terms and conditions set forth in the original Grant Agreement shall remain in full force and effect. This Amendment is effective as of the date of this letter.

Please sign the original and eight (8) copies of this letter to acknowledge your acceptance of the conditions established in the subject Grant, as amended, and return the original and seven (7) copies to Paula Feeney, AID/LAC/DR/HN Room 2247A New State, Washington, D.C. 20523.

Sincerely,

Irwin A. Levy
Acting Assistant Administrator
Bureau for Latin America and
the Caribbean

ACCEPTED:
Pan American Health Organization

BY: _____
Carlyle Guerra de Macedo, Director

DATE: Sep 12, 85

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

March 28, 1985

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
525 23rd. Street N.W.
Washington, D.C. 20037

Subject: Grant No. 596-0136
Appropriation No. 72-114/51021.8
Allotment No. LES 485-35596-CG13(468-65-596-00-69-51)
Obligation No. 5659200

Dear Dr. Guerra de Macedo:

1. I have the honor to refer to your letter request of March 4, 1985 relating to a program for Malarial Control and Essential Drugs for Central America and Panama.

2. I am pleased to inform you that, pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Government of the United States of America, acting through the Agency for International Development (hereinafter referred to as AID) hereby grants to Pan American Health Organization, Regional Office of the World Health Organization, (hereinafter referred to as the Grantee) the sum of Two Million United States Dollars (US$2,000,000), to be used for support of a project to strengthen malarial control programs, especially in Honduras, El Salvador, Guatemala and Belize, and improve essential drug procurement, distribution, quality control and utilization programs in the Central American region, as more fully described in Attachment A.

3. AID's total contribution to the Project will be provided in increments not to exceed a total of $6,500,000 United States Dollars, during the period from March 30, 1985 through March 31, 1989, the initial one being made available in accordance with Section 2 of this Agreement. Subsequent increments will be subject to availability of funds to AID for this purpose and to mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. This Grant is effective as of the date of this letter and is applicable to commitments made by the Grantee in support of the project during the period March 30, 1985 through March 31, 1989. Funds disbursed by AID but uncommitted by the Grantee at the expiration of this period shall be refunded to AID.

5. It is understood that financial records, including documentation to support entries on accounting records and to substantiate changes within this Grant shall be maintained in accordance with the Grantee's usual accounting procedures, which shall follow generally accepted accounting practices. All such financial records shall be maintained for at least 3 years after final disbursement of funds under this Grant.

6. The Grantee confirms that this program will be subject to an independent audit by the Grantee's outside certified or chartered public accountant and agrees to furnish copies of these audit reports to AID along with such other related information as may be requested by AID with respect to questions arising from the audit report.

7. It is understood that the funds granted hereunder shall be disbursed as set forth in Attachment B hereto entitled Payment Provisions.

8. The parties agree that this grant and the activities financed therewith, shall be managed by the Grantee in accordance with its established policies and procedures. The proposed budget for this Grant is provided in Attachment C.

9. If the use of the Grant funds results in the accrual of interest to the Grantee or to any other person to whom the Grantee makes such funds available in carrying out the purposes of this Grant, the Grantee shall refund to AID any amount of interest earned.

10. The Grantee shall prepare and submit to AID the required financial and technical reports in accordance with the schedule set forth in Attachment D.

11. This Agreement, in whole or in part, may be terminated by either Party at any time upon 30 days written notice. This agreement may be revised only by the written mutual consent of the Parties hereto.

12. Prior to disbursement of grant funds the Grantee and AID shall mutually agree to the terms of reference and the candidates proposed for key Grantee staff assigned to manage and administer the Project.

Prior to disbursement of grant funds the Grantee shall submit an annual workplan, including a budget, which must be mutually agreed upon by the Grantee and A.I.D.

13. The Grantee agrees that grant funds will be additive to ongoing grantee-financed technical assistance, training and operations research programs in malaria and essential drugs.

The Grantee covenants that it will not conduct operations research in malaria in Honduras, El Salvador and Belize unless and until AID has reviewed the proposed operations and has found them to be in compliance with existing environmental assessments.

The Grantee covenants that it will not begin operations research in Guatemala unless and until an Initial Environmental Assessment with a pesticide assessment has been conducted, by an independent consultant approved by AID and paid for from Grant funds if no other assessment has been conducted, and the proposed operations research has been found by AID to be in compliance with the assessments.

The Grantee covenants that AID resources will be utilized only for technical assistance, training and operations research in or for Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Panama.

15. Please indicate your acceptance of this Grant by signing the original and Eight (8) copies of this letter in the space provided below and returning the original and seven (7) copies to the Grant Officer. Two copies may be retained for your files.

16. The AID Technical Office responsible for monitoring this Grant is Linda E. Morse, AID/LAC/DR/HN Room 2247, Washington, D.C. 20523.

THE UNITED STATES OF AMERICA

BY: Victor R. Porter

DATE: 3/28/85

Attachments:
A. Purpose and Implementation Plan
B. Payment Provisions
C. Budget
D. Reporting Requirements

ACCEPTED:

Pan American Health Organization

BY: _____
Carlyle Guerra de Macedo, Director

TITLE: _____

DATE: 3/20/85

STATEMENT OF WORK

A. Background

Central America and Panama, containing approximately 3.5% of the population of Latin America and the Caribbean, accounts for approximately 34% of the confirmed malaria cases in the hemisphere. Malaria cases have more than doubled in the last ten years. Malaria is a major public health problem in Honduras, El Salvador, Guatemala and Belize, in terms of the number of cases registered, potential for epidemics, and effect on the rural population, on migrants, and on refugees and displaced persons.

The consumption of medicines in Central America is valued at $13 per capita per year, or more than $300 million per year, much of it in foreign exchange. One third of the pharmaceuticals purchased each year are used in public sector health delivery systems. Although up to 40% of health expenditures in Central America may be spent on pharmaceuticals, the majority of the population does not have access to many of the essential drugs needed to treat and prevent prevalent diseases.

B. Objectives

The proposed AID/PAHO joint malaria and essential drugs project ("the Project") has as its objectives to: a) strengthen malaria control programs especially in Honduras, El Salvador, Guatemala and Belize, b) establish and institutionalize a Central American regional training and operations research program for mosquito born diseases, ("the Malaria component") c) improve essential drugs programs in Central American Ministries of Health and Social Security Programs, and d) establish and institutionalize Central American regional training programs in procurement, distribution, quality control and utilization of essential drugs ("The Essential Drugs component").

C. Proposed Activities and Scope of Work

1. Malaria

AID/LAC will fund a joint PAHO-AID program to provide technical co-operation to Central American countries to design and implement malaria control programs. Regional short term training courses will be designed to meet needs of country programs. Such courses may include: epidemiology, entomology, vector biology, management of malaria control programs, pesticide handling and safety, applied research methodology. These courses will be open on a space available basis to candidates from countries outside of Central America and Panama. Costs for such participation shall not be provided from project funds but are to be

supported by those countries, AID missions, and PAHO regular programs. The target group of trainees will be technicians and managers with direct line responsibilities for the topics presented in the courses.

Operations research will also be undertaken to determine the most cost-effective mix of malaria control interventions, including intradomiciliary spraying, larviciding, source reduction and biological control mechanisms.

PAHO will select an institution or institutions to become the regional base for such training, technical assistance and research. These institutions must be selected on the basis of accessibility, institutional capability and interest, laboratory capability, computer facilities, etc. PAHO will also form an advisory committee on malaria to: review the terms of reference for assessing country technical assistance requirements, the organizational mandate and structure of the proposed training and research center, research protocols, etc. AID and the Centers for Disease Control will be invited to participate in the advisory committee.

PAHO will be the major source of technical cooperation for country program design and evaluation, such technical co-operation shall include curriculum design, particularly for in-country training activities, and design and implementation of regional or subregional technical meetings. Certain activities, including curriculum design and short term technical assistance, may be sub-obligated, when appropriate, by PAHO in contracts and/or grants. U.S. institutions, including universities, firms, and other U.S. government organizations, e.g.: CDC for testing of insecticides and operations research, and NIH will be given preference for such sub-obligations.

PAHO will carry out operations research in malaria control in Belize, El Salvador, Honduras and Guatemala. Proposed operations research activities will be reviewed by the AID Environmental Officer to assure compliance with existing environmental assessments in those countries. Operations research undertaken in Guatemala will require an Initial Environmental Assessment with a pesticide assessment undertaken by a short term consultant selected with the concurrence of the Environmental Officer. Operations research proposed for other than malaria control and in countries other than the four specified above will be negotiated as part of the annual work plan. If such research includes the use of pesticides, IEE's and pesticide assessments will have to be undertaken and approved by the Environmental Officer per the case of Guatemala above. Plans on any and all operations research involving pesticides will be approved by the AID project officer only with the written concurrence of the Environmental Officer that environmental issues have been resolved.

2. Essential Drugs

AID/LAC will fund a joint AID/PAHO program to provide technical co-operation and training to Central American Ministries of Health, Social Security Institutes and other local organizations to improve their essential drugs programs. PAHO will provide a minimum of 40 months of technical co-operation under this project. PAHO will develop and implement regional training programs, to the extent possible, at Central American institutions, which may be strengthened for this purpose. Short term training courses will be provided in: 1) drug selection, 2) drug procurement, 3) inventory control, 4) quality assurance and control, 5) warehousing, 6) distribution and dispensing, and 7) utilization. These courses will be open on a space availabale basis to candidates from countries outside of Central America and Panama. Costs of such participation will not be provided from project funds. The target group of trainees will be technicians and managers with direct line responsibilities for the topics presented in the courses.

PAHO will develop a Central America pharmaceutical vendor/pricing information network as part of a more general information system on drug issues which will provide current data on procurements and suppliers within the sub-region.

PAHO will identify and furnish drug therapy information from independent reputable sources to several institutions within each participating country, including reference textbooks, journals and newsletters, and where appropriate, microfiche libraries.

PAHO will prepare guidelines and standards for a prototype drug quality control laboratory, a prototype warehouse, and prototype registration and inspection services. These prototypes will establish for health planners and managers the minimum space, equipment, staffing requirements, etc. Where appropriate such prototypes will be developed for facilities at various levels in the health delivery system. These prototypes may then be adapted to individual country settings.

Finally, PAHO will undertake analyses of drug utilization. Where microcrocomputers are available and applicable in Central America, the analyses will seek to link patient specific pharmaceutical use, to morbidity outcomes, to drug supply. Existing U.S. drug monitoring software packages where appropriate, will be utilized/adapted for this purpose.

As with the malaria control activities, it is anticipated that, when appropriate, PAHO will utilize qualified U.S. institutions to implement certain of the activities outlined above.

D. Timetable year 1

Appointment of PAHO Project Manager and other Project Staff	Month 1
Formation of Advisory Committee for Malaria Component	Month 1-3
Preparation of 1st Annual Workplan	Month 1-3
Technical Co-operation Plans Developed	Month 3-9
Training Courses Designed	Month 3-9
Operations Research Activities Designed	Month 6-9
Technical Co-operation and Training Implemented	Month 6-12

E. Reporting

The PAHO project manager will submit to AID/LAC a quarterly status report covering implementation progress-to-date and projecting activities for the next quarter. The exact format of this report will be proposed by PAHO as part of the submission of the first annual workplan. PAHO will submit an annual workplan, including a budget, for the malaria and essential drugs components, which must be mutually agreed upon by both organizations prior to implementation of the proposed plan. The project will be jointly evaluated after two years and at the end of the project. The evaluation criteria will be mutually agreed upon by AID and PAHO. The evaluations will be conducted with the participation of AID, PAHO and independent contractors selected by AID. Cost for the evaluations will be borne by AID.

ATTACHMENT B

PAYMENT PROVISIONS

(a) AID shall open a Federal Reserve Letter of Credit (hereinafter referred to as an "FRLC") in the amount of funding obligated by this grant, against which the Grantee may draw cash only for immediate disbursing needs. The term "immediate disbursing needs" when applied to FRLC's is defined as the cash requirements for a three-day period. Any subgrantee funded by the Grantee from funds provided by this grant, shall obtain such funds from the Grantee only as needed for disbursement. The financial management system of the Grantee shall provide for effective control over and accountability for Federal funds in accordance with its usual procedures and generally accepted accounting practices.

(b) FRLC Operational Requirements

(1) The Grantee will select a commercial bank that agrees to receive payment vouchers, TFS Form 5401, "Payment Voucher on Letter of Credit," drawn on the U.S. Treasury and to forward such payment vouchers to the applicable Federal Reserve Bank or branch. The Grantee shall select a commercial bank that will credit the account of the Grantee at the time of presentation of the completed payment voucher. Immediate credit by the commercial bank will enable the Grantee to meet its responsibilities to draw cash only when actually needed for disbursements.

(2) After arranging with a commercial bank for operations under FRLC and obtaining the name and address of the Federal Reserve Bank or branch serving the commercial bank, the Grantee shall deliver to the AID Controller, three originals of Standard Form 1194, "Authorized Signature Card for Payment Vouchers on Letters of Credit," signed by those officials authorized to sign payment vouchers against the FRLC and by the designated official of the Grantee who has authority to specify individuals to sign payment vouchers. Only those officials whose signatures appear on the SF-1194 can sign the TFS Form 5401. New signature cards must be submitted whenever there is a change in the persons authorized to

(3) The Grantee shall subsequently receive one certified copy of the Federal Reserve Letter of Credit, SF-1193. No payment vouchers shall be presented to the commercial bank before the FRLC is opened. The SF1193 indicates the effective date the FRLC is opened.

(4) As funds are required for immediate disbursement needs, the Grantee will submit a properly completed payment voucher (Form TFS 5401) to the commercial bank for transmission to the Federal Reserve Bank or branch. The commercial bank may at this time credit the account of the Grantee with the amount of funds being drawn down. Payment vouchers shall not ordinarily be submitted more frequently than daily and shall not be less than $5,000 or more than $5,000,000. In no event shall the accumulated total of all such payment vouchers exceed the amount of the FRLC.

(5) In preparing the payment voucher, the Grantee shall assign a voucher number in numerical sequency beginning with 1 and continuing in sequence on all subsequent payment vouchers submitted under the FRLC.

(6) After the first payment voucher (Form TFS 5401) has been processed, succeeding payment vouchers shall not be presented until the existing balance of previous drawdowns has been expended or is insufficient to meet current needs.

(c) FRLC Reporting

Fifteen days following the end of each calendar quarter, the Grantee shall submit, to the office designated in the grant letter, a report showing for that quarter the cash on hand at the beginning of the quarter plus cash drawn under the FRLC during the quarter, the amount of project disbursements, and cash remaining on hand at the end of the quarter. The Grantee will indicate the number of days cash requirements represented by the amount shown as cash remaining on hand.

(d) Suspension of FRLC

(1) If at any time, the AID Controller determines that the Grantee has failed to comply with the terms and conditions of the FRLC, the AID Controller shall advise the Grant Officer who may cause the FRLC to be suspended or revoked.

(2) The Controller may recommend suspension or revocation to the Grant Officer on the grounds of an unwillingness or inability of the Grantee to: (A) establish procedures that will minimize the time elapsing between cash drawdowns and the disbursement thereof, (B) timely report cash disbursements and balances as required by the terms of the grant and (C) impose the same standards of timing of advances and reporting on any subrecipient or any of the Grantee's overseas field organizations.

ATTACHMENT C (1)

Estimated AID Contribution - Central America Malaria Control
(in thousands US Dollars

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Applied Field Research		450	300	200	950
Research and Training Center	500	300	250	189,35	1239,35
Short Term Training	100	200	100	100	500
Technical Cooperation	310,65	100	100	100	610,65
Advisory Committee	50	50	50	50	200
TOTAL	960,65	1100	800	639,35	3500

Estimated AID Contribution - Central America Essential Drugs

Activity	Year 1	Year 2	Year 3	Year 4	TOTAL
Technical Cooperation	363,85	200	115	100	778,85
Training	230	450	350	256,15	1286,15
Reference Materials	15	15	15	15	60
Pricing Network	50	20	20	20	110
Prototypes	250	150	---	---	400
Drug Utilization Software & Studies	100	165	100	---	365
TOTAL	1008,85	1000	600	391.15	3000

ATTACHMENT C (2)

Estimated Budget - Year 1

AID Contribution:

Component 1: Malaria control		
Short term consultants	$301.100	
Duty travel	69.000	
Contractual services	83.000	
Supplies and equipment	110.000	
Courses and seminars	129.000	
Grants	4.700	
Subtotal		$ 696.800
Component 2: Essential Drugs		
Short term consultants	$230.000	
Duty travel	60.000	
Contractual services	130.000	
Supplies and equipment	105.000	
Courses and seminars	150.000	
Grants	70.000	
Subtotal		$ 745.000
Project Management		
Project manager	73.100	
Administrator	43.500	
Secretary	26.050	
Subtotal		$ 142.650
Contingencies (10%)		158.450
SUBTOTAL		$1,742.900
Overhead (13%)		226.600
TOTAL		$1,969.500

PAHO Contribution:

PAHO will contribute professional staff to implement the program. It is estimated that during the first year period of this grant, PAHO's contribution will be approximately Four Hundred Fifty Thousand United States Dollars ($450,000.00) as follows:

	US Dollars
PAHO Headquarters	
Professional Staff	
(5 professionals, 2 at 25% & 3 at 5%)	102,115
Secretarial Staff	
(5 G.6's at same %'s as above)	35,165
PAHO Country Offices	
1 P.4 Guatemala (20%)	31,120
Country Representative Guatemala (5%)	9,385
1 P.4 Panama (20%)	28.880
Country Representative Panama (5%)	8,580
1 P.4 Honduras (20%)	29,280
Country Representative Honduras (5%)	8,440
1 P.4 El Salvador (20%)	30,080
Country Representative El Salvador (5%)	8,085
Country Representative Cost Rica (5%)	6,440
Consultants	
9 months of Short Term Consultants	
(3 months, Costa Rica, 6 months Belize)	63,900
Supplies and Equipment	
Essential Drugs Components	30,000
(Malaria) Component	30,000
	421,470
Duty Travel	15,000
TOTAL	436,470

ATTACHMENT D

REPORTING REQUIREMENTS

Grantee shall submit the following to the AID Technial Office shown under Item 16.

1. Annual work plan, including a budget.

2. Quarterly status reports covering progress to date and projecting activities to the next quarter.

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

June 29, 1987

Dr. Irene Klinger
DAP
Pan American Health Organization
Room 905
525 Twenty-third Street, N.W.
Washington, D.C. 20037

REFERENCE: LAC-007-G-00-5329
Malaria and Essential Drugs Project No. 597-0007

Dear Dr. Klinger:

We approve the proposed preliminary methodology for the mid-term evaluation of the PAHO Malaria and Essential Drugs Project No. 597-0007 (attachment). The principal objectives of the evaluation are to describe and assess the status/progress of project activities as of March 31, 1987, and to determine project performance in meeting the goals and objectives.

We recommend that consultants be identified through the A.I.D. Vector Biology and Control (VBC) Project No. 936-5948 (contact Dr. Victor Barbiero at 235-8934) and/or the Technology for Primary Health Care Project, (PRITECH) Project No. 936-5927.1 (contact Lloyd Feinberg at 235-8950) for candidates.

We are certain you will agree that it is important to obtain high quality technical assistance so that we have complete confidence in the evaluation findings.

If there are further questions, do not hestitate to contact our office.

Sincerely,

Julie M. Klement

Julie M. Klement
Health Development Officer
Office of Health and Nutrition
Bureau for Latin America and
the Caribbean

Attachment: a/s

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PAHO/AID PROJECT No. 597-0007

PROPOSAL FOR MID-TERM EVALUATION

STATEMENT OF WORK

A. Background

In 1985, the Latin American and Caribbean Bureau of AID signed an agreement with PAHO for the latter to provide a range of technical support in the areas of malaria control and essential drugs to countries in the Central American and Panamanian subregion. A condition of the agreement is that PAHO will be responsible for ensuring that a mid-term evaluation of the projects is undertaken.

The objectives of the project are multiple. In malaria control they are to: a) strenghten malaria control programs in the subregion; b) to establish and institutionalize a regional training and operations research program for mosquito borne diseases. For essential drug programs the objectives are: a) to improve existing program in the subregional Ministries of Health and Social Security Institutes; b) establish and institutionalize Central American regional training programs in procurement, distribution, quality control and utilization of essential drugs.

B. Objectives

The principal objectives of the proposed evaluation are to describe and assess the status and progress of the project as of March 31, 1987, and to determine project performance in meeting stated goals and objectives. The purpose is to provide an objective picture of project operations in order to identify ways in which it can be strengthened. Analyses will be prepared for projects in each country under examination, as well as for the subregion as a whole.

C. Scope of Work

The consultants will conduct a process evaluation of the Central American and Panama Malaria Control and Essential Drugs Project. The purpose is to assess project status, progress and performance through March 31, 1987. It is not to evaluate what project impacts have been. A preliminary methodology has already been prepared (see Appendix). It is expected the evaluators will follow the general guidelines set forth in that document. Specific activities to be carried out by the evaluators include the following:

1. Review of Initial Materials

The first task after signing of their contract will be for the evaluators to review essential program documents to be provided by PAHO, in order to familiarize themselves with the objectives, scope and nature of the project.

2. Meeting with AID/PAHO

After signing their contracts, the evaluators will meet with cognizant AID and PAHO officials in order to clarify evaluation goals and objectives.

3. Work Plan/Evaluation Design

At the end of the first week of the contract period, the evaluators will present to cognizant AID and PAHO officials a final draft work plan and detailed evauation methodology. The methodology will be drawn on the one attached, based on the AID standard evaluation requirements and cover at a minimum all the methodological task areas set forth. The work plan will include detailed schedules of activities, including activities in each country, identifying documents to be reviewed, officials to be visited and project components to be observed. PAHO will assist in identifying relevant officials for interviewing purposes and arranging for appointments.

4. Conduct of Evaluation

The evaluators will travel to the various countries in accordance with the calendar of activities presented in page 4. Pre-trip preparations will be made with enough time to contact in-country officials to arrange appointments, request documents and attend to most logistic details. It is expected that the team leader will begin the write-up in the field. For their part, PAHO and AID will facilitate field work by providing necessary logistical support including assistance in securing appointments with local officials, unimpeded access to word processors, assistance in making travel arrangements, both local and international, and acquiring hotel and other accomodations.

5. Analysis and Write-up

Final analysis and write-up will be done in Washington. A penultimate draft will be submitted to PAHO and AID for factual review. Once completed, the final draft will be written.

D. Level of Effort

PAHO will contract with three independent experts approved by AID to carry out the evaluation. The time estimated to carry out the evaluation is six weeks, as described in the calendar of activities. The evaluation team will be comprised of three specialists: 1) a program evaluation specialist/ team leader; 2) a malaria control specialist; 3) an essential drugs specialist. Detailed descriptions of each consultant are appended in Appendix 1.

E. Deliverables

The following products are to be delivered:

1. A detailed evaluation design based on the established methodology.

2. A detailed work plan for the entire evaluation project.

3. A comprehensive evaluation of the status, progress and performance of the AID/PAHO Malaria Control and Essential Drugs Project for Central America and Panama.

4. A proposal of necessary adjustments and development for the next 18 months.

PRELIMINARY CALENDAR OF ACTIVITIES

Week 1	Preparation, including background review, development of evaluation design and logistical arrangements for site visits
Week 2	Site visit, Belize Site visit, Guatemala
Week 3	Site visit, El Salvador Site visit, Honduras
Week 4	Site visit, Costa Rica Site visit, Panama
Week 5, 6	Analysis Write-up, editing, and translation

APPENDIX 1

POSITION DESCRIPTIONS
AID/OPS MALARIA CONTROL AND ESSENTIAL DRUGS EVALUATION

Program Evaluation Specialist

A. Minimum Qualifications

The Program Evaluation Specialist will have a terminal degree in the social sciences, public health or public administration; be thoroughly familiar with evaluation methods, especially in cross-cultural environments; possess a minimum of five years experience in program evaluation, especially in social and health or health-related programs; worked for PAHO or other international organizations, either as a consultant or employee; occupied a senior management position in the public sector; be familiar with Central America and Panama; speak fluent Spanish and English.

B. Responsibilities

The Evaluation Specialist will serve as a team leader and be responsible for management of all phases of the project, including liaison with PAHO, AID and host country officials. He/she will assign, as appropriate, job tasks to the members of the team. He/she will be responsible for ensuring the integrity of the evaluation design and analysis. The Evaluation Specialist will also be responsible for the final write-up and presentation to PAHO and AID officials.

Malaria Specialist

A. Minimum Qualifications

The Malaria Specialist will have a terminal degree in a relevant discipline, preferably epidemiology; possess five or more years experience of work in malaria control programs, especially in Latin America; have two years experience in program evaluation and/or five years experience in research; have a demonstrated understanding of basic social science research methods; be familiar with Central America and Panama; speak fluent Spanish and English.

B. Responsibilities

The Malaria Specialist, under the direction of the Team Leader, will be responsible for carrying out the majority of activities in the evaluation of the malaria control component of the project. He/she will delineate the appropriate indicators to be used, recommend methodological approaches, take the lead in conducting field activities for evaluating relevant project functions and undertake other relevant tasks as needed. He/she will bear primary responsibility for drafting the initial analysis of the malaria component.

Essential Drugs Specialist

A. Minimum Qualifications

The Essential Drugs Specialist will have an advanced degree in a relevant field such as pharmacology, chemistry or similar discipline; five years experience in managing an essential drugs program or otherwise participating as a senior administrator; two years experience in program evaluation and/or operations research; be familiar with Latin America; speak fluent Spanish and English.

B. Responsibilities

The Essential Drugs Specialist, under the direction of the Team Leader, will be responsible for carrying out the majority of activities in the evaluation of the essential drugs component of the project. He/she will delineate the appropriate indicators to be used, recommend methodological approaches, take the lead in conducting field activities for evaluating relevant project functions and undertake other relevant tasks as needed. He/she will bear primary responsibility for drafting the initial analysis of the essential drugs component.

EVALUATION METHODOLOGY
FOR
AID/OPS MALARIA CONTROL AND ESSENTIAL DRUGS PROJECT
CENTRAL AMERICA AND PANAMA

The purpose of this evaluation is twofold. First, it is to describe the mid-term status of the AID/PAHO project in malaria control and essential drugs, citing progress in completing goals and objectives through March 31, 1987. Second, it is to assess, where possible, project performance in meeting goals and objectives. The evaluation will be based on a straightforward descriptive methodology, essentially measuring project performance in terms of goal attainment within the program context of each country in which the project operates.

The following methodology for evaluating the projects is predicated on several assumptions. First, few indicators or measures exist to conduct a comprehensive assessment - and the scope of the present exercise is limited in any event. Second, in some cases data may not be available or reliable, posing similar restrictions on the analysis. Third, optimally a process evaluation is best informed by knowledge of project impacts. As this evaluation is to review mid-term progress only, it will not be possible to analyze impacts. Nevertheless, empirically valid conclusions on the status of the projects can be safely made.

The methodology to be used in the evaluation is outlined below. Each step represents the general approach to be used. It should be pointed out, however, that an initial task of the evaluators will be to refine and develop in detail each of these steps by way of constructing an evaluation research design to be approved by cognizant AID and PAHO officials.

1. Goals and Purposes

The first step in the evaluation will be to clarify and agree upon its goals and purposes. This will be done in conjunction with appropriate AID and PAHO officials. The reason for this exercise is to insure that the evaluators are given unequivocal direction with respect to the goals of the project and the purposes of the evaluation. Clear definition of goals is essential for a valid evaluation.

2. Research Questions

A series of final questions will be developed to guide the direction of the evaluation and define its limits. This will be done in consultation with program officials from PAHO, AID and the host countries. A tentative set of core questions has already been developed for application on a subregional basis (see Appendix 2). Country-specific questions will be developed on an individual basis. All questions will be formulated keeping in mind data and indicator limitations.

3. Operational Definitions

Operational definitions of key terms and concepts will be formulated and standardized to facilitate, where possible and desirable, intraregional comparison and aggregation, as well as to permit relevant project progress measurement.

4. Methodological Approach

The evaluation will be basically straightforward and depend on collection and analysis of descriptive data using empirical procedures. Quantitative data will be used as much as possible for the analyses. But qualitative information will also be used, particularly where quantitative data are either unavailable or judged to be unreliable or inappropriate to the analysis. Both the malaria control and essential drug projects in each of the six AID/PAHO recipient countries will be reviewed. Although the malaria control and essential drug programs are different, the general methodological approach in evaluating each will remain the same. Indicators and variables will differ in kind, as will the total number and kinds of project interventions. These disparities will be accounted for in drawing up the final evaluation design. Thus, what follows is an outline of the basic methodological steps to be followed in applying the evaluation in each country and for both the malaria control and essential drugs programs.

a. Protocols

Evaluation protocols will be developed, using where applicable AID and PAHO guidelines. The protocols will govern conduct of the evaluation including making arrangements to review files, interview personnel and interact with project, MOH and other relevant functionaries.

b. Indicator/Variable Identification

While most indicators will already have been identified prior to the evaluation, an initial tsks will be to review the project to develop other potential indicators/variables (and check sufficiency of existing ones). Most of the global indicators are already set forth in the AID Statement of Work (see Appendix 3). The dependent variable, in each project area - i.e., malaria control and essential drugs - is "institutional strengthening." The independent variables are training, technical cooperation and, in the case of malaria control, operations research. That is, the goal of strengthening the institutions carrying out the project and project-related activities will be measured by tasks performed in training, technical cooperation and/or operations research. In addition, this will be put into a larger socioeconomic, general health services and MOH environmental framework. That is, influences on institutional performance may be not only a factor of project training, technical cooperation and operations research interventions, but of more macro decisions as well.

c. Data Generations and Collection

Four methods for collecting data will be employed: content analysis, interviews, modified Delphi technique, direct observation:

- Project archival materials as well as relevant SNEM and MOH documents will be content analyzed. In addition, descriptive materials, such as organizational charts, position descriptions, etc., will be reviewed. The evaluators will draw up a list of documents and other materials to be examined. Relevant policymakers may also be considered for interviewing purposes.

- A modified Delphi Technique will also be used to determine perceived project strengths and weaknesses. Delphi groups will be selected by level and skill area. (Basically, the Delphi Technique is an interactive process of asking questions of key officials in an organization to identify problems and solutions in order to determine if a consensus exists and what it is.)

- Some limited direct observation will also be employed, circumstances permitting.

Both qualitative and quantitative information will be collected. Data collection forms and dummy tables will be prepared beforehand. Where possible and feasible, forms will be coded for computer use and data input.

d. Data Verification

It may be anticipated that many data will be unreliable and incomplete. An important task of the evaluation team will be to develop data verification (internal and external) procedures to establish reliability.

e. Proxy Data/Variables

Where necessary and feasible, proxy or surrogate data/variables may be used.

5. Analytical Techniques

As already indicated, the level and status of most data to be collected will allow for basically straightforward descriptive analysis. While different analytical techniques have ultimately to be determined, at this juncture it is possible to suggest some possibilities.

a. Mapping

The central analytical method or model to be used in mapping, which diagrams situational factors and their interrelationships to describe a

project operation. Maps will be developed to show how inputs (i.e., training, technical cooperation and/or operations research) are connected to the processes of project functions (and structures) to achieve goals and objectives with measurable characteristics, such as the number and kinds of training courses delivered.

b. Tabulations

All quantitative (quantifiable) data will be tabulated and cross-tabulated to provide a simple statistical picture of project progress in frequency and percentage terms.

c. Correlation/Regression

Variables for which there are reliable quantitative data may be subjected to correlation and regression analysis if a potentially useful (and significant) relationship is thought to exist. However, given the nature of the evaluation and the general limits on the methodological approach, it may not be possible or necessary to use such techniques.

d. Content Analysis

Project archival materials and results of interviews will be content analyzed.

6. Write-Up

The last task of the evaluation will be to produce the final analysis and write the report. The format for the report will be the following:

a. Executive Summary

The first section will be an executive summary, including the principal findings and conclusions.

b. Findings

The second section will be a listing of major findings.

c. Analysis

The analysis section will constitute the major portion of the evaluation, describing the status and performance of the project within the time period established. Efforts will be made to present not only a quantitative picture of the project, but to capture its dynamics through qualitative examination.

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d. Conclusions

This penultimate section will list the major conclusions drawn from the analysis, referring relevant findings. Conclusions will cover project operations in each country as well as address the overall subregional effort.

e. Recommendations

The evaluators will be expected to make a series of alternative recommendations, where appropriate, for strengthening project operations.

APPENDIX 2

RESEARCH QUESTIONS

The following research questions are not exhaustive. By the same token, neither will they all necessarily be found to be appropriate for the evaluation of the AID/OPS Malaria Control and Essential Drugs Project for Central America and Panama. Rather, they are suggestive of the scope and nature of the inquiries to be made in assessing the status and progress of the project. A list of final questions will be developed by the evaluators in conjunction with cognizant AID, OPS and host country officials.

MALARIA CONTROL

Technical Cooperation/Administration

How have MC program operations been strengthened by project activities?

- Structurally
- Functionally/systems
- Resources
- Personnel
- Information (internal and external)
- Planning and Evaluation
- Interventions

a. Structure

What changes in organization have taken place and why? How do they reflect goals, objectives and priorities of project? How have they improved efficiency?

b. Functions/System

What new and/or different functions to promote greater efficiency have been undertaken? How were these executed and why? How do they correspond to existing/changed organizational structures? What else needs to be done to improve efficiency? Are program criteria and deadlines met? Are objectives and goals met in priority order?

c. Personnel

How have skills been enhanced, by level and type, including management? What new procedures have been set in place to improve efficiency, including management/supervision; salary and benefits; incentives/disincentives; training?

d. Information

Has information flow been changed and how? What have been results? How is information gathered, processed and utilized? How are data verified? What is feedback process? How are instructions communicated? How are decisionmaking, planning and operations processes informed?

e. Planning and Evaluation

Is there a planning and/or function/component? Where is it located and how does it interact with other units? How are goals, objectives and priorities established? Who oversees their execution and how are they evaluated? What methods and analytical techniques are used in evaluations? How are findings and recommendations utilized?

f. Resources

What has been pattern of resource (financial, human, logistical, physical) allocation? How do outlays correspond to budgeted items and policy and project goals and objectives; to functions and structures? What kinds of maintenance are performed on equipment/facilities? How efficient/sufficient is equipment and facilities?

g. Interventions

What new or enhanced (different) project interventions have been introduced? Who was responsible? What are the target populations, by frequencies and percentages? What have been the results - in terms of output and not impact? How accessible are services? How well are they reaching principal target populations of high risk groups and the poor?

What is the relationship of the SNEM to the general health services sytem? How does it fit organizationally and functionally into the overall system? What are the perceived/actual advantages and disadvantages of the present situation?

Training

- What training needs exist and how have they been identified?
- What training goals/objectives/priorities have been set? Have they been met? If not, why?
- How are personnel selected for training and on the basis of what criteria?
- What training programs have been provided for how many/kinds of personnel?
- Is training basically supply or demand driven?

- Can any outcomes of traning be measured?
- What is the selection and recruitment process? How does it operate?
- Are individual training plans developed? How?
- What kinds of training methodologies are used and why?
- Is there any follow-up to training? How is it implemented?
- How are curricula determined, developed and implemented?
- What measures are taken to ensure that newly acquired skills/ knowledge are used in programs?
- Where are training "graduates" placed after training?
- What measurable changes in program outcomes can be identified as linked to training?

Operations Research

- What specific, visible and measurable steps have been taken to develop an OR capacity?
- How are these linked to specific program and operational goals?
- How have these measures strengthened organizational capacities?

ESSENTIAL DRUGS

Basically the same generic questions will be posed under this rubric as under Malaria Control, with an important exception. The process from initial identification of essential drugs to their ultimate dispensation to the patient involves a series of clearly prescribed and interlocking steps. This operational catena will form the basis of the following research questions.

a. Planning

How are essential drug goals/objectives/priorities established? What is the impact of donor agencies on them? What kinds of monitoring and evaluation mechanisms are in place and functioning, and to what effect?

b. Selection

How are drug selection decisions made and on the basis of what criteria - e.g., price, quality, etc.? How are drug quantities planned/predicted? How accurate are forecasts?

c. Procurement

What kinds of procurement mechanisms and procedures are used, and what legal/regulatory restrictions apply? How are potential suppliers identified and selected? How much procurement is sole source; competitive? What are the comparative advantages among supplier prices? What kinds of quality control/assurance mechanisms are used? How effective are they? How are drugs financed? Donor agencies, revolving loan funds? appropriated funds, etc.? What efforts are made to buy locally produced instead of imported drugs? What prices have been paid for selected drugs since inception of project and how do they compare to prices for identical medicines available from other sources?

d. Distribution

How effective is customs and port clearance? How are drugs stored? What is waste ratio in inventories? How long are products stored? How efficient is space utilization? How efficient is warehouse management? What problems, if any, exist in turnaround time from central warehouse to regional/local storage facilities (i.e., what are delivery strategies and how efficiently do they work)? How efficient/sufficient is transportation equipment/network?

e. Use

Where, how and to what effect are drugs prescribed? How accessible are essential drugs to groups at risk and the poor, both in terms of physical and financial accessibility? What criteria are used to dispense/prescribe drugs? How is appropriate use by patients encouraged and/or monitored?

f. System Management

How is essential information on all aspects of essential drugs acquired, stored, processed and analyzed? How are results of information analyses used and to what effect? What kinds of cost reductions can be measured over the past five years in procurement of drugs? To what can this be attributed? What kinds of security mechanisms are used to protect drugs from theft?

APPENDIX 3

INDICATORS IN STATEMENT OF WORK

While the AID/PAHO Statement of Work for the Central America and Panam Malaria Control and Essential Drugs Project sets forth measures for evaluating performance, it is helpful to list them separately. Although a more comprehensive list of indicators is required and will be developed as one of a set of initial tasks in the evaluation, those already in the Statement of Work will form the base for measuring status and progress of the project. Specifically, they include:

Malaria Control

- Training courses.
- Operations research interventions.
- Interventions for selection of and support for regional training, technical assistance and research support institutions.
- PAHO technical cooperation interventions including: curriculum design; program design and evaluation; technical meetings; sub-contracted short term technical assistance.
- Operations research activities.

Essential Drugs

- Short-term training courses in: drug selection; drug procurement; inventory control; quality assurance and control; warehousing; distribution and dispensing; utilization; other.
- Types of trainees, including technicians and managers with direct line responsibilities for the topics presented in the courses.
- Development of a Central American pharmaceutical vendor/pricing information network.
- Provision of drug therapy information from reliable independent sources.
- Preparation of guidelines for a prototype drug quality control laboratory, warehouse and registration and inspection services.
- Drug utilization analyses.

SIXTH PROGRESS REPORT

Period: April - June, 1987

SIXTH PROGRESS REPORT

Period: April - June, 1987

I. BACKGROUND DATA

A.	Project title:	Malaria Component
B.	Project number:	597-0007
C.	Project Manager:	Irene Klinger, PAHO
D.	Date of Authorization:	March 28, 1985

II. PROJECT PROGRAM

A. To strengthen malaria control program in Belize, Costa Rica, El Salvador, Guatemala, Honduras and Panamá.

B. To establish and institutionalize a Central American regional training and operations research program for mosquito-borne diseases.

III. MAJOR OUTPUTS

A. Institutional Strengthening

- Activity A.4, Fifth Regional Meeting of Malaria Directors and General Directors of Health. This meeting was held in Bogotá, Colombia, from 1 to 6 June 1987, bringing together both Directors of Health Services and Directors of the National Malaria Control Programs from Belice, Costa Rica, El Salvador, Guatemala, Honduras and Panama, and from other countries of the region of the Americas as well. Important conclusions and recommendations for the implementation of malaria control programs through the Primary Health Care approach were approved. The final report is under preparation.

- Activity A.8, Advisory services and support to the University of Panamá for the subregional training program continued. Main activities included supporting the preparation of theses, helping the University with the recruitment process for the Master Program and initiating, together with other PAHO personnel, an assessment of the master in entomology course. Results of this initial step in the evaluation of this Course are already available.

- Activity A.1.3, Support to border meetings in the Sub-region, support was provided to Honduras for border surveillance activities related to vector control. A joint plan of action was developed and approved by participating health authorities.

B. Distribution of material and exchange of information.

- Activity B.5, Preparatory work for publication of a manual on Diagnosis of Malaria continued. The manual is ready for printing and its publication will take place in the next quarter.

- Activity B.6, Publication of the document: "Medical Care of Severe and Complicated cases of Malaria" was completed. The publication is identified as PAHO "Cuaderno Técnico No. 8".

C. Training

- Activity C.1.1, Master in Entomology. This post graduate course continued during the quarter and the recruitment process for new students is almost completed, seven candidates have already applied. An extension of four months scholarship was approved for two students in order to enable them to finalize their theses, which they will defend in October 1988. (See also above, Act. A.8).

- Activity C.1.3, "Bionomics and Identification of Mosquitoes of Public Health Importance". Arrangements for the course were completed with The Wedge University of South Carolina. The course will be held from 19 to 30 October, 1987, in Spanish. Announcements were circulated to all Central American countries.

- Activity C.3.2, Control and Surveillance of Aedes albopictus. An international, one-week-course, for senior personnel responsible for planning and implementing the program for surveillance/control of A. albopictus was held in the University of Panama, Panama, during the period 8-12 June 1987. There were participants from the Central American countries as well as from 6 other countries of the Region. Drs. Knudsen and Liu from PAHO/HPT and Dr. Eliason from CDC, USA, taught in this course. A report on the course in available.

  Two courses on surveillance and control of A. aegypti and A. albopictus were carried out in Costa Rica. One course was held in Puerto Limón, for 24 participants from the anti-Aedes aegypti program; 2 nurses from the community health program also participated. Another course in Punta Arenas was attended by 26 participants from the anti-Aedes aegypti program, including also a Chief of Sector from the SNEM.

- Activity C.2.2, Malariology and Environmental Health. This ten-month-course is being given by the University of Maracay, Venezuela and continued developing normally, with 3 participants from the Central American countries.

- Activity C.3.1, Insecticide Application Techniques and Maintenance of Spraying Equipment. This course was announced in June in all Central American countries and preparations are underway to give it in Panama on September 21-October 9, 1987.

- Activity C.3.2, International Workshop on Bionomics, Surveillance and Control of Aedes aegypti and Aedes albopictus. The workshop was held at the University of Panama, on 8-12 June 1987. Participants from the Central American countries and from other countries attended. A plan of action was prepared.

- Activity C.5.1, Identification of Management Training Needs. The Project Manager worked together with a Consultant in the development of a questionnaire to be distributed to the Malaria Programs and General Health Services Personnel of the Central American Countries. This questionnaire is intended to identify training needs in the different managerial aspects of the Programs (Financial, logistics, operations), the type, level and methodology for future training activities in this area.

- Activity E.2, Application of Modules of Epidemiology and Malaria Control. Four seminars were held in Panama in the areas of Colon, Panama Oeste, Chiriqui/Veraguas and the Metropolitan Region, and were intended to promote malaria prevention and control by national health services personnel. Four other seminars are planned for the period August-November. The first workshop using the modules on malaria epidemiology and control, was carried out in Costa Rica for 8 staff members from the SNEM, on 21-27 June 1987.

D. Research

- Activity D.1.A, Study of the Ecology, Biology and Vector Capacity of the A. albimanus in Central America and Panama. A regional seminar on development of methodology for the study of the A. albimanus is under preparation. It will be held in "Centro de Investigación de Paludismo" (CIP), Tapachula, México, during the period 24 August-4 September 1987. Participants will be the national research officers and technicians responsible for carrying out the study at country level.

Two PAHO medical entomologists visited Costa Rica in the period 4-8 May 1987 to develop, in collaboration with national authorities, a plan of action to conduct the studies in that country.

IV. Other Accomplishments

The Project Manager and the technical unit together with AID representatives, reviewed the proposal for project evaluation presented in March 1987 to the Technical Advisory Committee (TAC) of the project. Final arrangements are being made and actual evaluation is expected to take place next September.

The evaluation of the Tropical Diseases priority area of the Plan of Priority Health Needs in Central America and Panama (PPSCAP) was completed and will be presented to the next Directors General of Health Meeting of Central America to be held on August 3-6, 1987. This evaluation will provide important information about the malaria situation and problems in malaria control confronted by the Central American countries. These findings together with information collected in the evaluation of the project development itself, will be very useful for planning future project activities.

V. Problems and Delays

Preparation of research protocols by the countries for submission to the Research Advisory Committee of the project continues to be a problem. Only two country protocols were received from Panamá, reviewed by the Regional Program, and returned to the country for revision and re-submission. No reply has been received so far.

The remaining countries with planned research studies included in the 3rd. year Work Plan, have not submitted their plans yet.

We are also awaiting AID's concurrence with extension of research activities beyond life of project as discussed during TAC meeting. This approval is needed prior to our agreeing to any research contract which would extend beyond April 1989. All the proposed regional research projects appearing under code D in the third year Work Plan probably would extend beyond that date.

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PAHO-AID PROJECT NO. 597-0007
MALARIA AND ESSENTIAL DRUGS COMPONENTS.
Interin Financial Report 24 June 1987.

Actual Expenditures

	1985	1986	JAN-MAR/87	APR-JUN/87	TOTAL/87	GRAN TOTAL
Management	53783	106266	26313	33044	59357	219406
Essential Drugs	180839	902614	58858	314320	373178	1456631
Malaria Control	126099	529071	54753	96683	151436	806606
TOTAL	360721	1537951	139924	444047	583971	2482643

PAHO/AID PROJECT 597-0007

ESSENTIAL DRUGS COMPONENT

SIXTH PROGRESS REPORT

- April-June, 1987 -

III. MAJOR OUTPUTS

1. Programming and Coordination

The workplan for the third year of the project, April 1987-March 1988, was revised and edited to incorporate the modifications requested at the III Interinstitutional Coordination Meeting, held 2-6 March in Antigua, Guatemala, and sent to the appropriate government officials and PAHO/WHO Country Offices. An English version of the workplan was also prepared and distributed.

The project consultant, Dr. I. Santich, visited Costa Rica, Honduras and El Salvador to follow-up on ongoing activities and to work with national counterparts in developing updated and detailed workplans to carry out the activities agreed upon at the above-mentioned Guatemala meeting.

2. Institutional Strengthening

The first phase for the implementation of a laboratory and training/service center for biological drug testing was successfully completed. Dr. Adela Rosenkranz (Argentina) trained staff of the University of Costa Rica on the testing methodology and evaluation procedures for biological drugs. Her work, which was highly praised by university authorities, also included a 140-hour training course on statistics applied to biological training, which was attended by about 50 professionals and students from Costa Rican public institutes and private sector companies. She also provided advisory services to the laboratories of the Health Ministry, Social Security and other organizations (B.2.2.7).

The seminar/workshop on the Organization and Operation of National Drug Information Centers, held at the Universidad Central of Venezuela from 30 March to 10 April was attended by representatives from all Spanish-speaking countries except El Salvador. During the course, each participant defined the activities that needed to be carried out in their respective countries, in order to establish national drug information centers. The Project will give the necessary technical support for this purpose, providing such centers can obtain the official commitment required for its staffing and operation (B.3.3).

The proposed programs for national courses on clinical pharmacology in Honduras and El Salvador were revised to give greater emphasis on essential drugs. The original dates of the courses and, therefore, of the contracts of the outside expert consultants, were modified in late June to avoid conflicting with a major national meeting in Honduras, though both courses will still be held in July (B.4.5).

Following an informal evaluation of the work performed to date and discussions with Dr. Aída LeRoy (USA), the contract with her company (Health Information Designs) was extended for a second year. During this time, drug utilization programs will be introduced in Honduras and El Salvador and will be further developed/strengthened in Costa Rica and Guatemala (B.5.1).

The School of Pharmacy of the National University of Honduras has agreed to carry out, with project support, studies on (a) the quality of oral rehydration preparations marketed in the country, and (b) dispensing practices of private pharmacies for the treatment of acute diarrhea (B.2.2.9 and B.5.2).

Direct technical assistance was provided to Belize, Costa Rica Honduras and Guatemala with project funds. In Belize, improved drug supply management systems are in place at the Central Medical Store, which has been refurbished with a contribution from the Swedish Government (C.4.1). The PAHO/AID consultant, John Turnbull (Canada) has also organized a national meeting "Toward a New Drug System in Belize", 9-12 June 1987, with the support of AID/Belize for local participants and French funds for outside consultants. This was the first event in that country to bring together doctors, pharmacists and administrators to discuss the availability and use of drugs in the public sector. In Costa Rica, Carlos Castaño (Colombia) assisted the Health Ministry in revising the drug supply system to conform to the national policy of regionalization and decentralization. By Government request, the two-month contract was extended an additional month, which was covered by PAHO regular funds (C.4.4). In Honduras, María Josefina Quinteros (Chile) initiated a six-month consultantship to develop comprehensive pharmacetucial services in the Hospital Escuela (University Hospital). This project has been endorsed by the hospital administration, as well as by the Schools of Medicine and Pharmacy of the University, who will actively participate in the committees and activities of the project. A basic document for the project has been developed during Dr. Santich's visit to Honduras (C.4.5). In Guatemala, local professionals, contracted with Project funds, assisted in the reorganization of the Droguería Nacional, the agency responsible for drug distribution to health centers and posts (C.4.2).

The Information System on Drug Prices and Supplies has incorporated the recommendations made during the III Interinstitutional Coordination Meeting and is generating data of interest to those responsible for government drug procurement, as it documents the wide range of prices paid by the different countries for similar products (D.1).

3. Technical Documents

The master set of audio-visual materials for the course on Good Manufacturing Practices has been completed. Arrangements have been made to have an FDA inspector (E. Rivera) travel with Dr. Santich in August to Guatemala to start the preparations for a national course on this subject to be held later this year or in early 1988.

A document and audio-visual material on the conceptualization of an integrated drug supply system for the public sector has also been completed. A limited number of copies will be distributed to Central American institutions.

The primer on hospital pharmacy prepared under a WHO contract by Prof. Joaquín Bonal (Spain) has been published and will be distributed in July 1987.

The working document "Analysis of Existing Drug Procurement Procedures in Central America and Panama" was completed and distributed to the government authorities in the subregion. The document was used in a two-day workshop (3-4 June 1987) on this subject following a Swedish-funded meeting on the Revolving Fund for Essential Drugs (FORMED) for Central America and Panama held in Costa Rica.

Submittal E of the guidelines on warehouse prototypes was submitted by the contractor TPM Inc. (USA) and approved by PAHO. A consultation was scheduled in Panama for 8-9 June to review with selected governmenent officials from the subregion the material prepared to date. However, due to political unrest and street demonstrations, the meeting was cancelled. It has been rescheduled for 17-18 August 1987 in El Salvador.

IV. OTHER ACCOMPLISHMENTS AND OVERALL STATUS

1. The Directors General of the Ministries of Health of Central America and Panama will meet 3-7 August to discuss, inter alia, the subject of essential drugs, including the contributions made by the PAHO/AID Subregional Project towards improving existing conditions. A Ministerial-level meeting will take place at the end of the month and will consider a working document on issues affecting the availability and use of essential drugs. PAHO staff and consultants have assisted national authorities in the preparation of the papers for these meetings and the experiences and knowledge acquired through the PAHO/AID project were most valuable in this effort.

2. The complementarity of AID-funded activities with those financed by other donors has allowed for a more advantageous use of consultants and meetings. Thus, John Turnbull in Belize was able to use Swedish funds for refurbishing the Central Medical Store and French funds to bring in experts to a national meeting; Carlos Castaño in Costa Rica was able to tap the pharmaceutical expertise of a Swedish-funded professional who was in the country at the same time; the FORMED meeting provided an opportunity to discuss the working document on procurement practices, etc.

V. PROBLEMS AND DELAYS

1. Activities in Panama have been minimal since political instability and public disturbances have adversely affected all project-related programs. Even before the June demonstrations, there had been little progress in activities related to the Caja de Seguro Social, due to the turnover of top-level officials and the resulting discontinuity in the decision-making process.

2. Ministry of Health facilities in the capital of El Salvador have not yet been reconstructed, making it difficult to carry out activities under existing conditions. An undamaged major hospital in the outskirts of San Salvador is being considered as a site to implement a project for the development of hospital pharmaceutical services that can serve as an example for other institutions.

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FIFTH PROGRESS REPORT
January-March 1987
Malaria Component
Proyecto OPS/AID 597-0007

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Fifth Progress Report

Revision: January - March, 1987

I. Background Data

A. Project title: Malaria Component

B. Project number: 597-0007

C. Project Manager: Irene Klinger, PAHO

D. Date of Authorization: March 28, 1985

II. Project Purpose

a) To strengthen malaria control programs in Belize, Costa Rica, El Salvador, Guatemala, Honduras and Panama.

b) To establish and institutionalize a Central American regional training and operations research program for mosquito-borne diseases.

III. Major Outputs

1. Training and research activities

Between 1985 and 1986, approximately 900 people have received training or professional education in medical entomology, vector control, educational techniques, stratification, research methodology, serology, insecticides handling and equipment, didactic material production, epidemiology and surveillance, management and community participation.

During February 1987, the PAHO/AID project medical entomologist, stationed at the University of Panama, visited all participating countries to identify training need areas for the coming year. They are:

- Computer programming and data processing.
- Malaria: clinical, parasitological and immunological diagnosis
- Medical entomology at all levels.
- Integrated vector control: permanent and emergency situations
- Public health
- Epidemiology, surveillance and control of malaria
- Immunology of tropical diseases
- Basic and advanced epidemiology
- Social communication

Supervision of all training and professional education activities has been conducted during the last quarter by PAHO personnel in the field (two medical entomologists, two technical officers and two epidemiologists.)

- The XVIII International Course on Malarialogy and Environmental Health began January 12, 1987 in Maracay, Venezuela with the attendance of 6 delegates designated from Central American countries and Panama.

- The Masters Degree on Medical Entomology course in Panama continued and recruiting for the second cycle of students has begun. PAHO/AID entomologists also are counseling the Central American students in the preparation of theses. Due to concerns about student drop out rates from this course, an evaluation process was initiated this quarter.

- Five national seminars on malaria control within the framework of PHC were held in Panama.

- Four seminars on malaria epidemiology and control were held in Panama for malaria and general health service personnel.

The following courses to be given in 1987 were under preparation during the period January-March:

- Postgraduate course on vector control.

- International seminar on surveillance and control of Aedes (Stegomya), and development of Plan of Action.

- Short courses at the national level on insecticides application, handling and maintenance of equipment.

- Short course on epidemiological surveillance for general supervisors of health services (Panama).

- Seminar on vector control within the strategies of primary health care and community participation (Honduras).

- Preparation and development of training at local level for dissemination of new techniques for applied research in vector biology, ecology and control.

Research activities were also initiated and further developed during this last quarter, particularly those related to stratification, vector ecology, biology studies, social sciences applied to malaria transmission, and new methodologies for integral vector control.

A comprehensive review of the ecology and biology of Aedes albopictus was completed as well as a plan of action to prevent importation, exportation, dissemination and establishment in the Central American countries.

The studies of behavioral and reproduction characteristics of A. albimanus are ongoing in Mexico and Guatemala in a joint program coordinated by a PAHO medical entomologist. A scientific meeting was held in Guatemala in February 1987. Six entomologists participated to help define specific objectives of these studies as well as methodologies, cost estimate and human resources needs to carry them out. The protocol was also reviewed by the national authorities during the Guatemala meeting last March.

2. Institutional strengthening

Development of the Plan of Action for the Third year of the project operations (Act. A 2 - A 3)

A proposal for the third year work plan was presented to the Third Meeting of SNEM Directors from Central America and Panama. They met together with PAHO Project Manager and advisers on March 9-12, 1987, to review the activities carried out during the second year and present their needs and proposal of activities for the coming year.

A consolidated workplan and an estimated budget were presented for approval to the Technical Advisory Committee Meeting held on March 30-31, 1987, at PAHO headquarters, and attended by representatives from the academic and scientific world. Also the Bureau of Science and Technology and the Health and Nutrition Division of the Bureau for Latin America and the Caribbean from AID were represented.

Modernization of the information system

A working group met at PAHO's headquarters during the week of February 15-28 to review progress achieved in the design of a computerized information system for malaria control in the Central American countries. Special attention was given to the integration of this information system into the general health services information system.

Guidelines for preparation of a Manual for Program Management and Administration at the field level have been drafted.

3. Development of teaching material

Significant advances were made in the preparation of a monograph on Malaria Diagnosis. All manuscripts are ready for final edition in Spanish.

A final review of the Spanish version of "Severe and Complicated Malaria" was completed and is ready for publication and distribution.

Support and participation of PAHO/PASCAP personnel continues for the development of didactic and informational materials as well as programs for community participation activities.

The Spanish version of a document on stratification for planning antimalaria action was initiated (based on a report of the informal consultation made by WHO Malaria Action Program, during 3-7 June, 1985).

The revision and evaluation of the training modules for malaria epidemiology and control continued during the January-March period.

IV. Other Accomplishments

During the II Meeting of Ministers of Health and Directors of Social Security of the Central American countries held last August in Tegucigalpa, it was decided to carry out evaluations of the different priority areas of the Plan on Priority Health Needs for Central America and Panama. Guidelines were developed to carry out such evaluation in the area of tropical diseases, particularly in relation to Malaria and Aedes (Stegomya) control. These guidelines were made to assess the implementation of selected strategies for control and to encompass critical analysis of their technical, administrative and management

components. The evaluation will examine progress achieved in malaria control, political will, and administrative processes. An exhaustive analysis will also be made of the progress achieved in the development of information systems, intercountry technical cooperation, intra- and intersectorial coordination, community participation, etc.

Besides the general evaluation of the tropical diseases area that will be carried out under the RESSCAP auspices, a proposal for mid-term evaluation of activities developed under this agreement was submitted to AID prior to the end of March 1987. Both evaluations will provide a good basis for the planning of the fourth year of activities and for further development of the malaria control programs in Central America.

V. Project Manager Assessment

Improved communications with national authorities and increased participation of PAHO's field offices in project implementation have characterized this last period.

National authorities were very positive about project activities during previous years. We anticipate increased activities and greater involvement of national authorities in their development.

Doc. No. 3684G

FIFTH PROGRESS REPORT
Project No. 597-0007
Essential Drugs Component
Period: January 1 - March 31, 1987

III MAYOR OUTPUTS

1. Programing and Coordination

PAHO staff and consultants developed a tentative workplan for the third year of the project, April 1987-March 1988 (Activity A.5). The workplan reflects the experience and information gained during the previous years and stresses continuity of the main lines of action being promoted by the subregional Project and the increased utilization of Central American professionals in the implementation of activities.

The proposed workplan was discussed and approved with minor modifications at the III Interinstitutional Coordination Meeting held from 2-6 March 1987 in Antigua, Guatemala with representatives from all participating Governments and PAHO staff from Headquarters and field offices. The meeting offered an opportunity to discuss ongoing related projects financed by other donors and to ensure the coordination and/or integration with the AID-sponsored project.

2. Institutional Strengthening

The project consultant, Dr. I. Santich, visited the Escuela de Salud Publica of Mexico to follow-up on the progress achieved in the preparation of the program and support materials for a course on Laboratory Administration (Activity B.2.2.4). Due to personnel changes in the School there has been some delay in the schedule but the new group assigned to this task will proceed to expedite completion of the work as planned.

The implementation of a laboratory and training/service center for biological drug testing is proceeding as scheduled based on an agreement between PAHO and the University of Costa Rica. Dr. Adela Rosencranz, a consultant from Argentina, is advising the University on the testing methodology and, at the end of the trimester, started a training course which is being attended by about 40 local participants representing the technical and scientific institution in Costa Rica concerned with animal testing (B.2.2.8).

Preparations were completed for the seminar/workshop on the Organization and Operation of National Drug Information Centers scheduled for 30 March to 10 April at the Centro de Informaión de Medicamentos of the Universidad Central of Venezuela (B.3.3). Except for El Salvador, representatives from all Central American countries and Panama are attending this event.

Coordination and preparation for national courses on clinical pharmacology were launched through the visit to El Salvador and Honduras of Dr. Victor Campos of the University of Costa Rica (who was responsible

for last year's subregional course) and follow-up activities by Dr. I. Santich. The courses are scheduled to take place on July 1987 with significant participation of local clinicians as teachers.

The drug utilization program has been implemented in Social Security hospitals of Costa Rica and activities are under way with the Social Security of Guatemala for this purpose. Also, the contractors, Health Information Design, visited Honduras in March to establish contact with the Health Ministry Hospital where the program will be developed next (B.5.1).

Direct technical assitance to improve specific aspects of their drug supply system is being provided to Belize, Costa Rica and Guatemala. In Belize, Mr. John Turnbull (Canada) continues to work with the Central Medical Stores staff to improve procurement and storage and to develop a management information system (C.4.1). In Costa Rica, Dr. Carlos Castaño, (Colombia) is advising the Health Ministry on the decentralization of activities affecting the drug suply system (C.4.4). Local professionals are being contracted in Guatemala to advise on the reorganization and operation of The Drogeria Nacional, the agency responsible for drug distribution to Health Ministry health centers and posts (C.4.2).

The information System on Drug Prices and Supplies continues to function with all countries having provided data. Difficulties encountered to date were discussed at the III Interinstitutional Coordination Meeting of March 1987 and revised procedures and schedules were approved (D.I.). The participants expressed satisfaction with the system and its usefulness at the national level.

3. Technical Documents

The final report of the subregional workshop on Development and Implementation of National Formularies was distributed to all participants in this event (Activity B.1.1) as well as to national formulary committees in Central America and Panama and other interested institutions.

The preparation of audio-visual materials for the course on Good Manufacturing Practices for Phamaceuticals is in its last phase requiring only proof-readings and minor corrections of the material (B.2.4.2).

Funds were transferred to Guatemala for the preparation of a drug bulletin (B.3.5). This activity was originallly intended to be carried out in Panama but, due to other commitments of the national official responsible for this work, was re-assigned to an interested group in Guatemala under the supervision of the PAHO country office.

The International Health Council (USH) submitted its final report "Evaluation and Recommendations on the Curriculla of the Schools of Pharmacy in Central America and Panama (B.4.1.1). The report was presented to a joint meeting of PAHO with the American Association of Colleges of Pharmacy held in Washington, 24-25 February 1987, to discuss the role and education of pharmacists.

A primer on hospital pharmacy prepared by Prof. Bonal of Spain under a WHO contract was reviewed and editd for publication next trimester. The primer will be used in the national courses on hospital pharmacy (B.4.1.3).

A working document was drafted for the future workshop on "Current drug procurement procedures: identification of problem areas and proposals for improvement "(C.2.1). The paper is being reviewed and will be distributed in the next trimester.

Preparation of the guidelines for warehouse prototypes, planning design and construction is proceeding as scheduled. The contractor, TPM Inc., presented submittals "C" and "D" during this trimester which have been reviewed and approved by PAHO.

IV. Other accomplishments and overall status

1. The Ministers of Health of Central America and Panama have selected the subject of Esential Drugs as one of their main topics for their annual meeting scheduled for August 1987. In preparation for this meeting the Governments will carry out an extensive evaluation of the progress achieved in this area and of existing obstacles. The Ministerial Meeting will provide important political support for ongoing efforts sponsored by the AID/PAHO project.

2. The participation of government officials at the III Inter-institutional Coordination Meeting of March 1987 clearly demonstrated that there is today a better understanding of the issues and of what can realistically be accomplished with existing resources.

3. Other donor-funded projects in Central America that are being executed by PAHO are complementing AID-sponsored activities, thereby ensuring proper use of resources and efforts. The end result is a unified and integrated approach to the development of subregional and national programs in the drug area.

V. Problems and delays

1. The earthquake in El Salvador has severely stretched the capabilities of the Health Ministry in all areas. This has been felt in the Project where activities in that country have been minimal. Efforts

to include an El Salvador professional in the Venezuelan course on Drug Information Centers were stymied by the lack of a availability of suitable professional in this area.

2. Activities related to the preparation of materials for the course in Drug Supply Management have suffered some delay. PASSCAP, PAHO's Central American Human Resource Development Program, based in Costa Rica has agreed to carry out this work, and recently submitted a specific plan and schedule for this purpose. Activities will be initiated in the beginning of May.

OPS/AID Project No. 597-0007

Malaria and Essential Drugs Components

ACTUAL EXPENDITURES

		1985	1986	Jan-March/87	TOTAL
ICF-GPD-060	Management	$53,783	$106,266.18	$26,313.37	$186,362.55
MCP-EDV-010	Essential Drugs	$180,839	$902,613.95	$58,857.53	$1,142,310.48
MCP-MAL-030	Malaria	$126,099	$529,070.94	$54,752.55	$709,922.49
		$360,721	$1,537,951.07	$139,923.45	$2,038,595.52

Dr. Irene Klinger

Project Manager

Third Year Workplan

MALARIA COMPONENT

PAHO/AID Agreement 597-0007

1 April, 1987 - 31 March, 1988

Introduction to 1987-1988 Workplan

Malaria Component

PAHO/AID Project 597-0007

The attached workplan is the revised version of the proposed workplan presented to the Third Meeting of the Technical Advisory Committee held in Washington, D.C. on 30-31 March 1987. Participants in this Committee are experts in malaria control from the academic and scientific world. Also AID's Bureau of Science and Technology and the Health and Nutrition Division of the Bureau for Latin America and the Caribbean are represented. Each year they review the proposed activities for the coming year and make suggestions for adjustments.

Previously, on 9-12 March 1987, the third meeting of SNEM directors from Central America and Panama took place in Guatemala. They met to review activities carried out during the second year of the project and to prepare the workplan for the third year. Representatives from each country presented a list of needs and a proposal of activities for the coming year.

The Project Coordinator, together with the Coordinator and other personnel from the Communicable Diseases Program, consolidated the requests, prepared a budget and put together a proposal that was presented to the Advisory Committee. Their suggestions are incorporated in the attached workplan.

All the activities included in the workplan are directed towards the achievement of the two main objectives for which the project was designed, namely:

1) The strengthening of malaria control programs, and

2) The stablishment and institutionalization of a Central American regional training and operations research program for mosquito borne diseases.

PROGRAM AND BUDGET FOR THE MALARIA CL
AGREEMENT PAHO/AID 597-0007
1 APRIL, 1987 - 31 MARCH, 1988

	DESCRIPTION	BUDGET ELEMENT	AMOUNT	NAME OR DESCRIPTION	PLACE	DATES	REMARKS
A	Institutional Strenghtening	200	7000	5 Staff Members	Panama	5-16 October'87	The purpose of this meeting is to inform the International Institutions and other technical and financial cooperation agencies of Malaria control activities and their funding, increasing awareness on the need for supplemental external investment and additional national resource allocation
	A.1 Movilization of Resources	550	2000	Local Costs			
	1. Sub regional meeting of Malaria Directors and cooperating agencies (Related to A.1.1.)	820	13800	6 Malaria Directors 6 Gral. Directors			
	Subtotal		22800				
	2. Technical Cooperation among Developing Countries ----------						These inventories will allow countries to exchange information on national capabilities and needs.- If adequately and continuosly updated,this will permit tracing changes in their capabilities. The exchange of national inventories will take place simultaneously with the meeting proposed under activity A.1.1., and will serve as a basis for the development of a network for TCDC activities.- The inventory will be provi ded to USAID in September 1987.
	Development of national TCDC capabilities and needs inventories in vector borne diseases						
	a.-Development of protocols and consolidation	040	3250	18 days STC	CAPB	July'87	
	b.-National contracts to collect and process information	390	6000		CAPB	August'87	
	c.-Meeting of the Directors of Malaria for the exchange of national inventories (Related to Activity A.1.1.)						
	Subtotal		9250				
	3. Support to Border meetings in the subregion	820	6000	US$1000. each	CAPB		Supplementary support to ongoing border meetings held by the countries to improve coordination in Malaria control activities
	Subtotal		6000				
	A.2 Development of guidelines, norms and policies						Other institutions and agencies involved in Aedes control will be invited, e.g. USAID, Port Authorities, Municipalities,etc.
	1. Celebration of a regional workshop to review norms and guidelines for control of Aedes (Stegomya) (Ongoing activity)	230 550 820	3700 2000 6300	6 HPT Staff members Local expenses 6 participants	CAPB	February'88	
	Subtotal		12000				
	2. Support to countries for the implementation of the stratification process	040	20250	90 days Temp. Adv.	CAPB	To be determined	The objective of this activity is to support the already started stratification process in the countries,To share experiences and work towards uniform concepts and criteria.The output will be country specific description of priority areas according to indicators such as response to control measures, seasonality,inten sity and distribution of the problem for pla [illegible] will be produced

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3. Development of Malaria Information Systems							To establish systems for analysis of malaria trends, inventories and operations. Factors considered will be: -Epidemiological surveillance -Managerial Information Systems -Data basis for scientific and technical information -Case registration (Diagnosis and treatment) -Mortality case rates, morbidity, incidence and prevalence, as well as entomological information.
a. Follow up on systems development and country visits.	040	6200	35 days STC	CAPB			
b. Epidemiology workshop to determine and select indicators	820 230	10800 3700	12 participants 3 Staff members				
c. Development of Malaria Information software and training of national staff	390	100000					
d. Procurement of equipment	550	30000					
Subtotal		150700					
4. Regional meeting of Malaria Directors and General Directors of Health	230 820	9240 10800	6 Staff members 12 participants	Bogota	1-6 June'87		These regional meetings are held every four years. Representatives of the countries will present national experiences in incorporating malaria activities into the General Health Services System
Subtotal		20040					
5. Sub regional SNEM and General Directors meeting for the preparation of the 4th. year workplan	040 230 550 820	3100 7920 2500 10800	15 days STC 6 Staff members Local costs 12 participants	Costa Rica	January'88		Regular annual project planning meeting
6. Technical Advisory Committee Meeting	040	4050	18 days Temp. Advs.	Washington,DC	March'88		To review proposed 4th year workplan
Subtotal		28370					
7. Support to the countries for the development of national workshops in Community participation in Malaria detection and control. (Related to B.2)	230 820	2000 90000	Local Staff Funds for Natl.Courses and Seminars (US$15000) each country.	CAPB	To be determined		Each country will carry out several national workshops in the different Sanitary regions and or health districts
Subtotal		92000					
8. Sub regional advisory services and support to the University of Panama	040	73000	STC Dr.Jorge Arias 11 months with 1/3 on travel status in CA.	Panama	Ongoing		Dr. Arias is the field USAID/PAHO focal point concerned with CAPB Subregional training and research activities
Subtotal		73000					
9. Core group meeting to discuss design and follow up on economic analysis of Malaria control activities in CAPB.	820	7590	6 Participants 6 Staff members	Washington,DC			Per recommendation of Project's Advisory Committee, a study will be carried out to analyze trends in funding of malaria control activities, recurrent costs issues and economic impact of malaria in CAPB.
Subcontracts to develop a study on financing of Malaria control activities in the countries	390	40000	CAPB				
Subtotal		47590					

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6.	Distribution of material and exchange of information						CSUCA (Consejo Superior Universitario de Centro America). FEMCA (Federacion de Escuelas de Medicina de Centro America).
	1. Work group meeting to program activities related to the collection, selection and distribution of technical and scientific information on malaria and other vector borne diseases in the subregion	230 550 820	1896 2000 6300	2 Staff members (D.Rowe, M.Nelson)	PASCAP Costa Rica	27-29 April'87	Both institutions together with two representatives from the Malaria Directors of the region, will act as a working group to identify mechanisms for the selection and distribution of the information. The output will be the strengthening of the research and training programs.
	Subtotal		10196				
	2. Documentation of Community participation activities -Travelling Seminar to El Salvador and Honduras Related to A.2.7.	820	25200	6 Comm. Leaders El Salvador// 6 participants Honduras 14 days	to be determined		To document experiences in Community participation in Malaria transmission control. Information to be shared by countries with similar conditions and less experience in this area
	Subtotal		25200				
	3. Distribution of stratification materials to the countries (Related to A.2.2.)	390 550	4000 6000	Editing/Reprod. and mailing cost	CAPB	Ongoing	To support National stratification process
	Subtotal		10000				
	4. Distribution of PAHO/WHO publications to the countries of the subregion	550	6000	Procur/Mailing			Publications will be distributed to Schools of Medicine, SNEMS, Gral Health Services and other interested parties
	Subtotal		6000				
	5. Development and publication of a Diagnosis manual on Malaria (Related to C.4.1.)	390 550	3000 21000	Editing/printing distribution/costs			This manual is being developed by PAHO/WHO Regional program to support the countries in Malaria Diagnosis. Output will be 2000 copies for distribution in CAPB.
	Subtotal		24000				
	6. Reproduction and distribution of technical books on Epidemiology of Malaria	550	3500	Procur/mailing			Per request of the Malaria Directors of CAPB to enhance their general skills and those of collaborators
	Subtotal		3500				
	7. Production and exchange of National Reports on the activities developed by the countries under the agreement during the year.	550	1000				To enhance communications and sharing of country specific activities and experiences with other Malaria services and General Health Services.
	Subtotal		1000				

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B. Development of Operational Management Guidelines for Malaria control programs	040 250 550	12000 3200 3500	2 months STC 1 Staff member printing	Washington,DC		These general guidelines will be used for the preparation of local managerial manuals for the General Health Services at the level of Sanitary Districts or regions.
Subtotal		21700				
Subtotal for Institutional Strengthening		583596				
C Training						
C.1 Training in Entomology						
1. Master in Entomology	550 820	2500 149565	6 fellowships of 20 month each	U. of Panama	September 87	
2. Update in Medical Entomology	820	15300	9 fellowships of 6 weeks ea.	U. of Panama Guatemala	February 86	
3. Biology and taxonomy of mosquitoes USC, The Wedge.	820	10000	7 Fellowships of 2 weeks ea.	South Carolina	To be determined	
C.2 Epidemiology						
1. Basic Course in Epidemiology	820	6800	3 fellowships of 3 months each	School of Public Health,Mexico		
2. Malariology and Environmental Health	820	32850	6 fellowships of 10 months each	Maracay,Venezuela Esc. de Malariologia	January 86	
3. Course on Malaria Epidemiology and other Metaxenic Diseases	820	15240	9 fellowships of 4 months each	UniValle,Cali Colombia	To be determined	
4. Epidemiological control and surveillance for mid level personnel	820	34286	6 fellowships of 2 months each	Atlanta Ga. CDC	To be determined	
5. Training in Epidemiology and Tropical Diseases	820	33000	6 fellowships of 10 months each	UniValle, Cali Colombia	To be determined	
C.3 Vector Control						
1. Insecticide application techniques and maintenance of spraying equipment	820 550	32500 2000	14 fellowships of 3 weeks each.	Universidad de Panama	September 87	
2. Control and Surveillance of Aedes Albopictus	040 230 820 550	1575 2200 11000 1500	7 days STC 1 Staff member/BGE 10 participants	Universidad de Panama	8-12 June 87	
3. Course on Comprehensive Vector Control VEC	820	2500	5 fellowships of 1 month each	Univ. of Sao Paulo Brazil Esc. [illegible]	To be determined	

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	C.4 Diagnosis and Immunology						
	1. Meeting to present the Manual on Diagnosis of Malaria (Related to B.5)	820 230	8850 2000	7 Participants CAFR 1 Staff member	Costa Rica	September '87	The purpose of this meeting is to present the manual to the person in charge of Malaria Diagnosis in each country. They will promote its use later in their national activities. (See E.4.)
	C.5 Diagnosis and Immunology						
	1. Identification of management training needs and development of training methodologies	040	6200	30 days STC			The consultant will visit the countries and interview the Malaria Directors to find out their real needs in management training. In accordance with results, the training methodologies will be defined and activities C.5.2. and C.5.3., adjusted.
	2. Management workshop for high level personnel (Related to C.5.1.)	040 390 550 820	6200 5000 2000 54000	30 days STC Local contracts Local costs 18 participants	Costa Rica PASCAF 2-3 weeks	November '87	This workshop is aimed at enhancement of the decision making officials and improvement of their managerial capabilities.
	3. Management workshop for operational intermediate levels (Related to C.5.1.)	040 390 820	10125 5000 26910	45 days STC Local contracts 18 fellowships of 1.5 month each.	Guatemala or honduras	Jan/Feb '88	This workshop is aimed to improve operations management and supervision within the sanitary regions. (Related to C.5.1)
	Subtotal for training		519901				
G	Research (*)						
1	A. Development of a protocol for the study of the ecology, biology and vector capacity of the Anopheles Albimanus in Central America	040	16200	72 days STC			Specific protocols for main research activities will be ready by the end of June 1987
	Subtotal		16200				
	B. Regional seminar on development of methodology for studies of the Anopheles Albimanus for research officers and technicians	230 820 550	2700 29000 2000	2 Staff members 15 Participants Local costs	Guatemala	July '87	During the seminar all procedures and techniques will be discussed and standarized to be applied in the participating countries
	Subtotal		33700				

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C. Studies in information and vector's dynamic	040 230 550 550 550 550 550 550	14400 7200 17200 6300 35000 4400 25000 3200	64 days STC 6 Staff members	Guatemala El Salvador Panama Costa Rica Honduras Belize	First year US$112,700 2nd. year US$124,000 3rd. year US$136,500 A total of US$373,200 will be needed for a 3 year period to install a network capable of producing knowledge in vector ecology and biology for better design of control measures
Subtotal		117200			
2. Studies in Larvae biology (related to activity D.1)	040 390 550	63200 12000 44000	11 months STC Local contracts Supplies & Materials	Guatemala	1st. year US$124200 2nd. year US$114600 3rd. year US$112900 A total of US$351700 will be needed for a three year period to develop the methodology for the knowledge of the ecology and biology of aquatic stages of the malaria vector for developing alternative control measures
Subtotal		124200			
3. Research on methodologies and strategies against Malaria, through physical control of larvae. (Related to activity D.1.)	830	25000		La Ceiba/San Pedro Sula/Juticalpa Hond.	
Subtotal		25000			
4. Development of protocols on problems of finding oportune treatment with basic diagnosis at the periphery	830	17500		Cayo/Orange walk Belize	To be determined Requires specific protocol
Subtotal		17500			
5. Seroepidemiological studies of Malaria on refugees, displaced persons and other social strata	830	17000		Costa Rica	Requires specific protocol
Subtotal		17000			
6. Technical cooperation for the design of a protocol and the implementation of research activities on community participation in control and prevention of malaria.	230 830	13500 39000	3 Staff members Nelson/Benitez/Pou	El Salvador Honduras Panama	
Subtotal		52500			
7. Use of alternate methods for malaria control in problem areas (Collective treatment)	830	15000		Alta Veracaz Guatemala	Pending review with the country
Subtotal		15000			
8. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	This will be technical support to [illegible]

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9	A. Impact of malaria prevalence in the social aspects that affect transmission	830	8000		Panama	
	Subtotal		8000			
	B. Support for the implementation of the stratification process	830	6000	Grant to SNEM	Colon/Darien San Blas/Panama	
	Subtotal		6000			
	C. Studies on socio economic factors related to malaria	830	9000		Colon/Darien San Blas/Panama	
	Subtotal		9000			
	Subtotal for Research		462900			
	** Protocols for the specific research proposals will be submitted by the countries to the Research Review Group as called for by the II Meeting of the Advisory Committee held in February 1986 in New Orleans					
E.	Country Specific Training Activities					
	1. National courses on insecticide applications, handling and maintenance of equipment	820	15600	Local costs	Belize Honduras	
	Subtotal		15600			
	2. Application of modules of Epidemiology and Malaria control	820	5000	Local costs	Belize	One week seminars to be developed in each country to promote malaria prevention and control by the national personnel of the General Health Services at all levels. Cost are to cover per diem and reproduction of training materials
		820	10000	Local costs	Costa Rica	
		820	10000	Local costs	El Salvador	
		820	10000	Local costs	Guatemala	
		820	10000	Local costs	Honduras	
		820	10000	Local costs	Panama	
	Subtotal		55000			
	3. Bench and field training in basic entomological techniques	820	5000	3 Belize fellowships 4 months each	Tapachula Mexico	Tapachula offers appropiate training conditions for Belizean fellows.
	Subtotal		5000			

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4. National courses on parasitological diagnosis of malaria for laboratory and microbiology personnel	820	20000	Local costs US$5000 ea.	Costa Rica El Salvador Guatemala Honduras	This national courses are related to activity C.4.1. and B.5., and will extend to Laboratory personnel of the General Health Services
Subtotal		20000			
5. Courses on technical and administrative functions for mid level personnel	520	4000	Local costs US$2000	Costa Rica Honduras	
Subtotal		4000			
6. Seminar workshop for University teaching staff on malaria epidemiology and control	820	2400		El Salvador	
Subtotal		2400			
7. Technical cooperation for the development of intersectorial actions through the training of elementary school teachers	350 550	2000 1000	Local contracts	Guatemala	
Subtotal		3000			
8. Training of instructor in educational technology	820	3500		Honduras	
9. Training of instructors in the preparation of teaching materials	820	2500		Honduras	
10. Course on Research methodology	820	2500		Honduras	
11. Workshop on evaluation techniques and methodology	820	2500		Honduras	
12. Residence in serological and parasitological diagnostic techniques	820	2000	Two month duration	Honduras	Residency will take place in San Jose Costa rica
Subtotal		14000			
Subtotal for Country specific training activities		119000			
Direct cost of Programmed activities		1685397			
Program Support Cost 13%		219102			
10% contingencies		168540			
Grand Total		2073038			

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Summary by Elements

040	Short Term Consultants	268450
230	Duty Travel	65256
290	Personal Services Contracts	180000
550	Supplies & Equipment	227000
820	Courses & Seminars	806191
830	Grants	138500
920	Program Support Cost	219102
	10% Contingencies	168540
Total		2073038

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Third Year Workplan
Essential Drugs
PAHO/AID Agreement 597-007
1 April, 1987 - 31 March, 1988

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Introduction to 1987-1988 Workplan
Essential Drugs Component
PAHO/AID Project 597-0007

During the first week of March, 1987 the focal points for essential drugs from the Central American Countries met in Antigua, Guatemala. They reviewed activities carried out during the second year of the project and prepared the workplan for the third year.

Previously, during the first quarter of 1987, project personnel had visited the various countries to review progress, discuss future activities and assure complementarity between project activities and other national activities in the area of the drug supply system.

The Project Coordinator, together with personnel from the technical unit consolidated the requests from the countries, prepared a budget and completed this proposal.

All activities contained in this Third Year Workplan respond to the original objectives described in the project agreement, covering the areas of drug selection, quality, utilization, administration and management of the drug supply system and exchange of information of drug prices and suppliers.

PROGRAM AND BUDGET FOR THE ESSENTIAL DRUG COMPONENT
AGREEMENT PAHO/AID 597-0007
1 APRIL, 1987 - 31 MARCH, 1988

ACTIVIDAD NUMERO	DESCRIPTION	BUDGET ELEMENT	AMOUNT	NAME OR DESCRIPTION	PLACE	DATES	REMARKS
A.	General Project Activities						
A.1	Planning, programming, coordination and general technical cooperation. Preparation of documents and progress reports; monitoring and evaluation.	040	55000	Principal consultant Ileana Santich	Regional	1 april'87-31 March'88	Period 1 april 30 june 87, financed with 1986 funds. Period 1 july'87- 31 march'88 against 87/88 funds
		030	11000	Project Manager and Reg.Advisor in EDV.	Regional	1 april'87-31 March'88	
	Subtotal		66000				
A.2	Development of the 4th.year workplan						Cost included in A.1. above
A.3	IV Interinstitutional Meeting for	820	9000	12 participants.7 ea CAPB	El Salvador	7-11 March'88	This meeting brings together representatives from the Central America Countries.
	project evaluation and programming (4th. year workplan)	040	3350	15 days STC	El Salvador		PAHO and AID,to review previous year activitities and progra the coming year
		550	1500	local costs			
	Subtotal		13850				
A.4	(Activity A.6/86 reprogrammed) Document on the Essential Drugs situation in CAPB			30 days STC S. Wexman	Washington,DC	1 april-30 June'87	Financed with 1986 funds The document will be the result of various contributions,including an evaluation mandated by the Central America Ministers of Health.
B.	Technical and Scientific Subsystem						National list and therapeutic formulary have been prepared with bilateral AID support to Honduras through MSH and PAHO's collaboration.
B.1	Selection of Drugs						
B.1.1.	(Activity B.1.3/86 reprogrammed: Support for the implementation and promotion of the basic list and therapeutic formulary.	040	6700	30 days STC	30 days HON	1 april - 30 September'87	
		550	5000	Promotional Material			
		820	3000	National meeting	Honduras		National consultative meeting to discuss strategies for promotion and programming of five national workshops, to promote the use nationwide, of the national list and formulary.
		920	6000	National courses			Amount allotted for National Courses is to support technical workshops in each of the five health regions.
			20700				

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8.2 Drug Quality

8.2.1. Quality Control Administration

8.2.1.1. Publication and distribution of the Guidelines for the design and implementation of quality control programs for the supply system of the health sector	550	5000				This guidelines have been prepared by a group of consultants and used as a working document at a workshop on this subject held in Panama on December 1-5, 1986. The revised document will be edited and published to serve as guideline in this area at country level.
		5000				
2. 8.2.1.2 (Cont. of Activity 8.2.1.4/86) Publication of Guidelines for the development of national drug control systems	390 550	2000 10000	Editing Publication	Washington,DC		This manual will provide governments with basic guidelines for establishing drug regulatory activities
		12000				
8.2.2. Laboratory Services						This manual is in the final stages of revision and editing and provides guidelines for administration of laboratories. It will be distributed to the national drug control laboratories
8.2.2.1. (Cont.of Activity 8.2.2.2/86) Editing, Publication and distribution of the Manual on Good Laboratory Practices.	550	5000	Cost of Publication	Washington, DC.		
		5000				
8.2.2.2. II Course on contamination of Nonsterile products	820 550 390	10000 3000 2000	7 participants CAPR. Reagents & Glassware Local Contracts	Panama IEA-Panama	1-21 September'87	This course was given for the first time last year and was unable to accomo date all interested candidates.This time it will be given by local staff from IEA, Panama.
		15000				
8.2.2.3 (Cont. of Activity 8.2.2.3/86) Editing and publication of the Manual on Contamination of Nonsterile products	550	5000	Editing/Public.	Washington, DC.		This manual was prepared and used during the first course on this subject last year. Now it will be published for use in further courses and as reference material for routine work in the laboratories.
		5000				
8.2.2.4 (Cont. of Activity 8.2.2.4/86) Preparation of the program and material for courses on Laboratory Administration	550	10000	School of Public Health/Mexico Cost of Publication	Mexico,Mexico	December'87	The School of Public Health received a grant for the preparation of this material in 1986.-It is scheduled to be published by the end of 1987.
		10000				

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8.2.2.5	Participation of CAPB National Staff in the III Meeting of the LatinAmerican Network of Quality Control Laboratories.	820 550	10000 2000	8 Participants CAPB Local Costs	Lima, Peru	1 october-30 december'87	This meeting will bring together the directors of all Latinamerica Drug laboratories and its purpose is to evaluate the 1986-87 activities to program the 1988/89 ones, and hold two technical workshops.
			12000				
8.2.2.6	(Activity 8.2.2.7/86 reprogrammed) Technical cooperation for the improvement of infrastructure in the microbiological analysis,methodology and training for sterile testing in three countries.	040 550	10000 10000	42 days STC Laboratory materials and improvement of facilities	Panama,Guatemala Costa Rica. Panama, Guatemala		On the job training for laboratory personel.This activity is complemented with funds from other sources.
			20000				
8.2.2.7.	(Activ.8.2,2,8/86 reprogrammed) Implementation of a Laboratory and training service Center in biological drug testing. Phase I	550	5000	59 days STC A. Rosenkranz Supplies & Materials Local contracts Natl. participants	Costa Rica	15 March-15 June'87	Financed with 1986 funds This will be the only Center in the Central America region for the biological testing of products such as insuline, oxytocin,heparine and pyrogene safety. The activity includes on the job training and a national course.
			5000				
8.2.2.8	Support for the Managerial Strenghtening of the IEA	040	13400	60 days STC	Panama	2nd Semester'87	Direct technical assistance to IEA for the development of the Managerial System, including a laboratory quality assurance program
			13400				
8.2.2.9	Research on the quality of oral rehidration salts marketed in Honduras	830	1500	Grant to the School of Pharmacy	Honduras	1 april-30 December'87	The PAHO Maternal and Child Care Program will finance an equal amount.-The purpose of this activity is to carry out an initial evaluation of marketed products in Honduras, it will be repeated later in other countries
			1500				
8.2.2.10	Development of 4 reference samples for the testing of dissolution of pharmaceutical products	390	2000	Local contracts	IEA Panama		This activity complements a PAHO/FDA effort in this area, to monitor the performance of a government laboratory.
			2000				
8.2.2.11	Feasibility study for the construction of a Laboratory in Honduras	040	6700	30 days STC	Honduras		Per request of Honduras and coordinated with MSH and AID/HON.

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B.2.3. Drug Registration Service						
B.2.3.1. (Activity B.2.3.1/86 Cont.) Support to the Drug registration services in Panama, Costa Rica and Guatemala	230	1200	Dr. Carmen Selva	Panama/Costa Rica	1 july-30 sept'87	Continued support to drug regulatory agencies to improve drug registration procedures.
	040	4700	71 days STC	Guatemala/Panama Costa Rica	1 july-30 Dec.'87	
	550	5000	Computer	Panama	1 april-30 june'87	
	390	5000	Local contracts for administrative supp.	Panama/Costa Rica	1 april-30 Dec'87	
		15900				
B.2.4. Inspection Services						Reproduction of materials that have been prepared for use in courses scheduled for this and subsequent years.
B.2.4.1 (Cont. of Activity B.2.4.2/86) Program and material for the course on "Theory and practice of Good Manufacturing Practices, Auditing & Inspection.	550	5000	Supplies & Mat.	Washington, DC.		
		5000				
B.3 Pharmaceutical and Scientific Information						
B.3.1. (Cont. of Activity B.3.1/86) Selection, procurement and distribution of reference materials for National Institutions.	550	5000	Supplies & Materials	Washington, DC.	30 april'87-31 march'88	These materials are being distributed to Government and Univertsity Institutions concerned with drug information
		5000				
B.3.2. (Cont. of Activ. B.3.2/86) Establishment and development of	040	10000	45 days STC	Honduras/Costa		This activity follows activity B.3.3
national drug information centers	820	10000	V. Balleza de Paris On the job training for CA fellows	Rica/Guatemala Venezuela Drug Information Center	1 oct-30-Dec'87	for direct support to the countries in this area.
		20000				
B.3.3. (Activ.B.3.3/86 Reprogrammed) Workshop on Organization and Operation of national drug information centers			Natl. participants Supplies & Materials Local contracts Local costs	Venezuela Central University	30 mar-10 april'87	Financed with 1986 funds Previous to activity B.3.2.
B.3.4. (Activ B.3.5/86 reprogrammed) Support for the development of a National Bulletin on Essential Drugs			Local costs	Guatemala		Financed with 1986 funds. Printing and distribution of a National Drug Bulletin.
	550	1000	Local costs	Belize		These bulletins will provide information on national drug policies, safety and efficacy of drugs and related subjects

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B.4 Development of Human Resources

B.4.1 (Cont. of Activity B.4.1.2/86) Continued support to CENDEISSS for the preparation of the Program and material for the courses in Hospital Pharmacy	040	3100	15 days STC J. Bonal/Spain	Costa Rica	1-30 may'87	During 1986 a grant was given to CENDEISSS for this purpose.-The consultant will review the work done
		3100				
B.4.2. (Activ.B.4.1.3/86 reprogrammed: I National course in Hospital Pharmacy	040	3100	15 days STC J. Bonal	Costa Rica	October 1987	
	820	4000	2 Participants CAF			
		7100				
B.4.3 Support to the Central American Congress of Pharmaceutical Sciences	040	1600	7 days STC J.Bonal		1 oct-30 Dec'87	The Congress offers a forum for promotion of the concept of essential drugs utilization and the role of pharmacists
	550	2000	Local Costs			
		3600				
B.4.4 (Activ.B.4.2/86 reprogrammed) Support to PASCAF for the development of program and educational material for the courses in Administration of Drugs supply System.	390	44000	Contractual Services	Costa Rica PASCAP	1 april-30 Mar	
		44000				
B.4.5 (Activ.B.4.3/86 cont.) National courses in Clinical Pharmacology	040	3300	15 days STC P. de Souich	Hond/El Salvador	1 july-30 Sept	This is a national course based on a subregional course given last year.
	040	4700	20 days STC V. Campos	Hond/El Salvador		
	390	3000	Contractual Services	National Staff		
	550	2000	Local costs			
	820	4000	Natl. Participants			
		17000				
B.4.6 (Cont. of Activ B.4.3/86) Preparation and publication of the textbook on General principles on Clinical Pharmacology.			Grant	Canada/ISCPT		1986 funds. This book is one of the products of the 1986 subregional course mentioned above.
B.4.7 (Cont. of Activ.B.4.6/86) [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Development of three teaching modules [illegible]

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B.4.8	Implementation of the Continuing Education Program in the rational use of Essential Drugs	820 040 550 820	6000 6700 3000 2000	Part from Hon/Els. 30 days STC A. Chavez Supplies and Materials Natl. Part.	Costa Rica Honduras/El Salv. Honduras/El Salv.	1 july-30 Sept'87	Tranfer of Costa Rican experience in the subject matter to Honduras and El Salvador.
			17700				
B.4.9	Support to the development and institutionalization of regular seminars Seminars on the role of the pharmacist in public health	550	1000	Supplies for the School of Pharmacy El Salvador	El Salvador	April-June'87	
			1000				
B.5	Drug Utilization and Adverse Reaction						Second phase of a three year plan signed in 1986. The drug utilization program
B.5.1	(Cont. of activ.B.5.1/86) Implementation of Drug Utilization and adverse Drug reaction programs	390 550	165000 20000	Health Information Design. 2 computers each Country	Costa Rica and Guatemala Honduras/El Salv.	1 april'87-30 mar'88	has been implemented in Social Security hospitals in Costa Rica and activities are underway with the Social Security in Guatemala for this purpose. Next are Honduras and El Salvador.
			185000				
B.5.2	Study of the therapy of diarrhea and rehidration	390	2000	Schools of Pharmacy US$1000. ea.	Hond/El Salv.		This study will be co- financed by PAHO MCH Program.-It will investigate actual dispensing practices of pharmacies to customers with diarrhea symptoms
			2000				
C.	Operational Subsystem						
C.1	Administration						
C.1.1	Training on Drug Supply Management	820	6500	1 Belizean fellow	MSH Boston,Mass.		Per request of the Belizean Government
			6500				
C.1.2	Monograph on the Organization and operation of the technical scientific component in a supply system			E. Falcon/Costa Rica		May-August 1987	Financed with 1986 funds

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C.3 Storage and Distribution						
C.3.1 (Cont. of Activ.C.3.1/86)						
Preparation of guidelines for Warehouse			IPM	USA	ongoing	Contract awarded in 1986
prototypes,planning,design and construc	390	5000	Davy Mckeey	USA	ongoing	Contracts awarded for outside review of materials
tion.						
Mid term meeting to review Material with the countries.	820	4000	6 participants Wexman P Carr 15 days STC Pedraza 7 days TSC Wexman	Costa Rica	1 august-30 Nov'87	
		9000				
C.4 Technical cooperation for the development and improvement of comprehensive drug supply systems						
C.4.1. Technical cooperation for the development of the National Drug supply System in Belize	040	33500	150 days STC J.Turnbull	Belize	1 april-30 Aug'87	Direct technical cooperation to Belize
	820	2000	Local training in Computers		1 april-30 june'87	
		35500				
C.4.2 Technical cooperation for the development of the national drug supply system for the Ministry of Health	390		Drog.Nacional	Guatemala	1 april-30 October	US$15000 already transferrred from 1986 funds.
C.4.3 Technical assistance for the development of the drug supply system of the "Caja del Seguro Social"	040 550 390	40200 6000 10000	180 days STC Supplies and Material Local contracts	Panama	1 april-30 March	Subject to signature of agreement, whereby the Panamenian Government provides for significant counterpart funding.
		56200				
C.4.4. Technical cooperation for the development of the supply system in Costa Rica			60 days STC. Carlos Castano Minsalud	Costa Rica	1 april-30 Sept'87	Financed with 1986 funds.
C.4.5. Technical assistance to support the development of the supply system for the "Hospital Escuela".	040	33500	150 days STC J Quintero	Honduras	1 april-30 Dec'87	
	390	2500	Local contracts for computer programming			Programmer Contracts for recent graduates from the School of Pharmacy.
	390	[illegible]	Local contract			

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C.4.6. Technical cooperation to support the development of an institutional drug supply system in El Salvador	040 390 390	20100 4000 2500	90 days STC Local contracts Local contracts	El Salvador	1 april-30 mar'87		Hospital Pharmacist Recent graduates from the School of Pharmacy Programmers.
		26600					
D. Information Subsystem							
D.1. (Cont. of activity D1/86) Support to the focal point for the processing and analysis of the information system			Local contracts E. Falcon Supplies and Material	Costa Rica	1 april-30 mar		Funds from 1986.
D.2 Support to the countries for the collection of information			local contracts	CAP	ongoing		Funds from 1986.
D.3 Follow up evaluation of drug information			15 days STC Rolando Duque	CAP	1 April-30 june'87		Financed with 1986 funds.
Subtotal		732350					
13% Program Support Cost		95206					
Total		827556					

ELEMENT	DESCRIPTION	AMOUNT
040	SHORT TERM CONSULTANTS	259650
230	DUTY TRAVEL (PAHO STAFF)	12200
390	PERSONAL SVCS. CONTRACTS	266000
550	SUPPLIES AND MATERIALS	111500
820	COURSES AND SEMINARS	76500
830	GRANTS	6500
920	PROGRAM SUPPORT COST	95206
TOTAL	US$	827556

FOURTH PROGRESS REPORT
Project 597-0007
Malaria and Essential Drugs
Revision: October-December 1986

98

Fourth Progress Report

Period: October-November 1986

I. Background Data

A.	PROJECT TITLE:	Essential Drugs Project Component
B.	PROJECT NUMBER:	597-0007
C.	PROJECT MANAGER:	Irene Klinger, PAHO
D.	DATE OF AUTHORIZATION:	March 28, 1985
E.	IMPLEMENTING AGENCY:	Pan American Health Organization/World Health Organization

II. Project Purpose

To support the improvement and development of the essential drugs programs carried out by the Ministries of Health and Social Security Institutions of the Central American Isthmus. It aims at improving the availability, quality and use of pharmaceuticals in the region.

The activities are designed to strengthen the three components of the drug supply system:

1) Technical and Scientific Subsystem (selection, quality, pharmaceutical and pharmacological information, development of human resources, drug utilization);

2) Operational Subsystem (administration, procurement, storage and distribution, technical cooperation to national drug supply systems);

3) Information Subsystem (subregional network on drug prices and suppliers).

III. MAJOR OUTPUTS

1. Training

1.1 Three courses were carried out during the last trimester of 1986:

a) The course on Microbial Contamination of Nonsterile Products took place from 6-24 October, 1986 at the University of Panama (Activity B.2.2.3). The course was the result of a previous consultancy which evaluated the microbiological testing being carried out in Central American drug control laboratories. There were six participants representing all Central American countries plus the national participants. The three-week course was carried out by professionals from the Instituto Especializado de Análisis of the University with the assistance of one international consultant (Dra. Nelly Caetano). The course will be repeated in 1987 and, it is expected that it will be organized by the University without contracting an outside expert.

b) The course on Bioavailability and Rational Use of Drugs (Activity B.4.4), re-scheduled from 15-19 September, took place from 13-17 November at the University of Panama with the collaboration of a U.S. expert, Dr. William H. Barr, Chairman of the Department of Pharmacy and Pharmaceutics of the Virginia Commonwealth University, who has also served as a consultant to the U.S.FDA. Participants came from all Central American countries, including Belize, and from Argentina, Colombia, Cuba, Mexico and Dominican Republic. A total of 31 professionals attended the course of which 12 were from Panama.

c) The Caja del Seguro Social and the Subregional Project sponsored a workshop in Panama on the Establishment of Quality Control Programs for the Supply Systems of the Public Health Sector, 1-5 December 1986 (Activity B.2.1.2). The working

document for this workshop had been prepared earlier this year (Activity B.2.1.1) by a group of experts from Colombia, Brazil, and Mexico, three of whom participated as instructors in this course along with consultants from Costa Rica and the Project consultant, Dra. Ileana Santich. All Central American countries were represented at this meeting, for a total of 12 professionals, plus local and Nicaraguan participants, the latter financed from PAHO's regular budget.

The project will provide technical support to those countries interested in implementing the quality control programs discussed at the workshop. Immediate follow-up is being carried out in Panama, where the consultant, Dra. Maria Luisa Castillo, is working with the Caja del Seguro Social.

1.2 In addition to the above events, directly promoted by the PAHO/AID project, 8 professionals from Costa Rica, Honduras, Guatemala and Panama also participated in the Regional Workshop on Laboratory Safety, 29 September - 3 October, held in Rio de Janeiro, Brazil (B.2.2.6). The workshop was sponsored by the Latin American Network of Official Drug Control Laboratories, the Brazilian Instituto Nacional de Controle de Qualidade em Saúde (INCQS) and PAHO.

2. Institutional Strengthening

2.1 The Director of the Centro de Información de Medicamentos (CEDIMED) of the University of Venezuela, Dra. Vanessa de Paris, visited Central America. She evaluated existing public institutions and their resources with regard to their interest and capability to become national drug information centers providing services to health professionals and the public (B.3.2). Her report has been submitted and will provide guidance for further activities in this area, including a workshop on the role and operation of drug information centers.

2.2 The contractors responsible for developing guidelines for prototype drug warehouses provided technical advice on this matter to government officials during their visits to Costa Rica, Honduras, Panama and Guatemala to observe existing drug supply systems (see "Technical Documents" below). The Project has also supported collaboration between El Salvador and Panama in this area.

2.3 Direct technical assistance has been provided to El Salvador and Panama to improve the quality of the drug supply for the public sector (B.2.1.3) A consultant, Dra. Maria Luisa de Sánchez worked with national officials in the development of a quality subsystem for the drug supply system.

2.4 Belize's central pharmacy and medical stores received direct technical assistance from the consultant John Turnbull, who continued to work on improving purchasing and storage procedures.

2.5 The U.S. contractor, Health Information Design, responsible for developing drug utilization review systems in Central America has presented a Progress Report with the methodology to be used to initiate pilot studies in the Social Security Institutes of Costa Rica and Guatemala. The Project has acquired the microcomputers required to implement the study in Costa Rica whereas, in Guatemala, the Social Security Institution already had the necessary equipment.

3. Technical Documents

3.1 The Spanish translation of the guidelines for the development of a national drug control program (Activity B.2.1.4) has been reviewed for technical accuracy and will be submitted for editing in early 1987.

3.2 Following the workshop on quality in drug supply (Activity B.2.1.2), the working document will be reviewed and modified as necessary prior to its distribution as a technical document on the function, structure and operation of the drug quality subsystem in the public sector supply system.

3.3 Similarly, the extensive manual prepared for the course on contamination of non-sterile products (Activity B.2.2.3) will also be reviewed with the intention of making it available to national drug control laboratories as a comprehensive publication on this subject.

3.4 The U.S. contractors, TPM International, responsible for developing guidelines for prototype drug warehouses have presented two satisfactory Progress Submittals in accordance with the contract schedule. The contractors had completed a visit to Central America in September-October to gather information on existing supply systems and on warehouse design and construction practices that should be considered in the preparation of the guidelines. A one-day meeting was held in November with a TPM representative to discuss their observations from the Central American visit and its effect on the contents of the guidelines.

IV. OTHER ACCOMPLISHMENTS

1. The Project Manager, Dr. Irene Klinger; the Project Officer, Dr. Enrique Fefer; the Principal Consultant, Dr. Ileana Santich; and Mark L. Schneider, Senior Policy Advisor to the PAHO Director; participated in a meeting in Tegucigalpa, Honduras on 12-14 November to coordinate activities of the Revolving Fund for Essential Drugs for Central America (FORMED), a subregional project sponsored by the Dutch and Swedish governments (RE-ED-05). Many of the participants at this meeting were the same government officials involved in programming and

implementing activities sponsored by the PAHO/AID Project, a situation which facilitates the optimal use of the technical cooperation being delivered within the framework of the Central American initiative, avoiding duplication and ensuring complementarity. Thus, the meeting provided an opportunity to discuss progress and obstacles encountered at the national level in carrying out pharmaceutical programs.

The FORMED Project has completed its first procurement of essential drugs for over US$3 million.

2. The Project's drug consultant, Dr. Santich, visited El Salvador, Honduras and Panama to review with the national counterparts on-going activities and to define areas for inclusion in the third year workplan of the Project. In El Salvador and Honduras, the consultant met with representatives from AID offices and AID sponsored bilateral projects to ensure coordination with Project activities.

3. A third subregional project has been initiated with French funding: "Development of National and Subregional Drug Policies", (RE-ED-01). A basic document on drug policies is being developed that will serve as a working document for meetings to be held at the country level during 1987 and 1988.

V. PROBLEMS AND DELAYS

1. The preparation in Central America of a national/subregional bulletin on pharmacology and toxicology (Activity B.3.5) has been delayed since the focal point for this effort, Dr. David Lee of the Comisión de Medicamentos of the Caja del Seguro Social of Panama, has announced that in 1987 he will be accepting a two-year fellowship in clinical pharmacology in Europe. Dr. Lee had accepted to be the editor of the bulletin and on the basis of this commitment, the project had supported his participation in meetings of the recently established International Society of Drug Bulletins.

The project staff is searching for other individuals and/or institutions interested in and capable of preparing a bulletin on pharmaceuticals with funds re-assigned from the Comisión de Medicamentos of Panamá.

2. Discussions were undertaken with the Director of the PASSCAP (a PAHO-sponsored institution in Costa Rica for the development of human resources in the health sector) regarding the preparation of materials for courses in Drug Supply Management (Activity B.4.2), an activity that originally was intended to be carried out by ICAP, also of Costa Rica. The Director agreed to undertake this task as soon as an expert on supply management is contracted to work with PASSCAP on this subject.

VI. PROJECT MANAGER ASSESSMENTS

The accelerated trend of expenditures and activities already noted in the previous report has continued during this last quarter. Preparatory activities for the 1987-88 program are underway.

Revision: October - December 1986

I. BACKGROUND DATA

A. Project title: Malaria Component

B. Project number: 597-0007

C. Project Manager: Irene Klinger, PAHO

D. Date of Authorization: March 28, 1985

II. PROJECT PROGRAM

a) To strengthen Malaria control programs especially in Honduras, El Salvador, Guatemala and Belize.

b) To establish and institutionalize a Central American regional training and operations research program for mosquito-borne diseases.

III. MAJOR OUTPUTS

1. Training

1.1 MSC Course on Medical Entomology. Activity C 5.

This 20-month course which started September 1985 at the University of Panama, Panama City, continued receiving technical support and fellowships for the participants during the period under review.

1.2 Course on Comprehensive Vector Control, The Wedge, South Carolina, USA. Activity C 6.

Five trainees from 5 countries of CAP (Costa Rica, El Salvador, Guatemala, Honduras and Panama), participated in the course on Comprehensive Vector Control carried out by the University of South Carolina during the period September 8 - October 17, 1986.

1.3 Technical and Administrative Management Course for Middle Level Personnel, Quirigua, Guatemala. Activity C 8.

This course was carried out in Quirigua, Guatemala during the period September 29 - December 18, 1986. A total of 14 trainees from the countries participated (Belize 2; Costa Rica 3; Guatemala 3; Honduras 3; and Panama 3). Six nationals, in addition, attended the course without fellowship.

The course was oriented to middle level personnel such as District Chiefs, Supervisors and Inspectors engaged in the implementation and management of programs in their countries, both from the General Health Services and from the Antimalaria Services.

1.4 Seminar on Development of Malaria Control within the context of PHC. Activity C 11.

Workshops in Honduras and Panama (60 participants) were carried out to promote community participation and to mobilize community resources for malaria control within the context of PHC.

1.5 Seminar on Epidemiology and Control of Malaria for Malaria and General Health Services Personnel (Modules). Activity C 12.

A one week training course on malaria surveillance and control was carried out for personnel of the malaria control program in the Zone of Colon, Panama. Thirty participants attended the workshop.

1.6 Short course on Insecticide Application techniques and spraying equipment. Activity C 14.

This short course was carried out in Panama during the period 13 to 31 October 1986 with 16 participants.

2. Institutional Strengthening

2.1 Support to the Training Programs for Malaria, Vector Control and Epidemiology of Tropical Diseases. Activity C 1.

2.2 Support to the University of Panama continued through technical assistance provided by the STC of the Program and through supplies and equipment.

3. Technical Documents:

3.1 Updating of guidelines for the collection and analysis of epidemiological and sociological data. Activity B 6.

A workshop on "Formulation of Proposals for Socio-economic Studies in countries of Central America, Panama and Belize" was held in Panama, Panama, during the period November 24 to 28, 1986. Objectives of the workshop were to review guidelines on the methodology for the study of socio-economic and ecologic determinants of malaria. These studies are part of the stratification process and guidelines for collection and analysis of epidemiological and sociological data are very much needed. Guidelines for approaching this sort of studies, according to the particular situation of the countries, were prepared. A report of the workshop was also prepared.

3.2. Updating of malaria surveillance and information systems. Activity B 7.

In continuation of activities already initiated in previous quarters for updating of malaria surveillance and information systems and considering that updating the information system is an essential part of the general process of management, preparation of a "Manual for Management and Administration of Health Services at Regional Level" was initiated during the period October 19 to November 1, 1986 by an STC. A draft document was prepared. This activity should be continued during the next quarter.

3.3 Another STC in Washington during the period 13-31 October 1986 prepared guidelines for of up-dating the information system for malaria and other vector-borne diseases in the countries of CAP and Belice. It is intended that the information system could serve as an element for integration of specialized programs such as malaria control and general programs of the Health Services at regional level. Starting the process from the peripheral level instead of the classical approach of fostering the change at central level is envisaged as the strategy for the updating process. It is expected that the descentralization process also will be strengthened through this approach.

3.4. Development of a PAHO/WHO Manual on Clinical Parasitology and Immunological Diagnosis of Malaria. Activity C 2.

Contracts were issued for preparation of various chapters of the Manual and the pertinent documents prepared were received. The process of technical editing, printing, binding and distribution will continue.

3.5 Development of a protocol for the study of the ecology, biology, vectorial capacity and control of A. albimanus in the Pacific Coast of Central America. Activity D 1.

In continuation of previous activities a meeting was held in PAHO/HQ during the month of October 1986 with the purpose of preparing the protocol. Entomologists of PAHO regional program participated and a draft protocol was developed which is being studied and reviewed.

IV. OTHER ACCOMPLISHMENTS

A meeting was held in Washington with the participation of the Coordinator of the Tropical Diseases Program, the Project Manager, and the Entomologist responsible for the coordination of training activities in the University of Panama, Panama. The objective of the meeting was to discuss matters related to the process of selection of candidates, the need for continuous assessment of the training activities and the preparation of a plan of action for training of personnel from countries of Central America and Panama according to the needs identified and discussed at country level. In pursuing this objectives various activities have been planned for the first quarter 1987.

The program has also continued providing support to: a) development and implementation of laboratory studies on the effectiveness of biological agents for vector control and small field trials with different products and formulations; b) production of malaria sporozoite antigens, and c) participation in the design, implementation and evaluation of studies on sporozoite indexes in wild populations of anophelines. These ongoing activities have received technical support and supplies and equipment during the period under report.

V. PROBLEMS AND DELAYS

PAHO's personnel in the field offices and particularly project-financed advisors appointed in Central America should work closely in supporting the countries authorities in the implementation of activities once the quarterly work plans are properly approved.

VI. PROJECT MANAGER ASSESSMENT

This comming year will be of crucial importance for the identification of Central American institutions capable of carrying out research activities. Special measures will be taken to promote research in the area and to support the selected institutions.

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CONSOLIDATED REPORT FOR PAHO/AID GRANT
NO. 597.0136/007. INTERIM REPORT FOR THE PERIOD OCT-DEC.1986

		MANAGEMENT			ESSENTIAL DRUGS			MALARIA CONTROL				
ELEMENT	DESCRIPTION	OBLIGATED	SPENT	SUBTOTAL	OBLIGATED	SPENT	SUBTOTAL	OBLIGATED	SPENT	SUBTOTAL	TOTAL OBLIGATED	TOTAL EXPEN
AAA	PROJECT STAFF		19562	19562		21770	21770				0	41
030	TEMPORARY ASSISTANCE			0			0				0	
040	SHORT TERM CONSULTANTS			0	44968	21770	66738	10761	21974	32735	55729	45
230	DUTY TRAVEL			0	3682	2011	5693	7888	12929	20817	11570	14
390	PERSONAL SERVC. CONTRACTS			0	1956	69069	71025	7000	8136	15136	8956	77
550	SUPPLIES AND MATERIALS			0	18025	44597	62622	290	33612	33902	18315	78
820	COURSES AND SEMINARS			0	20846	44138	64984	73946	120831	194777	94792	164
920	PROGRAM SUPPORT COST		2543	2543	11632	26436	38068	12985	25673	38658	24617	54
TOTAL			22105	22105	101109	229791	330900	112870	223155	336025	213979	475

OBLIGATED =new obligations
SPENT= cash paid out against old obligations

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THIRD PROGRESS REPORT
Project 597-0007
Malaria and Essential Drugs
Revision: July - September 1986

I. Background Data

A.	PROJECT TITLE:	Essential Drugs Project Component
B.	PROJECT NUMBER:	597-0007
C.	PROJECT MANAGER:	IRENE KLINGER, PAHO
D.	DATE OF AUTHORIZATION:	March 28, 1985
E.	IMPLEMENTING AGENCY:	Pan American Health Organization/WHO

II. Project Purpose

To support the improvement and development of the essential drugs programs carried out by the Ministries of Health and Social Security Institutions of the Central American Isthmus. It aims at improving the availability, quality and use of pharmaceuticals in the region.

The activities are designed to strengthen the three components of the drug supply system:

1) Technical and Scientific Subsystem (selection, quality, pharmaceutical and pharmacological information, development of human resources, drug utilization);

2) Operational Subsystem (administration, procurement, storage and distribution, technical cooperation to national drug supply systems);

3) Information Subsystem (subregional network on drug prices and suppliers).

1. Training

No courses were carried out during this trimester. The course on Bioavailability and Rational Use of Drugs (Activity B.4.4) was re-scheduled from 15-19 September to 13-17 October, since in late September the FDA held a meeting on bioequivalence during which important new information on this subject was presented. Participants are already selected and course material has been prepared.

Preparations have been also completed for the course on the Contamination of Nonsterile Products (B.2.2.3) scheduled for 6-24 October 1986 in Panama. This course is a result of previous consultantships on microbiological evaluation which included visits to various countries in the subregion.

PAHO/HQ has received the final reports of the II Training Course on Testing of Antibiotics Insulin and other Drugs (B.2.2.5) and of the Workshop on the Development and Implementation of National Formularies (B.1.1). The latter will be distributed widely to Drug Formulary committees as it contains annexes with a valuable selection of articles and the results of a subregional questionnaire on national formularies.

The material for the training course on inspection (B.2.4.2) is being revised following its field test in Chile last semester and will be used for a repeat course to take place next year in a Central American country.

The U.S. FDA office in Puerto Rico provided 2 weeks on-the-job training in inspection to a pharmacist from the Guatemalan drug regulatory agency. This project-financed stay complemented the training received from a 3-month fellowship in Puerto Rico funded by a WHO/industry pogram and from the PAHO/AID drug inspection course in Chile.

2. Institutional Strengthening

Following completion of agreements the CENDEISS of Costa Rica and the Escuela de Salud Pública of Mexico have started preparing educational materials on rational drug use (B.4.6), hospital pharmacy (4.1.2) and laboratory administration (B.2.2.4).

As a result of an extensive report evaluating existing facilities in Central America, the University of Costa Rica has agreed to be a subregional training and service center for biological testing (B.2.2.8). The PAHO/AID project will provide specialized training for its staff.

Arrangements have been made for an expert to visit Central America to identify institutions to serve as national drug information centers (B.3.2) and to provide assistance for this purpose.

Funds have been transferred to the Comisión de Medicamentos of the Caja del Seguro Social of Panama to support the preparation of the first number of a subregional drug bulletin to be distributed later this year (B.3.1). Dr. David Lee will coordinate this efforts, following his participation at the meeting of the International Society of Drug Bulletins (B.3.4).

Following the project-sponsored technical assistance, Guatemala and Panama officials are starting to improve the handling of drug registration information through computarization (B.2.3.1). Costa Rica will follow suit once Government-purchased equipment arrives.

El Salvador and Panama have received direct technical assistance to improve specific aspects of their supply system (quality and warehousing, respectively). Activities in El Salvador are carried out in coordination with the VISISA/HID project and included development of a program to promote the use of the drug formulary.

The Information System on Drug Prices and Suppliers is functioning, though not all countries have provided data as scheduled.

3. Technical Documents

The working document on the function, structure and operation of the drug quality susbsystem in the public sector (B.2.1.1) is being edited. The Spanish translation of the guidelines for the development of a national drug control system (B.2.1.4) is being reviewed to ensure technical accuracy prior to its editing.

A mission visited Guatemala, Costa Rica and Honduras to gather information for the preparation of the guidelines for warehouse prototypes (C.3.1).

IV. Other Accomplishments

1. The project manager, Dr. Irene Klinger, participated in a meeting in San José, Costa Rica on July 21-22, 1986; where the national coordinators of the "Plan on Priority Health Needs for Central America and Panama" as well as AID headquarters and field personnel from the Central American offices, were present. This provided an opportunity to discuss project's procedures, insertion within the national activities of each of the benefitting countries and complementarity with other AID's funded projects.

   Besides specific talks with AID's personnel in San José, the project manager also visited USAID in Guatemala and shared information with the health officer to assure a collaborative PAHO-AID approach in that country.

2. The project's drug consultant, Dr. Ileana Santich, also paid some visits to Costa Rica and El Salvador to coordinate actions with PAHO's and AID's country offices.

3. The Health Sector Meeting of Central America, held in Honduras from 25 to 29 August 1986, serves as an annual forum for Health Ministers and Directors of Social Security Institutes. This year's agenda included a report on the status of PAHO pharmaceutical programs, which provided another opportunity to inform on the objectives and activities of the PAHO/AID project. The PAHO staff was also able to discuss pending activities with government authorities present at this meeting.

4. Progress has been made in another regional project for the Central American region, the revolving fund for procurement of essential drugs (FORMED). Technical cooperation provided to the countries in the framework of the AID-funded project has been and will be of great relevance to the successful implementation of the activities related to the FORMED in the areas of planning, administration, distribution, quality control and use of drugs.

V. Problems and Delays

1. The preparation of materials for courses in Drug Supply Management has been significantly delayed, since, following extensive discussions, it was not possible to formalize an agreement with ICAP (Costa Rica) for this purpose. ICAP's resources have become strained due to other commitments and is unable to undertake additional work at this time. The project staff is searching for other institutions and/or individuals capable of carrying out this work, which hopefully will be initiated in January 1987.

2. The consultant selected to provide direct technical cooperation to Guatemala and Honduras for an 11-month period in total, without adequate forewarning, repeatedly postponed his assignment for personal reasons. His contract has been cancelled. We are in the process of identifying another consultant, a task which will require some time since such expertise is not readily available.

VI. Project Manager Assessment

The actual project's expenditures during the first nine months of 1986 were $1,377,713 demonstrating more than a threefold increase in implementation compared with the $420.658 expended during the first nine months of 1985.

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I. Background Data

A. PROJECT TITLE: Malaria Component
B. PROJECT NUMBER: 597-0007
C. PROJECT MANAGER: Irene Klinger, PAHO
D. DATE OF AUTHORIZATION: March 28, 1985

II. Project Program

a) To strengthen Malaria Control programs especially in Honduras, El Salvador, Guatemala and Belize.

b) To establish and institutionalize a Central American regional training and operations research program for mosquito born diseases.

III. Major Outputs

1. Training

1.1 An Intensive Course on Serologic Techniques for the Diagnosis of Parasitic Diseases, Activity C.7 (86), took place in the University of Sao Paulo, Brazil, from August 4 to September 30, 1986, with the participation of one Salvadoran, one Guatemalan, and one Costarican, among others.

1.2 A Course on Methodology for the development of protocols, Activity C.15 (86), took place in Tegucigalpa, Honduras, on July 7-19, 1986, and was organized by PASSCAP, PAHO's human resources development program for Central America. The purpose of this course was to train Central American personnel in the basic elements of scientific research in vector control. Each participant had to develop two protocols. This activity is of great interest for further development of all the intended research activities included in the plans of operations, under code D. The PAHO/AID fellows were from: Belize (2), Costa Rica (3), El Salvador (3), Guatemala (3), Honduras (7), Panama (3), total of 21. Others: Mexico (2), Nicaragua (2), total of 4

1.3 During the period 7-11 July, 1986, a consultative group met in Tegucigalpa to review the situation of the malaria programs in Central America and made recommendations on the need for a higher emphasis on community participation in malaria control activities within the context of PHC. The representatives of the different countries exchanged their experiences in community oriented activities. A report was produced with very interesting conclusions and recommendations to be implemented at the country level.

1.4 Interinstitutional Course on Technical and Administrative Management for Intermediate Level Personnel in Central America and Panama Activity C.8 (86). All preparatory activities took place during the last quarter to get this course started by September 29. Teaching material was selected, modules developed and national as well as international professors were contracted. Some laboratory equipment and resources to improve accommodations were given to INDAPS (Training Institute for Health Personnal), to facilitate the learning possibilities for approximately 14 fellows.

1.5 MSC Course on Medical Entomology, Activity C.5 (86). This 20-month course, started September 85 at the University of Panama in Panama City. We have been advised lately of some difficulties encountered by the students taking part in this program and we are taking the necessary steps to review the situation. An evaluation will take place soon.

2. Institutional Strengthening

The main institutions supported by the project during the quarter were:

2.1 University of Panama, for equipment and supplies to support the MSC Course of Medical Entomology and Short Courses on Insecticides application

2.2 INDAPS (Quirigua, Guatemala), for conditioning of the facilities, some laboratory equipment, and logistics.

2.3 School of Malariology (Maracay, Venezuela). The curricula of the post-graduate course has been reviewed and re-arranged to assure that it is designed to prepare an epidemiologist (with emphasis in parasitism) with capabilities in the areas of management, training and research. The curricula also includes material to increase the students' ability to understand public health problems, and to recognize the value of community activities. Perseverance, scientific thinking, positive attitude for changes, team-work and evaluating capability as well as teaching skills and need for continuos updating will be stimulated during the course. The one year specialist course could be extended for an additional year to complete a thesis for the Master Degree from the University of Carabobo.

3. Technical Documents

3.1 Modules for training on Principles of Epidemiology for the Control of Malaria. Activity C.3.

3.1.1 Guidelines for the evaluation of such a teaching material are in preparation.

3.1.2 Also a translation [illegible] was made to serve Belize's needs. The purpose of this module is to facilitate the development and management of general health services in a coordinated program of antimalarial activities based on the need to increase the participation of all sector levels in the search for solutions to the problems caused by malaria, using as a frame of reference the principles of the strategy of primary health care and greater community participation.

3.2 A monograph for "The Diagnosis of Malaria" (Activity C.2) was organized to include current knowledge on different aspects of the subject relative to the diagnosis of malaria, covering the intermediate as well as the definite host. The different chapters include the parasite in the human host, exoerythrocytic and erythrocytic cycles, the parasite in the invertebrate host, the erytrocytic sporogonic cycle, clinical symptoms, microscopical diagnosis in human blood and in mosquitos and immuno diagnosis. An appendix will be added with detailed description of techniques.

3.3 Integral Vector Control Manual. The University of South Carolina prepared a manual that will be utilized in training courses sponsored by the PAHO Project.

3.4 Methodology for the study of socio economic and ecologic determinants of malaria continues to be an area of interest and guidelines for these studies as part of the stratification process are on preparation and will be discussed in a workshop in Panama (november 1986).

3.5 Preparation of protocols on ecology, biology, vector capacity and control of Anopheles albimanus in the Pacific Coast of Meso America. (Activity D.1). The first step for this project was a meeting in Tapachula, Mexico (August 1986) of eight experts with experience in various aspects of vector biology and control. Of those attending six were PAHO Staff members, one was from CDC Project in Guatemala, and one was from VBC/USAID Project in Washington, D.C. This Subregional project will include: a) incrimination of anopheline species as malaria vectors, b) indoor resting behavior studies, c) assessment of outdoor transmission, d) micro habitat of A. albimanus breeding sites, e) gonothrophic cycle, f) human blood index, g) multiple feeding, h) physiological age grading techniques, i) monitoring of susceptibility to insecticides and mechanisms of resistance.

3.6 Computarization of the Information System of Malaria Programs. The design of a plan for mechanization of the Information sub-system of malaria programs and its integration with the Health System and other institutions was initiated in Guatemala and Honduras. Preparation of guidelines for internal and external analysis of the needs for an information system are also underway.

1. The project manager, Dr. Irene Klinger, participated in a meeting in San José, Costa Rica on July 21-22, 1986; where the national coordinators of the "Plan on Priority Health Needs for Central America and Panama" as well as AID headquarters and field personnel from the Central American offices, were present. This provided an opportunity to discuss project's procedures, insertion within the national activities of each of the benefitting countries and complementarity with other AID's funded projects.

   Besides specific talks with AID's personnel in San José, the project manager also visited USAID in Guatemala and shared information with the health officer to assure a collaborative PAHO-AID approach in that country.

2. The Health Sector Meeting of Central America, held in Honduras from 25 to 29 August 1986, serves as an annual forum for Health Ministers and Directors of Social Security Institutes. This year's agenda included a report on the status of PAHO malaria programs, which provided another opportunity to inform on the objectives and activities of the PAHO/AID project. Recommedations were made for the need to design a methodology for operational stratification in the subregion in order to allow the best selection and application of malaria control measures to each stratum. It wal also recommended that the Ministries of Health and Social Security institutions be responsible for malaria diagnosis and control and that all health structures strengthen the specialized groups for an integral vector control strategy.

   Another important recommendation was the special reference made to the countries for the need to strengthen joint activities in epidemiological surveillance and control in all common border areas.

3. A pamphlet on Aedes aegypti ecology, biology and control was prepared by the regional program for utilization in training courses and for general information to the countries of the region.

V. Problems and Delays

The experience has shown the importance of monitoring and evaluating training grants, selection of candidates, awards and fellowships. We need to strive towards better selection of fellows and continuous assessment of the training activities. To attain that goal, we need to put more emphasis in effective local coordination of activities and involvement of the national personnel. PAHO's personnel in the field offices and particularly project-financed advisors appointed in Central America could be delegated more responsibilities in supporting the countries in the implementation of activities once the quarterly work plans are properly approved.

Doc.1205N

CONSOLIDATED REPORT FOR
PAHO/AID GRANT 597-0136 1985-1986. 31/VII/86

ALLOTMENT	1985 CEILING	1986 CEILING	TOTAL 85/86 CEILING	1985 BUDGET	1986 BUDGET	TOTAL 85/86 BUDGET	-1985 EXPENSES	-1986 EXPENSES	TOTAL 85/86 EXPENSES +		1985/86 BUD-EXPS	1985/86 CEIL-EXPS
ICF/GPD/060												
PROJECT MANAGER				73100	73875	146975	41710	91000	132710	Aug'86	14265	
ADMIN.ASSTN				43500	37025	80525	0	14500	14500	Est.cost.	66025	
(ICP/IOC/010/PG)				0	0	0	0	0	0		0	
SECRETARY				26050	25675	51725	5886	25000	30886	Aug'86	20839	
PROGRAM DESIGN				0	20000	20000		0			20000	
TEMP.ASSISTANCE				0	0	0	0	12788	12788	Jun'86	-12788	
STC (EVALUATION)		110000		0	0			0				
PSC				18545	20355	38899	6187	18627	24815		14084	
SUBTOTAL		110000	110000	161195	176930	338124	53783	161915	215699		122425	-105699
ICF/EEV/010(MCP/EBV/010)												
STC				154770	306627	461397	137412	289516	426928		34469	
D.TRV				12500	22239	34739	1566	11781	13347		21392	
CONTR SVCS				240970	673113	914083	135387	666060	801447		112636	
S & E				42000	138258	180258	43887	111030	154917		25341	
C & S				82600	172429	255029	81625	143323	224948		30381	
GRANTS				0	74500	74500	0	59700	59700		14800	
PSC				69269	174768	244037	20781	96603	117384		126653	
CONTINGENCIES				0	0	0		0			0	
SUBTOTAL	1008850	1000000	2008850	652109	1561934	2164043	420658	1377713	1798371		365672	210479
ICF/NAL/030(MCP-NAL-30)												
STC				147872	144211	292083	43278	123064	166342		125741	
D.TRV				37242	50695	87937	14553	43846	58399		29538	
LOCAL COSTS				69500	0	69500	0	0	0		69500	
CONTR SVCS				44000	68068	112068	18989	39164	58153		53915	
S & E				114520	69617	184137	35260	44949	80209		103928	
C & S				371779	472332	844111	191106	298716	489822		354289	
GRANTS				0	250000	250000	0	0	0		250000	
PSC				112242	96603	208845	39414	96603	136017		72828	
CONTINGENCIES				78491	0	78491	0	0			78491	
SUBTOTAL	960650	1100000	2060650	975646	1151526	2127172	342600	646342	988942		1138230	1071708
TOTAL	1969500	2210000	4179500	1738950	2890390	4629340	817041	2185970	3003012		1626328	1176488

ICF/GPD/020	-	PAHO allotment for general program development
ICF/EDV/010	-	PAHO allotment for essential drug component
ICF/MAL/030	-	PAHO allotment for malaria component
PSC	-	Program Support Cost
STC	-	Short Term Consultant
D.TRV	-	Duty Travel
S & E	-	Supplies and Equipment
C & S	-	Courses and Seminars

PAHO-AID AGREEMENT
Grant No. 597-0136 (March/85)
MALARIA COMPONENT
WORK PLAN
Second year
April 1986.

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PRIORITY HEALTH NEEDS

IN CENTRAL AMERICA AND PANAMA

PAHO-AID AGREEMENT
GRANT No. 597-0136

MALARIA COMPONENT

Second Year Work Plan

April 1, 1986 - March 31, 1987

III-31-1986

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INTRODUCTION

The second-year work plan for the malaria component of the AID Grant No. 597-0136 to the Pan American Health Organization has been based on a review of current conditions related to the malaria problem in the countries of Central America and Panama, an evaluation of the first year's activities under the grant (submitted to AID on December 31, 1985), and the conclusions reached jointly with the countries with regard to priority needs and the most appropriate concepts, approaches and strategies for the control of malaria in the Isthmus.

These conclusions were in part based on the discussions held at a meeting of Directors of National Malaria Programs of Central America, Panama and Belize and on consultations held in the countries and at PAHO/HQs in Washington.

The second year work plan, therefore, is divided in two parts:

Part I: Conceptual background.

Part II: The list, timing and costs of activities to be carried out during the second year.

PART I: CONCEPTUAL BACKGROUND

The following is a summary of different presentations and ensuing discussions at the meeting of Directors of National Malaria Programs of Central America, Panama and Belize. This meeting took place on 18-21 February 1986 in New Orleans, LA, with the support of the School of Public Health and Tropical Medicine, Tulane University. A copy of the Agenda and of the list of participants are attached for easy reference. Several policy documents were presented. Those policies have been developed in recent years by PAHO/WHO based on overall program evaluations in the various regions and particularly on conditions in the Americas. Taken together these policies comprise the conceptual foundation for second-year activities.

1. Regional analysis of the malaria situation in relation to the development of primary health care (PHC) in the American Region

Although the strategy of the malaria eradication program was revised by the World Health Assembly (1969) in favor of a strategy of malaria control, the countries of the Americas have continued to apply malaria eradication measures, with an open ended approach, without time limitations. Vector Control activities have been reduced, from 14,260,457 house sprayings (1969) in 21 countries to 4,395,483 in 1984, that is a reduction from 59.03 house sprayings per 1000 inhabitants (1969) to 4,395,483 per 1000 in 1984.

The number of 320,383 patent parasitaemias which were registered in 1969 increased to 904,457 in 1984 with an Annual Parasite Incidence per 1000 inhabitants of 1.33 in 1969 and 2.5/1000 in 1984, considered the Region as a whole.

The countries of the American Region may be grouped, in accordance with the present malaria situation, as follows:

1) Countries with no evidence of malaria transmission;
2) countries where malaria transmission has been reduced and the favourable situation has been maintained;
3) countries where malaria is increasing in endemic areas; and
4) countries where serious social, economic, political, technical, administrative and financial problems are hindering the program.

After several years of reviews, discussions, and deliberations regarding the malaria problem, since San Salvador (1971), Alma Ata (1978), Oaxtepec (1979), Brasilia (1983) and Geneva (1985) the following main components of the strategy for the control of malaria may be identified:

1) Precise statement of objectives and goals of the program which are dependant upon the initial situation and its development, taking into account the knowledge of epidemiological factors and the interventions affecting the transmission and control of the disease. The objectives must be strictly related to the financial and administrative capability of the particular country or countries involved in the program.

2) The principle of total coverage in time and space is only applicable in relation to availability of antimalarial treatment to any person living in endemic areas.

3) All other prevention and control measures must be adapted to the local situation, which implies different tactical variants to be applied in terms of selective coverage in time and space.

4) Two types of measures are envisioned:

   a. Permanent measures of vigilance, prevention and control, and
   b. Emergency measures to prevent and control epidemics

5) Provisions for the monitoring and evaluation of the dynamics of malaria transmission for the application of corrective measures, with the participation of all available resources of the health and development sectors.

The majority of the countries of the Region of the Americas have reviewed their antimalaria programs in the light of the "Health For All" policies of the Organization, the principles of Primary Health Care (PHC) and the stage of their development. The planning of activities of malaria control as a component of PHC takes into consideration concurrent activities of health promotion and the control of other vector borne diseases.

Malaria control should be based on an epidemiological approach, for which it is necessary to recognize local variations in the distribution, extension, intensity and evolution of the disease as a social, biomedical and public health phenomenon. This will permit the design of appropriate strategies and the adoption of appropriate measures for the development of qualified human resources for the monitoring and evaluation of prevention and control methodology, not only at country level but also within diverse ecological areas and within different social strata.

Present planning of malaria control activities is placing particular emphasis on:

1) Relevance of proposed objectives and the feasibility to reach them, particularly the prevention of mortality and the reduction of morbidity, prevalence and incidence;

2) The adequacy of the infrastructure in order to ensure proper coverage of the population with timely diagnosis and treatment, supported by an appropriate reference system for treatment of severe cases of malaria and handling of problems of resistance of parasites to antimalarial drugs;

3) Availability of a competent core of well trained personnel to provide technical guidance to the general health services staff, in the study of the malaria problem and the planning and implementation of prevention and control measures;

4) Utilization of adequate surveillance and vigilance mechanisms for an effective monitoring of the progress of the program within the context of PHC.

5) Development of integrated vector control, particularly source reduction and individual protection which could be carried out in a sustained and permanent manner by the community, while decreasing the dependency of the program on the use of chemical insecticides.

As long as the operational responsibilities of the malaria program are more and more integrated into the general health services it will be necessary, it will become necessary to specify the type of knowledge that each member of the service has to have in order to discharge his or her functions properly, in relation to the surveillance and control of malaria. The reorientation needed for the control of malaria will not be possible unless there is a redistribution of the labor force, and the financial and material resources. Resources assigned to the Central level should be concentrated or distributed depending upon the intensity of the problem and the capacity of carrying out control activities at the local level.

National expertise at professional and specialized levels must be developed further, particularly in connection with the epidemiological approach to malaria control. Of capital importance at the PHC level is the early diagnosis and proper treatment of cases in order to cure the patient and prevent further transmission in his/her community. The training and orientation of GHS personnel at all levels regarding the identification of malaria patients and the recognition of severe cases must receive a high priority. Every effort must be made to achieve this goal. In addition, all information regarding severe and fatal cases must be documented.

2. Planning and Evaluation of Malaria Control Activities

The malaria vigilance and information system of Costa Rica, Honduras, El Salvador and Guatemala were reviewed. Data flow-charts were prepared, in order to know the levels of application and the time-lag between notification of cases and the application of treatment to patients or control measures in the community. These were found to be quite different from country to country.

When reviewing the most commonly used indicators, approximately 16, they were found to be useful and interesting from the point of view of continuity of information, but it is necessary to combine these data with information obtained by the general health services in order to make them more meaninful and to facilitate the analysis of changes in incidence during a period of time.

There is a possibility of combining the information derived from the specialized services with that of the general health services at low cost, with the added advantage of facilitating its dissemination to other sectors.

During recent years, when computers have become easily available, the information obtained can be processed rapidly in such a way that decisions can be taken in a relatively short period of time.

Finally, it is necessary to point out that the present malaria vigilance and information system was designed following the criteria of the eradication philosophy. The system, as it stands today, does not appear to be compatible or effective for the newly adopted control strategy, which needs a more flexible approach to information gathering in order that anti-malarial measures can be taken in a more selective and opportune way. There is, therefore, a recognized need to select the indicators in accordance with updated criteria, in line with the programs new strategy. Furthermore, it is necessary to analyze the present indicators and to decide if they have to be retained without change or modified to privide more timely and relevant information to decision makers. As a paralel activity the national services or programs should decide if the information will continue to be hand processed or if they wish to take advantage of modern computer technology. In the latter case the information collected and filed should be selected according to the needs of the program, such as (a) planning purposes (b) evaluation of process; (c) evaluation of results; and (d) evaluation of impact. Ideally, the number of indicators and the amount of data to be collected and analyzed should be suitable for processing by "microcomputers".

3. The Application of Malaria Control Strategy

The resurgence of malaria occurring in many parts of the World, particularly south-east Asia, in the decade between 1966 and 1976 made it necessary to reformulate control strategies. Four general approaches or tactical variants were devised, in increasing order of complexity, which were presented to and adopted by the Thirty-first World Health Assembly (1978) and further developed by the Seventeenth Expert Committee on Malaria, which were as follows:

- Tactical Variant No. 1: Reduction and prevention of mortality due to malaria;

- Tactical Variant No. 2: Reduction and prevention of mortality and morbidity, with special attention to reduction of morbidity in high risk groups;

- Tactical Variant No. 3: As for No. 2, together with reduction of malaria prevalence;

- Tactical Variant No. 4: Country wide malaria control with the ultimate objective or eradication keeping countries or areas free from malaria where eradication has been achieved; and vigilance in countries that are naturally malaria-free but are threatened by the introduction of the disease.

After the tactical variants were adopted as part of the new strategic approach, several problems related to their application were observed. One of these problems or constraints was the tendency on the part of the programs to view them as mutually exclusive compartments, rather than a flexible series of steps on which one or more methodologies may be placed, depending on local requirements revealed by epidemiological stratification. It has been observed that the variants, while serving to highlight the need to pay attention to malaria more as a disease problem and not merely as a parasitic infection, have not usually influenced the countries to develop flexible approaches suitable to their individual situations.

3.1 Alternative strategic approaches

Antimalaria objective should be developed as part of a planning process relevant to each identified situation. It is possible, to recognize a gradation of complexity of attacking the problem, requiring a range of different resources and development activities to ensure that the results of efforts are sustained in the long term. This includes the possibility of starting malaria control by a sophisticated attack on malaria transmission as was attempted by the eradication programmes, which proved to be a successful approach in a few areas.

Therefore the variants ould not be considered as a strictly required secuence, but there is a hierarchy of objectives, which implies that a more complex plan of malaria control should not be adopted unless there is assurance that earlier objectives would be appropriately achieved.

Two substantially different approaches, aimed at attaining the objectives at both ends of the spectrum, may be identified as follows:

(1) improvement in the general health services to ensure adequate diagnosis, accessibility to health care and attention to malaria cases and to ensure the capacity to provide adequate protection to the population at risk and the promotion of personal and community protection. This includes objectives such as reduction in mortality, in general malaria morbidity, and in duration of sickness;

(2) establishment of the capability for controlling malaria transmission in the long-term, necessitating the planning of specific antimalaria action designed to change the epidemiological equilibrium. This includes the objectives of prevention of epidemics, reduction in foci of *P. falciparum* malaria, and transmission control in selected areas or in the entire country.

The first aproach would incorporate tactical variants 1 and 2, and the second approach variants 3 and 4. The first approach will require as an absolute minimum to provide diagnosis and appropriate treatment to the sick, curative treatment and prophylaxis throughout pregnancy, and improved education to the population for the better use of health services, non-tolerance of illness, and utilization of personal protective measures. The second approach, involving planned interference in malaria transmission on a large scale, should only be considered if this will effectively change the epidemiological equilibrium and the change can be sustained.

Intermediate objectives will require the progressive strengthening of the referral system and the development of a meaningful information system, and epidemiological surveillance with appropriate recognition of abnormal situations, delimitation of problem areas and provision of adequate response. This will progress from the control to the prevention of epidemics and control of the most serious foci. It will include monitoring of problems such as drug resistance and evaluation of the response to control measures.

3.2 Development of antimalaria activities and their supporting, referral and technical guidance systems

To achieve malaria control within the strategy of primary health care requires complete coverage with peripheral care facilities supported by strong referral and technical guidance systems. The type and magnitude of the systems depend upon the

level of development of the primary health care system, and the stage of implementation of the malaria control strategy and its relations with other common health problems, the objectives in the short-, medium-, and long-term, and finally the availability of resources.

At present, according to the relative development of antimalaria services and health infrastructure, three groups of malarious countries or areas can be distinguished.

Group 1 includes countries or areas where malaria is a serious problem but the health infrasctructure is very deficient and there is no organized antimalaria service. This group includes most of Africa south of the Sahara where the antimalaria strategy should concentrate first on providing treatment to the sick, and particulary to those who are in danger of dying.

Group 2 includes countries or areas where the primary health care system has reached a comparatively high degree of development, but specific antimalaria measures are necessary in at least some areas as part of primary health care.

Group 3 includes countries or areas where organized antimalaria services have preceded the development of primary health care at the periphery. The acceptance of primary health care implies the organization of the whole of the health system so as to support it and enhance its further development. The antimalaria services should contribute to this development and in some instances may well form the basis for the development of primary health care, since it is often the only health service to reach the periphery and be accessible to the whole population.

3.3 Supporting system for malaria control within the strategy of primary health care

In order to develop primary health care programmes in a country, it is crucial to have a good supporting system:

(a) Support at the central level

- Support from the government: successful primary health care development requires national commitment to this strategy. It needs strong political will and a strong leadership to take action and sustain the action. Continual motivation from the central level is a necessary support to the intermediate and local level. It needs at the national level a clear definition of the objectives of malaria control determined according to the priority of malaria in relation to other problems within the strategy of primary health care and availability of manpower and other resources.

- Support from technical services: a nucleus of specialized personnel at the central level, exclusively concerned with malaria or vector-borne diseases, will usually be required. The nucleus should be responsible for (1) planning, monitoring and evaluating all antimalaria activities in the country, (2) providing training to the intermediate level of health personnel, (3) monitoring drug and insecticide sensitivity, and (4) carrying out special epidemiological and entomological studies as needed. The size and structure of this nucleus may vary according to local conditions and available resources.

- Support from community organizations and from other sectors: community participation and intersectoral coordination are two key points in primary health care as well as in malaria control.

- Role of health-related sectors in the support of antimalaria action: the primary health care strategy clearly identifies intersectoral cooperation for health as one of its major components. It is particularly important that coordination at central level involving the main sectors concerned should lead to coordinated action at the local and intermediate levels.

3.4 Referral system

Primary health care activities in the community should be supported by successive levels of referral facilities. These engage more highly trained staff capable of dealing with a progressively wider range of specialized health interventions that require more sophisticated technology that can be provided at the most peripheral level.

The following aspects are particularly important:

(1) the identification of appropriate levels of clinical service for the prompt diagnosis and clinical management of severe, including complicated, malaria, and for the prompt correction of diagnosis and treatment for those who do not respond to the initial medication;

(2) establishment of a system whereby parasite resistance to antimalaria drugs can be recognized, evaluated and monitored;

(3) establishment of a realistic information system and a core group to monitor the epidemiological situation at the periphery;

(4) establishment of a rapid capability for dealing with emergency situations such as an outbreak of malaria, development of foci of drug-resistant malaria, and the appearance of P. falciparum in new areas unaffected for many years;

(5) identification of areas not responding to the malaria control strategy and help in resolving the causes;

(6) provision of continuous evaluation at the periphery;

(7) support and guidance for field research.

3.5 Technical guidance system

Technical guidance is far more important in malaria control than in malaria eradication.

Such guidance may be conducted through the following activities:

(1) training and refresher training;
(2) planning and evaluation of antimalaria measures;
(3) supervising the antimalaria activities at lower levels;
(4) assessing the epidemiological situation and carrying out epidemiological research;
(5) discussing specific technical problems at regular meeting;
(6) participating in actual field operations in representative areas and analysing the impact of antimalaria measures on the malaria situation;
(7) analysing information received.

4. Malaria Control Activities and their Implementation as part of Primary Health Care

4.1 Diagnosis and Treatment

Basic antimalaria activity is the opportune diagnosis and appropriate treatment.

a. In many malarious areas, there is a need to institute treatment based on a clinical diagnosis. This clinical diagnosis needs to be defined beyond ''fever.'' Thus, simple fever protocols need to be established providing a diagnosis for acute respiratory

infections, localized infection, etc. Process of elimination-treat the fevers of unknown origin as malaria. In highly endemic areas, all young children with fever need to be treated, as malaria infection will be a complicating factor.

b. Treatment based on very unspecific diagnosis should be with drugs which are very safe and in circumstances where severe cases and treatment failures can be treated with second line drugs or by parenteral treatment through the referral system.

c. The use of second line drugs would be on specific diagnosis by light microscopy or DNA, RNA probes in the future.

d. In areas where frequency of RIII resistance makes treatment with Chloroquine or Amodiaquine too risky at the periphery, it will be necessary to bring the microscopic diagnosis to the periphery.

4.2 Antimalaria Protection for Pregnant Women

Malaria presents a grave risk in pregnancy. The degree of risk, however, is moderated by parity and immune status of the individual. In areas of stable malaria, the pregnant woman has some immunity, thus the major problem is small for dates babies as a result of interference with foetal nutrition from the infected placenta. Parasite densities are highest in primigravidae. In areas of unstable malaria, severe parasitemias occur in pregnancy, resulting in high abortion rates and foetal death if malaria is acquired early in pregnancy. All parities are at risk, but primipara are at greatest risk in the second and third trimesters, giving rise to stillbirth, premature labor, and maternal mortality.

Because of the risks involved, it is recommended that:

1. Chemosuppression be provided throughout pregnancy in malarious areas to prevent life-threatening attacks of acute malaria in poorly immune pregnant women and to protect the foetus from the consequences of maternal fever, anemia and placental dysfunction.

2. At the initial visit of the pregnant woman to the primary health care worker that appropriate arrangements are made to provide a curative dose of antimalarials (excluding Primaquine) in malaria endemic areas, as many have a parasitemia at the commencement of pregnancy.

3. The drugs used should be safe, non-teratogenic, and effective.

4. In some malarious areas where the above is not feasible, it is imperative to provide access to prompt diagnosis and appropriate treatment.

4.3 Infants and Small Children

This is also a high risk group. The clinical features of malaria in children are a continuous high fever, not the usual pattern of cyclical fever. Febrile convulsions occur, and one third of the children with P. vivax have rigors nausea, vomiting, and diarrhea are the common gastrointestinal symptoms. Anemia and jaundice occur.

Despite this high risk, mass chemosuppression in children under five years is no longer recommended for the following reasons:

a. Experience shows that it is rarely possible to achieve continuous chemosuppression in a significant proportion of the population.
b. Chemosuppression may interfere with protective immunity.
c. May accelarate the development of drug resistance.
d. May utilize scarce resources which could be better used for treatment.
e. May increase the risk of retinopathy during the lifetime of the individual.

It is preferale to provide curative treatment wherever and whenever required, i.e. prompt diagnosis and adequate treatment.

4.4 Management of Severe Malaria

1. Diagnosis at Various Levels of the Health Services

- A parasitological diagnosis of malaria should be applied wherever diagnosis and clinical facilities allow.
- Operational definition of severe malaria is required and will depend on the competence of health care personnel and on the laboratory and other facilities available.

- Three levels of health care could be envisioned:

a. Level 1 - Most Peripheral

Here the staff have received basic training only and have a limited ability to diagnose clinically and to make judgements. No laboratory, only oral medication, no injections given.

Clinical assessment of severe malaria would be based on the observation that the patient is too weak to walk, or has signs of cerebral malaria such as confusion, drowsiness or convulsions or is unable to take medication by mouth, is vomiting or has diarrhea or has obvious bleeding or clotting disorders. All of these will be indications for referral to the next level. Possibly severe anemia and jaundice may be detected.

b. Level 2 - First Referral Level

Here the staff have more training, are able to use instruments for diagnosis, including a thermometer, have some degree of clinical judgement, simple laboratory facilities including a microscope. Dipstix tests possible. Intramuscular and subcutaneous injections can be given, but no intravenous therapy.

At this level, the definition of severe malaria would be based on all of the above plus the following: exclusion of meningitis clinically on neck rigidity and photophobia, severe anemia, jaundice, hyperthermia, circulatory collapse and hemoglobinuria. In addition, it may or may not be possible to determine fluid, electrolyte acid-base disturbances, complicating/associated infections, pulmonary oedema, hypoglycemia, other diagnoses, and hyperparasitemia.

c. Level 3 - Second Referral or Central Level

Here there is at least one trained physician, full laboratory facilities including biochemistry, radiology and intravenous therapy.

The definition of severe malaria can be based on any of the above.

2. Management at Various Levels of the Health Services

a. Level 1

- The rapid recognition of severity and need for referral according to above criteria
- Reduction of fever if possible
- Oral medication before referral if possible

b. Level 2

- Recognition of or confirmation of severe malaria
- Rapid referral if necessary
- Intramuscular injection of antimalarial
- Appropriate management of seizures and hyperpyrexia
- Nursing care

c. Level 3

- The most sophisticated management
- Intravenous therapy
- Correction of fluid and electrolyte imbalance
- Management of complications
- Nursing Care

4.5 The Use of Drugs in Malaria Control

In primary health care, the aim is to treat individual cases promptly, providing access to health care to as much of the target population as possible and prevent clinical malaria in high risk groups.

- Chloroquine is the drug of choice for *P. falciparum* where sensitive and to *P. vivax*. Amodiaquine is an alternative which may be reserved for second line treatment.

- If *P. falciparum* is highly resistant to Chloroquine, the second line drug is sulfadoxine and pyrimethamine (or Amodioquine).

- If *P. falciparum* is highly resistant to both Chloroquine and sulfadoxine/pyrimethamine, then mefloquine is the third line drug if available-otherwise, quinine or quinine plus tetracycline.

- Primaquine need only be used as a gametocytocide in *P. falciparum* or for the radical treatment of *P. vivax* in those situations where the objective is to change the equilibrium of malaria transmission, and for seasonal infection, epidemic control and prevention of the re-establishment of transmission.

- Chemosuppression is reserved for reducing morbidity in high risk groups (pregnancy and non-immune short-stay visitors). In labor forces, police, army units, refugee camps, chemosuppression is combined with vector control activities.

4.6 Vector Control Activities in the Context of Primary Health Care

In view of the flexible approaches required through PHC, more intensive studies on malaria epidemiology in general and vector ecology will be required to utilize or develop successful integrated control approaches.

Thus, primary health care workers will need guidance from central group of experts.

Before embarking upon complex and expensive vector control activities, priority control areas should be identified and the epidemiology of the situation including social and economic features should be considered. This will permit the selection of specific measures based upon the availability of technologies that are both scientifically sound for the solution of the problems and are applicable at primary health care levels at a cost that can be afforded within the capacity and resources of the health system, bearing in mind that such activities will usually need to be sustained and maintained on a comparatively long term basis.

Vector control activities, based on present day technology that could be implemented within the primary health care strategy include: personal protection measures by the individual and family and community activities to reduce man vector contact by site selection; deforestation around the village if appropriate animal deviation. Reduction of mosquito longevity by individual use of flit-gun or aerosol and community involvement in residual spraying under guidance and support from the heatlh service. Destruction of larval breeding sites by the individual and family and by the community. Source reduction and source alteration by covering water containers in the home and by community clean up campaigns, intermittent irrigation of crops, land reclamation, etc.

5. Technological Advances and their relation to Malaria Control

The past decade has witnessed a major thrust in technological development in nearly all areas of biomedical research on malaria. Though we have seen erosion of current technology in the area of vector control and chemotherapy, where insecticide resistance and drug resistance have continued to proliferate, there have been major advances in biomedical research which provide a new optimism and excitement which have not existed since the late 1950's. This is not to imply that the solutions are not hard, nor that one can be complacent in the expectation of technology addressing all the problems.

In attempting to highlight some of the recent developments, one can consider several areas of investigation including:

Malaria diagnosis
Chemotherapy
Vector control
Malaria vaccine development

Microscopic diagnosis of malaria has been the mainstay of malaria programs. The delays inherent to this methodology have proved difficult, particularly form the standpoint of making critical programmatic decisions. Though the employment of modern molecular biological techniques, very specific immunologic detection systems are possible which offer the possibility of rapid and accurate identification of parasites in blood. In addition, these techniques have provided highly effective approaches to identification of sporozoites in the arthropod host. Work is currently underway to develop methods for detecting protective immunity in the human host. This has obvious implications in assessing the effectiveness of immunizing agents.

In the area of chemotherapy, mefloquine, aquinoline methanol, is one of the most significant developments of recent years. It's effective against most strains of drug resistant Plasmodium falciparum, and has many other favorable characteristics. A formulation of mefloquine in combination with sulfadoxine-pyrimethamine has been produced with the idea of impeding the development of P. falciparum resistance. The recent observation of significant numbers of severe toxic reaction to sulfadoxine-pyrimethamine, alone or in combination with another drug, has prompted WHO to undertake a careful re-examination of this drug combination. Qinghaosu (artemisinine), was derived from a Chinese herbal remedy, and has been found to be particularly effective in the treatment of severe and complicated malaria. In addition, other compounds are in the advanced stages of evaluation in use of the major antimalaria drug screening programs.

In the area of vector control, there has been relatively slower progress in the development of new residual insecticides, though there have been a few. These include bendiocarb, pririmiphos-methyl, chlorphoxim and the synthetic pyrethroids. Novel formulations of such compounds to provide slow release of the active component have been developed. The new synthetic pyrethroids and new compounds affecting insect development and growth provide new dimentions in the area of vector control. Work continues in the area of biological control with field studies on Bacillus thuringiensis serotype H-14 and Bacillus sphaericus. A variety of approaches to mosquito control utilizing larvivorous fish are being undertaken in several areas of the world and may prove of use in particular epidemiological conditions.

Considerable interest has developed in the use of measures designed to reduce man-mosquito contact. Impregnation of bed nets with pyrethroids appears to provide significant protection, safety, and acceptability when evaluated in several areas of the world.

Efforts to develop a safe, effective and acceptable malaria vaccine continu at a rapid pace. The three vulnerable areas of the malaria parasites currently targetted for attack by immunological approach are a) the sporozoite, b) the asexual parasite, an c) the gamete. The first two mechanisms would provide a measure of individual protection, whereas the third would be expected to donfer a transmission blocking effect. Specific sporozoite antigens have been produced utilizing peptide synthesis an genetic engineering. These agents are nearing Phase I human trials, and an acceptable performance will be evaluated for protective efficiency, safety, and epidemiological effects. Efforts to produce immunizing agents against the asexual forms of the parasite are also progressing.

During the next decade, exciting developments can be predicted in the field of malaria control. A particular challenge will be defining the combination of measures required for success in any given epidemiological situation. This question and many others can only be answered in the field.

6. The 18th Expert Committee on Malaria

The 18th WHO Expert Committee on Malaria met in Geneva from September 9-17th, 1985.

The main items of the agenda were the consideration of malaria control and developing primary health care systems, education and training of health manpower for malaria control, technological advances and their application to malaria control and relevant research, both field and laboratory.

The Expert Committee arrived at a number of conclusions, and made some recommendations that the Malaria Action Programme will be actively following up in collaboration with the regional offices and member countries for implementation of those that are appropriate.

The following is a brief resume of some of the conclusions and recommendations of the Expert Committee that will be of interest to this meeting:

6.1 Countries should review their antimalaria activities in the light of the policy of health for all, the principles of primary health care, and the state of their development. The planning of malaria control as a component of primary health care should take into account concurrent activities for health promotion and for control of other diseases, and be based on an epidemiological approach.

6.2 Planning antimalaria activities or the transformation of current ones should take particular consideration of:

- The relevance of current or proposed objectives and approaches

- The adequacy of the infrastructure to ensure total coverage of the population with timely diagnosis and treatment, and malaria prophylaxis during pregnancy, supported by an appropriate referral system, capable of treating severe cases and managing the problem of drug resistance.

- The availability of the necessary competences needed to guide the health services in the study of the malaria problem and the planning and implementation of its control. It is necessary that all health services dealing with malarious areas develop and maintain a core of expertise responsible for such guidance furthermore, effective linkages should be established to complement this expert core with other technical resources available in the country or through inter-country or international collaboration.

- The development of methods of integrated vector control, particularly source reduction and personal protection measures, that can be carried out, sustained, and afforded by the community and involve less dependency on chemical pesticides.

6.3 As operational responsibilities are being transferred to the general health services, under the expert guidance and supervision of malariologists, it will be necessary to specify what every member of the service will need to know about malaria control. In order to organize health care within his district, it is particularly important for the district medical officer to be fully capable of:

a. Selection of aproppriate directives, approaches an technology for each district and possibly for different communities based on a process of stratification of the malaria problem;

b. Appreciation and utilization of knowledge of social, behavioral and economic factors in addition to technical ones in the design of control interventions;

c. Appropriate financial planning, considering the ability and willingness of people to share in covering costs or alternatively planning for a more centralized solution to cost coverage.

6.4 The required reorientation of malaria control will not be possible without some redistribution of manpower, material and financial resources, particularly resources from the central level should be concentrated in accordance with the intensity of the problem and local capabilities for its control.

6.5 The need to guide the health services in implementation of the malaria control strategy makes it necessary to support and expand training at all levels, and its global coordination. Training capabilities should be developed further, and particular notice taken of instruction related to application of the epidemiological approach to control.

a. The role and type of training necessary at different levels of the health services system should be defined and an assessment of the national training needs and resources made, and these should be incorporate in a national manpower development plan. Such plans should incorporate the appropriate coordination of malaria training with that of other communicable diseases.

b. Training of PHC workers should stress their need to work effectively in the communities towards the common objective of a reduction in the malaria problem.

c. It is desirable that medical schools and schools of public health develop their curricula to include the new approaches to malaria control as a part of primary health care and the latest information on the diagnosis and treatment of malaria.

6.6 Plans to control malaria or to modify existing malaria control programs should be based on the best available information and experience, but, in most instances, they will require the acquisition of complementary knowledge and experience, to be fed back into the management process in a learning-by-doing approach. This will require careful documentation of relevant experiences. In other instances, a "research and development" approach (R & D) will be needed. The range of subjects for R & D studies includes:

a. Improving the general and local understanding of the epidemiology of problems such as resistance to drugs and insecticides;

b. The influence of social, cultural, behavioral and economic processes in the epidemiology and control of malaria, including the problems associated with the disestablishment of vertical programs;

c. Approaches to training non-professional workers in particular to cope with antimalarial activities, in addition to their other activities;

d. Factors influencing community participation and intersectoral cooperation.

e. Ways of providing guidance and supervision by the health services, and ultimately, by malaria experts;

f. Appropriate implementation at the community level of malaria control, control of other priority diseases and other primary health care activities. It should be investigated whether (or where) such activities could be carried out by a multipurpose community health worker, or divided among a number of categories of workers, such as those dealing with disease control and those dealing with other promotional and preventive activities or those dealing with people and those dealing with the environment;

g. Ways of developing and incorporating into popular habits simple, safe, cheap and effective methods which could be used by individuals and commmunities for their own protection against disease vectors.

6.7 Research into a variety of matters affecting the malaria control programs is essential in order to overcome constraints and introduce new approaches and methodologies. Among the more important matters are the following:

a. Basic research on malaria should continue to be pursued, in view of its importance in the development of new tools for and approaches to malaria control;

b. Elucidation of the epidemiological background and solution of operational problems requires that appropriate field research activities through relevant mechanisms be developed as an integral part of the national malaria strategy, that research in the context of primary health care be conducted especially in areas where malaria control was hitherto not feasible and did not yield the desired results, and that the correlation between epidemiological features of malaria and social, economic and ecological factors and their dynamics be studies. A thorough and systematic review of the latter should include:

(i) Further development of comprenhensive conceptual framework(s), and related guidelines, relating to the social and economic factors that may be related to malaria transmission and control programs;

(ii) Compilation and assessment of the principal research studies undertaken in the field;

(iii) Establishment of a data bank of social and economic indicators;

(iv) Preparation of research protocols to stimulate emerging research interests;

(v) Development of case studies documenting the social, economic and policy dimensions of malaria control programs.

c. The urgent need for new antimalarial drugs having novel modes of action relates particularly to those possessing the following characteristics: blood schizontocidal, tissue schizontocidal, hypnozoitocidal, sporozoitocidal, gametocytocidal/sporontocidal, safety, low cost, stable for long periods under suboptimal storage conditions, and if possible, and where appropriate, of a long duration of action;

d. The importance of chemotherapeutic agents in reducing mortality and suffering from malaria, and the deficiencies of currently available drugs, make it necessary that the following be developed urgently:

   (i) Suitable, simple drug assay methods for the monitoring of drug compliance, applicable at peripheral levels of primary health care;

   (ii) A reliable, simple test method for the monitoring of early drug response in falciparum malaria which could guide the management of severe and complicated falciparum malaria at all levels of primary health care;

   (iii) Safe medicaments and/or drug formulations, and guidelines for their use, for the emergency management at peripheral primary health care levels, of patients with severe or complicated falciparum who cannot be treated via the oral route;

   (iv) Monitoring of adverse reactions to all antimalarial drugs; studies of interactions between these and other drugs need to be undertaken to enable the development of guidelines for the safe and rational use of antimalarials;

e. The necessity for accurate monitoring of the prevalence of drug-resistant falciparum malaria calls for the further development of *in vivo* and *in vitro* tests, and requires that such tests be based on standardized, recognized procedures and materials and reporting systems to facilitate the use and dissemination of information.

f. The collaboration of WHO with Member States is essential to expedite and coordinate the development and field testing of malaria vaccines;

g. In respect of vectors of malaria, the principal areas needing increased research attention are the identification and determination of their status and ecology wherever indicated, the impact of vector resistance to insecticides on malaria control, and testing and evaluation of imagocides, larvicides, biological agents and environmental methods of vector control.

The report of the 18th Expert Committee on Malaria will be published in the WHO Technical Report Series and considered by the WHO Executive Board in May, 1986, after which it will be made readily available.

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7. Use of Microcumputers in Health Sciences

The directors of the malaria programs, and all those participants not involved in the Technical Advisory Committee meeting, attended a day-long session on the use of microcomputers. At the facility of the Tulane University School of Public Health, Mr. Stanley Terrell, Assistant Director of the Institute for the Study of Change in the Americas, introduced the group to the concepts of data bases with the software package, Knowledgeman. The participants set up a small data base from blood slide data from El Salvador, first defining the elements to be entered (type of sample, notifier code, date sample was taken, date examined, locality information, laboratory and microscopist codes, age of the case, and result of the examination), the size of the field for each element and the kind of characters to be entered (numeric or alphanumeric). Data from actual blood slide report forms were then entered, reviewed, and corrected. Commands for grouping, sorting and selecting of data to be output were practiced for example, an output of all cases of remales from 21 to 30 years of age with falciparum malaria during the month of November, 1985, grouped and ordered by municipality and by age from youngest to oldest. Combinations of these commands, called "macros", were assigned names, so that a series of commands could be executed by the entry of a single macro name.

On a small data base from Guatemala blood slide reports, a special screen entry format, resembling the actual field report form, was demonstrated, and daily and weekly reports were sorted and ordered.

Mr. Terrell pointed out that the advantage of modern microcomputers is that they are relatively inexpensive, and each malaria program can now have rapid access to all epidemiological and operational information.

8. Country Proposals

In accordance with the approved agenda, Wednesday, February 19, 1986, was devoted to the presentations, country by country, of the proposals for implementation under the PAHO/AID Agreement, including updating in the light of presentations and discussions on the 18 of February, which have been summarized on previous pages of this report.

The proposals were intended as (1) follow-up of the activities already underway as planned for year 1 of the agreement, particularly in the areas of training and institutional strengthening; and (2) the selection of topics for support in the area of operational research.

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During the discussions, matters concerning inter-and intrasectoral coordination were mentioned as meriting support in order to facilitate the implementation of the newly adopted Malaria Control Strategy and to strengthen the "regionality" of the program.

A detailed workplan is presented in another chapter of this report. However, it is deemed to be opportune to list at this time the major subjects discussed during the presentation of the proposals. These subjects are not necessarily listed in order of priority, but in the order in which they were presented by different delegations and other participants:

- Training in administration and program management;
- Community participation;
- Vigilance and information system;
- Better articulation of specialized malaria services with the general health services (GHS);
- Joint programming of research and training activities (malaria and general health services);
- Strengthening of the capacity of the malaria programs and general health services to undertake training and research, in matters of interest to the malaria control efforts of the participating countries;
- Epidemiological studies regarding the present malaria situation and the factors which have a direct influence in that situation;
- Susceptibility of malaria parasites to drugs;
- Utilization of the information gathered on ecological, biomedical and social factors to arrive at the "stratification" of the problem;
- Studies on vector biology and control.

  These studies could include:

  . susceptibility of the vector to insecticides, and its relation to genetic factors;

  . identification of new pathogens and predators for the control of mosquito in the acquatic phase;

  . field research on more efficient methods of biological control, utilizing already known agents;

- monitoring of mosquito vector populations, in order to establish thresholds of "alarm" and the prediction of malaria epidemics. In addition to presently available methodologies, the potential utilization of new technologies such as "remote sensing" devices could be taken into consideration.

- integrated approaches of vector control which could deal with exophilic and exophagic vectors.

9. Second Meeting of Ad-hoc Technical Advisory Committee

The Second Meeting of the Technical Advisory Committee (TAC), PAHO-AID Agreement Grant 597-1136, was held at the School of Public Health and Tropical Medicine of Tulane University, in New Orleans, LA, on 20 February 1986, during the Meeting of Directors, National Malaria Programs of Central America, Panama, and Belize (18-21 February, 1986).

Invited participants for the Technical Advisory Committee on Malaria included:

Dr. Robert L. Kaiser (CDC), Chairman
Dr. Abdiel Adames (UP), Vice-Chairman
Dr. M.A. Tidwel (USC), Rapporteur
Ms. Paula Feeney (AID)
Mr. Lawrence T. Cowper (AID)
Dr. Victor Barbiero (AID)
Dr. Marcelo Mazzari (Venezuela)

The following persons also participated in the meeting as observers:

Dr. Trenton Ruebush (CDC)
Mrs. Mary Ellen Tanamly (AID/Belize)

The following were members of the Secretariat:

Dr. F.J. López-Antuñano (PAHO)
Dr. P. F. Beales (WHO)
Dr. I. Klinger (PAHO)
Dr. J. Ayalde (PAHO)

The Secretariat introduced to the II-TAC for discussions and recommendations a document entitled "PAHO-AID Agreement, Grant 597-1136, Progress Report" with background information and an analysis of activities already carried out.

Despite the fact that a one year program had to be accomplished during a real time of six months (from the date of approval of the work plan) most of the planned activities were carried out as scheduled. A few had to be re-phased for the second year of the project due to programmatic reasons, perticularly the overload of training institutions during the dates originally selected for implementation.

In addition to the presentation of the "Progress Report", the Secretariat presented an overview of the proposals received from the countries regarding year 2 of the Agreement. These proposals were analyzed in a general way, and considering the presentations and discussions of the Meeting of National Directors of Malaria Programs, held during the previous two days.

The Secretariat gave an overview of activities including courses in Venezuela, Panama, Guatemala and South Carolina and some of the problems associated with arranging their presentations. It was noted that short courses reduce the problem of loss of jobs which may occur on occasion when personnel are absent from their posts for long periods of time. For individuals seeking graduate degrees it is important that positions are available when they return. Screening for competent persons, able to take the courses and who will remain with the program after the training is essential.

In considering training for Belize it was suggested that English language courses might be available through CDC's Guatemala (Universidad del Valle) or through the University of South Carolina. The AID/Belize Representative indicated that resources to support this training will be secured.

The Secretariat also informed that a set of five training modules on the epidemiology and control of malaria are being translated from Spanish into English.

The importance of monitoring and evaluation of training grants, awards and fellowships by PAHO and AID was stressed, as well as effective coordination at Washington/HQs and country level to facilitate the objectives of the project and to avoid duplication of efforts. As one of the first joint PAHO-AID projects the experience gained will be very valuable in the development and implementation of future projects. The group also emphasized the need for mechanisms to evaluate the efficacy of this program.

The development of the facility at Quirigua, Guatemala was cited as an excellent example of a regional prototype training center for middle level personnel.

Role of PASCAP in Costa Rica and the expanded use of their capabilities was discussed and the committee was informed that the rescheduling of three courses had been processed and that a maximum of 18 participants were anticipated to attend each course.

Considerable discussion was generated on the focus of the training modules and other teaching material, whether they should specifically deal with malaria alone or with malaria in the context of other health problems in the community. The need for specialized material for the training and "core" or nucleus of advisors has been recognized. However, there is also a need to further define the concepts and approaches to reduce the impact of malaria at the individual and at the community level.

It was pointed out that PAHO is already carrying out activities geared towards community participation, utilizing resources already allocated to other health programs within the strategy of PHC and that malaria is being incorporated into these programs and associated training.

Other subject which generated discussion and recommendations was the matter of coordination of activities at field level. The Secretariat informed that a qualified Medical Entomologist had already been selected, as STC, with a first appointment of 10 months. Although the duty station is Panama City, Panama, the consultant will be available to support training activities in other countries of CAP participating in this project. It was agreed that the job description should be clearly stated to avoid any potential difficulties due to the expectation of "multiple duties".

In accordance with the PAHO-AID agreement support during the first year of the project was to be concentrated on training. Support to operational research was to start in year 2 and continue through the life of the project (LOP).

The development of operational research was first discussed in relation to two major aspects, management and the development of epidemiological and information systems. A brief summary of developments in these areas was provided. In relation to equipment to be purchased either for training or research activities, no specific guidelines or "ceilings" were recommended. Equipment can be justified by its role in the project, and each case should be decided upon based on its own merits. In certain countries, leasing of equipment may be a viable alternative to its purchase. Maintenance facilities should also be borne in mind while taking a final decision on these matters. Regular PAHO administrative norms and procedures will be followed while buying or leasing equipment.

The second main area of discussion involved the examination of training proposals:

A brief resume of the proposals identified countries and asociated proposals. The lack of corrected budget figures prevented and accurate assessment. Questions were raised concerning the long term aspects of these proposals, for example, how many additional persons be trained during the second and third years of the project. Evaluation of the various programs was again discussed with agreement that appropriate method(s) must be identified for this purpose.

A third major area of discussion was operational research, and the method for the TAC to study and endorse proposals in this area. Some general prerequisites were agreed upon, such as the potential "regionality" of the proposals, either (a) in terms of the study of problems common to CAP countries; or (b) the "pooling" of resources from two or more countries in research activities; or (c) the establishment of clearly defined subregional research projects involving all (or most of) the countries of CAP. As an example research on A.alleimanus along the Pacific Coastlands of CAP was mentioned.

In situations (a) and (b) above, ideally, the initiative should come from the countries themselves. This initiative should materialize in the presentation of "pre-proposals". If these are found to be relevant and of interest within the scope of the project technical cooperation can be facilitated for the preparation of the final protocol. In situation (c) PAHO would be in a better position to prepare pre-proposals or the final protocols.

The TAC recognized that more time was needed to examine research proposals. After several suggestions were discussed, the following approach was agreed upon:

- A small group representing the TAC and the Secretariat would study the procedures presently used by PAHO and AID.
- The group would prepare simple guidelines; and
- A special Research - Review Group (RRG) would later be constituted to study, aprove, or reject pre-proposals.

The RRG would meet twice per year or more often if deemed necessary. This activity will involve members of TAC, PAHO/Secretariat and outside specialists if needed. It should include:

. one representative of AID
. one representative of CDC
. one member of TAC
. one member of PAHO Secretariat/Malariologist
. the PAHO-AID Agreement Project Manager

10. Research Review Procedures

Following the recommendations of II/TAC a small working group was convened at PAHO/HQs in Washington, on March 25th.

Participants of this work group were:

- Dr. Robert L. Kaiser (CDC)
- Dr. Victor Barbiero (AID)
- Dr. M.A.Tidwell (USC)
- Dr. María Leite Ribeiro (PAHO/DRC)
- Dr. F.J. López-Antuñano (PAHO/HPT)
- Dr. Gabriel Schmunis (PAHO/HPT)
- Dr. Irene Klinger (PAHO/DAP)
- Dr. Jaime Ayalde (PAHO/HPT)

10.1 Research Areas Elegible for support

The Research Review Group took note of the fact that the project includes 6 countries, and that the dollar amount earmarked for Applied Field Research, for year 2 of the project, is 450,000.oo. In addition, funds (300,000.oo) have been allocated for the support of Research and Training Centers already indentified in the Sub-region.

Considering (a) terms of the agreement; (b) present malaria situation; (c) new strategies of malaria control; (d) level of funding and (e) the regionality of the project, the following four broad areas of applied field research can be considered as elegible for support:

1. Malaria epidemiology (including studies on malaria morbidity, mortality, prevalence, incidence, stratification and the establishment of epidemiological baselines for the eventual utilization of anti-malaria vaccines).

2. Methodologies and strategic approaches to control

   (Vector control, use of antimalarial drugs, environmental management, integrated control).

3. Health Services Research

   (Role of Primary Health Care in the prevention and control of malaria; program management; systems analysis; quality control; utilization and accessibility of services; selective coverage).

4. Social Behavior Studies

(Community participation; social and intersectoral studies; impact on malaria; tasks for the community).

10.2 General Procedures for review and Approval of Proposals

a. The Directors of National Malaria Programs and National research institutions cooperating with them, are encouraged to identify key sub-regional issues within the five broad research areas elegible for support.

b. There are no fixed limits to the number of proposals to be supported. However, it is expected that a first screening should be undertaken at country level in terms of the importance of the research and how the results of such research will be issued in the countries of the Sub-region. The limits will be dictated by practical reasons, such as the capability of the country or program to carry out the research and the availability of funds. As a planning exercise a maximum of five issues may be identified in each individual country, for consideration by the Research Review Group.

c. Once the issues are identified, a preproposal should be prepared (English or Spanish text). The preproposal (2-3 pages) should be describe:

- project title;
- the category (see 4 broad areas of classification) of the research;
- name of principal and other investigators;
- project objective;
- project duration and proposed starting date;
- research rationale and proposed workplan. What is intended to be done - and why? Scientific hypothesis;
- what is the importance of the research to the program;
- brief budget (salaries, equipment and materials, travel, technical cooperation needed, other).
- Preproposals should be submitted to HPT through regular PAHO channels (i.e. through the Country Representative) indicating the endorsement of national authorities. No formal agreement is necessary at this stage. A preproposal is not contractually binding.

d. Preproposals will be evaluated by the Research Review Group (RRG). Once approved, a formal protocol has to be prepared (15-20 pages). Technical cooperation will be provided if requested at this stage. Ethical Review - at country level - and Environmental Impact Assessment will also be carried out if applicable.

   The RRG will decide regarding approval and funding of the final protocol.

e. Provisions should be made for evaluation of progress and monitoring, when projects are underway by written reports and site visits when deemed necessary.

f. As a starting point, available funding will be distributed as follows:

   - One third to Sub-regional projects, i.e. one or two projects involving all participating countries of the Sub-region.

   - Two thirds, to individual country research projects, within the five broad categories selected for support. Inter-country collaboration will be encourage to maximize the results. This means that more than one country can choose the same general line of research, but the activities will be either shared or supplemented.

   - Depending on the proposals received and approved, the RRG may change the distribution of funding after the first review.

g. There will be a ceiling of US$ 25,000.oo per year and a maximum of 75,000.oo per country project in 3 years. If two countries share activities, obviously this amount, for a particular line of research, will be double.

h. Support will be given for transportation (in terms of travel and per diem) but no vehicles will be provided. Salaries to the investigators and other participants could be paid for time actually devoted to the project. The decision will be taken in each individual case taking into account national standards, and in accordance with PAHO regulations.

PART II

1986 PAHO/AID MALARIA COMPONENT

A: TECHNICAL COOPERATION OF THE PLANNING,EXECUTION AND EVALUATION OF MALARIA PREVENTION AND CONTROL PROGRAMS.

ITEM	ACTIVITY	COMPONENT	No.of Participants	Short term consultants, Temporary Advs(040) Duty travel (230) Subcontracts(390)	Registration, Travel and per diem (820)	Supplies and Materials (550)	Grants	Total
	A.1	PREPARATION OF 2ND.YEAR WORKPLAN	Costs included in a.2 & a.3 below					
	A.2	Annual Malaria Directors Meeting		Stc 45/d Duty Travel 21/d	10035 4200			
		Total			14235			14235
	A.3	Technical Advisory Committe Meeting		50/d.STC 40/d.D.TRAVEL	11150 8000			
		Total			19150			19150
	A.4	Research Review Group (23 March,Wash.D.C.)		40/d.STC	8920			
		Total			8920			8920
	A.5	Follow up and Gral. technical Support		0 0 30/d.D. TRAVEL	6000			
		Total			6000			6000
	A.6	Review of experiences, evaluation of methodology and adoption of strategies for Malaria control (July,1986)		7/d.STC	1561			
		Total			1561			1561
	A.7	Follow up on ongoing activities on Community Participation in Malaria control Honduras (May 1986)		7/d.STC	1561			
		Total			1561			1561
	A.8	Support to Country Programs for the Development of Research Protocols (Six Countries $10000.ea. 3rd. & 4th. Quarters'86)				60000		
		Total				60000		60000

B DEFINITION OF CRITERIA AND ORIENTATION OF THE MALARIA STRATIFICATION PROCESS

ACTIVITY	COMPONENT	No.of Participants	Short term consultants, Temporary Advs(040) Duty travel (230) Subcontracts(390)	Registration, Travel and per diem (820)	Supplies and Materials (550)	Grants	Total
B.1	Analysis and Strenghtening of stratification. Selection of indicators. (Workshop in Panama- 14-17 April, 1986)		20/d.STC 8/d.D.TRAVEL	4460 1600			
	Total			6060			6060
B.2	Development of a Computer program for startification (3rd. & 4th. Quarters'86)		30/d.STC	6690			
	Total			6690			6690
B.3	Collection and analysis of epidemiological data related to selected indicators.(six countries) (3rd. Quarter 1986)		90/d.STC	20070	3000		
	Total			20070	3000		23070
B.4	Collection of socio-economic data,(migration, housing,modes of production (six countries) (3rd. & 4th. Quarters'86)		Subcontrcts(390)	6000			
	Total			6000			6000
B.5	Joint activities on stratification in bordering Countries (4th.Quarter 1986)		52/d.STC	11596			
	Total			11596			11596
B.6	Updating of guidelines for the collection & analys of epidemiological and socio-logical data (3rd. Quarter 1986)		40/d.STC	8920			
				8920			8920
B.7	Updating of Malaria surveillance and information systems(Guatemala/Honduras) (3rd. Quarter 1986)		40/d.STC	8920			
	Total			8920			8920

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COURSES AND SEMINARS ON MEDICAL ENTOMOLOGY
VECTOR CONTROL, RESEARCH EPIDEMIOLOGY
AND ENVIRONMENTAL SANITATION

ACTIVITY	COMPONENT	No.of Participants	Short term consultants, Temporary Advs(040) Duty travel (230) Subcontracts(390)	Registration, Travel and per diem (820)	Supplies and Materials (550)	Grants	Total
C.1	Support to the Training Programs for Malaria, Vector Control and Epidemiology of Tropical Diseases						
	++++++++++++++++++++++++++++						
	Support to the University of Panama.		300/d.STC	66900			
	Total			66900			66900
C.2	Development of a PAHO/WHO Manual on Clinical Parasitology & Inmunological Diagnosis of Malaria -Technical Editing -Printing, Binding and Distribution (2nd. Quarter 1986)		Subcontrcts(390)	15000	5000		
	Total			15000	0 5000		20000
C.3	Support to C.A. Educational Institutions		Subcontrcts(390)	7500	12500		
	Total			7500	12500		20000
	Academic Courses						
	++++++++++++++++++++++++++++						
C.4	Malariology & Environmental Health, Maracay, Venezuela 10 months. beg. Jan'87	5	30/d.STC 20/d.D.TRAVEL	50 Fellowship Months 6690 4000	80000		
	Total			10690	80000		90690
C.5	Master of Science on Medical Entomology, Panama 20 months. Sept. 1986	4		80 Fellowship Months	128000		
	Total	4			128000		128000
	Short Courses of more than 21 days and less that 90						
	++++++++++++++++++++++++++						
C.6	Comprehensive Vector Control South Carolina, 6 weeks (Aug-Sept. 1986)	7		8 Fellowship Months	12800		
	Total				12800		12800

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C.7	Course on serological Techniques for parasitic Diseases.Sao Paulo, Brazil. (3rd. or 4th. Quarter 1986	5			10 Fellowship Months	16000		
	Total					16000		16000
C.8	Technical and Administrative Management Course for Middle level Personnel, Quiriqua, Guatemala (3rd. Quarter 1986)		100/d.STC 30/d.D.travel Subcontrcts	22300 6000 5000	54 Fellowship Months	86400		
	Total			33300		86400		119700
	Short Courses or Seminars of 21 days or less ++++++++++++++++++++++++++++							
C.9	Preparation of Teaching Materials & Audiovisual Aids,PASCAP,Costa Rica 19-30 May,1986	13				22620		
	Total					22620		22620
C.10	Occupational Profiles and Educational Technology PASCAP,Costa Rica (April 1986)	13				22620		
	Total					22620		22620
C.11	Seminar on Development of Malaria Control within the context of PHC (Five National Seminars per Country in six Countries)					90000		
	Total					90000		90000
C.12	Seminars on Epidemiology and Control of Malaria for Malaria and Gral.Health Services Personnel (Modules) (Six National Seminars per Country with 20 Participants ea.)		45/d.STC 45/d.D. TRAVEL	10035 9000		90000		
	Total			19035		90000		109035
C.13	Short Course on Emergency Control of A. Aegypti (Panama, April 1986)					6960	2000	
	Total					6960	2000	8960
C.14	Short Course on Insecticide Application techniques & Spraying Equipment Panama 4-15 Nov.1986					12180		
	Total					12180		12180

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C.15	Research Methodology Protocols,PASCAP,Honduras 7-19 July,(Three per Country,six Countries).	18	36/d.STC	8028		4800		
	Total			8028	33930	4800		46758

D: DEVELOPMENT OF THE METHODOLOGY FOR SOCIOECONOMIC AND ECOLOGYCAL RESEARCH ON MALARIA

1	DEVELOPMENT OF A PROTOCOL FOR THE STUDY OF THE ECOLOGY, BIOLOGY,VECTOR CAPACITY AND CONTROL OF A.ALBIMANUS IN THE PACIFIC COAST OF CENTRAL AMERICA							
	Total						150000	150000
2	DEVELOPMENT OF EPIDEMIOLOGICAL STUDIES OF THE BIOLOGICAL SOCIAL, ECONOMIC, CULTURAL AND POLITICAL DETERMINANTS AFFECTIONS MALARIA TRANSMISSION AND CONTROL,TRENDS CAUSES AND RISK GROUPS.							
	Total						75000	75000
3	METHODOLOGIES & STRATEGIC APPROACHES FOR CONTROL							
	Total						75000	75000
4	HEALTH SERVICES RESEARCH -ROLE OF PRIMARY HEALTH CARE IN THE PREVENTION AND CONTROL OF MALARIA -PROGRAM MANAGEMENT -SYSTEM ANALYSIS -QUALITY CONTROLS -UTILIZATION & COVERAGE							
	Total						75000	75000

5	SOCIAL BEHAVIOUR STUDIES - RESEARCH ON COMMUNITY PARTI- CIPATION . -ECONOMIC IMPACT OF MALARIA IN SOCIAL DEVELOPMENT -SOCIAL AND INTERSECTORAL ACTIVITIES -DEVELOPMENT OF METHODOLOGY FOR HEALTH EDUCATION AND LITERACY GEARED TOWARDS COMMUNITY AWARENESS AND PARTICIPATION.		
	Total	75000	75000
	Total Cost		1418946
	13% Program Support Costs		184463
	Grand Total		1603409

MALARIA PROPOSED BUDGET FOR 1986.2ND YEAR

ELEMENT	EXPENSES/ACTIVITY	A.1	A.2	A.3	A.4	A.5	A.6	A.7	A.8	B.1	B.2	B.3	B.4	B.5	B.6	B.7
040	Short Term Conslt.		10035	11150	8920		1561	1561		4460	6690	20070		11596	8920	8920
230	Duty Travel		4200	8000		6000				1600						
390	Contractual Services												6000			
550	Supplies and Equipment								60000			3000				
820	Courses & Seminars															
830	Grants															
	TOTAL	0	14235	19150	8920	6000	1561	1561	60000	6060	6690	23070	6000	11596	8920	8920

ELEMENT	EXPENSES/ACTIVITY	C.1	C.2	C.3	C.4	C.5	C.6	C.7	C.8	C.9	C.10	C.11	C.12	C.13
040	Short Term Conslt.	66900			6690				22300				10035	
230	Duty Travel				4000				6000				9000	
390	Contractual Services		15000	7500					5000					
550	Supplies and Equipment		5000	12500										2000
820	Courses & Seminars				80000	128000	12800	16000	86400	22620	22620	90000	90000	6960
830	Grants													
	TOTAL	66900	20000	20000	90690	128000	12800	16000	119700	22620	22620	90000	109035	8960

	EXPENSES/ACTIVITY	C.14	C.15	D.1	D.2	D.3	D.4	D.5	TOTAL
040	Short Term Conslt.		8028						207836
230	Duty Travel								38800
390	Contractual Services								33500
550	Supplies and Equipment		4800						87300
820	Courses & Seminars	12180	33930						601510
830	Grants			150000	75000	75000	75000	75000	450000
	TOTAL	12180	46758	150000	75000	75000	75000	75000	1418946

TOTAL PROGRAMMED	1418946
13% PROGRAM SUPPORT COSTS	184463
GRAND TOTAL	1603409

PRIORITY HEALTH NEEDS
CENTRAL AMERICA AND PANAMA

Priority Area:
Essential Drugs

SUBREGIONAL PROJECT RE-ED-01
DEVELOPMENT AND ADJUSTMENT OF
SUBREGIONAL ESSENTIAL DRUG POLICIES

Revised version: June 1986

INTRODUCTION

DESCRIPTION OF THE PROBLEM

PROJECT OBJECTIVES

STRATEGY

SCOPE AND ACTIVITIES OF THE PROJECT

WORKPLAN AND BUDGET

INTRODUCTION*

The establishment of national pharmaceutical policies by all the Member States is a principal objective of the PAHO/WHO Essential Drug Program in Central America and Panama. These policies should form part of the general health policy for attaining the goal of Health for All by the Year 2000 based on primary health care (PHC) and should be implemented within the limits of the resources mobilized for this purpose. Thus, national pharmaceutical policies must correspond to health systems based on PHC and must be compatible with the concept of essential drugs.

In any nation, the importance placed on health can be measured in economic terms by determining health care expenditures as a ratio of the gross national product. Using this yardstick, it is calculated that health care expenditures normally account for 6-8% of the GNP in the industrialized countries and much less, sometimes as little as 1%, in the developing countries. Similarly, the importance of pharmaceutical products in health care can be measured in economic terms by determining drug expenditures as a ratio of health care expenditures; this figure normally ranges between 10-20% in the industrialized countries, and much higher, up to 30-40%, in most of the developing countries.

In 1980 the world pharmaceutical market was estimated at US$100 billion. Eighty-five percent of this market is located in the industrialized countries. Only 15% of the pharmaceutical market is located in the developing countries, where the majority of the world population lives, and the individual percentages range from approximately 6% in Latin America to about 7% in Asia, and only 2% in Africa.

Together these figures clearly show that from an economic standpoint, pharmaceutical product use follows trends no different from those of other manufactured products: the volume spent on pharmaceutical products depends more on the purchasing power of consumers of such products than on the real needs of the population. That explains, in turn, why annual drug expenditures are less than $1.00 per capita in the poorest developing countries yet can exceed US$70.00 in some industrialized countries. Although it is not too difficult to highlight the economic differences among different countries, it is much harder to identify the causes of differences noted in the health and pharmaceutical policies of countries subject to the same economic limitations. These policies result from the interaction of certain political, economic, and social pressures that frequently enter into conflict with one another as pressure groups promote their various interests. Such groups are both governmental (ministries of health and social welfare and ministries of industry, commerce, and finance), and nongovernmental (medical and other related professions, scientists and academics, commercial institutions and consumers).

* Adapted from document DAP/83.3 of the WHO Essential Drug Program

DESCRIPTION OF THE PROBLEM

In 1983 the countries of Central America and Panama spent about US$300 million for the purchase of drugs. Of this, $100 million came from the public sector.

Although this is a large expenditure, it is estimated that half the population of Central America and Panama still lacks continuos access to essential drugs. Furthermore, in these countries, policies and practices with regard to drug procurement and use have developed in such a way that today are inconsistent with the main objectives of the essential drugs programs.

Moreover, owing to the socioeconomic context in which the procurement systems have developed, current drug supply schemes are not compatible with the real health needs of the majority of the people of Central America and Panama.

The major aspects and/or components of a drug policy that meets priority health needs in the subregion have been developed independently of one another and at different levels, thus creating a situation of imbalance, not only between the supply of drugs and health plans and programs but also within the drug supply system as such. It has been noted in some cases that drug registration and control mechanisms are not suitable; in others it has been observed that criteria for the selection of drugs at the various levels of health care services do not correspond to overall program objectives.

This clearly demostrates the need to formulate and establish national and subregional drug policies and strategies that are consistent with health programs and support primary care, and based on the WHO concept of essential drugs.

Like other developing countries, the countries of the Central American Isthmus sometimes have contradictory policies with regard to drug supply, the promotion of industrial policy, the National Development Plan and, in some cases, systems for the assignment of financial resources, especially convertible currency.

This situation of imbalance is aggravated by the absence of a flow of relevant information for decision-making and for the adjustment of policies and practices. These could help bring about a more efficient use of available resources, a more rational use of drugs and to improve procurement schemes and mechanisms, and a better assessment of the prevailing price structures in the subregion.

PROJECT OBJECTIVES

- To provide the Member Governments of Central America and Panama with the technical cooperation needed for:

  (a) The establishment of national essential drug policies designed to improve the availability of essential drugs of acceptable quality to all the population in need at reasonable cost;

(b) The formulation and establishment of an essential drugs program at national and regional levels;
(c) The evaluation of its results.

- To promote at the subregional level the coordination and adjustment of the most relevant aspects of national policies, with special emphasis on matters relating to the selection, procurement, production, control, information, and proper use of drugs.

STRATEGY*

The ideal situation would be for each country, prior to the establishment of a pharmaceutical policy, to identify priority health problems and assign resources with a view to solving them.

Subsequent to this health planning process, it would be possible to identify the most appropriate types of drugs for solving priority health problems and to plan the pharmaceutical supply system accordingly. With a more precise definition of national health policies, it would also be possible to establish national pharmaceutical policies tied to each country's health objectives. However, the main difficulty in establishing a relationship between pharmaceutical and health policies lies in the fact that every national decision on drugs must be made within the multidimensional framework of health planning and economic and social development planning, the value systems of which are often very different. For example, from the standpoint of health and social welfare, the principal objective of pharmaceutical policies is to guarantee the availability of a sufficient supply, at reasonable cost, of the most appropriate and useful drugs ("essential" drugs) of acceptable quality in order to meet the health needs of the entire population. From the standpoint of the industrial and commercial sector, however, the principal objective is to meet the demand for drugs through the development of local pharmaceutical industries capable of expanding their activities in domestic and foreign markets, thus generating job opportunities and contributing to a better balance of payments through exports and/or import substitution.

For this reason, the various sectors involved in the area of drugs must participate in the formulation of a pharmaceutical policy that fits the especific situation of each country, recognizes the legitimate interests of the various parties, and pursues, insofar as possible, the coordination of their various approaches and priorities.

In order for an essential drug policy to be effective, it is fundamentally important for everyone to understand that its implementation must result in greater benefit for correct medical practice and the economy of the country. Accordingly, a well planned and well guided information campaign to familiarize health personnel and the public with the essential drug pogram is an important part of the strategy for attaining the goal of Health for All.

*Adapted from document DAP/83.3 of the WHO Essential Drug Program

GOALS AND EXPECTED RESULTS

1) Establishment of national drug policies relevant to the health needs of the population of Central America and Panama.
2) Establishment of intersectoral national and subregional commissions as coordinating instruments for the adjustment of policies and the implementation of common plans and strategies in the subregion.
3) Preparation, printing and establishment of a subregional essential drugs formulary (which takes into account the health needs of the majority of the population) in all the countries of the subregion.
4) Improvement of the administrative and managerial practices in the drug supply systems prevalent in the countries of the subregion.
5) Reduction in the level of technological dependence of Central America and Panama in the area of essential drugs. At the same time, the project would allow for a major flow of knowledge and technology to professionals, technicians, and institutions concerned in the subregion.
6) Understanding by health care personnel and the public at large of the concept of essential drugs and their role in health care.

SCOPE AND ACTIVITIES OF THE PROJECT

At the national level, there will be cooperation with the governments in the formulation of policies and program planning on essential drugs, which will encompass the following actions:

1) Identification of therapeutic needs;
2) Selection of essential drugs required at the various levels of the health care system and, in particular, in primary health care;
3) Evaluation of the amounts required of various drugs;
4) Improvement of the drug supply system for better procurement, storage, distribution, and logistical support, with the corresponding training of personnel;
5) Measures for ensuring the appropriate use of essential drugs through an adequate supply of information and the training of the various categories of personnel authorized to prescribe and dispense and, in particular, of primary health care workers;
6) Supply of information to and instruction of health care personnel and the general public on the appropriate use of essential drugs;
7) Establishment and strengthening of the means for the local production of selected essential drugs, provided its technical and economical feasibility;
8) Guaranteed quality control by the means most suited to each country;
9) Monitoring of adverse reactions as an integral part of the health care delivery system;
10) Enactment of appropriate legislation, as necessary, in areas such as drug registration, trade and generic names, control of information on therapeutic indications, contraindications and side effects, standards for drugs of proven efficacy, safeness and acceptable quality, quality

guaranties, legal authorization of the various categories of health care personnel to prescribe or administer various types of drugs (including injectables), price regulation, etc.;

11) Coverage of personnel needs through the training of sufficient staff for all levels and categories. Such staff must be capable of designing and implementing national pharmaceutical policies in accordance with the concept of essential drugs and undertaking any intercountry activities that may prove necessary;
12) Coordination of multisectoral activity in all sectors, including health, public education, planning, finance, industry, commerce, and communications;
13) Introduction of an evaluation process to follow progress achieved in the implementation of national pharmaceutical policy and its long-term effectiveness.

A Subregional effort will be made to establish mechanisms and tools for carrying forward the following activities:

- To update and/or promote the adjustment of legislation and regulation of the registration, production, and marketing of pharmaceuticals;
- Drafting of a subregional formulary;
- Establishment of joint procurement schemes, including financial support, especially in hard currency;
- Training and manpower development;
- Establishment of a subregional drug quality assurance network;
- Exchange of information on a wide variety of subjects in the field of pharmaceuticals (appropriate use, adverse reactions, prices, suppliers, etc.).

WORKPLAN AND BUDGET

The activities corresponding to the Subregional Project RE-ED-01 Development and Adjustment of Subregional Essential Drug Policies will be financed primarily by the contribution of the French Government, which has agreed to provide one million francs for the first year of the Project. Half of this sum is being transferred from funds given to UNICEF and the other half will be made available directly to PAHO. The activities included in the proposed workplan have been revised to correspond to the increased first year funding.

For the initial year, the revised workplan places special emphasis on country studies to be carried out by national groups with the purpose of analyzing and evaluating existing policies that affect the availability and use of essential drugs. The national groups will be guided by a comprehensive basic document on the main issues to be addressed by a coherent drug policy (including legal, financial, administrative and technical components). This paper will be prepared during the first months of the Project for presentation and discussion at a subregional meeting in a Central American nation. The participants at this meeting will serve as focal points for the country studies which are expected to provide a substantive basis for subsequent activities directed to the promotion and formulation of national drug

policies. To ensure consistency and continuity of planned activities at the country level, it is considered essential to assign an experienced consultant to serve as a subregional coordinator for Project RE-ED-01 as well as to provide direct technical assistance to the national groups. Costs associated with this assignment will be partially (6 month/year) charged to this project.

Additional funding for activities closely related to those undertaken under this Project is being provided by U.S. and Swedish development agencies. The minimum amounts corresponding to activities planned for the first year are estimated to be as follows:

Source	Activity	Contribution
U.S. AID	Drug regulation and Drug Formularies	$100,000
SIDA	Joint Procurement of Essential Drugs	$ 30,000

PAHO will also contribute in kind to the planning, programming, coordination, execution and evaluation of the Project. For the first year this contribution is estimated to be almost $50,000, broken down as follows:

a) Essential Drugs Program	
- Chief of Program, 10% dedication	$ 9,000
- Senior pharmacist, 10% dedication	$ 9,000
- Pharmacist, 10% dedication	$ 5,500
b) Analysis and Strategic Planning Coordination	
- Officer responsible for coordination of Central American Proyects, 5% dedication	$ 3,900
c) PAHO Country Offices (7 countries)	
- Technical Officers, 5% dedication	$ 21,000
	$ 58,400

Thus, the approximate over-all budget for the first year activities associated with Project RE-ED-01 is over $300,000:

Source		
Government of France	$140,000	
U.S. AID		$100,000
SIDA (Sweden)		$ 30,000
PAHO		$ 58,400
		$328,400

The budget for the proposed 4 year workplan to be financed by the French Government is summarized below; a more detailed breakdown is provided with the description of the activities in the next page.

Year 1	$139,100
Year 2	$159,000
Year 3	$176,000
Year 4	$138,000
Subtotal	$612,100
Contingencies (10%)	$ 79,600
TOTAL	$691,700

The activities for the first year correspond to the following budget elements:

Element	Description	Cost
040	Consultants (6M/M)	$ 41,500
230	Duty travel (PAHO staff)	$ 4,000
390	Contractual services	$ 83,600
550	Supplies and materials	$ 3,000
820	Courses, seminars, meetings	$ 7,000
	Subtotal	$139,100
	Overhead (13%)	$ 18,000
	TOTAL	$157,100

WORKPLAN AND BUDGET

DESCRIPTION		AMOUNT (US$)	1ST YEAR 1	1ST YEAR 2	1ST YEAR 3	1ST YEAR 4	2ND YEAR	3RD YEAR
I. GUIDELINES FOR THE FORMULATION AND ESTABLISHMENT OF NATIONAL DRUG POLICIES								
1. Preparation of basic document and subregional consultation on the guidelines		29,500						
Consultant (3.0 M/M)*			X (20,500)					
Consultation (Guatemala, 4 days)				X				
1 participant/country x 7	6,000			(9,000)				
- PAHO HQ staff (2)	2,000							
- Local Expenses	1,000							
2. Finalization of the guidelines and printing of the document		6,500						
- Consultant (0.5 M/M)*	3,500			X (3,500)				
- Publication	3,000				X (3,000)			
3. Country studies by national groups to analyze and evaluate existing policies affecting the pharmaceutical sector		99,500						
- National groups (contractual services)						X		
$10,000/country x 6	65,000					(65,000)		
$ 5,000/Belize								
- Consultant (2.5 M/M)*	17,500					X (17,500)		
- Duty travel (PAHO HQ staff)	2,000					X (2,000)		
- Publications	15,000						X (15,000)	

WORKPLAN AND BUDGET

DESCRIPTION		AMOUNT (US$)	1ST YEAR 1	1ST YEAR 2	1ST YEAR 3	1ST YEAR 4	2ND YEAR	3RD YEAR	4TH YEAR
I. GUIDELINES FOR THE FORMULATION AND ESTABLISHMENT OF NATIONAL DRUG POLICIES									
1. Preparation of basic document and subregional consultation on the guidelines		29,500							
Consultant (3.0 M/M)*			X (20,500)						
Consultation (Guatemala, 4 days)				X					
1 participant/country x 7	6,000			(9,000)					
- PAHO HQ staff (2)	2,000								
- Local Expenses	1,000								
2. Finalization of the guidelines and printing of the document		6,500							
- Consultant (0.5 M/M)*	3,500			X (3,500)					
- Publication	3,000				X (3,000)				
3. Country studies by national groups to analyze and evaluate existing policies affecting the pharmaceutical sector		99,500							
- National groups (contractual services) $10,000/country x 6 $ 5,000/Belize	65,000					X (65,000)			
- Consultant (2.5 M/M)*	17,500					X (17,500)			
- Duty travel (PAHO HQ staff)	2,000					X (2,000)			
- Publications	15,000						X (15,000)		

DESCRIPTION	AMOUNT (US$) 1	2	3	4	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
4. Identification of areas for harmonization at subregional level and preparation of basis for approaches and options to harmonization		16,000						
Consultant (contractual services)	7,000					X		
Working Group	9,000					(16,000)		
5. Subregional consultation on harmonization of policies		10,000						
Subregional meeting (3 representatives/country)							X (10,000)	
6. Two negotiations meetings at technical level		12,000						
Subregional working groups								X (12,000)
SUBTOTAL		173,500			120,500	31,000	10,000	12,000

*The consultant will serve as subregional coordinator for activities undertaken under this project.

DESCRIPTION	AMOUNT (US$)	1ST YEAR 1	2	3	4	2ND YEAR	3RD YEAR	4TH YEAR
II. DEVELOPMENT OF A SUBREGIONAL ESSENTIAL DRUGS FORMULARY*								
1. Research and revision of the present situation in the subregion with regard to national drug formularies and their use (3 M/M)**	--	X						
2. Preparation of document with the basic elements for the establishment of the subregional drug formulary, including criteria for inclusion/exclusion, priorities, etc. Consultant (1 M/M)**	—							
3. Subregional meeting for consideration of the subregional formulary technical working group)	18,000					X (18,000)		
4. Finalization, printing and distribution of the subregional formulary	25,000						X (20,000)	X (5,000)
SUBTOTAL	43,000					18,000	20,000	5,000

*The formulary will include therapeutic information required for rational drug use.
**This activity is being completed with funding from another subregional project.

DESCRIPTION	AMOUNT (US$)	1ST YEAR 1	1ST YEAR 2	1ST YEAR 3	1ST YEAR 4	2ND YEAR	3RD YEAR	4TH YEAR
III. REVISION OF DRUG LEGISLATION AND STUDIES ON FINANCIAL POLICIES FOR DRUG COVERAGE								
1. Survey and critical review of (a) present drug legislation and regulation and (b) financial mechanisms for drug coverage*	—							
Consultant					X			
National groups (contractual services)					X			
2. Drawing of model drug legislation	7,000							
Consultant (contractual services) (1 M/M)						X (7,000)		
3. Guidelines for registration of pharmaceutical products**	—							
Consultant								
4. Harmonization of standards and requirements including standards for drugs moving within the subregion. Background documents and one subregional meeting	17,000							
Consultants (contractual services)							X (5,000)	
Subregional meeting							X (12,000)	
5. Guidelines for good prescribing and dispensing practices	18,000							
Consultation							X (10,000)	
Preparation of guidelines							X (8,000)	
6. Promotion and dissemination of the guidelines in No. 5:	50,000							
Subregional meeting (5 participants/country)								X (30,000)
National meetings (2 meetings/country)								X (20,000)
SUBTOTAL	92,000					7,000	35,000	50,000

*Activity included in the country studies under I.3.
**Activity completed with funding from another subregional proyect.

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DESCRIPTION		AMOUNT (US$)	1ST YEAR 1	1ST YEAR 2	1ST YEAR 3	1ST YEAR 4	2ND YEAR	3RD YEAR	4TH YEAR
IV. INFORMATION, PROMOTION AND EDUCATION									
1. Preparation of didactic and information material about drug policies and strategies:		25,000							
1.1 Professional level					X				
- Contractual Services	5,000				(5,000)				
1.2 Public (patient) level							X		
- Contractual Services	10,000						(10,000)		
1.3 PHC level						X			
- Contractual Services	10,000					(10,000)			
2. Dissemination and promotion of the educational material to the public - learning-at-distance schemes		75,000					X	X	X
- Contractual services	75,000						(25,000)	(25,000)	(25,000)
3. National workshops and seminars on drug policies with the participation of policy- and management-level staff from the various sectors involved		85,000							
							X	X	
National meetings	70,000						(35,000) (7 Mtgs.)	(35,000) (7 Mtgs.)	
Preparation of of didactic material based on case studies	15,000						X (15,000)		
4. Promotion of national drugs' policies based on the concept of essential drugs		25,000							
4.1 Schools of medicine								X	X
4.2 Schools of pharmacy								(15,000)	(10,000)
4.3 Schools of public health and others									
SUBTOTAL		210,000		15,000			85,000	75,000	35,000

DESCRIPTION	AMOUNT (US$)	1ST YEAR 1	1ST YEAR 2	1ST YEAR 3	1ST YEAR 4	2ND YEAR	3RD YEAR	4TH YEAR
SUBREGIONAL ORGANIZATION AND COORDINATION OF THE ESSENTIAL DRUGS PROGRAM IN CENTRAL AMERICA AND PANAMA								
1. Management and coordination training (2 fellowships, 3 months each)	18,000					X (18,000)		
2. Support to the national coordinating office responsible for the implementation of national policies (10,000/country)	60,000						X (30,000)	X (30,000)
3. Information and logistic support to national coordinating offices	12,000						X (6,000)	X (6,000)
4. Administrative support to subregional coordinator - Contractual services $600.00/month x 6	3,600		X (3,600)	X				
SUBTOTAL	93,600		3,600			18,000	36,000	36,000
T O T A L	612,100		139,100			153,000	176,000	138,000

PAHO-AID AGREEMENT
Grant No. 597-0136 (March/85)
ESSENTIAL DRUGS COMPONENT
WORK PLAN
Second year
April 1986.

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INTRODUCTION

During the first year of the Project, the objectives, strategy and scope of the Essential Drugs component were successfully promoted and explained to the national groups responsible for this priority area. Their endorsement of the Project and approval of the Workplan proposed for the first year provided the consensus needed to launch a significant number of subregional activities aimed at improving the supply and quality of the pharmaceuticals available in the Central American subregion. The initiatives undertaken ranged from direct technical assitance and studies to courses, workshops and the preparation of materials for educational and operational activities.

The Workplan for the second year of the Project builds not only upon the activities of the previous year but also upon the very positive working relationships established with the national groups and institutions. This relationship is expected to allow for a more active participation in Project activities of Central American professionals concerned with the supply and quality of pharmaceuticals in the subregion.

The Workplan for the second year of the PAHO/AID Project 597-0136 was discussed at the second Interinstitutional (Min. Health/PAHO/AID) Coordination Meeting held in Panama from 6 to 7 March 1986. The present document incorporates the activities approved and changes recommended by the participants at the meeting.

The presentation of the activities follows the structure of the Workplan developed for the first year. That is, activities and their assigned codes are divided into the following areas:

Area A: General Project Activities (includes planning, programming, coordination, control and evaluation).

Area B: Technical and Scientific Subsystem (includes technical and scientific activities required to support the establishments and operation of national drug supply systems.

Area C: Operational Subsystem (includes activities related to management, procurement, warehousing and distribution).

Area D: Information Subsystem (includes the collection and recovery of information required to support supply operations).

The first part of the document refers to the programmed activities, providing information to indicate, when required, whether an activity is the continuation of one initiated or postponed in the first year, and making reference to the corresponding activity code of the 1985 Workplan.

Where possible, the sites and dates of the activities are listed as well as the names of the specialized consultants proposed for these tasks.

The second part presents the costs per element of expenditure, for each one of the planned activities as well as a consolidated statement.

AREA A

GENERAL PROJECT ACTIVITIES

Planning, Programming, Coordination, Monitoring and Evaluation as well as other Global Activities

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
A.1	Development of 2nd. year workplan, 1 April-30 March, 1986					
	- Regional Advisor	x				HQS, Dr. Enrique Fefer
	- Principal Consultant	x				HQS, Dr. Ileana Santich
	- Project Manager	x				HQS, Dr. Irene Klinger
A.2	Planning, programming, coordination and general technical cooperation. Preparation of documents and progress reports, monitoring and evaluation					
	- Project Manager Duty travel	x	x	x	x	Dr. Irene Klinger
	- Regional Advisor Duty travel	x		x	x	Dr. Enrique Fefer
	- Principal consultant	x	x	x	x	Dr. Ileana Santich

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
A.3	. II Interinstitutional Meeting (Health Ministries/PAHO/AID) to review 2nd. year workplan. 1 April 1986-30 March 1987, 2 days.					Site: Panama Date: 6-7 march 86
	Participants:					
	- 3 PAHO/HQS	x				Drs. E. Fefer, I.
		x				Dr. I. Klinger
	- 1 AID/HQS	x				Dr. I. Santich
	- 1 AID/Country Offices	x				
	- 2 PAHO/CR-Panama	x				
	- 6 National staff CAP	x				
	- Consultant in charge of the coordination and preparation of meeting report	x				Lic. Amanda Pedraza
A.4	. Project evaluation meeting for the period April 1985-December 1986, and 3rd year programming				x	Site: Guatemala Date: March 87
	Participants:					
	- 3 PAHO/HQS				x	Drs. E. Fefer, I.
					x	Dr. I. Klinger
	- 6 PAHO/field offices				x	Dr. I. Santich
	- 6 AID/country offices				x	
	- 12 national staff from Central American countries				x	
	- 1 Consultant in charge of the coordination and preparation of meeting report				x	
A.5	. Development of 3rd year workplan: 1 April 1987-30 March 1988				x	January/February 1987
						Site: OC
	- Regional Advisor					Dr. E. Fefer
	- Principal Consultant					Dr. I. Santich
	- Project Manager					Dr. I. Klinger

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CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
A.6	(Continuation of Activity A.4/85) Development of country profiles on essential drugs, identification of ongoing projects and institutional resources	x				Dr. I. Santich

AREA B
TECHNICAL AND SCIENTIFIC SUBSYSTEMS

Technical and Scientific Activities Required for the Implementation and Operation of the National Drug Supply Systems

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.1	SELECTION OF DRUGS					
B.1.1	(Continuation of Activity B.1.1/85)					
	• Subregional workshop on Development and Implementation of National Formularies					Site: Panama Date: May
	Participants					
	- 3x4 countries (GUT, COR, ELS, HON, BEL)	x x				
	- 20 national observers	x				
	- 1 Consultant: Coordination	x				Lic. Amanda Pedraza
	- 1 Expert	x				Dr. Aida Le Roy
	- 1 Consultant	x				Dr. Albin Chaves
B.1.2	(Activity B.1.2/85 postponed)					
	• Technical cooperation in Guatemala for the unification of drug formularies used in the health sector, evaluation of the drug list for PHC, and development of therapeutics guid					
	- 1 Consultant (2 trips)		x			Dr. Albin Chaves o Dr. David Lee
	- 1 National expert		x	x	x	
B.1.3	• Technical assistance for the updating of national drug formularies and therapeutics guide Panama, Honduras, El Salvador					
	- 1 Consultant (2 trips)		x	x	x	Dr. Albin Chaves o Dr. David Lee
	- 2 National experts			x	x	

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2	DRUG QUALITY					
B.2.1	Management of Quality in the Drug Supply System					
B.2.1.1	(Activity B.2.1./85 reprogrammed) Definition of the function, structure and operation of the drug quality subsystem in the public sector					April 13 - May 4 Site: Mexico
	. Preparation of working document by a technical group					
	- 2 consultants (20d ea)	x				Dr. Nelly Marin Dr. Geraldo Fenerín
	- 1 national coordinator	x				Dr. María L. Castillo
	- 1 national expert	x				Dr. Horacio Olivera
	- 1 principal consultant	x				Dr. Ileana Santich
	- Administrative support	x				
	- Editing and publication of the working document	x				
B.2.1.2	. Regional workshop to evaluate the proposal for the restructuring of the quality function in the supply systems			x		Site: Panama, CPSS Date: October 1986
	- 3 participants x 4 countries (GUT, COR, ELS, HON)			x		
	- 6 national participants					
	- 1 Consultant to organize the workshop and prepare the report			x		Dr. María Luisa Castillo de Sánchez (Mexico)
	- 1 Consultant to organize the workshop and prepare the report			x		Lic. Amanda Pedraza (Colombia)
	- 2 Consultants (6d ea)					Caja Seguro Social Colombia Caja Seguro Social México
	- 1 Consultant PAHO					Lic. A. Waldrón
	- Supplies and materials					
	- Principal consultant					Dr. Ileana Santich
	- Publication and distribution of the final document				x	

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.1.3	. Technical cooperation for the implementation and/or improvement of the quality of the supply system (PAN, GUT, COR)					
	- 1 Consultant			x	x	Dr. María Luisa Castillo de Sánchez (México)
B.2.1.4	. Updating and publication of national guidelines for the development of national drug control systems					Washington, D.C., HQS
	- 1 Consultant (Revision)	x				Dr.Marcelo Vernengo
	- 1 Expert	x				Dr.A. Wertheimer (Univ. of Minnesota)
	- Editing, translation and publication					

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.2	Laboratory services					
B.2.2.1	(Continuation of Activity B.2.2.1/85 . Contract award for the development of the guidelines in design, construction, equipment and administration of the drug control laboratory (prototype) - Contractual services		x			Development of the scope of work and request bids Activity B.2.2.1/85
B.2.2.2	. Editing, publication and distribution of the manual on good laboratory practices - Supplies and materials	x				Document prepared and reviewed by the members of the Latin American Laboratory network (includes 7 Central American countries)
B.2.2.3	. Course on Contamination of Non-sterile products (3 wks.) - 1 Consultant - 7 participants (1 GUT; 1 ELS; 1 HON; 2 COR; 2 PAN) - Supplies and materials - Preparation of working agenda and course report - Publication			x x x x x		Site: LEA, Panamá Date: Octubre Dr. Nelly Caetano Dr. Nelly Caetano
B.2.2.4	. Preparation of the program and support material for courses on Laboratory Administration - Contractual Services - Publication	x	x	x	x	School of Public Health and National Reference Laboratory, México
B.2.2.5	. II Training Course on Testing of Antibiotics, insulin and other drugs with HPLC (4 wks.) - Supplies and materials - 7 Participants (2 GUT; 2 COR; 1 ELS; 1 HON; 1 PAN)		x			LUCAM, Guatemala Date: 2-28 June

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CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.2.6	. Participation of Central America and Panama in the regional course on Laboratory Safety - 8 Participants (2 GUT; 2 COR; 2 PAN; 1 ELS; 1 HON) - 1 Consultant (1 wk) - 1 Consultant (4d) - 4 National experts - Supplies and materials		x	x		Site: INCQS, Rio de Janeiro Brazil Date: Dr. Nilda Fernícola (ECO)
B.2.2.7	(Continuation Activity B.2.2.5/85) . Technical cooperation for the improvement of infrastructure in microbiological analysis, methodology and training for sterile testing in 4 countries - 1 Consultant - Supplies and materials			x	x	Date: Site:
B.2.2.8	(Continuation Activity B.2.2.6/85) . Implementation of a laboratory and training/service center for biological drug testing (Phase I) - 1 Consultant - Supplies and materials - 2 Participants (Panamá-Guatemala)	x x				Site: University of Costa Rica Dr. Adela Rosenkranz IEA-Panama LUCAM-Guatemala
B.2.2.9	. Technical cooperation for in service training in quality control of viral vaccines (two countries) - 1 Consultant				x	Site: Date:

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CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.3	Drug Registration Service					Dates: Panamá 5-15 May
B.2.3.1	(Continuation of Activity B.2.3.1/85)					Costa Rica 28 April-2 May
	. Technical cooperation for the development of the evaluation and registration services in Panama, Costa Rica and Guatemala					Guatemala
	- 1 Consultant					C. Selva
	- 1 Consultant (organization, procedures and legislation)	x	x			Dr. Raquel González ISPCH
	- 1 Consultant, systems analyst for the selection of equipment and data base design			x		Lic. R. Duque
	- Supplies and materials			x		
	- Technical/Administrative support to process the information (national contracts GUT, COR, PAN)			x		

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.4	Inspection Service					
B.2.4.1	(Activity B.2.4.2/85 reprogrammed)					Site: Public Health
	. I Theoretical/Practical Training					Institute, Chile
	Course on Inspections of the					Date: 2-28 June
	Pharmaceutical Industries,					
	Distributing Companies and Retail					
	Outlets (Theory and practice, 30 d)					
	- Contractual services	x				
	Public Health Institute, Chile					
	- 1 Expert F.D.A.	x				Sr. Edwin Rivera, FDA
	- 1 Consultant	x				Dr. Luis Trapaglia
	- 1 Consultant					Dr. Ileana Santich
	- 6 Participants:	x				
	1 GUT, 2 COR, 1 PAN, 1 HON, 1 ELS					
B.2.4.2	(Continuation of Activity B.2.4.1/85)					
	. Revision of the program and audio-					
	visual material for the training					
	course on inspections of the					
	pharmaceutical industries and					
	retail outlets, after the field					
	test (Activity B.2.4.1)					
	and assembly of ten training sets					
	- 1 Consultant					Dr. Luis Trapaglia
	- 1 Contractual Services		x			
	. - Supplies and materials		x			

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.2.4.3	(Continuation of Activity B.2.4.1 and B.2.4.2)					
	II Theoretical/Practical Training Course on Inspections of the Pharmaceutical Industries, Distributing Companies and Retail Outlets (Theory and practice, 30 d)			x		Site: Guatemala Date: November
	- Contractual services with the Unified Laboratory for Food and Drug Analysis			x		LUCAM, Guatemala
	- 1 Consultant F.D.A.			x		Mr. Edwin Rivera (F.D.A.)
	- 1 Consultant			x		Dr. Luis Trapaglia
	- 1 Consultant			x		Dr. Maria Luisa Castillo de Sánchez
	- 9 Participants (3 GUT; 2 COR; 1 ELS; 1 HON; 2 PAN)			x		

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.3.	PHARMACEUTICAL AND PHARMACOLOGICAL INFORMATION					
B.3.1	(Continuation of Activity B.3.1/85)					
	. Selection, purchase and distribution of reference materials to national institutions	x	x	x	x	Dr. Carmen Selva
B.3.2	. Technical cooperation for the identification of national institutions capable of organizing information centers on pharmacology and toxicology, as well as preparation of projects for implementation and development. Six countries.					
	- 1 Consultant		x	x	x	Dr. Vanessa Balleza de de Paris (Venezuela)
					x	
.3	. Seminar/Workshop on Organization and Operation of National Information Centers on Pharmacology and Toxicology (5 days)					
	- 5 Participants (1 GUT; 1 COR; 1 ELS; 1 HON; 1 PAN)				x	Site:
	- Supplies				x	CEDIMED, Venezuela
	- Consultant				x	Dr. A. García Iñesta (Spain)
	- PAHO Advisor Regional Program				x	Dr. Carmen Selva
	- Contractual Services				x	Dr. Vanessa B. de Paris
B.3.4	(Continuation of Activity B.3.1/85)					
	. Annual Meeting of the International Society of Drug Bulletins					Date: August
	- 1 Participant		x			Dr. David Lee

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CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.3.5	. Collaboration in the development of national information bulletins on pharmacology and toxicology.					
	- Preparation of guidelines for the publication of national bulletins					Conclusion of Activities B.3.2/85 y B.3.4/86
	- Preparation of addendum to Carta Medica (quarterly issues)				x	Dr. David Lee
	- Publication and distribution				x	PASCAP

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CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.4	DEVELOPMENT OF HUMAN RESOURCES					
B.4.1	Continuing education for pharmacists and health personnel attached to the drug supply system					
B.4.1.1	. Grant to the International Health Council (USA) for the Evaluation of Pharmacy Curriculae in the countries of Central America and Panama	x x x	x x x	x x x	x x x	Dr. Enrique Fefer Dr. Ileana Santich
B.4.1.2	(Continuation of Activity B.4.1/85). . Grant to CENDEISSS for the preparation of the program and support material for the courses in hospital pharmacy - 1 Regional Advisor - Principal Consultant - 1 Consultant - Subcontract	 x	 x			 Dr. Enrique Fefer Dr. Ileana Santich Dr. J. Bonal (Spain)
B.4.1.3	Support to the I National Course in Hospital Pharmacy.	x				Site: Costa Rica Date:

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.4.2	(Continuation of Activity B.4.2/85)					
	. Technical cooperation to ICAP for the development of educational material for the courses in Administration of the Drug Supply System					
	- 1 Regional Advisor		x		x	Dr. Enrique Fefer
	- Principal Consultant					Dr. Ileana Santich
	- 1 Consultant (2 trips)		x		x	Dr. Ma. Luisa Castillo
	- 1 Consultant		x			Dr. Alejandro Malacaracas
	- Contractual Services (ICAP)					
B.4.3	. Subregional course in Clinical Pharmacology (1 wk)					Costa Rica University
	- 17 Participantes (4 per country) (GUT; HON; ELS; PAN) (1 BEL)		x			Dr. V. Campos Dr. P. De Sovich Dr. Carlos Dujovne (USA) Dr. Carlos Naranjo (CAN) (IASCF)
	- Gastos locales					
	- Publication of course material					
	- Grant to ISCFT	x				
B.4.4	. Subregional course in essential drugs, bioavailability, bioequivalence and rationalization (5 days)					Site: I.E.A. University of Panamá Date: September
	- Locas expenses	x				
	- 1 Consultant	x				
	- 10 participants (3 GUT, 2 HON, 2 ELS, 3 COR)	x				
B.4.5	. Translation of WHO model curriculum on drug policy and rational use of essential drugs					
	- Translation	x				
	- Publication	x				

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.4.6	Support to CENDEISSS, for the implementation of the continuing education program on rational utilization of drugs for physicians and pharmacists in three regions and development of three additional modules	x				Costa Rica

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
B.5	DRUG UTILIZATION AND ADVERSE REACTIONS					
B.5.1	(Continuation of Activity B.5.1/85)					
	• Implementation of drug utilization and adverse reaction programs					
	- Second phase		x			Contract awarded to Health Information Designs (USA) See project document Activity B.5.1
	- Supplies and materials	x				Two micro computers to implement the system (IBM-PC)

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AREA C
OPERATIONAL SUBSYSTEM OF DRUG SUPPLY

Activities Related to Administration (Planning, Programming, Monitoring and Evaluation), Procurement, Storage and Distribution

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
C.1	ADMINISTRATION					
C.1.1	. Complete the document on integral approach in drug supply			x		Dr. I. Santich
	- Supplies and materials					
C.1.2	. National workshops on policies and programs for the development of comprehensive drug supply systems in the health sector (1 day)					Addressed to the policy and decision making level staff in the public health sector
	. Development of materials					Site: each country, starting in Guatemala
	- 1 Consultant	x				Dr. G. Gereffi
	- 1 Consultant	x				Dr. C. Castaño
	- Supplies and materials	x				
	. Development of a workshop in Guatemala					
	- Consultants (2 x 6d)			x	x	Dr. G. Gereffi Dr. C. Castano
	- Supplies and materials					

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
C.2	PROCUREMENT					
C.2.1	(Continuation of Activity C.2.2/85)					
	. Workshop on analysis of current procurement procedures for essential drugs, identification of problem areas and proposals for improvement 6 countries (4 days)					Date: Site: Panama
	- 13 Participants: 2 GUT; 2 COR; 4 PAN; 2 HON; 2 ELS; 1 BEL			x		
	- 1 Consultant for organization of the meeting and preparation of report			x		Lic. Amanda Pedraza
	- 1 Consultant			x		
	- 1 Consultant/PAHO Supply Systems					Lic. A. Waldrón
	- Regional advisor			x		Sr. Peter Carr
C.2.2	(Activity C.2.1/85 reprogrammed)					
	. Preparation of criteria for essential drug procurement					
	- Contractual Services				x	

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
C.3	STORAGE AND DISTRIBUTION					
C.3.1	(Continuation of Activity C.3.1/85)					
	. Preparation guidelines for warehouse prototypes, planning, design and construction	x	x	x	x	Contract awarded during the 4th trimester of the 1st year of the project
	- 1 Consultant for follow-up and evaluation					Mr. H. Knutsen
	- Consultive meeting with the countries (2 days)					El Salvador
C.3.2	. Advisory services for the evaluation of the cost and efficiency of alternative systems for the distribution of essential drugs in the public sector					
	. Development of evaluation instrument					
	- 1 Consultant		x			
	- 1 Regional Advisor					Mr. Peter Carr
	. Field test of instrument in one country					
	- 1 Consultant			x		Site: El Salvador o Panama

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
C.4	TECHNICAL COOPERATION FOR THE DEVELOPMENT/IMPROVEMENT OF COMPREHENSIVE DRUG SUPPLY SYSTEMS					
C.4.1	. Technical cooperation for the development of a comprehensive drug supply system in Belize - Consultant - Supplies and materials	x	x	x	x	
C.4.2	. Technical cooperation to support the development of the hospital drug supply system in Guatemala - 2 Consultants			x	x	Lic. A. Waldron (3m)
C.4.3	. Technical cooperation to support the development of the drug supply system for the Social Security Institute in Panama - 1 Consultant	x	x			
C.4.4	. Technical cooperation to support the development of the drug supply system for the Social Security Institute in Costa Rica - 1 Consultant			x		Lic. A. Waldrón
C.4.5	Technical cooperation to support the development of the drug supply system for the Ministry of Health in Honduras - 1 Consultant			x		

AREA D
INFORMATION SUBSYSTEM

CODE	DESCRIPTION	TRIMESTER 1o.	2o.	3o.	4o.	OBSERVATIONS
D.1	DESIGN AND OPERATION OF AN INFORMATION SYSTEM ON DRUGS PRICES AND SUPPLIERS					
D.1.2	(Continuation of Activity D.1.2/85)					
	. Meeting for the implementation of the exchange of information system (4 days)					Site: Caja Costarricense del Seguro Social
	- 5 Participants: GUT; ELS; HON; PAN	x				
	- 5 Participants Costa Rica					
	- Advisor PAHO/HQS	x				Dr. C. Selva
	- 1 Consultant					Dr. Carlos Ferrero
	- 1 Local Consultant					Ing. Luis Arturo Hernández
	- Local expenses	x				
	- Contractual services, contracts with national staff. Focal points (5 countries)	x				
D.1.3	. Follow-up of activity D.1					
	- 1 Consultant (2 trips x 15d ea)		x		x	Dr. Carlos Ferrero

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AREA A

GENERAL PROJECT ACTIVITIES

Planning, Programming, Coordination, Monitoring and Evaluation
as well as other Global Activities

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
A.1	. Development of 2nd. year workplan (1 April - 30 March, 1986)		STC/P 30d 1/ *Project Manager **Regional Advisor	-	-	-	-
	Total						
A.2	. Planning, programming, coordination and general technical cooperation. Preparation of documents and progress reports, monitoring and evaluation.		STC/P - 300d - 66,900 D. Travel 60d. 12,000 Project Manager Regional Advisor	-	-	-	-
	Total		78,900	-	-	-	78,900
A.3	. II Interinstitutional Meeting (Health Ministries/PAHO/AID) to review 2nd. year workplan. 1 Abril 1986 - 30 March 1987 (2 days) Participants: 6 National Staff CAP	6	STC/P - 7d 1/ STC/P - 15d 3,345 D. Travel - 6d 1,200 Project Manager Regional Advisor	$3,150		-	-
	Total	6	4,545	$3,150		-	7,695

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
A.4	. Project evaluation meeting for the period April 1985 - December 1986, and 3rd year programming Participants: 12 national staff from CAP	12	Project Manager Regional Advisor STC - 15d 1/ STC - 20d 4,460 D Travel 32d 6,400	8,400			
	Total	12	10,860	8,400			19,260
A.5	. Development of 3rd year workplan: 1 April 1987 - 30 March 1988	-	STC/P - 30d 1/ Regional Advisor Project Manager				
	Total						
A.6	. (Continuation of Activity A.4/85) Development of country profiles on essential drugs, identification of ongoing projects and institutional resources		STC/P 1/				
	TOTAL						

AREA B

TECHNICAL AND SCIENTIFIC SUBSYSTEMS

Technical and Scientific Activities Required for the Implementation and Operation of the National Drug Supply Systems

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.1	SELECTION OF DRUGS						
B.1.1	(Continuation of Activity B.1.1/85) • Subregional workshop on Development and Implementation of National Formularies Participants - 3 x 4 country (GUT, COR, ELS, HON) - 1 x Belize 26-30 Mayo PAN	13	STC - 37d $8,251	$11,375			
	TOTAL	13	8,251	11,375			19,626
B.1.2	(Activity B.1.2/85 postponed) • Technical cooperation in Guatemala for the unification of drug formularies used in the health sector, evaluation of the drug list for PHC, and development of therapeutics guide		STC - 30d 6,690 Contracts 4,000				
	TOTAL		10,690				10,690
B.1.3	• Technical assistance for the updating of national drug formularies and therapeutics guide Panma, Honduras, El Salvador		STC - 40d 8,920 Contracts 4,000				
	TOTAL		12,920				12,920

[illegible] contrato
15d. [illegible]

CODE	DESCRIPTION	No. of Participants *	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.2	DRUG QUALITY						
B.2.1	Management of Quality in the Drug Supply System						
B.2.1.1	(Activity B.2.1./85 reprogrammed) Definition of the function, structure and operation of the drug quality subsystem in the public sector		STC - 40d 8,920 STC - 20d 4,460 STC/P - 10d 1/ Contracts 60d 3,500		3,000		
	TOTAL		16,880		3,000		18,880
B.2.1.2	. Regional workshop to evaluate the proposal for the restructuring of the quality function in the supply systems - 3 participants x 4 countries (GUT, COR, ELS, HON) - 6 national participants/Panamá Dic 1-5	18	STC - 50d 11,150 STC - 10d/1	12,900	4,000		
	TOTAL	18	11,150	12,900	4,000		28,050
B.2.1.3	. Technical cooperation for the implementation and/or improvement of the quality of the supply system (PAN, GUT, COR)		STC - 90d 20,070				
	TOTAL		20,070				20,070

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.2.1.4	. Updating and publication of national guidelines for the development of national guidelines for the development of national drug control systems		STC - 7d 1,561 D. Travel - 15d 3,000		10,000		14,561
	TOTAL		4,561		10,000		14,561
B.2.2	Laboratory services						
B.2.2.1	(Continuation of Activity B.2.2.1/85) . Contract award for the development of the guidelines in design, construction, equipment and administration of the drug control laboratory (prototype) Samuel Epstein prepare plantas		Contracts 45,000				
	TOTAL		45,000				45,000
B.2.2.2	. Editing, publication and distribution of the manual on good laboratory practices				5,000		
	TOTAL				5,000		5,000
B.2.2.3	. Course on Contamination of Nonsterile products (3 weeks) - participants (1 GUT; 1 ELS; 1 HON; 2 COR; 2 PAN)	7	STC - 30d 6,690 Contracts 1,000	15,525	6,000		
	TOTAL		7,690	15,525	6,000		29,215
B.2.2.4	. Preparation of the program and support material for courses on Laboratory Administration		Contracts 15,000 13,200		10,000		Ex. Salud P. mex,
	TOTAL		15,000		10,000		25,000

Against 85-85 budget funds

CODE	DESCRIPTION	No. of Participants *	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.2.2.5	. II Training Course on Testing of Antibiotics, insulin and other drugs with HPLC (4 weeks) - Participants (2 GUT; 2 COR; 1 ELS; 1 HON; 1 PAN) LUCAM-GUA 2-28 Junio	7		22,190	5,000		
	TOTAL	7		22,190	5,000		27,190
B.2.2.6	. Participation of Central America and Panama in the regional course on Laboratory safety. Participants: (2 GUT; 2 COR; 2 PAN; 1 ELS; 1 HON)	8	STC - 7d 1,561 Duty travel 5d 1,000 Contracts 2,000	18,560	2,000		
	TOTAL	8	4,561	18,560	2,000		25.121
B.2.2.7	(Continuation Activity B.2.2.5/85) . Technical cooperation for the improvement of infrastructure in microbiological analysis, methodology and training for sterile testing in 4 countries		STC - 90d 26,760		10,000		
	TOTAL		26,760		10,000		36,760
B.2.2.8	(Continuation Activity B.2.2.6/85) . Implementation of a laboratory and training/service center for biological drug testing (Phase I) - ~~2 Participants (Panamá-Guatemala)~~ no procedía.	2	STC - 120d 26,760 Aida Rosenmann	3,653 (insaluna)	10,000		
	TOTAL	2	26,760	3,653	10,000		40,413

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.2.2.9	• Technical cooperation for in service training in quality control of viral vaccines (two countries)		STC - 30d 6,690				
	TOTAL		6,690				6,690
B.2.3	Drug Registration Service						
B.2.3.1	(Continuation of Activity B.2.3.1/85) • Technical cooperation for the development of the evaluation and registration services in Panama, Costa Rica and Guatemala		STC - 180d 40,140 Duty travel - 21d 4,200 Contracts 7,000		3,000		
	TOTAL		51,340		3,000		54,340
B.2.4	Inspection Service						
B.2.4.1	(Activity B.2.4.2/85 reprogrammed) • I Theorical/Practical Training Course on Inspections of the Pharmaceutical Industries, Distributing Companies and Retail Outlets (Theory and practice, 30d) - Participants 1 GUT, 2 COR, 1 PAN, 1 HON, 1 ELS Chile 2-28 junio	6	STC - 50d 11,150 STC/P - 10d 1/ Contracts 5,000	26,100			
	TOTAL	6	16,150	26,100			42,250

CODE	DESCRIPTION	No. of Participants *	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.2.4.2	(Continuation of Activity B.2.4.1/85) Revision of the program and audio-visual material for the training course on inspections of the pharmaceutical industries and retail outlets, after the field test (Activity B.2.4.1) and assembly of ~~4~~ 20 training sets		STC - 15d 3,345 Contracts 1,500		30,000		
	TOTAL		4,845		30,000		34,845
B.2.4.3	(Continuation of Activity B.2.4.1 and B.2.4.2) II Theorical/Practical Training Course on Inspections of the Pharmaceutical Industries, Distributing Companies and Retail Outlets (Theory and practice, 30d) - Participants (3 GUT; 2 COR; 1 ELS; 1 HON; 2 PAN) LUCAM-GUA NOV.	9	STC - 60d 13,380 Contracts 5,000	26,700			
	TOTAL	9	18,380	26,700			45,080
B.3.	PHARMACEUTICAL AND PHARMACOLOGICAL INFORMATION						
B.3.1	(Continuation of Activity B.3.1/85) Selection, purchase and distribution of reference materials to national institutions			5,000			
	TOTAL				5,000		5,000

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.3.2	. Technical cooperation for the identification of national institutions capable of organizing information centers on pharmacology/toxicology as well as preparation of projects for implementation and development.		STC - 90d 20,070				
	TOTAL		20,070				20,070
B.3.3	. Seminar/Workshop on Organization and Operation of National Information Centers on Pharmacology and Toxicology (5d) - Participants (1 GUT; 1 COR; 1 ELS; 1 HON; 1 PAN)	5	STC - 6d 1,338 D. travel 6d 1,200 Contracts 1,500	4,350	3,000		
	TOTAL	5	4,038	4,350	3,000		11,388
B.3.4	(Continuation of Activity B.3.1/85) . Annual Meeting of the International Society of Drug Bulletins Estocolmo (D. Lee)	1		2,000			
	TOTAL	1		2,000			2,000
B.3.5	. Collaboration in the development of national information bulletins on pharmacology and toxicology - Preparation of guidelines for the publication of national bulletins - Preparation of addendum to Carta Médica (quarterly issues) - Publication and Distribution		Contracts 2,000		5,000		
	TOTAL		2,000		5,000		7,000

CODE	DESCRIPTION	No. of Participants *	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.4	DEVELOPMENT OF HUMAN RESOURCES						
B.4.1	Continuing education for pharmacists and health personnel attached to the drug supply system						
B.4.1.1	Grant to the International Health Council (USA) for the Evaluation of Pharmacy Curriculae in the countries of Central America and Panama		STC/P 1/ Regional Advisor			20,000	
	TOTAL					20,000	20,000
B.4.1.2	(Continuation of Activity B.4.1/85) Grant to CENDEISSS for the preparation of the program and support material for the courses in hospital pharmacy		STC/P - 7d 1/ D.Travel 7d 2/ STC - 7d 1,561 Contracts 20,000				
	TOTAL		21,561				21,561
B.4.1.3	Support to the I National Course in Hospital Pharmacy					2,000	2,000
	TOTAL					2,000	2,000

2/ Budgeted in A.2

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.4.2	(Continuation of Activity B.4.2/85) . Technical cooperation to ICAP for development of educational material for the courses in Administration of the Drug Supply System		STC/P - 10d 1/ STC - 30d 6,690 D.Travel 10d 1/ Contracts (390) 40,000				
	TOTAL		46,690				46,690
B.4.3	. Subregional course in Clinical Pharmacology (1 wk) (GUT; HON; ELS; PAN) (1 BEL) 9-13 June in COR 4 hac	17		14,790	1,500	15,500	
	TOTAL	17		14,790	1,500	15,500	31,790
B.4.4	. Subregional course in essential drugs, bioavailability, bioequivalence and rationalization (5 days) - 10 participants (3 GUT, 2 HON, 2 ELS, 3 COR)	10 (5 dias)	STC - 15d 3,345	8,700	6,000		
	TOTAL	10	3,345	8,700	6,000		18,045
B.4.5	. Translation of WHO model curriculum on drug policy and rational use of essential drugs				3,500		
	TOTAL				3,500		3,500

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
B.4.6	• Support to CENDEISS, for the implementation of the continuing education program on rational utilization of drugs for physicians and pharmacists in three regions and development of three additional modules.		Contracts 4,000				
	TOTAL		4,000				4,000
B.5	DRUG UTILIZATION AND ADVERSE REACTIONS						
B.5.1	(Continuation of Activity B.5.1/85) • Implementation of drug utilization and adverse reaction programs		Contracts 165,000		14,000		
	TOTAL		165,000		14,000		179,000

AREA C

OPERATIONAL SUBSYSTEM OF DRUG SUPPLY

Activities Related to Administration (Planning, Programming, Monitoring and Evaluation), Procurement, Storage and Distribution

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
C.1	ADMINISTRATION						
C.1.1	. Complete the document on integral approach in drug supply		STC/P - 1/		3,000		
	TOTAL				3,000		3,000
C.1.2	. National workshops on policies and programs for the development of comprehensive drug supply systems in the health sector (1 day)		STC - 40d				
	. Development of materials						
	TOTAL		8,920		2,000		10,920
C.2	PROCUREMENT						
C.2.1	(Continuation of Activity C.2.2/85)	13	STC - 40d 8,920	6,685			
	. Workshop on analysis of current procurement procedures for essential drugs, identification of problem areas and proposals for improvement 6 countries (4 days) - Participants 2 GUT; 2 COR; 4 PAN; 2 HON; 2 ELS; 1 BEL		D.Travel 10d 2,000				

(estamos (viendo) de ver el de A.P. y devuelva luego para (luego workshop) por si Wayman puede

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
C.2.2	(Activity C.2.1/85 reprogrammed) . Preparation of criteria for essential drug procurement		Contracts 2,500				
	TOTAL		2,500				2,500
C.3	STORAGE AND DISTRIBUTION						
C.3.1	(Continuation of Activity C.3.1/85) . Preparation of guidelines for warehouse prototypes, planning, design and construction		Contracts 205,000	3,150			
	TOTAL		205,000	3,150			208,150
C.3.2	. Advisory services for the evaluation of the cost and efficiency of alternative systems for the distribution of essential drugs in the public sector		STC - 50d 11,150 D.Travel 30d 6,000				
	TOTAL		17,150				17,150
C.4	TECHNICAL COOPERATION FOR THE DEVELOPMENT/IMPROVEMENT OF COMPREHENSIVE DRUG SUPPLY SYSTEMS						
C.4.1	. Technical cooperation for the development of a comprehensive drug supply system in Belize		STC - 180d 40,140		10,000		

Unacceptable participation supplies offer in MSH/USAID GHA.

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
C.4.2	. Technical cooperation to support the development of the hospital drug supply system in Guatemala		STC - 120d 26,760				
	TOTAL		26,760				26,760
C.4.3	. Technical cooperation to support the development of the drug supply system for the Social Security Institute in Panama P. Lebaza 16/5/86-16/6/86		STC - 120d 26,760				
	TOTAL		26,760				26,760
C.4.4	. Technical cooperation to support the development of the drug supply system for the Social Security Institute in Costa Rica		STC - 60d 13,380				
	TOTAL		13,380				13,380
C.4.5	Technical cooperation to support the development of the drug supply system for the Ministry of Health in Honduras		STC - 120d 26,760				
	TOTAL		26,760				26,760

ESSENTIAL DRUGS PROGRAM CAP. TENTATIVE BUDGET FOR IV/86-III/87

CODE	RESOURCE / ACTIVITY	A.1	A.2	A.3	A.4	A.5	A.6	B.1.1	B.1.2	B.1.3	B.2.1.1	B.2.1.2	B.2.1.3	B.2.1.4	B.2.2.1	B.2.2.2	B.2.2.3	B.2.2.4	B.2.2.5
040	SHORT TERM CONSULT.	0	66900	3345	4460	0		8251	6690	8920	13380	11150	20070	1561			6690		
230	DUTY TRAVEL		12000	1200	6400									3000					
390	CONTRCTS								4000	4000	3500				45000		1000	15000	
550	EQUIPMENT										3000	4000		10000		5000	6000	10000	5000
820	COURSES & SEM.			3150	8400			11375				12900					15525		22190
830	GRANTS																		
TOTAL		0	78900	7695	19260	0	0	19626	10690	12920	19880	28050	20070	14561	45000	5000	29215	25000	27190

CODE	RESOURCE / ACTIVITY	B.2.2.6	B.2.2.7	B.2.2.8	B.2.2.9	B.2.2.10	B.2.3.1	B.2.4.1	B.2.4.2	B.2.4.3	B.3.1	B.3.2	B.3.3	B.3.4	B.3.5	B.3.6	B.4.1.1	B.4.1.2	B.4.1.3
040	SHORT TERM CONSULT.	1561	26760	26760	6690		40140	11150	3345	13380		20070	1338					1561	
230	DUTY TRAVEL	1000					4200						1200						
390	CONTRCTS	2000					7000	5000	1500	5000			1500		2000			20000	
550	EQUIPMENT	2000	10000	10000			3000		30000		5000		3000		5000				
820	COURSES & SEM.	18560		3653				26100		26700			4350	2000					
830	GRANTS																20000		2000
TOTAL		25121	36760	40413	6690	0	54340	42250	34845	45080	5000	20070	11388	2000	7000	0	20000	21561	2000

CODE	RESOURCE / ACTIVITY	B.4.2	B.4.3	B.4.4	B.4.5	B.4.6	B.5.1	C.1.1	C.1.2	C.2.1	C.2.2	C.3.1	C.3.2	C.4.1	C.4.2	C.4.2	C.4.4	C.4.5	B.1.2	B.1.3	TOTAL
040	SHORT TERM CONSULT.	6690		3345					8920	8920			11150	40140	26760	26760	13380	26760	1821	6690	485508
230	DUTY TRAVEL									2000			6000						1000		38000
390	CONTRCTS	40000				4000	165000				2500	205000							14400		547400
550	EQUIPMENT		1500	6000	3500		14000	3000	2000					10000					600		151600
820	COURSES & SEM.		14790	8700						6685		3150							4375		192603
830	GRANTS		15500																		37500
TOTAL PROGRAMMED		46690	31790	18045	3500	4000	179000	3000	10920	17605	2500	208150	17150	50140	26760	26760	13380	26760	22196	6690	1452611
13% PROGRAM SUPPORT COSTS																					188839
GRAND TOTAL																					1641450

AREA D
INFORMATION SUBSYSTEM

Includes mechanisms for data collection and recovery manual o computarizada de datos to support supply activities

CODE	DESCRIPTION	No. of Participants	Consultants Temp. Advisors (040) Duty Travel (230) Subcontracts (390)	Registration, Travel and Perdiem Participants (820)	Supplies and Materials (550)	Grants (830)	Total
D.1	DESIGN AND OPERATION OF AN INFORMATION SYSTEM ON DRUGS PRICES AND SUPPLIERS						
D.1.2	(Continuation of Activity D.1.2/85)	10	Temp.Adv. 7d 1,821	4,375	600		
	. Meeting for the implementation of the exchange of information system (4 days)		Contracts 14,400				
	- Participants: GUT; ELS; HON; PAN		D.Travel 5d 1,000				
	- Participants Costa Rica (5)						
	TOTAL		17,221	4,375	600		22,196
D.1.3	. Follow-up of Activity D.1 - 1 Consultant (2 trips x 15 d ea)		STC - 30d 6,690				
	TOTAL		6,690				6,690

STC = Short Term Consultant
TA = Temporary Advisor

TOTAL	1,452,611.00
13% PSC	188,839.00
	1,641,450.00

Doc.0847N
04/21/86
English Version

PAHO-AID Agreement
Grant No. 597-0136
II Progress Report
January - June, 1986

Malaria Component

I. Introduction

Project No. 597-0136 was approved in March 1985, and, after completing preliminary consultations and planning activities started operations in July, 1985.

The project has now completed one year of activities, which, in accordance with the work plan were aimed at institutional strengthening and training of personnel. As of the second year training will continue but operational research has been added to the work plan.

The present document (Second Progress Report) constitutes a follow-up of the project since January 1986. The first report was presented to the Ad-hoc Technical Advisory Committee (II-TAC) and to the Directors of National Malaria Programs of Central America and Panama (18-21 February 1986) during meetings held at the School of Public Health and Tropical Medicine of Tulane University, in New Orleans, LA.

II Analysis of activities

For easy reference this analysis has been prepared following the grouping and coding of activities presented in the "Work Plan - Second Year - April 1986 - Malaria Component".

A. Technical cooperation for the planning, execution and evaluation of malaria prevention and control programs

A "Second Year Work Plan" was prepared in consultation with the Directors of National Malaria Programs of Central America, Panama and Belize, and with the participation of the Ad-hoc technical advisory Committee (II-TAC) in New Orleans, February 1986. In addition, a sub-committee of the II-TAC was convened at PAHO/HQs on March 25, 1986 with the purpose of:

- establishing general guidelines for research review procedures;
- selecting areas elegible for support from the project;
- adopting general procedures for review and approval of proposals; and
- recommending distribution of funds (ceilings) for specific projects.

The recommendations of the sub-committee were incorporated into the "Second Year Work Plan", which was submitted in April, 1986, completing activities A.1 thru A.4 of the plan.

PAHO has continued to provide technical and administrative support to the project through its own staff at HQs and in the field. When judged necessary, temporary advisors have been invited to support specific activities as listed in the budget lines, such as A.5, A.6 and A.7.

The review of experiences, evaluation of methodology and adoption of strategies for malaria control have been an ongoing activity in the sub-region (CAP) but it is felt that a more formal review would be justified in the light of the recommendations of the 18th WHO Expert Committee on Malaria, as they could be implemented in AMRO and in CAP.

It is anticipated that external funding will become available in the near future to strengthen field operations in the 4 most affected countries of the Sub-Region. As soon as this possibility materializes, it will be necessary to reformulate their programs. Present training and planned research activities supported by the PAHO-AID Agreement will facilitate the implementation of the new programs.

Regarding the development of research protocols, preliminary steps have been taken to develop this activity during the second semester, 1986.

B. Definition of criteria and orientation of the malaria stratification process

A workshop was carried out in Panama (B.1) during the month of April, 1986, as planned, to draft general guidelines which must be tested in the field and adapted to individual country situations.

Other activities regarding collection of data, utilization of computer programs and updating of the vigilance and information system are being planned for the second semester, 1986. (B.2-through B.7). However, it is to be noted that this process involves the identification of different variables influencing the problem and the decision making process related to the best utilization of resources. Therefore, while the general criteria should be ready by the end of the year, the application under varying field conditions should be considered an ongoing process, which should continue for the duration of the program, in order to introduce the necessary adjustments.

C. Courses and seminars on medical entomology, vector control, epidemiological research and environmental sanitation

A Medical Entomologist (Ph.D.) has been recruited as a consultant to provide support to training activities in the Sub-region and is now stationed in Panama (C.1). The Consultant works closely with staff from PAHO, the University of Panama and with other institutions.

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A major portion of the time of the consultant is devoted to courses on medical entomology and vector control organized in Panama, but he is also available to support training and research activities in other countries, and, during the period participated in the organization of a workshop on "research methodology" to be given in Honduras (July 7-18) with the support of PAHO, Ministry of Health, University of Honduras and PASCAP.

Regarding the preparation of Manuals (C.2) planning activities have started with the participation of outside consultants.

Institutional strengthening (C.3) has been targeted on: University of Panama, in Panama; and PASCAP in Costa Rica. In addition, limited support in terms of curricula review has been provided to the School of Malariology, Ministry of Health, Maracay, Venezuela.

Fellowships have been provided for participants to attend courses given by the institutions mentioned above (C.4, C.5).

A new course on Epidemiology of Vector Borne Diseases, leading towards a Master's degree, is being organized in Venezuela as a joint venture of the Ministry of Health and the University of Carabobo. The course would have about 18 months duration, including the academic component and the preparation of a thesis. If all goes according to the proposed schedule, the first course will be given in 1987-1988.

During the I-Semester, 1986, the project has been very active in the organization and support to courses and seminars:

(a) Courses of more than 21 days and less than 90:

- Comprehensive vector control, USC (act. C.6). Announcements have been issued for this course which is schedulled to take place at The Wedge, South Carolina from 8 September, through 17 October 1986. Fellowships will be awarded to CAP candidates.

- Serological diagnosis techniques for parasitic diseases (act. C.7), university of Sao Paulo. This course has been announced for the period August 4 - September 30, 1986, and it has been designed for specialized port-graduate training. Up to 5 fellowships would be awarded to University level candidates with solid experience and laboratory facilities where they can apply newly acquired knowledge.

- Management for middle level personnel (act. C.8). Consultations are underway to carry out this course during the second semester, 1986, utilizing facilities of the Ministry of Health of Guatemala, at Quirigua. Course announcements have not been issued as yet.

(b) Short Courses or Seminars of 21 days or less:

- Preparation of teaching materials and audiovisual aids (C.9). This course was given by PASCAP in San Jose, Costa Rica, from 19 through 30 May 1986, with 19 participants: Guatemala, El Salvador, Honduras, Costa Rica, Panama (3 candidates each), Belize and Nicaragua (2 candidates each). The last two candidates were supported utilizing other sources. No project funds were involved.
  The participants of the course were divided into 3 groups for the preparation of:

  - audio-visuals (synchronized slides and sound to teach laboratory techniques);
  - mini TV programs (cycle of parasite);
  - marionettes or puppet shows (health education-malaria).

  Each group prepared a final product (15') for demonstrations.

- Educational technology and occupational profiles (C.10).

  This workshop was carried out by PASCAP in San Jose, Costa Rica, from 31 March through 11 April 1986, with 17 participants; from Guatemala (3), El Salvador (3), Honduras (3), Panama (3) and Costa Rica (5). No candidates from Belize or Nicaragua participated in this exercise.

  The workshop focussed on the following subjects:

  - Malaria in the Subregion (CAP);
  - Continuing Education;
  - Extended learning (educación a distancia);
  - Preparation of occupational profiles;
  - Educational profiles; and
  - Practical exercises.

- Seminars on Development of Malaria Control within the context of PHC. (C.11).

  These seminars are in the planning stages.
  The Community participation component will be the subject of a consultative meeting in Honduras (7-11 July 1986) to adopt general guidelines for the activities to be carried out during the second semester.

- Seminars on Epidemiology and Control of Malaria (C.12).

  These seminars constitute continuing activities of the malaria and general health services. An evaluation will be carried out in the second semester in order to assess:

  - Seminars carried out with support from PAHO/HQs. to train the trainers;
  - Seminars carried out by the countries (multiplying effect);

- Profesional profile of participants;
- Evaluation of the process (tools or modules used);
- Evaluation of impact, in terms of articulation of malaria and general health services.

Final outcome, in terms of changes in attitude, improvement of the program, prevention of mortality and reduction of morbidity are dependent upon multiple interventions. These aspects should also be evaluated through a research oriented activity, in selected areas, at a later stage.

- Short Course on Emergency Control of A. aegypti (C.13).

This course was given in Panama in April 1986, and was supported by PAHO-AID funds, PAHO/regular and funds remaining from a Netherlands research grant on A. aegypti.

The course included participants, from the following countries: Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay and Venezuela. Only elegible candidates from CAP countries participating in the PAHO-AID Agreement were supported with AID funds. The rest of the candidates participated with support from other sources.

- Short course on insecticide application techniques and spraying equipment (C.14).

This course has been scheduled to take place in Panama, from the 13 through 31 of October 1986. Course announcements have already been sent out to potential candidates of the Region.

There is heavy-demand for this type of training. Duration of the course was extended from the original 2 weeks to a new 3 week schedule. Preference will be given to candidates who could not be accommodated in the previous courses on this subject.

- A workshop on research methodology (C.15) will be carried out in Tegucigalpa, Honduras, with a 2 week duration, from 7 through 18 July 1986. This course will accommodate around 20 participants, most of them from CAP countries, and a few from neighboring countries of the Region.

- International course, on updating of medical entomology. This course, which was schedulled in accordance with the first work plan, was given in Panama (3-28 February) and in Guatemala (1-4 March 1986). The course was attended by 17 participants from 11 countries, as follows:

Belice, Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama and Peru. Only elegible candidates from CAP countries participating in the PAHO-AID Agreement were supported with AID funds. The rest of the candidates participated with support from other sources.

D. Development of the Methodology for Socio-economic and ecological research on malaria

Steps have already been taken for the development of a protocol for the study of the ecology, biology, vectorial capacity and control of A. albimanus in the Pacific Coast of Central America (activity D.1). PAHO specialists in vector control and other staff have been reviewing existing literature. A meeting, scheduled to take place in Tapachula, Chiapas, Mexico (August 3-9) will permit bringing the group together for the preparation of the draft protocol. Tapachula was selected as site of the meeting, considering that CIP (Centro de Investigaciones sobre Paludismo) is already working on this subject.

Plans are not ready as yet, regarding activities D.2, D.3, D.4 and D.5. PAHO personnel is trying to identify major lines of research and also encouraging well-trained social scientists to work in these areas. These scientists could work with national teams developing research proposal in Central America. Inicial contacts have been made with i.a. sociologists from the universities of Toronto, Columbia, Tulane, Belo Horizonte, Cali, Medellin and Mexico.

III Summary

In summary, during the report period the activities connected with training were accomplished according to the work plan. Research activities to be supported by the PAHO-AID agreement are at a preliminary planning stage. The same applies to training manuals; the implementation of this activity has been delayed pending (a) definition of new strategies which should follow the recommendations of the 18th WHO Expert Committee on Malaria; (b) recopilation of experiences and material gathered during training exercises; and (c) availability of documents from other sources.

SECOND PROGRESS REPORT
PERIOD: JANUARY-JUNE 1986
ESSENTIAL DRUGS COMPONENT

I. Background Data

A.	PROJECT TITLE:	Essential Drugs Project Component
B.	PROJECT NUMBER:	597-0136
C.	PROJECT MANAGER:	IRENE KLINGER, PAHO
D.	DATE OF AUTHORIZATION:	March 28, 1985
E.	IMPLEMENTING AGENCY:	Pan American Health Organization/WHO

II. Project Purpose

To support the improvement and development of the essential drugs programs carried out by the Ministries of Health and Social Security Institutions of the Central American Isthmus. It aims at improving the availability, quality and use of pharmaceuticals in the region.

The activities are designed to strengthen the three components of the drug supply system:

1) Technical and Scientific Subsystem (selection, quality, pharmaceutical and pharmacological information, development of human resources, drug utilization);

2) Operational Subsystem (administration, procurement, storage and distribution, technical cooperation to national drug supply systems);

3) Information Subsystem (subregional network on drug prices and suppliers).

The total annual programmed funds for the development of the three components were broken down in 1985-86 and 1986-87 as follows:

ESSENTIAL DRUGS
REGIONAL USAID/PAHO PROJECT

Area	Title	1985-86	1986-87	Total
A.	General Project Activities	68.995	105.855	174.850
B.	Technical & Scientific Subsystem	494.129	914.745	1,408.874
C.	Drug Supply Operating Subsystem	220.630	403.125	623.755
D.	Information Subsystem	51.010	28.886	79.896
	TOTAL	834.764	1,452.611	2,287.375

III. Project Status

Major Outputs

1. Training

A total of 10 courses, workshops, seminars and meetings have taken place addressing the following main project areas: selection of essential drugs, clinical pharmacology, information exchange on suppliers and prices, pharmaceutical analysis, good manufacturing practices, laboratory administration, and coordination of project activities.

About 100 Central American professionals participated in the above mentioned events. They were selected considering their responsibilities vis a vis the pharmaceutical supply system in their respective countries.

Training and reference materials as well as reports were selected and/or prepared by PAHO staff and consultants. These are being further revised for utilization by national institutions in future activities.

The knowledge and experience of U.S. institutions have been tapped for assisting in some of the training activities, particularly the USFDA and Health Information Design Inc.

2. Institutional Strengthening

Project activities in Central America have been carried out through and with the collaboration of government and university institutions, such as: the Instituto Especializado de Análisis (I.E.A.) and the Faculty of Medicine of the University of Panama; Laboratorio Unificado de Control de Alimentos y Medicamentos (LUCAM) of the Ministry of Health of Guatemala; Faculty of Medicine of the University of Costa Rica and the Costa Rican Social Security; and the Public Health Laboratory of the Ministry of Health of Honduras.

Agreements have been reached or are under way with various subregional institutions such as: Instituto Centroamericano de Administración Pública (ICAP), Programa de Adiestramiento en Salud para Centroamérica y Panamá (PASCAP), and Centro para el Desarrollo y la Investigación en Salud y Seguridad Social (CENDEISSS)--all in Costa Rica--for the preparation of educational materials.

The above mentioned institutions have received or will receive financial support from the project, to carry out the agreed upon activities.

Institutional building has also included supporting the development of national drug information centers. The first shipment of textbooks and reference materials has been sent to selected institutions.

3. Technical documents

Guidelines are being produced for i.a. the following:

- Planning, design and construction of warehouses for health products (TPM Strategic Planners Inc.),
- Establishment of a National Drug Control Program (University of Minnesota),

- Management and operation of the quality function in drug supply systems (Latin American Working Group),
- Drug utilization (Health Information Designs, HID),
- Good Laboratory Practices (Latin American and Central American Experts),
- Comprehensive approach to drug supply systems (PAHO).

Other accomplishments and overall status

1. The project has successfully movilized the public sector institutions concerned with the availability and quality of the pharmaceuticals in the subregion.

   This has contributed to an increase in the awareness of the economic and technical role of pharmaceuticals in health care and, therefore, to the high priority presently assigned to this area by the various governments.

2. Latin American institutions have provided technical cooperation to project activities utilizing their facilities and personnel, enhancing regional TCDC and exchange of experiences.

3. The project has been active in the coordination of actions related to the drug supply system, avoiding duplication of efforts among different donor agencies and ensuring complementarity of the same.

4. At the national level, project activities have complemented on-going government initiatives providing additional resources to strengthen their own systems.

5. The annual programming and coordination meetings held with representatives from all the participating countries have served to broaden the perspectives of the government officials in terms of understanding the issues involved and exploring solutions relevant

to the areas. This has been achieved through the open discussion of common issues, exchange of information and experiences and transference of knowledge. This interchange has resulted in greater committment to this program area by all the countries.

Problems and Delays

The project has developed as scheduled, with the normal delays associated with the launching of the initial activities and the expected difficulties in obtaining the specialized consultants for the originally planned dates. Additionally, changes in national counterparts have also produced some delays.

Unfortunatelly, the limited number of qualified ministry personnel has precluded the development of simultaneous activities on various occassions.

Project Manager Assessment

During the first year and a half, a broad range of activities have been launched at the regional level, many of them requiring much organizational and logistic effort. Specialized consultants and institutions had to be identified and a major effort was made to initiate the transfer of technical know-how. The second half of the project will try to ensure the institutionalization of this knowledge at the Central American level.

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SECOND PROGRESS REPORT

Period: January-June/86

I. ACTIVITIES FROM FIRST YEAR WORK PLAN*

CODE A: GENERAL ACTIVITIES OF THE PROJECT

Activity A.4/85: Complete identification of on-going projects and institutional resources in 5 countries.

As stated in the First Progress Report, the activity will be completed during June-July 1986.

*These are activities that were included in the First Year Workplan (April 1985 - March 1986) and were not covered by the First Progress Report, which was presented to AID in January 1986. These activities are designated/85.

CODE B: TECHNICAL AND SCIENTIFIC SUBSYSTEM

Activity B.1.1/85: Analysis of existing national drug formularies, criteria and procedures for revision, "level of use" standards.

The study was completed as scheduled and the results were presented at the Subregional Meeting described under Activity B.1.1/86.

Activity B.1.2/85: Technical Assistance to Guatemala for unification of drug formularies of the health sector and evaluation of PHC drug list.

The assitance is being scheduled for the second semester of 1986, (Activity B.1.2/86).

Activity B.2.1/85: Management of quality in the drug supply system.

The technical group responsible for the production of a working document on this subject met as scheduled in Mexico City during April-May 1986. The document is being edited and will serve as the background document for a workshop (Activity B.2.1.2/86) that will take place in October 1986 in Panama.

Activity B.2.2.1/85: Preparation of Guidelines for design, equipment and management of Drug Control Laboratory (Prototype).

Terms of reference for a bid proposal to produce such guidelines were completed as programmed. During the second semester qualified bidder within and outside the United States will be identified and requested to submit proposals (Activity B.2.2.1/86).

Activity B.2.2.4/85: Technical Assistance to develop/improve microbiological testing of drugs.

The experts, Dr. Celso Bittencourt and Dra. Nelly Caetano, visited all the Central American nations (except Belize) during February and March 1986 to evaluate existing capabilities for microbiological testing and to provide technical assitance to countries with existing laboratories (Costa Rica, Guatemala and Panama). The report with findings and recommendations is being prepared.

Activity B.2.2.5/85: Feasibility studies for improving/upgrading biological testing.

The consultant, Dra. Adela Rosenkranz, has submitted her report to PAHO. The report indicates that the University of Costa Rica has the most favorable conditions for the establishment of a subregional center for training and services in biological testing. The authorities of the University have formally expressed their interest in developing such a center and a specific action for this purpose will be developed (B.2.2.8/86).

Activity B.2.2.6/85: Technical assistance for the design of new laboratory facilities in two countries.

This activity will be postponed until the prototype guidelines for a drug control laboratory are completed (Activity B.2.2.1/86).

Activity B.2.2.8/85: Course on Quality Control of Immunological Reagents.

The course took place in Costa Rica from 3 to 28 March 1986, with the participation of 31 students from the subregion, 25 of them from the host country. The teaching staff included 2 international experts (Dr. Nicolas Bianco from Venezuela and Dra. Pamella Wright from Holland) and over twenty Costa Rican professionals.

Activity B.2.2.9/85: Course on Quality Control of Viral Vaccines.

This laboratory course took place in Honduras from 3-14 February 1985 with the participation of 5 students. The international faculty included Dr. Julie Milstein of the U.S. Food and Drug Administration and experts from Mexico and Costa Rica. The objective of the laboratory work was to develop proficiency in the quality control of polio and measles vaccines required for the Expanded Program on Immunization. A report on this activity is available.

Activity B.2.2.10/85: Technical Assistance to INCIENSA (Costa Rica) for improving the testing of viral vaccines and program design.

Dr. Julie Milstein, FDA, visited INCIENSA from 17-21 March 1986 to evaluate whether the laboratory was certifiable as a national quality control laboratory for viral vaccines. The expert recommended inter alia, that the laboratory participate in certification studies on a regular basis. Additional funding will be required to purchase equipment, to ensure maintenance and to support regular operations. The PAHO/WHO Country office is working with INCIENSA to obtain such funds.

Activity B.2.4.1/85: Preparation of audiovisual for continuos education of inspectors at national level.

A team of three experts (Dra. María Luisa Castillo, Mexico; Mr. Edwin Rivera, FDA, and Dr. Luis Trapaglia, Argentina) under the direction of the principal Project Consultant, Dra. Ileana Santich, defined the scope and teaching objective of the inspectors' course and developed extensive audio-visual materials for the instructors and the students. In preparation for this work a review and evaluation of existing programs were undertaken. The materials prepared include 400 slides, the corresponding text and bibliography plus 14 commercially available audio-visual programs. The materials are being tested in the Activity described below.

Activity B.2.4.2/85: Basic Course for Inspectors.

This Course was reprogrammed under Activity B.2.4.1/86 and is taking place in Santiago, Chile from 2-28 June 1986. A total of 25 students, including 7 from all Central American countries (except Belize), are participating in the theoretical and practical activities. An additional 25 persons, all from the Chilean private industry, are attending the lectures. The faculty is composed of three international consultants (Mr. Edwin Rivera, FDA; Dra. Ileana Santich, PAHO; and, Dr. Luis Trapaglia, Argentina), six officials from the Chilean Ministry of Health, four from the University of Chile and ten experts from the Chilean pharmaceutical industry. Local arrangements for the course were done by the Instituto Nacional de Salud under a Project contract.

Activity B.3.1/85: Selection of reference materials for national institutions.

Distribution of the first set of reference books to selected institutions in Central America and Panama was carried out in June 1986. This first set consists of a total of 18 publications per institution. A second purchase order has already been placed and the corresponding distribution will be done later this year (Activity B.3.1/86).

Activity B.4.1/85: Continuing education of hospital pharmacist, auxiliary pharmacy personnel, pharmacists and health personnel in drug supply system.

Terms of reference and the corresponding budget for activities in this topic were developed in collaboration with the Pharmaceutical Commission of the Costa Rica Center for Development and Research (CENDEISS), an agency of the Costa Rica Social Security. The agreement is being reviewed by the Director of the Social Security prior to its approval.

Activity B.4.2/85: Contract for the development of training material in Drug Supply Management.

Terms of reference for the collaboration of the Central American Institute for Public Administration (ICAP) in this activity were defined in March 1986 and an appropriate workplan was developed. The agreement is under review by the Director of the ICAP.

CODE C: DRUG SUPPLY OPERATIVE SUBSYSTEM

Activity C.2.2/85: Evaluation of current procurement procedures, cycles and identification of restrictive practices.

The information collected during the survey has been submitted to PAHO by the consultant hired for this activity. The material requires extensive review and analysis before it can be used for the preparation of the working document that will serve as the basis for a workshop on this subject. This workshop is being postponed until 1987 (Activity C.2.1/86), as well as the resulting monograph (Activity C.2.1/85 reprogrammed as C.2.2/86).

Activity C.3.1/85: Preparation of guidelines for prototype warehouses.

The contract for the preparation of the guidelines has been awarded to TPM Strategic Planners of Lake Forest, Ill., following review of the submitted bids. The scope of the guidelines will be limited to Planning, Design and Construction of a Health Care Products Distribution Center, eliminating the operational aspects which will be developed separately at a later date.

II. PROGRESS REPORT OF SECOND YEAR WORKPLAN*
(January-June 1986)

CODE A: GENERAL ACTIVITIES

Activity A.1/86: Development of Second Year Workplan, 1 April - 30 March, 1986.

The proposed activities for the second year of the Project were developed at PAHO Headquarters during February 1986 and included in document PNSP/85-09. This document served as the basis for discussions under Activity A.3/86 described below.

Activity A.2/86:

The Project Manager and Technical staff have carried out on a day-to-day basis the actions required for the planning, execution, monitoring and control of the Project's Activities. Special effort has been made to ensure complementarity with other national and regional programs whether sponsored by PAHO or other international and bilateral agencies.

Activity A.3/86: II Interinstitutional Meeting (Health Ministries/PAHO/AID).

The meeting was held in Panama City, Panama, 6-7 March 1986 with the assistance of official representatives of all the countries covered by the Project. AID and PAHO officers were also present. The group reviewed the above-mentioned workplan and the revised document PNSP/86-09/RevI incorporated the changes recommended by the participants. An English version of the revised workplan was presented to AID and constitutes the framework for on-going activities.

*Activities are designated by /86

CODE B: TECHNICAL AND SCIENTIFIC SUBSYSTEM

Activity B.1.1/86: Subregional workshop on Development and Implementation of National Formularies.

The workshop was carried out in Panama City from 26-30 May 1986 with the collaboration of the Faculty of Medicine of the University of Panama and the Commission on Medicaments of the Social Security under a grant provided by the Project. A total of 13 professionals from Central American countries participated in addition to over twenty persons from Panama. The faculty included Dra. Aida Leroy, USA; Dr. Albin Chavez, Costa Rica; and, Dr. David Lee and Dr. Tomas Arias, both from Panama. PAHO Country Staff assisted in the coordination and organization of the event. A report is being prepared by Dr. David Lee.

Activity B.2.1.4/86: Updating and publication of national guidelines for the development of national drug control systems.

The updated guidelines were prepared by Dr. A. Wertheimer and his colleagues from the University of Minnesota. The submission has been reviewed by PAHO Staff with Dr. Wertheimer and the revised version is now being translated into Spanish. The Spanish version will be reviewed and edited during the second semester of 1986.

Activity B.2.2.3/86: Course on Contamination of Non-sterile products.

The three week course (theory and practice) is scheduled for October 1986 in the Instituto de Analisis Especializado (IEA) of the University of Panama. An expert consultant, Dra. Nelly Caetano, has visited the Instituto, and with the local professionals, developed the agenda and carried out the necessary preparatory activities for the course. Dra. Caetano will be the technical coordinator and principal instructor for this activity.

Activity B.2.2.4/86: Preparation of the Program and Support Material for Courses on Laboratory Administration.

Discussions were held in April with the Mexican School of Public Health and agreement was reached regarding the scope, the detailed terms of reference and the budget for developing the materials required for the course on Laboratory Administration. Administrative procedures are underway for formalizing the agreement.

Activity B.2.2.5/86: II Training Course on Testing of Antibiotics, insulin and other drugs with HPLC.

The Laboratory Course was carried out at the Government drug central laboratory in Guatemala (LUCAM) from 2-28 June 1986 with the participation of eight professionals from the Central American Subregion. The faculty was made up of professionals from LUCAM with the support of local PAHO Staff.

Activity B.2.2.6/86: Participation of Central America and Panama in the regional course on Laboratory Safety.

The Course has been scheduled for 29 September - 3 October and will be held at the Brazilian federal food and drug control laboratory (INCQS) in Rio. Expenses for the organization of the Course, including international and local experts, will be covered by a PAHO/UNDP Brazil Project. The AID/PAHO Project will only finance travel expenses of the Central American participants.

Activity B.2.3.1/86: Technical Cooperation for the development of the evaluation and registration services in Panama, Costa Rica and Guatemala.

A team of three consultants (Dra. Raquel Gonzalez, Chile; Lic. R. Duque, PAHO; and, Dra. Carmen Selva, PAHO) started the implementation of the recommendations developed by the Working Group on Drug Registration Practices in Central America that met last year (Activity B.2.3.1/85). The consultants provided technical assistance to the drug registration authorities in Costa

Rica (27 April-3 May/86) and Panama (4-17 April/86) on the processing of information and on the development of a common data base for the subregion. A visit to Guatemala will be programmed for later this year.

Activity B.2.4.1/86: I Theoretical/Practical Training Course on Inspections of the Pharmaceutical Industries, Distributing Companies and Retail Outlets.

The course is presently underway (2-28 June 1986) at the Instituto de Salud Publica of Chile. The materials and program developed under Activity B.2.4.1/85 is being used. Additional comments on this are included under B.2.4.2/85 above.

Activity B.3.1/86

See B.3.1/85

Activity B.4.1.1/86: Grant to the International Health Council (USA) for the Evaluation of Pharmacy Curriculae in the countries of Central America and Panama.

The IHC has submitted a progress report that summarizes the activities developed through May 1986. They have sent a questionnaire to all Central American pharmacy schools and professional associations and will analyze the information to be provided by these and other sources. A final report is expected before the end of the year.

Activity B.4.1.2/86

See B.4.1/85

Activity B.4.2/86

See B.4.2/85

Activity B.4.3/86: Subregional Course in Clinical Pharmacology.

The Course was carried out at the University of Costa Rica from 9-13 June 1986 with the participation of 21 university and government health officials from all Central American countries in addition to local participants. The course was organized by the Inter-American Society of Clinical Pharmacology and Therapeutics under a grant from the PAHO/AID Project.

Activity B.4.5/86: Translation of WHO model curriculum on drug policy and rational use of essential drugs.

The curriculum has been translated into Spanish. Revision of the translation will be postponed since WHO/Geneva will be modifying the original version. No target date can be established at this time.

Activity B.4.6/86: Support to CENDEISS (Costa Rica), for the implementation of the continuing education program on rational utilization of drugs for physicians and pharmacists in three regions and development of three additional modules.

The scope, terms of reference and budget were developed in collaboration with the CENDEISS' technical staff that will be responsible for this work. The proposal is being reviewed by the Director of the Costa Rican Social Security prior to approval.

Activity B.5.1/86: Implementation of drug utilization and adverse reaction programs.

The contractor for this activity, Health Information Design (USA), is proceeding according to the terms of the agreed-upon workplan, in the contract.

On the basis of the initial evaluation carried out by Health Information Design of existing capabilities, the social security institutes of Guatemala and Costa Rica have been selected for pilot programs in this area. Limited computer equipment will be provided to Costa Rica for this purpose, while existing equipment in Guatemala is sufficient.

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CODE C: OPERATIONAL SUBSYSTEM

Activity C.3.1/86

See C.3.1/85

Activity C.4.1/86: Technical cooperation for the development of a comprehensive drug supply system in Belize.

Mr. John Turnbull continued, on a limited basis, the technical cooperation started in 1985 and coordinated the publication of a Drug Formulary for the Ministry of Health. Due to his recent commitment to work full-time for a AID-sponsored project in the Eastern Caribbean, it will be necessary to identify another qualified consultant. Mr. Turnbull's recommendation regarding a national revolving fund for essential drugs has been implemented with the financial and technical support of PAHO. The Organizations's Procurement Office is presently purchasing drugs requested through this fund.

Activity C.4.3/86: Technical cooperation to support the development of the drug supply system for the Social Security Institute in Panama.

The Project has provided 1 month consultantship (Ms. Amanda Pedraza) to collaborate with the Social Security Institute in the improvement of its drug supply system. In addition, a PAHO staff member based in Panama and funded by the Government of Holland, is also participating in this activity.

CODE D: INFORMATION SUBSYSTEM

Activity D.1.2/86: Meeting for the implementation of the exchange of information system.

The meeting to establish the system for the exchange of information on selected drug suppliers and prices was held in Costa Rica from 1-4 April/86 with participation of representatives from all Spanish-speaking Central American Countries. The participants agreed upon the data to be exchanged and the mechanism for such an exchange. The Governments have formally designated the officials responsible for the operation of the system at the national level. Follow-up activities to evaluate the implementation and to solve unexpected problems will be carried out during the second half of the year.

CONSOLIDATED REPORT FOR
FAHO/AID GRANT 597-0136 1985-1986. 10/VI/86.

========= ELEMENT	ALLOTMENT	1985 CEILING	1986 CEILING	TOTAL 85/86 CEILING	1985 BUDGET	1986 BUDGET	TOTAL 85/86 BUDGET	-1985 EXPENSES	-1986 EXPENSES	TOTAL 85/86 EXPENSES *	1985/86 BUD-EXPS	1985/86 CEIL-EXPS
	ICF/GPD/020											
AAA	PROJECT MANAGER				73100	73875	146975	41710	91000	132710	14265	
	ADMIN.ASSTN				43500	37025	80525	0	14500	14500	66025	
	SECRETARY				26050	25675	51725	5886	25000	30886	20839	
040	PROGRAM DESIGN				0	20000	20000				20000	
	TEMP.ASSISTANCE				0	0	0	0	7648	7648	-7648	
920	FSC				18545	20355	38899	6187	17959	24147	14753	
	SUBTOTAL				161195	176930	338124	53783	156107	209891	128234	-209891
	ICF/E09/010											
040	STC				154770	306627	461397	137412	189432	326844	134553	
230	D.TRV				12500	22239	34739	1566	10642	12208	22531	
390	CONTR SVCS				240970	710113	951083	135387	525760	661147	289936	
550	S & E				42000	138258	180258	43887	38211	82098	98160	
820	C & S				82600	129429	212029	81625	68863	150488	61541	
830	GRANTS				0	37500	37500	0	35500	35500	2000	
920	FSC				69269	174768	244037	20781	112371	133152	110885	
000	CONTINGENCIES				0	0	0		0		0	
	SUBTOTAL	1008850	1000000	2008850	602109	1518934	2121043	420658	980779	1401437	719606	607413
	ICF/MAL/030											
040	STC				147872	144211	292083	43278	75793	119071	173012	
230	D.TRV				37242	32695	69937	14553	21863	36416	33521	
030	LOCAL COSTS				69500	0	69500	0	0	0	69500	
390	CONTR SVCS				44000	68068	112068	18989	11660	30649	81419	
550	S & E				114520	69617	184137	35260	120	35380	148757	
820	C & S				371779	472332	844111	191106	45641	236747	607364	
830	GRANTS				0	250000	250000	0	0	0	250000	
920	FSC				112242	96603	208845	39414	20160	59574	149271	
600	CONTINGENCIES				78491	0	78491	0	0		78491	
	SUBTOTAL	960650	1100000	2060650	975646	1133526	2109172	342600	175237	517837	1591335	1542813
	TOTAL	1969500	2100000	4069500	1738950	2829390	4568340	817041	1312123	2129165	2439175	1940335

*Includes actual expenditures and unliquidated obligations

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Glossary for terms used in consolidated report

ICF/GPD/020	-	PAHO allotment for general program development
ICF/EDV/010	-	PAHO allotment for essential drug component
ICF/MAL/030	-	PAHO allotment for malaria component
PSC	-	Program Support Cost
STC	-	Short Term Consultant
D.TRV	-	Duty Travel
S & E	-	Supplies and Equipment
C & S	-	Courses and Seminars

PAHO/AID PROJECT 597-0136

PROGRESS REPORT

January 1986

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The management of the project has been involved together with the technical units, in the planning of the activities for both components-malaria and essential drugs-and in the monitoring of their execution on a day-to-day basis. There has been constant concern for the appropriate development of the activities contained within the work plans, considering their timing, their objectives, their quality and their results, as well as for promoting the involvement of all the participating countries.

The project manager has traveled on many occasions to the Central American countries to participate in specific activities that were deemed important to the implementation of the project. The maintenance and promotion of the concept of regionality in the activities has been a high priority, resulting in the involvement of several Central American institutions. This process also resulted in resources being utilized more rationally, links between the countries of the Isthmus being strengthened, and national and subregional institutions and capabilities being reinforced.

The project management has provided the necessary backstopping to assure the coordination of all the resources involved in the development of the project, particularly, PAHO staff at headquarters and field offices, (technical and administrative), and nationals of the different Central American countries, along with AID headquarters and field staff.

Considering the close linkage of the PAHO/AID Project with the Subregional "Contadora/Health for Peace Initiative" and the identical geographic area covered by both the project and the initiative, it has become

necessary for the project manager to be partially involved in the negotiations with other Agencies and donors in order to assist in the coordination of the resources currently allocated, to avoid overlapping and to assure that the programming and financing of future activities complement the PAHO/AID effort.

The administrative officer has assisted the technical units on a day-to-day basis in all the administrative work necessary for the initiation of all activities, including internal and external contacts. He also has assisted the project manager in the monitoring of the financial and technical requirements of each activity as outlined in the work plans. To facilitate and expedite the above process, AID approved the purchase of microcomputer equipment for use in the project activities, as well as peripheral equipment and corresponding software. The procurement of this equipment was accomplished, based on existing PAHO regulations governing this type of equipment.

The total resources expended for management purposes until December 31, 1985 amounted to $58,154, with the following breakdown:

Project manager	$41,814.00
Secretarial support	9,440.00
Supplies and equipment	6,902.00*
T O T A L	$58,156.00

Note: The project manager's duty travel has been charged against the budget of the specific activities to which her travel related.

* The computer equipment was also charged to item 550 (supplies & equipment) of the ED component.

Doc.0651N

Pursuant to the agreement subscribed between the United States Agency for International Development (USAID) and the Pan American Health Organization (PAHO), on March 1985 and in accordance with the terms set forth in the above mentioned document listed as PAHO/AID 597-0136, the following report is presented for your consideration.

The report has been divided in the three programmatic areas covered by the agreement, specifically:

I Management

II Essential Drugs

III Malaria Control (Submitted on 8 January 1986)

I. Management

In this area, the following activities are reported:

- Appointment as Project Manager of Dr. Irene Klinger, effective April 1, 1985.

- Detailing as Administrative Officer, Mr. José C. Gomez, effective August 1, 1985.

- Detailing of Ms. Rosa Estevez as Secretary, effective April 1, 1985.

PAHO-AID Agreement
Grant 596-1136
Progress Report
December, 1985

A. Introduction

Project 596-1136 was approved on March 28, 1985, and the period April-May-June, was devoted to consultations and planning activities, as follows:

(a) Informal consultation (April 8-9, 1985) held at PAHO/HQs in Washington, D.C., with the purpose of defining the best approaches for the establishment of a work plan as well as the timetable of activities to be carried out in the immediate future. This consultation was attended by representatives from AID/Washington, CDC/Atlanta, the University of South Carolina, and PAHO/WHO.

(b) Direct contacts with National and PAHO authorities in the countries involved (April 29 - May 10, 1985) to facilitate their input in the project. Specific objectives of the mission were:

- Information to PAHO/Representatives, AID/Missions, National Coordinators of the Plan (Priority Health Needs) and Responsible Officers of Area 5 - Tropical Diseases, regarding the scope of the agreement, and its limitations. Selected research and training institutions were also visited.

- Discussion on present needs and available resources;

- Identification of additional information needed for the planning workshop, thus facilitating the input of national authorities in the preparation of the First Year Work Plan.

The mission started in Panama, for the discussion of general terms of reference and to unify criteria to be followed. Afterwards the group visited Belize, Costa Rica, El Salvador, Honduras and Guatemala, where a joint report was prepared.

Three members of the group visited Honduras, El Salvador and Guatemala, while other members visited Panamá, Costa Rica and Belize.

As a result of the Mission the following was accomplished:

- Identification of countries within the subregion which offered support to the project;

- Preparation of provisional list of training areas, and countries/institutions which have offered support to the project from outside the Sub-region;

- Matrix which could be used as a model, for the review of training needs in terms of personnel and areas of knowledge and a similar matrix in relation to research;

- Better understanding of the agreement at country level (National Authorities, AID/Missions, PAHO/CR);

- An exchange of information regarding the present malaria situation, needs and resources in each country;

- A review of previously prepared profiles, in order to make them more relevant to the project in the present circumstances;

- Preparation of a 20-30 pages document, by each participating country, regarding the Sub-regional component of their programs, bearing in mind present policies of the public health sector;

- The Responsible Officers - Area 5 -Tropical Diseases, arrived in Guatemala better prepared to participate in the planning workshop;

- All the national programs which are expected to benefit directly from the implementation of the agreement, including Belize, participated in the planning workshop. Therefore, the material used for the preparation of the workplan is country based.

(c) Planning seminar with the participation of Directors of National Malaria Programs to discuss priority needs and identify resources:

As a preliminary exercise for the preparation of the workplan, the following issues were discussed and analyzed during a Planning Seminar convened in Guatemala during the period 22-24 of May, 1985:

(1) The malaria problem in Central America and Panama - in terms of health impact, social factors and medical aspects.

(2) The objectives of the program in the Sub-region.

Belize, Costa Rica and Panama are in a position to aim at the eradication of the disease but the strategy being applied at present is that of integrated malaria control. In the rest of the Sub-region the goal is to eliminate malaria as a cause of death, and to reduce morbidity to levels compatible with social and economic development.

Complementary objectives are:

- To prevent epidemics of the disease;
- To maintain the gains in areas free of transmission;
- To avoid dissemination of the disease to non-malarious areas;
- To augment the operating capacity of the public health services in order to develop and implement effective epidemiological vigilance and control of malaria;
- To strengthen the specialized malaria services in the area of applied field research, in order to enable the program to gain better knowledge about the social, economic, biomedical and ecological variables that determine malaria transmission; and to assist in the selection, application and evaluation of control measures.

(3) National and external resources will be mobilized, with the aim of achieving, by 1990, the following:

- Organization, implementation and coordination of malaria vigilance, prevention and control, within the general health services, following the Primary Health Care Strategy;

- Elimination of mortality due to malaria in the Sub-region;

- Maintenance of the donward trend of malaria incidence in Costa Rica and Panamá, and, if possible, to eliminate residual foci of transmission through the strengthening of the epidemiological vigilance system;

- Elimination of malaria transmission in Belize and reduction of incidence in El Salvador, Guatemala, Honduras and Nicaragua.

(4) Common strategic approaches are the following:

- Political decision at National level;

- Full utilization of Primary Health Care;

- Identification and utilization of national resources;

- Technical Cooperation Among Developing Countries;

- Establishment of collaborative research and training projects with national academic institutions;

- Coordination of malaria programs with national development projects;

- Resource mobilization, from bilateral and international agencies.

(d) Meeting of an ad-hoc Technical Advisory Committee (TAC):

The first TAC Meeting was held at PAHO/HQs and provided an active exchange of information among TAC members and the PAHO secretariat. TAC members attending this first meeting were:

- R.L. Kaiser - CDC/CID Malaria (Chairman)
- V.K. Barbiero - AID/S&T/H (Rapporteur)
- McW. Warren - CDC
- M. Mazzarri - MOH/Venezuela
- M. Tidwell - USC

Drs. A. Adames, University of Panama, T. Ruebush, CDC, and Mr. L. Cowper, S&T/H were invited, but unable to attend.

The secretariat for the meeting included:

- J.R. Teruel	-	PAHO/DAP
- I. Klinger	-	PAHO/DAP
- F.J. López-Antuñano	-	PAHO/HPT
- J. Ayalde	-	PAHO/HPT
- J.R. Ferreira	-	PAHO/HSM
- R. Luna	-	PAHO/HSM
- R. St. John	-	PAHO/HCE
- P.F. Beales	-	WHO/MAP

The following is an Executive Summary of the discussions and general recommendations of the First Meeting of the Technical Advisory Committee (TAC) on Malaria - PAHO/AID Agreement:

1. The ability of host countries to absorb Agreement funds and commodities and utilize support effectively should be monitored throughout the Agreement.

2. Training and curriculum development should be pursued at regional and national levels. Both advanced degree and operational education are important. Relevance to the pragmatic aspects of malaria control should be stressed.

3. Internal and external training and research resources should be utilized extensively (i.e. PAHO/WHO training materials, existing courses, functioning institutions).

4. A critical mass of skilled trainers is of paramount importance at the regional and national levels.

5. Community level training should be pursued.

6. The concept of epidemiological "mosaics" should be acknowledged and characterized both empirically and operationally at the country level. Program stratification should be pursued when operational infrastuructures and political will indicate feasibility.

7. Malaria control should be pursued at the Primary Health Care (PHC) level in relation to Tactical Variants I-IV when appropriate, as recommended by WHO Expert Advisory Committee on Malaria (17th Report, 1979).

8. Environmental impact assessments should follow national and AID guidelines when project funds are committed to an activity that may affect the local environment.

9. Training efforts should pursue innovative methodologies. Human resource development should be incorporated into the PAHO/AID agreement activities.

10. The Agreement Activities should provide a mechanism for limiting the "brain drain" phenomenom. Further discussions are warranted.

11. First year activities should focus on existing courses and established institutions. Units in Panamá, México, Guatemala and Venezuela should receive first-year attention.

12. The MPH (Malaria) and the M.Sc. (Entomology) courses were recommended by the TAC. Short course priorities were:

    - Medical entomology refresher;
    - Vector control (management and planning);
    - Management for mid-level personnel;
    - Parasitological and immunological diagnostic techniques;
    - Monitoring of susceptibility of parasites to drugs;
    - Computing for health sciences.

13. Short courses on Ocupational Profiles and Educational technology should be organized.

14. Local General Health Services (GHS) as well as malaria program personnel should be encouraged to participate in the courses.

15. A curriculum program coordinator should be identified and assigned to the regional training centers to manage course development and curriculum design.

16. Operational field manuals (Vector Control, Malaria diagnosis and Treatment) should be designed, distributed and evaluated.

17. Teaching/Information Sets should be developed in:

    - Malaria Transmission Dynamics
    - Biology and Control of Vectors
    - Entomological Techniques
    - Inventory of Teaching Aids

18. Stringent internal and external evaluations should be conducted throughout the Agreement's Life of Project (LOP).

B. Analysis of activities

The workplan for the first year of the project was prepared with the participation of representatives from Belize, Costa Rica, El Salvador, Guatemala, Honduras and Panamá. Subsequently, the Secretariat prepared an estimation of budgetary requirements per activity, with emphasis on training.

The actual execution of the project at country level started on July 1, 1985, and consequently, this report covers a six month period (July-December). Steps are being taken to implement the rest of the planned activities during the first quarter, 1986.

A brief analysis of the activities carried out so far is presented herewith:

1. Academic courses:

The Technical Advisory Committee (June, 1985) reviewed courses offered by four institutions, of which 2 were selected as follows:

1.1 Malariology and Environmental Health, Maracay, Aragua, Venezuela:

According to the present program schedule, this course will be given as originally planned from January 13 through November 14, 1986. The training needs in this field as perceived by national authorities for the period 1986, were 7. Up to this writing only three CAP Countries have identified and completed application documents, for three candidates:

Name	Country	Funding
L. Jiménez	(El Salvador)	GOV + PAHO-AID
J.E. Rosales	(Guatemala)	GOV + PAHO-AID
J. Gómez	(Honduras)	GOV + PAHO-AID

The Government of Venezuela covers tuition and living costs. The PAHO-AID project covers travel and other expenses; 60 consultant days have also been allocated.

Candidates successfully completing the course will be awarded a certificate of specialists, by the Venezuelan Ministry of Health and the University of Carabobo.

The course of 1986 is not conducive to a Master's Degree.

As a supporting activity, the project organized a visit by 2 PAHO/HQs staff members and 2 consultants to the School of Malariology in Maracay and the University of Carabobo (Valencia) in order to review the present curriculum. Recommendations were made to organize a new course, on Epidemiology of Vector Borne Diseases, starting in 1987, leading to a Master's Degree. Course subjects, objectives and contents were selected, following established Government requirements regarding the academic credit system. A thesis, on a research subject, which can be completed in the country of origin, is one of the requirements for the master's degree.

The course is also open to candidates from countries not included in the PAHO-AID project.

One of the recommended requisites is that the candidates maintain their status as Government (or University) staff members, during the course, and that they have a post open for them when they return home. Sometimes this is a limiting factor, because the training project started before additional operational funds which are being negotiated, became available. This problem affects mostly candidates attending academic courses. For short courses usually there are more candidates than the facilities would allow.

In summary

(a) the project will support a minimum of 3 and a maximum of 7 candidates in 1986;

(b) the present course schedule was reviewed and updated.

(c) a factor of change was introduced, which if successful will expand the scope of the courses being given in Venezuela, and move from emphasis on operational aspects to the study of a wider range of epidemiological variables influencing vector borne diseases.

(d) emphasis of the new course will be on the application of epidemiology to the identification of problems, research methodology, study of alternative lines of action, support to the decision making level in the definition of priorities, and selection of prevention and control strategies.

(e) this course falls within the strategy of Technical Cooperation Among Developing Countries (TCDC) activity, mobilizing resources of Venezuela for CAP and other countries of the Region.

1.2 Master of Science Course on Medical Entomology, Panamá:

This course as planned, started on September 30, 1985 and will last 20 months.

The National authorities which met in Guatemala (May 22-24) during the "Planning Seminar" indicated that 4 were the candidates that could be sent to the Master's Course on Medical Entomology, due to start on September 30. Additional candidates would be identified for the next course, which will start in September 1987. The periodicity of this course is bi-annual.

Up to this writing there are six participants enrolled, as follows:

Name	Country	Funding
A. Huertas	(Costa Rica)	PAHO-AID
N. Padilla	(Guatemala)	PAHO-AID
A. Ciliézar	(Honduras)	PAHO/HON
L. Rivera	(Honduras)	AID/HON
Y. St. Jean	(Haiti)	PAHO/HAI
M. Best	(Panamá)	PAHO/PAN

This postgraduate course is being supported by University of Panamá, MOH/SNEM, PAHO staff and consultants.

It is to be mentioned that the course has been designed to meet the needs of the programs related to the prevention and control of vector-borne diseases, and at present, is the only one of its kind in Latin America.

The expertise available in Panamá is being used not only for the post-graduate course, but also for shorter courses needed for the training of middle-level personnel and for refresher exercises. A network of institutions of Guatemala, such as the NMES and Universidad del Valle, also play an active role in the project.

Training equipment and laboratory supplies are being provided by the project in addition to STCs, TAs, and fellowships. The equipment will serve the M. Sc. and other courses on vector control organized in Panamá.

2. Short Courses

2.1 "Short course on comprehensive vector control" University of South Carolina, at The Wedge. August 5 - September 13, 1985 (Spanish).

This is an ongoing activity of the Center for Public Health Research, University of South Carolina, Mc. Clellanville.

Teaching expenses were covered by the University based on tuition and registration fees paid under the terms of the PAHO-AID Agreement and by other PAHO projects on behalf of the fellows. The support to students has facilitated the continuity of the course.

The following candidates participated in the August-September, 1985 course:

Name	Country	Funding
C. Campos	(Panamá)	PAHO-AID
J. Sandoval	(El Salvador)	PAHO-AID
E. Bejarano	(Costa Rica)	PAHO-AID
A. Madariaga	(Honduras)	PAHO-AID
M. Calderón-Castro	(Guatemala)	PAHO-AID
F. Celis	(Colombia)	PAHO/COL
A. Donado	(Colombia)	PAHO/COL
C. Martínez de Rivas	(Venezuela)	PAHO/VEN
H. Carrillo	(México)	PAHO/MEX
C. Peña	(Dominican Rep.)	PAHO/DOR
A. Zaglul	(Dominican Rep.)	PAHO/DOR
P. Gonzalez	(Cuba)	PAHO/CUB
J. M. Ferrer	(Cuba)	PAHO/CUB
J. Mariscal	(Bolivia)	PAHO/BOL
P. de T. Villarinhos	(Brasil)	PAHO/BRA

A similar course, also in Spanish, will be offered by the Center from September 8 - October 16, 1986, on a student demand basis and with a required minimum of 10 students.

The project (PAHO-AID) has close links with the International Center for Public Health Research. The Center's Director, Dr. M.A. Tidwell has participated in program design in Panamá and in meetings of the Ad-hoc Advisory Committee and Dr. F.J. López-Antuñano, Coordinator of PAHO's Tropical Disease Program has been a lecturer at the Center.

2.2 "Short International course on Insecticide Application Techniques, and Handling and Maintenance of Spraying Equipment" Panama.

This is an undergraduate course, aimed at the training of middle level personnel, and was given as scheduled, from 4 through 15 November, 1985.

This type of training is in great demand in CAP and other countries of the Region. It was designed for 16 students but 19 were accepted. Late applicants had to be turned down.

The PAHO-AID project, supported the participation of four students, from CAP, plus Short Term Consultants and some equipment which is to be shared by other courses. PAHO/Regular funds were used for the staff participating in teaching activities, and for the award of fellowships, including to some of the candidates from CAP countries. The following is the list of participants with the origin of funds:

Name	Country	Funding
C. Carranza	(Guatemala)	PAHO-AID
G. Rivera	(Honduras)	PAHO-AID
E. Salas	(Costa Rica)	PAHO-AID
S. Torres	(Belize)	PAHO-AID
J. Ramos Martínez	(El Salvador)	PAHO/ELS
J. Linares Hernández	(El Salvador)	PAHO/ELS
L. Mayorga	(El Salvador)	PAHO/ELS
N. Vargas	(Nicaragua)	PAHO/NIC
A. Trevain	(Haiti)	PAHO/HAI
T. Guido-Paez	(Paraguay)	PAHO/PAR
M. Villalobos	(Ecuador)	PAHO/ECU
E. da Silva	(Brasil)	PAHO/BRA
J. Alvarez	(Colombia)	PAHO/COL
S. Galvis	(Colombia)	PAHO/COL
G. Alarcón	(Colombia)	PAHO/COL
A. López	(Guatemala)	PAHO/GUA
L. Espinoza	(México)	PAHO/MEX
J. Luna	(Panamá)	PAHO/PAN
E. Osorio	(Panamá)	PAHO/PAN

2.3 "Emergency Control of Aedes aegypti", Panama

The original date for this course (March 24-28, 1986) coincided with the Holy Week and the National Authorities suggested a change. The new planned period is April 14-18, 1986. The anticipated number of participants is 10 but this number may have to be increased due to interest generated on this subject by dengue activity in the Region, particularly in Central America.

In addition to the support from the University of Panamá, MOH/SNEM, PAHO/Staff and the funding from PAHO-AID project, negotiations are underway to utilize funds remaining from a grant awarded to Colombia for the study of the biology/ecology of *Aedes aegypti*. Therefore, funds available for this workshop will be in the neighborhood of US$ 29,000.oo of which $ 12,000.oo will originate in the PAHO-AID grant, for 6 participants CAP and Consultant Services.

The program of the workshop will be expanded to cover (a) regular plan of action; (b) emergency measures; and (c) policy matters.

2.4 "Refresher Course on Medical Entomology"

Panamá, February 3-28, 1986
Guatemala, March 1-14, 1986

Preparations are underway for this course, aimed at personnel with experience in medical entomology but who do not have an academic degree.

In Panama, the course will be given by University of Panama, MOH/SNEM, and PAHO, with the participation of PAHO and National Consultants stationed in neighboring Colombia.

In Guatemala, field work and laboratory activities will be carried out with the support of PAHO, MOH/SNEM and Universidad del Valle de Guatemala. PAHO staff, with work experience in Tapachula, Chiapas, Mexico will also participate in this component of the course.

PAHO staff stationed in Panamá are already scheduled to travel to Guatemala in order to establish the necessary coordination.

The list of participants has not yet been completed, but fellowship applications are already being processed.

2.5 Course on Technical and Administrative Management for middle level personnel", Quiriguá, Guatemala

This course is being organized, aiming at the training of public health sanitarians and malaria district or sector chiefs. A first draft of the curriculum has already been prepared, covering the following topics:

- Introduction and general considerations - Malaria and Primary Health Care
- Basic Malariology
- Epidemiological Method
- Control measures
- Community participation
- Applied research
- Administration
- Integral approach to prevention and control of malaria

The draft-project (available at PAHO/HQs) was presented by Temporary Advisors Dr. L. Cabrera and Eng. J. Avila, with the support of Lic. Mara Mora de Galindo and PAHO and National officials of MOH/Guatemala. This project is scheduled for review during the first quarter 1986, in order to prepare a final program. To this end, the consultants are scheduled to visit Guatemala again in January, 1986. Two PAHO/HQs staff members will also visit Guatemala at the end of the month, in order to finalize the necessary arrangements and to issue course announcements.

3.1 Development of occupational profiles and educational technology

This 3-week course has been re-scheduled for the first quarter, 1986 and will be carried out with the technical support of PASCAP/Costa Rica. To this end, steps are being taken to strengthen PASCAP, which, will also support other training activities in the sub-region.

3.2 "Principles and Techniques for the preparation of teaching material - audiovisuals"

This course also will be carried out in Costa Rica. The situation, at present, is similar to activity 3.1.

3.3 "Epidemiology and Control of Malaria"

PAHO staff, with the assistance of consultants and temporary advisors, prepared a set of five modules on epidemiology and control of malaria to be utilized as working documents of one-week seminars organized in the countries, with the participation of general health services and malaria personnel. An attempt is made to focus the discussions on integrated approaches. As a result of each exercise the modules are improved utilizing the input of the participants for this purpose.

The contents of the modules are utilized for group discussion (5-8 participants per group, plus a "facilitator") and for discussions during plenary sessions, with all participants (20-25 per seminar), and advisors present. In general, in the first seminar all "health regions" of a country are represented. This group is expected to have a multiplying effect in their respective regions.

The modules are available in Spanish only. An English translation is being prepared for the benefit of Belize and other English speaking countries of the Region.

It is estimated that the goal of training 120 participants, during the first year of the project will be surpassed.

These courses have been already scheduled in Honduras, Guatemala and Panamá.

3.4 "Promotion and orientation of community participation"

3.4.1 Voluntary collaborators and PHC.

3.4.2 Community participation in malaria control.

This activity is being organized in coordination with the health education unit of the Health Services Delivery Program, (PAHO/HSC). The first activity within this topic will be carried out in Guatemala (workshops have been planned for the first

quarter) utilizing existing material and following an integrated approach of the local health services). This will be considered as a pilot exercise (January - March, 1986) which will be followed by an informal consultation (target period 7-11 April, 1986) to establish guidelines and criteria for similar activities in other CAP countries.

PAHO's Country Representative in Guatemala is making available regular funds, which will complement those allocated by the PAHO-AID grant.

A PAHO/STC (paid from other sources) is already working in finalizing the details of this exercise in Guatemala, while in Honduras national authorities with PAHO's technical cooperation are planning two workshops for each of their 7 health regions, (14 workshops) with a target group of 350 persons to be directly involved, including voluntary collaborators and community leaders.

3.5 "Research Methodology"

Steps are being taken to organize a workshop on this subject, in Honduras during the second quarter, 1986 as originally scheduled, with support from PASCAP.

4. "Development of teaching aids and manuals for field use"

4.1 "Comprehensive Vector Control"

The academic and short courses mentioned in items 1 and 2 are generating a substantial amount of teaching material.

PAHO has also material on disease vectors and reservoirs, commissioned before project 596-0136 started. This material is already in the editing stage (in Panama). Several authors contributed original articles.

The situation is being reviewed in order to avoid duplications. To this end a consultant(s) will be invited under contract and we will proceed in accordance with the results.

4.2 "Manual on Clinical, parasitological and immunological diagnosis of malaria"

Plans are underway to convene a workshop with the participation of specialists from CAP countries and other consultants. Ideally, this workshop should take place at CDC/Chamblee, to count with their expertise and experience.

The target date would be the end of May, 1986; the participants would contribute working papers and the recommendations of the Workshop, together with selected papers, will serve the purpose of a Manual in this field.

5. "Technical and administrative support"

5.1 Coordinator

The University of Panama has received from PAHO assistance for the coordination of training activities as requested. Although, no permanent coordinator has been assigned to Panamá, several consultants have filled this need. At present, a candidate/coordinator has been appointed on a short term basis. The appointment will be extended if the situation warrants.

5.2 Operational Research

Preparatory work has been started in two aspects:

5.2.1 Management

A group of experts in public administration are studying the present organization of SNEM/Guatemala in order to identify bottlenecks, duplications, managerial procedures, tools, occupational profiles, delegation of authority, decentralization, and manuals needing improvement.

A protocol to this effect will be presented for consideration by the ad-hoc advisory Committee, due to meet in February 18-21, 1986 in N. Orleans.

The results of this activity will be useful in other countries, particularly in training of administrative personnel.

5.2.2 Epidemiological vigilance and information system

A review of the malaria epidemiological vigilance and information system of Honduras, El Salvador and Guatemala was carried out by PAHO staff, a STC from the University of Brasilia and consultants from Tulane University. As a result of this review, guidelines for the preparation of a conceptual model were sent to the countries involved. The guidelines included forms to be filled out, explanations, and examples on:

(1) List of forms and products
(2) Flow chart, with time lag for each step
(3) Elements of the system:
- users
- level within the program
- decisions which are expected to be taken
- essential data for decision making
- periodicity of the data
(4) Code book (with instructions and examples)
(5) Time table

Another visit by a consultant from Tulane University is taking place presently, to clarify concepts and correct the physical model, which is expected to be ready by mid-february for "pre-test".

In accordance with the tentative schedule the design of application, field testing, evaluation, and redesign will be carried out during the period April-August, 1986.

6. Supplies and Equipment for training

Some laboratory equipment and other supplies have been provided to the institutions involved in the program (U. of Panama, PASCAP) as a supplement to the resources that they already have at their disposal. See annexed list of equipment and supplies which were procured to this end.

7. Advisory Committee

The second meeting of the ad-hoc Advisory Committee will take place during the period February 18-21, 1986, together with a meeting of the Directors of the National Malaria Programs of CAP. Participation from AID missions and HQs is also expected.

Proposals on training and operational research for year 2 of the project have already been requested in order to facilitate the preparation of a consolidated document, for discussion during the meeting. The draft agenda is as follows:

Monday, February 17	Arrival (N. Orleans)
Tuesday, Wednesday (18-19)	NMES's Directors Meeting: Discussion of Workplan - year 2
Thursday 20	(a) Demonstration on use of microcomputers in health sciences (Directors of NMES) (b) Business meeting (Technical Advisory Committee)
Friday 21	Technical discussion on malaria vigilance and information system
Saturday 22	Return

Washington, 07 January 1986

EXPENDITURE WORKSHEET BY ELEMENTS IN EACH ACTIVITY.MALARIA COMPONENT Date: 12/16/85

ELEMENT EXPENSES/ACTIVITY	1	1.1	1.2	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3
BUDGETED	26314	42258	68464	35040	16908	12028	83705	6000	48538	38238	79920
EXPENSES:											
Short Term Conslt.	12155	7957			4212			1536			
Duty Travel	10054	1583	1045								1362
Contractual Services											231
Supplies and Equipment											
Courses & Seminars			72330	34216	4158						23870
Total Expenditure:	22209	9540	73375	34216	8370	0	0	1536	0	0	25463
BALANCE	4105	32718	-4911	824	8538	12028	83705	4464	48538	38238	54457

ELEMENT EXPENSES/ACTIVITY	3.4.1	3.4.2	4.1	4.2	5.1	5.2.1	5.2.2	6.1	6.2	6.3	7.2	TOTAL
BUDGETED		110000	20000	10000	37500	10000	21500	40000	25000	20000	33500	784913
EXPENSES:												
Short Term Conslt.			1558				10629					38047
Duty Travel							1971					16015
Contractual Services							6500		7500			14231
Supplies and Equipment								25461	4500			29961
Courses & Seminars												134574
Total Expenditure:	0	0	1558	0	0	0	19100	25461	12000	0	0	232828
BALANCE	0	110000	18442	10000	37500	10000	2400	14539	13000	20000	33500	552085

ANNEX

MALARIA CONTROL, SUPPLIES AND EQUIPMENT

The following equipment corresponds to activity 6.1 "Strengthening the University of Panama in support of courses & Seminars for malaria control.

P.A.	P.O.	Description	Units	Cost
074	N/A	Nikon Microscopes	4	3,900
071	23298	Dyna Fog Thermal fogger	1	736
069	23301	Laboratory supplies & equipment		2,865
070	23299	Leco machine and accesories	1	11,338
073	23296	Teaching microscopes	4	3,155
068	23300	Laboratory supplies & equipment		3,077
072	24384	Lotus 1-2-3 software		397
		T O T A L		25,468

The following equipment corresponds to activity 6.2 "Strengthening of PASCAP in support of teaching & training material for malaria control activities.

Printing supplies	4,500
TOTAL PURCHASES	29,968

per 12/XII/85

PAN AMERICAN HEALTH ORGANIZATION

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525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL. TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

PURCHASE ORDER NUMBER: APO-23298 (BM)
Please refer to the above number on all matters relating to this Purchase Order.

DATE: 21 October 1985

AUTHORITY: PA HPT/071/85

EX. RATE:

FUNDS AVAILABLE

FOB COST: $645.00

3%:

PFI: ~~91.00~~ 122.77

BLIND OBLIG.:

CIF COST: ~~$736.00~~ 767.77

30 OCT 85

058

Curtis Domestic International Sales Corp.
P.O. Box 297
Westfield, Indiana 46074

Att: Mr. R. F. Wassen
Internal Sales Mgr. 317/896-2561

01 XI 85

ALLOTMENT	ELEM.	OBLIG. #	EXP. CODE	AMD.	OBLIGATION AMOUNT	S&E PHONE #
AM/ICF/MAL/030/PG/84-85		AMR/85/163513			$ 736.00	202/861-3435

ECIAL INSTRUCTIONS/NOTES:

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1.	Dyna-Fog portable thermal fogger	1	ea.		$645.00
	Total, FOB Westfield, Indiana, packed for air shipment . . . . . Shipping and insurance charges extra at cost.				$645.00
	Quotation: Your writtenqqoote dated 10/10/85				
	Terms: Net 30				
	Shipment: On or before 11 November 1985				
	Ship to: Coordinador Programas en Panama Organizacion Panamericana de la Salud Edificio Ministerio de Salud Tercer Piso. Apartado 7260 Panama, Zona 5, Panama Tel.: 253328 ATTN: APO-23298(BM) - PA HPT/071/85				
	Exemption Clause: (commercial invoice must show:) DECRETO GABINETE NUMERO 280 DE 13 AGOSTO 1970.				
	Ship via: Insured airfreight prepaid on international through airwaybill.				
	Please telephone firm flight details to our Shipping and Expediting Unit.				
	AMR/85/163513 AMR/85/163513				

Clark L. Glenn
CONTRACTING OFFICER

O 183-8 (3/64)

eet 1 of 1 Sheets BM/ow PURCHASE FILE

BEST AVAILABLE COPY

PAN AMERICAN HEALTH ORGANIZATION

Pan American Sanitary Bureau - Regional Office of the World Health Organization
525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL. TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

PURCHASE ORDER NUMBER: APO-23299(BM)
Please refer to the above number on all matters relating to this Purchase Order.

DATE: 9 October 1985

AUTHORITY: PA HPT/060/85

EX. RATE:

FUNDS AVAILABLE: Amer 15 Oct 85

FOB COST: $10,558.01
3%:
PFI: 780.00
BLIND OBLIG.:
CIF COST: $11,338.01

TO
Pan American Product Services, Inc.
P.O. Box 7218
Orlando, Florida 32854-7218

Att: Mr. Allen W. Wooldridge

ALLOTMENT	ELEM.	OBLIG.	EXP. CODE	AMD.	OBLIGATION AMOUNT	S&E PHONE
AM/ICF/MAL/030/PG/84-85		AMR/E5/163743			$ 11,338.00	202/861-3435

SPECIAL INSTRUCTIONS/NOTES:

NOTE TO FORWARDER: Please ship via air to Panama per our APO Directive No. 39 page 28.

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1.	Leco machine ULV-HD-D/CV-E/SSTR/EXPORT/with stainless steel insecticide tank. Cat. 7900-009	1	ea.		$ 5,905.00
2.	One CV/Flow control unit for Leco ULV/HD generator for export. Cat. 6700-003	1	ea.		2,220.00
3.	One Minileco II Semiportable generator w/standard pneumatic wheels, for export. Cat. 6500-003	1	ea.		2,180.00
	Solenoid valve for ULV Leco generator. Cat. 9069	1	ea.		72.30
5.	Viton "O" Ring for insecticide pump. Cat. 90956	4	ea.	$2.35	9.40
6.	Nozzle (ULV) for Leco generator. 5171	2	ea.	27.92	55.84
	Total, FOB Valdosta, Ga.				$10,442.54
	Inland freight to Miami Airport				115.47
	Total cost at Miami Airport				$10,558.01

Quotation: Your written quote dated 26 Sept. 1985.

Shipment: On or before 4 November 1985

Case Markings: (to appear on all documents)
Coordinador Programas en Panama
Organizacion Panamericana de la Salud
Edificio Ministerio de Salud
Tercer Piso. Apartado 7260
Panama, Zona 5, Panama
Tel: 253328, 270082
ATTN: APO-23299(BM) - PA HPT/070/85

Note: Commercial invoice must show the following exemption clause: DECRETO GABINETE NUMERO 280 DE 13 AGOSTO 1970.

AM 5/163743 AMR/E5/163743

PAHO 183-B (3/84)

Sheet 1 of 2 Sheets BM/ow PURCHASE FILE

Walter W. Umstead
CONTRACTING OFFICER

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VENDOR Pan American Product Services, Inc. ORDER No. APO-23299(BM)

CONTINUATION SHEET 2 OF 2 SHEETS

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
	Before delivery please contact this company for specific instructions:			due 15 OCT 85	
	RANK International Forwarding Inc. 5477 N.W. 72 Avenue Miami, Florida 33166 Attn.: Mr. Jim Stentz Tel.: 305/883-8521 PAHO Order APO-23299(BM)				
	Note: When the material is dispatched to the forwarder, please send 10 copies of your invoice and 5 copies of your packing list.				

BEST AVAILABLE COPY

PURCHASE ORDER

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau - Regional Office of the World Health Organization
525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL. TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

00190

PURCHASE ORDER NUMBER: APO- 23300 (CG)
Please refer to the above number on all matters relating to this Purchase Order.

DATE: 28 October 1985

AUTHORITY: PA NO. HPT/68/85

EX. RATE:

FUNDS AVAILABLE

FOB COST: $ 2,862.12
3%:
PFI: 215.00
BLIND OBLIG.:
CIF COST: $ 3,077.12

TO
THOMAS SCIENTIFIC
99 High Hill Road at 1-295
Box 99
Swedesboro, New Jersey 08085-0099

Attn: Mr. Jack A. Sariego
Telephone: 800 524-0918

ALLOTMENT	ELEM	OBLIG #	EXP CODE	AMD.	OBLIGATION AMOUNT	S&E PHONE #
ICF/MAL/030/PG/85-85/550					$ 3,077.12	861-3435

SPECIAL INSTRUCTIONS/NOTES:

Note to S&E: Items 1 & 2 are hazardous

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
	Items 1 - 25 as per attached pages 2 to 5.				$ 2,862.12
	Total Cost Material FOB Airport, Philadelphia, PA packed for airfreight shipment. Shipping and insurance charges extra at cost.				$ 2,862.12
	Quotation: No. 852730005 signed by Mr. Jack A. Sariego, dated 8 October 1985				
	Delivery: On or before 31 January 1986				
	Ship to: COORDINADOR PROGRAMAS EN PANAMA ORGANIZACION PANAMERICANA DE LA SALUD EDIFICIO MINISTERIO DE SALUD TERCER PISO, APARTADO 7260 AVE. CUBA Y CALLES 36 Y 35 PANAMA, ZONA 5, PANAMA TELEPHONE: 25-3328 OR 27-0082				
	ATTN: APO-23300(CG): PA.NO. HPT 68/85				
	Exemption Clause: "DECRETO GABINETE NUMERO 280 DE 13 AGOSTO 1970." (to appear on B/L docs. & pkgs.)				
	Ship via: Insured airfreight prepaid on international thru airwaybill				
	Please telephone flight details to our Shipping & Expediting Unit, (202) 861-3435.				

BEST AVAILABLE COPY

HO 183-8 (3/84)

CLG/tsh HPT WALTER E. LINSTEAD

TO: Pan American Health Organization
Pan American Sanitary Bureau, Regional Office of the
World Health Organization
525 TWENTY-THIRD STREET, N.W., WASHINGTON, D.C. 20037
Attn: PROCUREMENT OFFICE (APO)

PURCHASE AUTHORIZATION

P.A. NO. HPT/68/85(2) DATE

ALLOTMENT

FROM: Lic. Mario Espinosa, Representante de OPS/OMS en Panamá
Ministerio de Salud 5º Piso
Ave. Cuba y Calle 35 y 36
Apartado Postal 7260 Zona 5, Panamá, R. P.

SEND BY: AIR [X] OCEAN [ ] AIR PARCEL POST [ ]

VIA PORT / CITY

DELIVER AT PORT OF ENTRY BY

ITEM No	DESCRIPTION ELECTRICAL CHARACTERISTICS _____ VOLT _____ CYCLE	CATALOGUE REFERENCE	QUANTITY	UNIT	ESTIMATED UNIT PRICE	ESTIMATED TOTAL PRICE
26	Bottle, Narrow month, glass stopper	1739-Q20	4	unit	5.16	20.64
27	Bottle, Narrow month, glass stopper	1739-Q30	4	unit	5.53	22.12
28	Bottle, Narrow month, glass stopper	1739-Q40	2	unit	7.44	14.88
	TOTAL					3,175.47

cc: AD
HPD
Dr. Mr. M. Nelson, ICF-VBC-010

CONSIGN TO: Lic. Mario Espinosa
Representante de OPS/OMS
Apartado 7260
Panamá 5, Panamá

MARK PACKAGES: Lic. Mario Espinosa
Representante de OPS/OMS
Ministerio de Salud 5º Piso
Ave. Cuba y Calles 35 y 36, Apartado 7260
Panamá 5, Panamá
Teléfonos: 25-3328
27-0082

Dr. Jaime Ayalde, HPT/M-1 — REQUESTING OFFICER'S SIGNATURE

Dr. Irene Klinger, DAP — ALLOTTEE (AR/CE) SIGNATURE

18.9.85 — DATE

PAHO 1144 11-76

IX-17-85

VENDOR: THOMAS SCIENTIFIC

PURCHASE ORDER NO. APO-23300(CG)

ITEM NO.	QTY.		CAT. NO.		DESCRIPTION	U/P	TOTAL AMT.
1	1	EA	C321V34	F15B12	EUPARAL,GBI LABS. 100CC	9.67	9.67
2	1	EA	C322J99	F17B06	EUPARAL ESSENCE,GBI LABS. 500 CC	17.61	17.61
3	1	PK	1704C28	F06D10	BOTTLE,8 OZ.PKG OF 12	3.83	3.83
4	1	PK	1758U37	F08D02	BOTTLE,125 ML.PKG OF 6	7.35	7.35
5	2	PK	1758U55	A29G	BOTTLE,250 ML.PKG OF 4	5.70	11.40
6	1	PK	1762E55	M04H15	BOTTLE,30 ML.PKG OF 12	9.52	9.52
7	1	PK	3483D11	F09E04	CULTURE DISH,60X15MM.PKG OF 12	21.78	21.78
8	1	PK	4704K21	F04A09	FILTER PAPER,48X48CM.PACK/100	10.56	10.56
9	2	PK	4704H10	M09A01	FILTER PAPER, 7.5CM.PACK OF100	.83	1.66
10	2	PK	4704H30	F05B03	FILTER PAPER,12.5CM.PACK OF100	1.37	2.74
11	2	PK	4704H45	F06D08	FILTER PAPER,20CM. PACK OF 100	2.45	4.90
12	2	EA	5680D12	F15E16	DIAMOND SCRIBER PLASTIC BARL	4.06	8.12
13	4	EA	9327J20	F11D05	THERMOMETER,MAXIMUM-MINIMUM	23.40	93.60
14	2	EA	6066R10	F10D06	SLING PSYCHROMETER	28.12	56.24

VENDOR: THOMAS SCIENTIFIC

PURCHASE ORDER NO. APO-23300(CG)

ITEM NO.	QTY.		CAT. NO.		DESCRIPTION	U/P	TOTAL AMT
15	1	PK	1951H10	F09D04	RUBBER BULB,1-ML.PKG OF 24	2.71	2.7
16	1	C1	1953D13	F11G05	RUBBER BULB,1/4-OZ.CTN OF 12	6.91	6.9
17	1	CS	3488H10	12 A	CULTURE DISH,60X15 MM.CS 500	57.62	57.6
18	2	EA	6561V20	8	STAND, B	210.87	421.7
19	2	EA	6561Y70	5	POWER POD, STEREOZOOM 5	721.00	1442.0
20	2	PR	6562C91	F03D07	EYEPIECE, 10X. PAIR	96.25	192.5
21	2	EA	6562D10	M17A03	LENS ATTACHMENT, 2X	66.50	133.0
22	2	EA	6630F06	7	MICRO LAMP, NICHOLAS	100.62	201.2
23	15	EA	3836F22	F08G08	DISH,37X25MM	4.58	68.7
24	1	PK	3551M29	B37A	CYLINDER, 100 ML. PKG OF 4	17.52	17.5
25	1	PK	3551M41	F08C01	CYLINDER,250ML.PKG OF 2	15.58	15.5
26	4	EA	1739Q20	F07D03	BOTTLE,125 ML	3.91	15.6
27	4	EA	1739Q30	F13A06	BOTTLE,250 ML	4.18	16.7
28	2	EA	1739Q40	F13A09	BOTTLE,500 ML	5.63	11.2

TOTAL COST MATERIAL 2862.
FOB AIRPORT, PHILADELPHIA, PA

BEST AVAILABLE COPY

PURCHASE ORDER

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau - Regional Office of the World Health Organization
525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL. TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

PURCHASE ORDER NUMBER: APO-23301(IP)
Please refer to the above number on all matters relating to this Purchase Order.

DATE: 28 October 1985
AUTHORITY: PA HPT/069/85
EX. RATE:
FUNDS AVAILABLE by 31 OCT
FOB COST: $2,105.07
3%:
PFI: 760.00
BLIND OBLIG.:
CIF COST: $2,865.07

00818

To
BIOQUIP PRODUCTS
P.O. Box 61
Santa Monica, Ca. 90406

Att: Ms. Louise H. Fall/Operations Mgr.
213/322-6636

01/XI/85 OW

ALLOTMENT	ELEM.	OBLIG. #	EXP. CODE	AMD.	OBLIGATION AMOUNT	S&E PHONE #
AM/ICF/MAL/030/PG/84-85		AMR/85/163604			$2,865.00	202/861-3436

SPECIAL INSTRUCTIONS/NOTES

AMR/85/163604 AMR/85/163604 AMR/85/163604

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
	Items 1 thru 20 as per second page of this order.				$2,105.07
	Inland freight charges to Los Angeles Int'l Airport				80.00
	Total, FOB Los Angeles Int'l Airport, packed for air shipment . . . . . Shipping and insurance charges extra at cost.				$2,185.07

Quotation: Your written quote of 18 October 1985.

Terms: Net-30

Shipment: On or before 23 December 1985

Ship to: Coordinador Programas en Panama
Organizacion Panamericana de la Salud
Edificio Ministerio de Salud
Tercer Piso. Apartado 7260
Panama, Zona 5, Panama
Tel.: 253328, 270082
ATTN: APO-23301(IP) - PA HPT/069/85

Note: Commercial invoice must show the following exemption clause:

DECRETO GABINETE NUMERO 280 DE 13 AGOSTO 1970.

Ship via: Insured airfreight prepaid on international through airwaybill.

Please telephone firm flight details to our Shipping and Expediting Unit.

85 OC 30 P 1:57

BEST AVAILABLE COPY

TO: Pan American Health Organization
Pan American Sanitary Bureau, Regional Office of the
World Health Organization
525 TWENTY-THIRD STREET, N.W., WASHINGTON, D.C. 20037
Attn: PROCUREMENT OFFICE (APO)

PURCHASE AUTHORIZATION

P.A. NO. HPT/069/85 | DATE

ALLOTMENT AM/ICP-MAL-030/PG/84-85

FROM: Lic. Mario Espinosa, Representante de OPS/OMS en Panamá
Ministerio de Salud 5º Piso
Ave. Cuba y Calles 35 y 36
Apartado Postal 7260 Zona 5, Panamá, R.P.

SEND BY: AIR [X] OCEAN [ ] AIR PARCEL POST [ ]

VIA PORT ____ CITY ____

DELIVER AT PORT OF ENTRY BY ____

ITEM No.	DESCRIPTION ELECTRICAL CHARACTERISTICS ____ VOLT ____ CYCLE	CATALOGUE REFERENCE	QUANTITY	UNIT	ESTIMATED UNIT PRICE	ESTIMATED TOTAL PRICE
	BIO QUIP PRODUCTS 1983-1984 Catalogue P.O. Box 61, Santa Mónica, California 90406 Cable: BIOQUIP Telex: 19 4561 LSA Phone: (213) 322 6636					
1	Schmitt Box for insects	1004	6	unit	19.50	117.00
2	Cornell Cabinet for insects	2512 F	2	unit	300.00	600.00
3	Cornell drawers	1012 AM	24	unit	23.75	570.00
4	Unit trays 7-5/16"	1025 A	32	unit	0.85	27.20
5	Unit trays 3-5/16"	1025 B	128	unit	0.68	87.04
6	Unit trays 1-13/16"	1025 C	384	unit	0.51	195.84
7	Dippers, plastic, carton of 10	1132	2	ctn	56.30	112.60
8	Pinning Block, plastic, 3-step	1144	4	unit	1.50	6.00
9	Point punch, square base	1161 B	2	unit	30.00	60.00
10	Insect pins, elefant, size 3 (Box of 1000)	1202 B	3	box	20.35	61.05
11	Insect pins, "Utility", size 3 (Box of 1000)	1201	3	box	11.00	33.00
12	Minuten pins, black (lot of 500)	1204 B	2	lot	9.85	19.70
13	Forceps, fine point, straight	4524	6	unit	9.00	54.00
14	Forceps, featherweight	4748	1	doz	22.00	22.00
15	Slide box, polystyrene	6100	1	doz	58.30	58.30
16	Cover slips, round, 18 mm	6342 B	2	ounce	14.20	28.40
17	Micro slide labels	6496	10	box	1.25	12.50
18	Plastic tubes	8909	1	gross	12.65	12.65
19	Plastic tubes	8912	1	gross	14.85	14.85
20	Plastic tubes	8915	1	gross	17.60	17.60
	cc: AD, HPD, Dr. M. Nelson TOTAL					2,109.73

CONSIGN TO: Lic. Mario Espinosa
Representante de OPS/OMS
Apartado 7260
Panamá 5, Panamá

MARK PACKAGES: Lic. Mario Espinosa
Representante de OPS/OMS
Ministerio de Salud 5º Piso
Ave. Cuba y Calles 35 y 36, Apartado 7260
Panamá 5, Panamá
Teléfonos: 25-3328
27-0082

Dr. Jaime Ayalde, HPD/M-P
REQUESTING OFFICER'S SIGNATURE

Dr. Irene Klinger, OAP
ALLOTTEE (AR/CR) SIGNATURE

18.9.85
DATE

PAMO 1166 IX 76

IX-17-85

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[redacted]

PAN AMERICAN HEALTH ORGANIZATION

Pan American Sanitary Bureau - Regional Office of the World Health Organization
525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL. TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

PURCHASE ORDER NUMBER: APO-24384(VS)
Please refer to the above number on all matters relating to this Purchase Order.

DATE: 21 November 1985

AUTHORITY: HPT/072/85

EXPIRE:

FUNDS AVAILABLE: 25 NOV 85 dy

PROCUREMENT OFFICE
PASB/WHO
DEC 4 1985
DISPATCHED

FOB COST: $ 306.90
3%
PFI: ~~90.00~~ 68.50
BLIND OBLIG.:
CIP COST: $ 396.90

To
TECHNOLOGY SERVICES, INC.
5703-B General Washington Drive
Alexandria, VA 22312
ATTN: Ms. Julie Mantis
354-8668

ALLOTMENT	ELEM.	OBLIG. #	EXP. CODE	AMD.	OBLIGATION AMOUNT	S&E PHONE #
AM/ICP-MAL-030/PG/84-85 /550	AMR/85/185062				$ 397.00	861-3434

SPECIAL INSTRUCTIONS/NOTES:

NOTE TO S&E: For shipment to CR, Panama

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
10.	Lotus 1-2-3 (for use on IBM PC-AT)	1	ea		$ 306.90
	TOTAL PRICE, FOB Dulles Airport, Chantilly, VA, packed for airfreight. . . .				$ 306.90
	QUOTATION: Telephone quotation, Ms. Mantis to Ms. Tull, 14 Nov. 85				
	PAYMENT TERMS: 2% - 20 days; net 30 days				
	CONTRACT: GS00K85AGS6059				
	DELIVERY: On or before 24 December 1985				
	DELIVER TO: PAHO ORDER APO-24384(VS) WALL SHIPPING COMPANY DULLES INTERNATIONAL AIRPORT CARGO BUILDING 2 CHANTILLY, VA 22021				
	IMPORTANT: Cartons must be clearly marked with our purchase order number and the packing list affixed to outside of cartons or Wall Shipping Company will refuse shipment.				

85 NOV 22 AM 10:32
FINANCE OFFICE
PAHO/WHO

AMR/85/185062

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PAHO 183-8 (3/84)

Sheet 1 of 1 Sheets VS/gt PURCHASE FILE V. SHUERT CONTRACTING OFFICER

281

Medicos y Laboratorios Especializados, S.A.

Calle F El Cangrejo, Edificio Avic

Tel: 64-4444
Apartado 6
El DORADO
Panamá, R. P.

Para

Dr. Abdiel Adames
Vice-Rectoría de Investigación
y Postgrado
UNIVERSIDAD DE PANAMA

Cotización No.
029-85

Fecha	Expiración	Referencia	Fecha de embarque estimada
5-9-85	30 días		

ART.	CANT.	Catalogo	Descripcion	Precio Unitario	Precio Total
1	4		Microscopio acromáticos. Alpha Phot YST	975.	3,900.00
2	1		Microscopio Labo Phot triocular planacromático.		2,450.0
				B/.	6,350.0
			Precios: C.I.F. Panamá, sin impuestos.		
			Entrega: El primer renglón tiene una entrega de 15 días y el renglón #2 de 90 días.		
		FB/oc.			

Firma

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Pan American Health Organization
Pan American Sanitary Bureau, Regional Office of the
World Health Organization
525 TWENTY-THIRD STREET, N.W., WASHINGTON, D.C. 20037
Attn: PROCUREMENT OFFICE (APO)

PURCHASE AUTHORIZATION

P.A. NO. HPT/074/85 | DATE 17 Sep. 85

ALLOTMENT AM/ICP-MAL-030/PG/84-85 AMR/85/153

FROM: Lic. Mario Espinosa, Representante de OPS/OMS en Panamá
Ministerio de Salud 5º Piso, Ave. Cuba y Calles 35 y 36.
Apartado 7260, Zona 5, Panamá, Rep. de Panamá

SEND BY: AIR ☐ OCEAN ☐ AIR PARCEL POST ☐

VIA { PORT / CITY

DELIVER AT PORT OF ENTRY BY

ITEM No.	DESCRIPTION ELECTRICAL CHARACTERISTICS _____ VOLT _____ CYCLE	CATALOGUE REFERENCE	QUANTITY	UNIT	ESTIMATED UNIT PRICE	ESTIMATED TOTAL PRICE
	For local, duty-free purchase from: Medica y Laboratorios Especializados, S. A. Apartado 6-2307 El Dorado, Panamá					
1	Microscopio acromático, Nikon Alphaphot YST		4	unit	975.00	3,900.00
	cc: AD HPD Dr. M. Nelson, ICF-VBC-010					

CONSIGN TO Lic. Mario Espinosa
Representante de OPS/OMS en Panamá
Apartado 7260
Panamá 5, Panamá

MARK PACKAGES Lic. Mario Espinosa, Representante de OPS/OMS en Panamá
Ministerio de Salud, 5º Piso
Ave. Cuba y Calles 35 y 36
Apartado 7260, Panamá 5, Panamá
Phone: 25-3328 / 27-0082

Dr. Jaime Ayalde, HPT/M-1
REQUESTING OFFICER'S SIGNATURE

Dr. Irene Klinger, DAP
ALLOTTEE (ABOVE) SIGNATURE

18.9.85
DATE

PAHO 1/84 AE 76

12-17-85

283

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
World Health Organization
525 Twenty-third Street, N.W., Washington, D.C. 20037
CABLE ADDRESS: OFSANPAN • Telephone (202) 861-3200
INTL TELEX: RCA 248338, ITT 440057, WUI 64152
DOMESTIC TELEX: 892744

00196

APO

DATE: 24 October 1985

AUTHORITY: PA NO. HPT/073/85

EX. RATE:

FUNDS AVAILABLE

To
H. K. Schueler International Ltd.
P.O. Box 1273
Old Chelsea Station
New York, New York 10113

Attn: Mr. H. Kenneth Schueler
Telephone: (212) 645-1900

FOB COST: $ 2,990.00
3%:
PFI: 165.00
BLIND OBLIG.:
CIF COST: $ 3,155.00

ALLOTMENT	ELEM.	OBLIG.	EXP. CODE	SAMO	OBLIGATION AMOUNT	S&E PHONE
AR/ICF/NAL/030/PG/86-85					$ 3,155.00	861-3435

SPECIAL INSTRUCTIONS/NOTES:

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1.	AO Model 45RT Teaching Microscope, Zoom, 10X Field 7-30X Mag, 110V, 60Hz.	5	each	$ 598.00	$ 2,990.00
	Total Cost Material FOB HKS Warehouse JFK International Airport, New York packed for airfreight shipment. Inland freight warehouse to airlines, shipping and insurance charges extra at cost.				$ 2,990.00
	Quotation: Pro Forma VS85-6878, Telex Msg. ST-827 dated 10/16/85 from Mr. Schueler				
	Terms: 1% - 10 Days, Net 30 Days				
	Delivery: On or before 24 January 1986				
	Ship to: COORDINADOR PROGRAMAS EN PANAMA ORGANIZACION PANAMERICANA DE LA SALUD EDIFICIO MINISTERIO DE SALUD TERCER PISO, APARTADO 7260 AVE. CUBA Y CALLES 35 Y 36 PANAMA, ZONA 5, PANAMA TELEPHONE: 25-3328 OR 27-0082				
	ATTN: APO- 23296(CG): PA NO.HPT 073/85				
	Exemption Clause: (to appear on all docs. & pkgs.) "DECRETO GABINETE NUMERO 280 DE 13 AGOSTO 1970."				
	Ship via: Insured airfreight prepaid on international thru airwaybill				
	Please telephone flight details to our Shipping & Expediting Unit, (202) 861-3435.				

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PAHO 183-B (3/84)
Sheet 1 of 1 Sheets

CLG/tmN HPT
REQUISITIONER

WALTER W. UMSTEAD
CONTRACTING OFFICER

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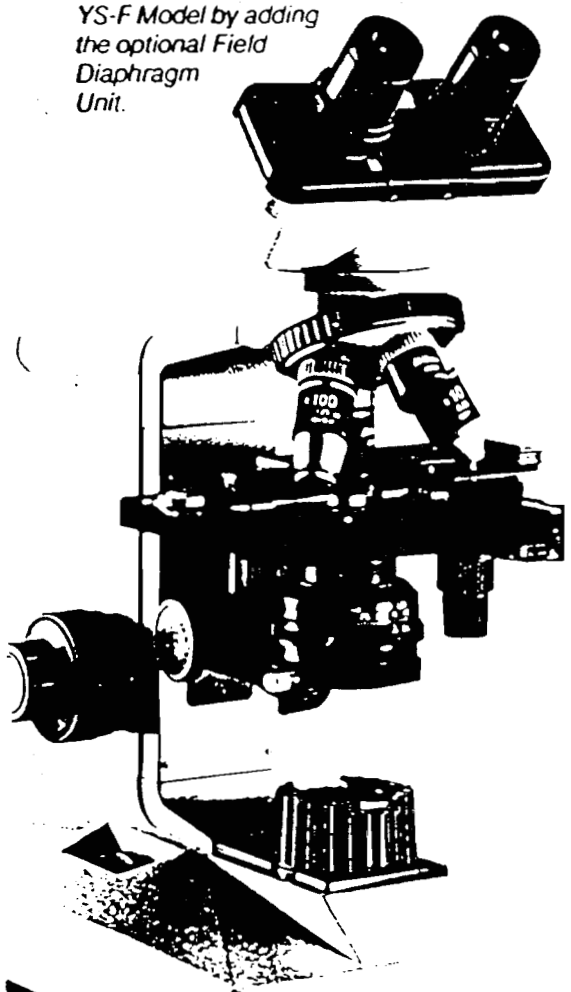
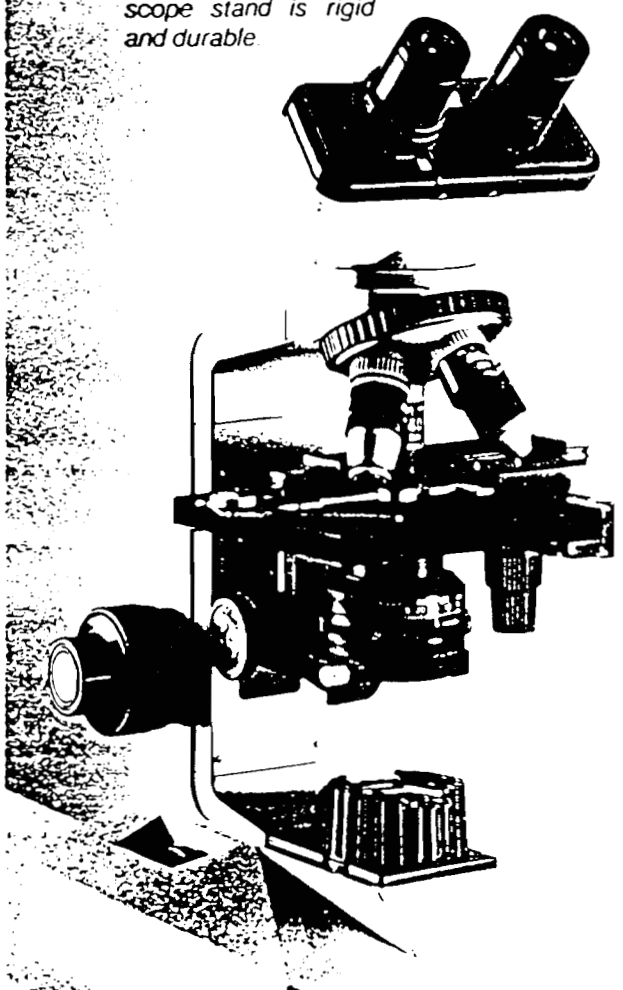
Model YS-H *Using a 6V-20W halogen lamp for illumination instead of the 20W tungsten lamp used in the YS-T, this model is effective for low light level observation at 100X, phase contrast, dark field, and polarized light (including the First Order Red Compensator) in addition to routine hospital and lab work. The YS-H Model can be upgraded to the YS-F Model by adding the optional Field Diaphragm Unit.*



Model YS-T *Perhaps the most attractive feature of the YS-T is its ability to be upgraded by the addition of accessories to meet your future needs. The YS-T uses a 20W tungsten lamp that produces ultra-bright illumination. Designed to ensure years of trouble-free use, every part of the YS-T, including the nosepiece, coaxial focusing mechanism, and microscope stand is rigid and durable.*



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PRIORITY HEALTH NEEDS
IN CENTRAL AMERICA AND PANAMA

PAHO-AID AGREEMENT

Grant No. 596-0136 (March 28/85)

MALARIA COMPONENT

WORK PLAN
First Year

Washington, D.C., 28 June 1985

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A. INTRODUCTION

On March 28, 1985 the Government of the United States of America, acting through the Agency for International Development, awarded to the Pan American Health Organization a grant (No. 596-0136) to be used for support of a project to strengthen malaria control programs and improve essential drug procurement, distribution, quality control and utilization programs in the Central American Subregion.

The Grantee covenants that AID resources will be utilized only for technical assistance, training and operations research in or for Belize, Costa Rica, El Salvador, Guatemala, Honduras and Panamá.

AID's contribution to the project will be provided in increments not to exceed a total of $6,500,000 United States Dollars, during the period from March 30, 1985 through March 31, 1989. It is estimated that, from the total contribution, the sum of $3,500,000 will be allocated to the support of the Central America Malaria Control program.

In connection with the malaria component, the Agreement identifies five areas of support, as follows:

	Total (thousands)	%
Applied Field Research	950	27.14
Research and Training Center	1,239.35	35.41
Short Term Training	500	14.29
Technical cooperation	610.65	17.45
Advisory Committee	200	5.71
4-year total	3,500.	100.00

B. INFORMAL CONSULTATION (April 8-9, 1985)

As an initial step for the implementation of the project, an informal consultation was held at PAHO/HQs in Washington, D.C., in April, with the purpose of defining the best approaches for the establishment of a work plan as well as the timetable of activities to be carried out in the immediate future. This consultation was attended by representatives from AID/Washington, CDC/Atlanta, the University of South Carolina, and PAHO/WHO. The group recommended the drafting of updated country profiles in terms of the malaria problem, training needs and available resources.

C. VISIT TO COUNTRIES DIRECTLY INVOLVED IN THE PROJECT
(April 29 - May 10, 1985)

In order to facilitate the input of national authorities, it was decided to plan a short visit to the countries directly involved in the project, to take place early in May, and to organize a planning workshop in Guatemala, about two weeks later (May 22-24) with the participation of Responsible Officers of Area 5 -Tropical Diseases.

Specific objectives of the Mission were:

- Information to PAHO/Representatives, AID/Missions, National Coordinators of the Plan (Priority Health Needs) and Responsible Officers of Area 5 - Tropical Diseases, regarding the scope of the agreement, and its limitations. Selected research and training institutions were also to be visited.

- Discussion on present needs and available resources;

- Identification of additional information needed for the planning workshop, thus facilitating the input of national authorities in the preparation of the Fist Year Work Plan.

The mission started in Panama, for the discussion of general terms of reference and to unify criteria to be followed, visited Belize, Costa Rica, El Salvador, Honduras and ended in Guatemala with the preparation of a joint report.

The joint report is available in Spanish only. It describes the activities of the two sub-groups, and provides information on the following:

(a) Provisional list of specific training areas, identification of countries within the subregion which have offered support to the project;

(b) Provisional list of training areas, and countries/institutions which have offered support to the project from outside the Sub-region;

(c) Matrix which could be used as a model, albeit imcomplete, for the review of training needs in terms of personnel and areas of knowledge.

(d) Matrix similar to the above, in relation to research.

As a result of the Mission the following was accomplished:

- Better understanding of the agreement at country level (National Authorities, AID/Missions, PAHO/CR);

- An exchange of information regarding the present malaria situation, needs and resources in each country;

- A review of previously prepared profiles, in order to make them more relevant to the project in the present circumstances (updating);

- Preparation of a 20-30 pages document, by each participating country, regarding the Sub-regional component of their programs, bearing in mind present policies of the public health sector;

- The Responsible Officers - Area 5 -Tropical Diseases, arrived in Guatemala better prepared to participate in the planning workshop;

- All the national programs which are expected to benefit directly from the implementation of the agreement, including Belize, participated in the planning workshop. Therefore, the material used for the preparation of the workplan is country based.

D. SUMMARY OF THE MALARIA STATUS

1. BELIZE

Total population: 164 thousand; Pop. malarious areas: 160,000 (97.6%). Year 1984.

Malaria in Belize is considered to be endemic but "responds" well to control measures. A National Malaria Eradication Program was started in 1957, and by 1963 it had been successful in interrupting autochthonous transmission and all the country was classified in the consolidation phase of the program. Only 17 cases were recorded that year.

Unfortunately, the situation deteriorated and the number of registered cases increased during the period 1965-1967. There was again a period (1968-1975) when enough resources were brought into the program, with relative good control of the situation and the number of annual cases reported was maintained below the 100 level. In 1970, for instance, the number of recorded cases was 33.

The situation now is considered to be very serious as a public health problem. Since 1976 there has been a steady increase in the number of cases from 90 cases recorded in 1975, to 4,595 recorded in 1983.

Another problem is the "dispersion" of positive localities, from 16% in 1977 to 62% in 1982.

In 1984 there was a slight improvement of the situation, as a result of the measures applied. The figures indicate an approximate reduction of 10% with 4,117 cases recorded (1984) as compared to 4,595 (1983). In addition, there was a reduction in the number of positive localities, and of P. falciparum infections (634 P. falciparum in 1983 and 521 P. falciparum in 1984).

The Annual Parasite Incidence (1984) was 25.5 per 1,000 inhabitants.

No technical problems, such as resistance of the vectors to the insecticides or resistance of the parasites to antimalarial drugs have been identified so far.

There is a new 4 year program planned for 1985-1988, which calls for the improvement of the structure of the national malaria service, financial support (already granted), and staff development.

The objectives of the program are:

- to obtain 70% reduction in the malaria level;
- to obtain 90% reduction of P. falciparum infections;
- to interrupt malaria transmission in 50% of the malarious areas.

The strategy to accomplish the objectives include:

- Assignment of appropriate human and budgetary resources;
- Use of residual insecticides in all affected areas;
- Improvement of case detection and treatment system;
- Training of personnel of the malaria program, and of the general health services;
- Community participation;
- Inter-institutional coordination.

2. COSTA RICA

Total population: 2.5 million; Pop. malarious areas: 700,000 (28.6%). Year 1984.

The national malaria eradication program started in 1957 with the use of DDT as the principal control measure, and by 1972 autochthonous transmission had been controlled and part of the country with 32% of the population of the originally malarious area was placed in the consolidation phase of the program.

In 1973 a new program of extension of coverage of the general health services to the rural areas was started, in close collaboration and with the active support of the national malaria eradication service. The new program aimed at (a) extension of basic health services;

(b) promotion of preventive activities; and

(c) improvement of epidemiological surveillance.

As of the same year (1973) malaria vigilance became an integral responsibility of the general health services, through the so-called "rural health program". The situation continued to improve, and by 1984 over 600,000 persons were living in areas in consolidation phase or 86.2% of the original malarious areas. It is now necessary to maintain a rigorous epidemiological vigilance in order to prevent a drawback.

A good prevention and control program has been maintained during the last ten years, with the lowest number of cases recorded in 1982 (110 cases, of which only 6 were P. falciparum infections). However, there was an alarming increase in 1983 (245 cases) and in 1984 (569 cases), with an increase in the Annual Parasite Incidence from 0.35 to 0.79 per 1000 inhabitants.

The number of positive localities has also increased (138 in 1984) and even localities which were not affected by malaria before are now reporting local transmission, a problem that weighs heavily on the general health services, and on the national malaria program which are now finding it difficult to cope with the increased demand.

It is to be mentioned that in the area of Guanacaste, North-western part of the country, near the border with Nicaragua, the Government is developing an irrigation project (Rio Tempisque) which would almost double agricultural production, and will attract new persons into the area, with the potential increase in malaria risk.

The Tempisque irrigation project will cover an area of 120,000 hectares; it is expected that the present population (40,000 inhabitants) of the area will increase to 250,000 people, by the time the project is in operation. It is also to be noted that the project is located in an "originally malarious" zone. The Government has requested IDB funds for the study of the health impact of the project.

The administration of the program is under the Office of International Cooperation. Technical activities are under the guidance of a central group, which works closely with the "Rural Health Program" in charge of malaria epidemiological vigilance in areas where transmission has been interrupted.

The movement of population through the Northern border, as well as the areas under the influence of migrants, displaced persons and refugees, due to social and political unrest in the Central America Sub-region, is cause of serious concern to the health authorities.

The program is oriented toward the goals of tactical variant No. 4 of the XVII Report of the Expert Committee on Malaria.

3. EL SALVADOR

Total population: 5.4 million; Pop. malarious areas: 4,133,000 (76.5%). Year 1984.

Malaria has been known to exist in El Salvador since the beginning of this century, with negative repercussions in the social and economic development of the country.

An area with 43% of the population is considered to be hyperendemic and has 85% of the cases registered in the country. In the rest of the malarious area, with 57% of the population, only 15% of the total number of cases are detected.

There are fluctuations in the number of cases registered per year, but, in general, the trend has been of increase. For instance, 10,066 cases in the year 1960; 45,436 in 1970; and 95,835 in 1980.

Several factors appear to be influencing this situation:

- technical, particularly resistance of A. albimanus to most available insecticides. This problem affects a large proportion of the country.

- Migration connected with labor movements in accordance with planting and harvesting cycles of agricultural crops. Around 200,000 persons are involved in these activities.

- Movement of displaced persons and refugees due to present political circumstances in the Sub-region.

- Administrative factors including financial constraints, difficulties in obtaining critical inputs and insufficient logistic support.

Starting in 1980 new strategies have been designed and adopted, so as to plan integral control in selected areas, including vector source reduction and treatment of cases. These approaches have been complemented by residual insecticides and space spraying (ULV) in some priority localities. The program, however, only covers about 25% of the area known to be hyper-endemic.

About 85% of all cases are P. vivax infections and 15% P. falciparum, with minor fluctuations during the last 5 years. In 1984 the percentage of P. falciparum infections was 16.71.

Control activities which are concentrated in priority areas, plus a wide distribution of antimalarial drugs through the voluntary collaborators network are credited with the control of mortality due to malaria.

Present goals of the program are:

- To organize malaria vigilance, prevention and control activities as an integral part of the General Health Services and within the Primary Health Care Strategy;

- To eliminate mortality due to malaria;

- To reduce morbidity to manageable levels.

To achieve the goals set forth above, the strategy includes:

- Support to General Health Services.
- Identification and better utilization of national resources.
- Technical cooperation among developing countries.
- Involvement of academic and other Institutions.
- Coordination with development projects.
- Mobilization of resources from international, bilateral and financial agencies, for the support of the program.

4. GUATEMALA

Total population: 8.1 million; Pop. malarious areas: 3,104,000 (38.0%). Year 1984.

Malaria constitutes one of the principal public health problems in the country, considering the high number of cases which are being detected, the potential to generate epidemic situations and the negative social and economic impact of the disease in the individual, the family, and society in general.

The situation is illustrated by the fact that

. in 1964 the program reported 20,401 cases, of which 5,003 were P. falciparum infections (24.52%);

. in 1974 the figure was reduced to 4,030 cases, of which only 25 were P. falciparum infections (0.62%);

. and in 1984 the figure reached 74,132 cases, of which 6,535 were P. falciparum infections (8.82%).

Around 3.5 million inhabitants of the Republic of Guatemala (1984) live in areas originally classified as malarious. Of the 22 Departments (primary administrative units) in which the country has been divided, six Departments are responsible for about 3/4 of the total number of cases, as follows:

El Peten	(North)	20.76%
Escuintla	(Pacific Coast-South)	16.40%
Alta Verapaz	(North)	15.84%
Izabal	(North)	9.61%
El Quiché	(North)	6.21%
Huehuetenango	(North)	5.08%
		73.90%

The malarious area of Guatemala has been divided in 3 zones, in accordance with ecological conditions, epidemiological situation and the response to control measures.

- The North, where El Petén and Alta Verapaz are located, has high rainfall, areas of rain forest, high relative humidity, and areas where agriculture is being developed. High risk of malaria transmission.

- The South, (Pacific Coastal Zone) is smaller than the North, but also has conditions favourable to malaria transmission. Main crops are cotton and sugar cane. The heavy use of insecticides in the Pacific Coastal Zone is blamed for the development of resistance of the mosquito vectors of malaria to these compounds.

- There is a third ecological zone, Central-Eastern Zone, with high temperatures, but low rainfall and low humidity. The risk for malaria transmisson is also low in this zone.

The year 1974 was the period when the malaria control program had its best accomplishments, with 4,030 cases registered, as mentioned before. After that year there were fluctuations regarding availability of critical inputs, with corresponding ups and downs in the number of recorded cases; during 1977 there was a sharp increase in the number of cases, which peaked at 34,907 for that year. This phenomenon was attributed to the fact that the Government had to mobilize all available resources to assist the population displaced by the earthquake which affected Guatemala in 1976, and new settlements appeared, while most of the malarious areas were left unprotected.

5. HONDURAS

Total population: 4.2 million; Pop. malarious areas: 3,867,000 (91.4%). Year 1984.

The control of malaria has been included in the priority health needs of the country. The malaria eradication program started in 1958, and, in general was succesful up to 1974 in keeping the transmission under control.

There were some fluctuations, however. For instance, in 1970 a total of 34,537 cases were recorded, of which 5,875 were P. falciparum infections. But by 1974 the situation was again under control and, in that year, the number of recorded cases was down to 7,503 with only 150 P. falciparum (2%).

From 1975 on, the situation has been steadily deteriorating with an all time peak in 1982 of 57,482 cases. Some control of the transmission was obtained in 1983 (37,536 cases) and 1984 (27,332 cases).

The objectives of the malaria program, at present, are:

- To Prevent mortality due to malaria;
- To lower malaria morbidity to levels which would not hinder the social and economic development of the country. To this end, a gradual reduction of the annual parasite incidence (API) to levels below 1.5 cases per 1,000 inhabitants, in a 5 year period, has been adopted as a goal. Present API is 7.07 x 1,000 (year 1984).

In order to achieve the objectives of the program the following strategic approaches have been identified:

- Strengthening of epidemiological vigilance;
- Training of personnel, as multiplying agents;
- Inter-institutional coordination and participation; this would include the active involvement of the General Health Services in antimalarial activities.
- Community participation;
- Intersectoral coordination and support;
- Optimal use of existing national resources.

In 1977 the National Malaria Eradication Service (NMES) was disestablished and a new Division of Vector Control was created with the goal of achieving the integration of antimalarial activities in the General Health Services and obtaining full participation of the community in the program. However, from 1977 to the present, malaria control activities have continued under the direct supervision and the executive authority of the head of the Division and joint activities with the General Health Services have been sporadic.

Considering the trend of the epidemiological situation of malaria, at present, and the adoption of new control strategies, there is a stated interest in stressing the participation of the general health services in the program, leading, eventually to a complete integration of the programs, through a gradual process. When this goal is accomplished, the Vector Control Division (VCD) would function as a central normative body, in charge of planning, programming, monitoring and evaluation of the malaria control program. Within this scheme the general health services would be in charge of the actual execution of the program. To this end, the personnel of the VCD should be retrained, in order that they may be able to act as multiplying agents, and that, in turn, they could offer training courses to the staff of the general health services. It is also envisaged that there will be a need to offer training in other health priority programs to the malaria personnel but maintaining malaria as the main focus of their activities so as not to jeopardize the proper execution of the program.

The process of interrelating the malaria program with the general health services was one of the issues discussed and analyzed during a recent evaluation of the program.

6. PANAMA

Total population: 2.1 million; Pop. malarious areas: 2,037,000 (95.4%). Year 1984.

At the beginning of the eradication campaign, in 1956, malaria was an important cause of mortality and morbidity in the country.

In 1959 the number of cases recorded was 5,066. There was a marked reduction in the number of cases between 1961 and 1968, but in 1969 another "peak" occurred, with 5,937 cases. After 1970 the number of cases recorded has been steadily declining as a result of the activities of the program. In 1975 the number was below th 1,000 mark, with less than 500 cases, per year, reported during the last seven years. In 1984 only 125 cases were reported of which 78 were P. falciparum infections.

Of the 125 cases diagnosed last year, 95 (76%) were imported from other countries, 28 cases were autochthonous and 2 cases were classified as introduced. Of 9,706 localities surveyed, 37 were positive but only in 17 there was local transmission.

Of the total number of cases, 48 were reported in Darien Province and 63 in San Blas, which means that these two provinces were responsible for about 90% of the cases recorded in 1984. There are ten provinces in Panamá.

It is considered that eradication of malaria is possible to achieve in Panamá, provided certain prerequisites are met, such as:

(a) Implementation of the Primary Health Care Strategy (PHC);

(b) integration of malaria (NMES) into the general health services. This would involve "joint programming" of malaria vigilance and control together with the activities of the general health services, and not just "coordination";

(c) maintenance of an adequate technical profile of malaria personnel and their activities (i.e. priority in their field of action);

(d) proper training of general health services in the epidemiology and control of malaria;

(e) public awareness and community participation;

(f) research on problems encountered, in cooperation with other sectors or other disciplines of the health sector; and

(g) maintenance of a high standard of professional competence.

Finally, is to be mentioned that, although malaria is well under control in Panama, the interest on research and training in vector borne diseases is maintained to the extend that the country has service and academic institutions which can actively participate in a Sub-regional program in these disciplines.

EPIDEMIOLOGICAL EVALUATION

BELIZE

YEAR	Population Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+Mixed	ABER	SPR	API	%Pf+ Mixed
1959	90,000	11,307	1,019	712	12.56	9.01	11.32	69.87
1960	90,000	13,307	196	55	14.79	1.47	2.18	28.06
1961	93,000	12,355	23	1	13.28	0.19	0.25	4.35
1962	100,000	14,556	20		14.56	0.14	0.20	0.00
1963	100,000	13,085	17		13.09	0.13	0.17	0.00
1964	104,000	11,826	35		11.37	0.30	0.34	0.00
1965	105,000	10,787	206	188	10.27	1.91	1.96	91.26
1966	107,000	13,920	552	260	13.01	3.97	5.16	47.10
1967	114,000	14,773	375	170	12.96	2.54	3.29	45.33
1968	119,000	12,271	39	1	10.31	0.32	0.33	2.56
1969	122,000	12,194	28		10.00	0.23	0.23	0.00
1970	120,000	15,522	33		12.94	0.21	0.28	0.00
1971	124,000	15,703	33	3	12.66	0.21	0.27	9.09
1972	128,000	19,835	86		15.50	0.43	0.67	0.00
1973	132,000	24,414	99		18.50	0.41	0.75	0.00
1974	135,000	23,100	96		17.11	0.42	0.71	0.00
1975	132,000	19,116	90		14.48	0.47	0.68	0.00
1976	136,000	23,513	199		17.29	0.85	1.46	0.00
1977	141,000	39,151	894		27.77	2.28	6.34	0.00
1978	143,000	30,818	1,218	2	21.55	3.95	8.52	0.16
1979	158,000	20,952	1,391	13	13.26	6.64	8.80	0.93
1980	158,000	23,925	1,529	34	15.14	6.39	9.68	2.22
1981	167,000	46,460	2,041	41	27.82	4.39	12.22	2.01
1982	163,000	31,945	3,868	191	19.60	12.11	23.73	4.94
1983	159,000	31,889	4,595	634	20.06	14.41	28.90	13.80
1984	160,000	31,146	4,117	521	19.47	13.22	25.73	12.65

EPIDEMIOLOGICAL EVALUATION

COSTA RICA

YEAR	Population Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+ Mixed	ABER	SPR	API	%Pf+ Mixed
1959	361,000	55,524	1,899	121	15.38	3.42	5.26	6.37
1960	382,000	57,603	2,000	64	15.08	3.47	5.24	3.20
1961	409,000	87,889	1,673	18	21.49	1.90	4.09	1.08
1962	412,000	183,642	1,583	5	44.57	0.86	3.84	0.32
1963	420,000	257,850	1,228	9	61.39	0.48	2.92	0.73
1964	423,296	123,285	1,212	7	29.13	0.98	2.86	0.58
1965	441,000	197,751	2,563	5	44.84	1.30	5.81	0.20
1966	460,143	250,135	3,057	2	54.36	1.22	6.64	0.07
1967	484,061	164,109	4,490	0	33.90	2.74	9.28	0.00
1968	510,134	142,029	1,191	0	27.84	0.84	2.33	0.00
1969	519,719	202,362	688	0	38.94	0.34	1.32	0.00
1970	549,575	195,484	351	8	35.57	0.18	0.64	2.28
1971	580,900	185,011	257	10	31.85	0.14	0.44	3.89
1972	578,906	191,152	159	3	33.02	0.08	0.27	1.89
1973	595,521	166,355	161	18	27.93	0.10	0.27	11.18
1974	635,107	154,656	152	22	24.35	0.10	0.24	14.47
1975	642,263	166,814	290	31	25.97	0.17	0.45	10.69
1976	663,842	171,753	473	154	25.87	0.28	0.71	32.56
1977	592,830	175,973	217	46	29.68	0.12	0.37	21.20
1978	608,243	202,284	313	28	33.26	0.15	0.51	8.95
1979	624,422	176,219	308	32	28.22	0.17	0.49	10.39
1980	641,593	166,894	376	68	26.01	0.23	0.59	18.09
1981	659,171	162,861	168	9	24.71	0.10	0.25	5.36
1982	677,495	139,019	110	6	20.52	0.08	0.16	5.45
1983	696,329	120,116	245	10	17.25	0.20	0.35	4.08
1984	717,714	103,987	569	9	14.49	0.55	0.79	1.58

EPIDEMIOLOGICAL EVALUATION

EL SALVADOR

YEAR	Population Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+ Mixed	ABER	SPR	API	%Pf+ Mixed
1959	1,440,000	71,259	17,521	4,051	4.95	24.59	12.17	23.12
1960	1,900,000	76,287	10,066	2,959	4.02	13.19	5.30	29.40
1961	1,885,000	127,293	12,563	2,960	6.75	9.87	6.66	23.56
1962	1,820,000	194,069	15,433	2,557	10.66	7.95	8.48	16.57
1963	1,641,000	238,791	17,846	1,879	14.55	7.47	10.88	10.53
1964	1,900,014	350,843	25,827	2,661	18.47	7.36	13.59	10.30
1965	2,451,000	506,442	34,070	2,186	20.66	6.73	13.90	6.42
1966	2,936,233	530,357	68,562	10,703	18.06	12.93	23.35	15.61
1967	2,117,609	535,494	82,960	7,227	25.29	15.49	39.18	8.71
1968	2,179,914	805,311	35,831	1,025	36.94	4.45	16.44	2.86
1969	2,912,731	858,916	25,299	1,994	29.49	2.95	8.69	7.88
1970	3,063,932	572,373	45,436	4,286	18.68	7.94	14.83	9.43
1971	3,136,175	414,331	46,858	3,235	13.21	11.31	14.94	6.90
1972	3,210,646	394,935	38,335	3,059	12.30	9.71	11.94	7.98
1973	3,220,875	393,110	35,095	7,286	12.21	8.93	10.90	20.76
1974	3,361,476	478,553	66,691	13,133	14.24	13.94	19.84	19.69
1975	3,523,569	538,909	83,100	16,309	15.29	15.42	23.58	19.63
1976	3,625,259	533,610	83,290	13,820	14.72	15.61	22.97	16.59
1977	3,870,848	471,109	32,243	2,934	12.17	6.84	8.33	9.10
1978	3,906,000	507,237	56,533	8,634	12.99	11.15	14.47	15.27
1979	3,941,000	434,475	75,657	13,391	11.02	17.41	19.20	17.70
1980	3,158,179	425,264	95,835	15,782	13.47	22.54	30.35	16.47
1981	4,360,000	367,447	93,187	10,878	8.43	25.36	21.37	11.67
1982	4,558,000	351,426	86,202	10,267	7.71	24.53	18.91	11.91
1983	4,683,000	306,648	65,377	9,696	6.55	21.32	13.96	14.83
1984	4,133,252	270,156	66,874	11,172	6.54	24.75	16.18	16.71

EPIDEMIOLOGICAL EVALUATION

GUATEMALA

YEAR	Population Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+Mixed	ABER	SPR	API	%Pf+Mixed
1959	1,544,000	108,047	7,894	1,548	7.00	7.31	5.11	19.61
1960	1,610,000	129,742	3,387	417	8.06	2.61	2.10	12.31
1961	1,770,000	218,628	4,083	780	12.35	1.87	2.31	19.10
1962	1,782,000	323,373	5,996	1,601	18.15	1.85	3.36	26.70
1963	1,912,000	348,866	15,116	5,557	18.25	4.33	7.91	36.76
1964	1,918,603	289,058	20,401	5,003	15.07	7.06	10.63	24.52
1965	1,944,000	380,562	14,472	2,313	19.58	3.80	7.44	15.98
1966	2,070,263	376,439	22,045	3,230	18.18	5.86	10.65	14.65
1967	2,132,371	439,186	19,683	1,377	20.60	4.48	9.23	7.00
1968	2,214,292	492,940	10,407	364	22.26	2.11	4.70	3.50
1969	2,291,794	521,336	10,494	209	22.75	2.01	4.58	1.99
1970	2,229,537	447,706	11,044	83	20.08	2.47	4.95	0.75
1971	2,436,086	332,531	8,280	34	13.65	2.49	3.40	0.41
1972	2,086,919	345,156	7,750	4	16.54	2.25	3.71	0.05
1973	2,153,532	386,026	6,182	3	17.93	1.60	2.87	0.05
1974	2,295,632	421,240	4,030	25	18.35	0.96	1.76	0.62
1975	2,345,894	418,749	4,979	100	17.85	1.19	2.12	2.01
1976	2,404,756	435,097	9,616	320	18.09	2.21	4.00	3.33
1977	2,404,756	472,297	34,907	2,159	19.64	7.39	14.52	6.19
1978	2,561,000	463,794	59,755	5,234	18.11	12.88	23.33	8.76
1979	2,643,865	440,712	69,039	6,631	16.67	15.67	26.11	9.60
1980	2,730,247	456,784	62,657	4,361	16.73	13.72	22.95	6.96
1981	2,820,211	475,777	67,994	5,718	16.87	14.29	24.11	8.41
1982	2,905,099	468,430	77,375	7,841	16.12	16.52	26.63	10.13
1983	3,002,485	442,745	64,024	4,356	14.75	14.46	21.32	6.80
1984	3,104,070	526,694	74,132	6,535	16.97	14.07	23.88	8.82

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EPIDEMIOLOGICAL EVALUATION

HONDURAS

YEAR	Pooulation Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+ Mixed	ABER	SPR	API	%Pf+ Mixed
1959	1,347,000	66,391	6,675	3,170	4.93	10.05	4.96	47.49
1960	1,359,000	109,677	5,517	1,737	8.07	5.03	4.06	31.48
1961	1,409,000	164,965	4,334	861	11.71	2.63	3.08	19.87
1962	1,561,000	239,655	5,750	597	15.35	2.40	3.68	10.38
1963	1,892,000	264,131	7,077	688	13.96	2.68	3.74	9.72
1964	1,900,776	207,000	6,673	641	10.89	3.22	3.51	9.61
1965	1,851,000	310,301	6,952	141	16.76	2.24	3.76	2.03
1966	1,912,268	360,760	17,127	1,204	18.87	4.75	8.96	7.03
1967	1,969,636	465,598	16,144	872	23.64	3.47	8.20	5.40
1968	2,028,725	584,696	15,666	4,281	28.82	2.68	7.72	27.33
1969	2,113,358	591,544	29,584	5,528	27.99	5.00	14.00	18.69
1970	2,132,242	357,436	34,537	5,875	16.76	9.66	16.20	17.01
1971	2,268,264	255,773	48,586	4,444	11.28	19.00	21.42	9.15
1972	2,314,524	226,578	18,651	652	9.79	8.23	8.06	3.50
1973	2,425,797	226,231	8,862	239	9.33	3.92	3.65	2.70
1974	2,504,367	287,842	7,503	150	11.49	2.61	3.00	2.00
1975	2,542,574	266,923	30,289	1,078	10.50	11.35	11.91	3.56
1976	2,580,781	295,128	48,804	2,603	11.44	16.54	18.91	5.33
1977	2,583,412	264,233	39,414	1,355	10.23	14.92	15.26	3.44
1978	2,670,000	236,650	34,554	2,539	8.86	14.60	12.94	7.35
1979	2,758,100	143,485	25,297	4,505	5.20	17.63	9.17	17.81
1980	3,267,239	175,591	43,009	6,789	5.37	24.49	13.16	15.79
1981	3,492,000	221,822	49,377	5,667	6.35	22.26	14.14	11.48
1982	3,627,611	322,802	57,482	4,019	8.90	17.81	15.85	6.99
1983	3,756,104	336,879	37,536	2,640	8.97	11.14	9.99	7.03
1984	3,867,209	452,184	27,332	1,511	11.69	6.04	7.07	5.53

EPIDEMIOLOGICAL EVALUATION

PANAMA

YEAR	Population Mal. Areas	B.S. Exam.	B.S. Posit.	Pf+ Mixed	ABER	SPR	API	% Pf+Mixed
1959	960,000	80,471	5,066	583	8.38	6.30	5.28	11.51
1960	969,000	77,141	4,464	670	7.96	5.79	4.61	15.01
1961	1,033,000	88,961	3,911	1,378	8.61	4.40	3.79	35.23
1962	1,091,000	145,012	3,249	631	13.29	2.24	2.98	19.42
1963	1,121,000	152,898	2,670	236	13.64	1.75	2.38	8.84
1964	1,165,363	131,634	1,804	101	11.30	1.37	1.55	5.60
1965	1,194,000	102,996	1,929	172	8.63	1.87	1.62	8.92
1966	1,235,000	97,525	3,664	906	7.90	3.76	2.97	24.73
1967	1,275,456	88,612	2,646	527	6.95	2.99	2.07	19.92
1968	1,317,216	83,211	1,625	512	6.32	1.95	1.23	31.51
1969	1,358,469	94,596	5,937	4,104	6.96	6.28	4.37	69.13
1970	1,404,977	237,477	4,584	3,405	16.90	1.93	3.26	74.28
1971	1,449,600	301,030	1,041	573	20.77	0.35	0.72	55.04
1972	1,466,058	269,098	819	543	18.36	0.30	0.56	66.30
1973	1,510,436	344,315	1,595	651	22.80	0.46	1.06	40.82
1974	1,618,100	368,820	1,184	481	22.79	0.32	0.73	40.63
1975	1,636,400	394,995	666	307	24.14	0.17	0.41	46.10
1976	1,654,700	384,941	727	337	23.26	0.19	0.44	46.35
1977	1,705,330	377,059	674	308	22.11	0.18	0.40	45.70
1978	1,757,500	382,942	263	73	21.79	0.07	0.15	27.76
1979	1,811,280	369,775	316	129	20.42	0.09	0.17	40.82
1980	1,881,740	360,172	304	97	19.14	0.08	0.16	31.91
1981	1,835,900	387,276	340	189	21.09	0.09	0.19	55.59
1982	1,881,766	392,458	334	186	20.86	0.09	0.18	55.69
1983	1,923,174	380,135	341	154	19.77	0.09	0.18	45.16
1984	2,037,191	373,072	125	78	18.31	0.03	0.06	62.40

E. REVIEW OF PROGRAM OBJECTIVES AND STRATEGIES

As a preliminary exercise for the preparation of the workplan, the following issues were discussed and analyzed:

(1) The malaria problem in Central America and Panama - in terms of health impact, social factors and medical aspects.

(2) The objectives of the program in the Sub-region.

While Belize, Costa Rica and Panama are in a position to aim at the eradication of the disease, in the rest of the Sub-region the goal is to eliminate malaria as a cause of death, and to reduce morbidity to levels compatible with social and economic development.

Complementary objectives are:

- To prevent epidemics of the disease;
- To maintain the gains in areas free of transmission;
- To avoid dissemination of the disease to non-malarious areas;
- To augment the operating capacity of the public health services in order to develop and implement effective epidemiological vigilance and control of malaria;
- To strengthen the specialized malaria services in the area of applied field research, in order to enable the program to gain better knowledge about the social, economic and biomedical variables that determine malaria transmission; and to assist in the selection, application and evaluation of control measures.

(3) The goals of the program are closely related to the objectives mentioned above, but have to be further defined in terms of quantification and have to be established within specific time frames. To this end, national and external resources will be mobilized, with the aim of achieving, by 1990, the following:

- Organization, implementation and coordination of malaria vigilance, prevention and control, within the general health services, following the Primary Health Care Strategy;

- Elimination of mortality due to malaria in the Sub-region;

- Maintenance of the donward trend of malaria incidence in Costa Rica and Panamá, and, if possible, to eliminate residual foci of transmission through the strengthening of the epidemiological vigilance system;

- Elimination of malaria transmission in Belize and reduction of incidence in El Salvador, Guatemala, Honduras and Nicaragua.

(4) The strategic approaches were also discussed, and are presented in summary form in Chapter D of this document as they refer to individual countries. Common approaches are the following:

- Political decision at National level;

- Full utilization of Primary Health Care;

- Identification and utilization of national resources;

- Technical Cooperation Among Developing Countries;

- Establishment of collaborative research and training projects with national academic institutions in order to design better vigilance and control methodologies;

- Coordination of malaria programs with national development projects;

- Resource mobilization, from bilateral and international agencies.

F. TRAINING NEEDS 1985-1986

Prior to discussing the proposed workplan for first year of the PAHO-AID Agreement, the group, which included the Responsible Officers - Area 5 - Tropical Diseases of Belize, Costa Rica, El Salvador, Guatemala, Honduras and Panama, during the planning workshop held in Guatemala City, reviewed the following:

- Background information on the Agreement;
- Epidemiological profiles of each country;
- Objectives, goals, strategies, tactical variants.

A summary of these aspects has been presented in previous chapters of this working document. Once the above was accomplished, the group discussed the following issues:

- Training needs for operations, research and training:

  . in the malaria service
  . in the general health services
  . in research and training centers.

- Training approaches or type of training activity by level of personnel:

  . Courses (technical, graduate and post-graduate level)
  . Seminars
  . Modules. Selfteaching
  . Continuous education. Refresher courses
  . Distance education

- Planning of training activities:

  . Review of job descriptions
  . Establishment of occupational profiles
  . Design of curricula
  . Identification of resources (institutions, teaching staff, suitable places for field practice)

- Development of teaching material for classroom, laboratory and field:

  . Manuals
  . Audio-visual aids
  . Brochures, publications, newsletters

- Timetable of activities

- Budgetary implications for training activities

- Evaluation and future projections

During the workshop held in Guatemala, it was noted that a review of the training needs should be based on present budgetary provisions rather than on an "ideal staffing" of the programs. There was awareness of the fact that efforts are being made to mobilize additional resources for program operations (Inter American Development Bank, European Communnity, Bilateral and Other International Agencies), but it was the consensus of the group that training of candidates should not be undertaken, unless there was a specific position for the individual involved, either in the specialized malaria services, or in other institutions participating in the program.

There was also a discussion on training needs regarding the staff of the general health services and their participation in vigilance and control of malaria. While tables 1 and 2 reflect the needs of specialized services, there was no consensus regarding criteria on which to base the needs of the general health services, a matter that was postponned for a future review, in coordination with the Health Manpower Development Program.

G. RECOMMENDED ACTIVITIES (1985-1986)

It is to be noted that the proposed work plan covers only the period July 1985-March 1986, that is, the time remaining within the first year of the PAHO-AID Agreement. This plan is presented, taking into consideration:

- Informal consultation, Washington D.C., April 8-9, 1985;
- Visit to six countries of the Sub-region, April 19-May 10, 1985;
- Planning seminar, held in Guatemala City, May 22-24, 1985;
- Meeting of an ad-hoc Technical Advisory Committee, June 20-21, 1985.

Note: The expenses already incurred in connection with the preparation of the workplan and the meeting of the Advisory Committee are presented in table 3, activity 1.0.

The work plan for year 1 is presented under seven main line items:

- Academic courses (with a duration of 10 months, or more);
- Short courses (with a duration of 4 months, or less);
- Workshops and seminars (with a duration of 1 to 2 weeks);
- Development of teaching aids and manuals for field use;
- Technical and administrative support (STC's, duty travel, contractual services, grants);
- Supplies and equipment.
- Advisory Committee Meetings.

1. ACADEMIC COURSES

Table 1 presents the estimation of needs as perceived by the national authorities (7 MPH/Malaria and 4 MSc/Entomology), for a total of 11 persons needing post-graduate training starting in year 1. This figure may increase as a result of further promotion of the program, and the availability of additional funding for operations.

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The Technical Advisory Committee (June, 1985) reviewed courses offered by four institutions, of which 2 were selected to send candidates as follows:

1.1 Malariology and Environmental Health,
Maracay, Aragua, Venezuela
Maximum number of students: 32
Next course: January - October, 1986
Periodicity: Annual
Level: Post-graduate
Diploma: Negotiations are underway to associate the School of Malariology and Environmental Health with the University of Carabobo. Students writing a thesis in their own countries will be awarded a Master's degree.
Total duration, including research thesis: 18 months

1.2 Master of Science in Medical Entomology
University of Panama, Panama
Coordinated by the School of Medicine
Maximum number of students: 10
Next course: starts September 1985
Duration: 20 months
Periodicity: Bi-annual
(Following course will start in September 1987)
Level: Post-graduate
Diploma: Master of Science

2. SHORT COURSES

2.1 "Short Course on Comprehensive Vector Control"
Place: The Wedge, South Carolina
Sponsor: University of South Carolina (USC)
Period: August 5 - September 13, 1985
Language: Spanish
Maximum number of students: 20

2.2 "Short International Course on Insecticide Application Techniques, and Handling and Maintenance of Spraying Equipment"
Place: Panama City
Date: 4-15 November 1985
Maximum number of students: 16
Level: Undergraduate
Sponsors: University of Panama
Ministry of Health/Panama
PAHO/WHO

2.3 "Emergency Control of Aedes aegypti"
University of Panama
Duration: 1 week
Maximum number of students: 10
Period: March 1986

2.4 "Refresher Course on Medical Entomology"
Site: University of Panama - 4 weeks
Field practice in an endemic area of another country of the Sub-region (Guatemala) - 2 weeks.
Period: First Quarter 1986

2.5 "Course on technical and administrative Management for middle level personnel"
Site: Quiriguá, Guatemala
Duration: 3 months
Date: 1986
Note: This course, to be organized, will aim at training of Public Health Sanitarians and Malaria Program District or Sector Chiefs.
Activities during this planning period will be concentrated on development of curricula and identification of teaching resources.

3. WORKSHOPS AND SEMINARS

3.1 "Development of occupational profiles and educational technology"
Place: Costa Rica
Duration: 3 weeks
Date: September - October 1985
Maximum number of participants: 20
Technical support: PASSCAP

3.2 "Principles and Techniques for the Preparation of Teaching Material - Audiovisuals"
Place: Costa Rica
Duration: 2 weeks
Maximum number of participants: 18
Date: November 1985
Technical support: PASSCAP

3.3 "Epidemiology and Control of Malaria"
Places: All countries CAP
Duration: 1 week (per seminar)
Maximum number of participants per seminar: 20
Expected number of participants CAP: 120
Material: PAHO-Modules
Dates: September 1985 - March 1986

3.4 "Promotion and orientation of community participation".

3.4.1 "Updating of Voluntary Collaborators in malaria control within the Primary Health Care (PHC) Strategy"
Places: All countries CAP
Five Workshops per country
Duration: 2 days
Participants: 20 per workshop
Material: To be developed
Dates: October 1985 - March 1986

3.4.2 "Promotion of the participation of the Community in malaria control activities"
Places: All countries CAP
Five workshops per country
Duration: 2 days
Participants: 20 per workshop
Material: To be developed
Dates: October 1985 - March 1986

3.5 "Research Methodology"
Utilization of a Manual to facilitate the development of health manpower
Duration: 1 week

Note: This workshop was considered but will be scheduled to take place in year 2.

4. DEVELOPMENT OF TEACHING AIDS AND MANUALS FOR FIELD USE

4.1 "Comprehensive Vector Control"
Potential contributors:
- University of Panama
- University of South Carolina
- PAHO/WHO

Period: 6 months (plus) for preparation of draft, which has to be translated, field tested, edited and published (in stages).

4.2 "Manual on Clinical parasitological and immunological diagnosis of malaria"
Potential contributors to be identified: CDC, Walter Reed Army Institute of Research, Venezuela, Brazil
Period: 6 months (plus) for preparation of draft, which has to be translated, field tested, edited and published (in stages).

4.3 Note: The possibility of preparing a manual on treatment of Malaria, and medical handling of severe cases, was discussed but it was decided to leave this manual for the following planning period, considering that material on this subject is to become available in the near future. The subject of manuals for field personnel, such as spraymen, evaluators, health education auxiliary personnel, was also discussed. It was decided that cooperation could be provided to individual country programs, for them to prepare their own manuals, but this item would not be included in the list of priorities of the PAHO-AID project at this time.

5. TECHNICAL AND ADMINISTRATIVE SUPPORT

5.1 It is necessary to assign a coordinator to the University of Panama, under local contractual services, for a period of eight months (August 1985 - March 1986) to help plan and implement the courses on vector control. The incumbent of this position should have sound technical expertise in medical entomology and experience in management. Experience in training would be an asset. The consultant should also be available to travel to other countries of the Sub-region when necessary, to identify sites for field training and to promote technical cooperation among countries of the Sub-region.

5.2 Although this planning period (year 1) is primarily devoted to training activities and to the preparation of teaching aids, it is recognized that some preparatory work has to be carried out also in the area of operational research. Based on past experience, two subjects which have not been studied recently, were selected.

5.2.1 Management

There is a need to improve management of the programs, and to forecast problems in the administrative area. This should be accompanied by the selection of alternative courses of action, to minimize negative effects of financial constraints. Furthermore, it is necessary to improve the ability of the programs to "absorb" new resources which are now being mobilized under the "Contadora Initiative" to solve the priority health needs of the Sub-region.

The study would be carried out in Guatemala with the cooperation of the "Unidad de Investigación del Instituto Nacional de Administración Pública" - INAP; the National Malaria Eradication Service - NMES - PAHO/WHO.

The results of the study would eventually serve as a basis for the drafting of training modules in the area of administration.

A protocol should be prepared to this effect.

5.2.2 Epidemiological Vigilance and Information System

The present epidemiological vigilance and information system has been in use in the malaria programs, without major changes, during the last 25 years, and follows the pattern set when eradication of malaria, within a fixed period of time, was the goal of the program.

The strategy has changed in some of the countries, as well as the administrative structure and the selection of control measures. New technologies have become available. There is interest in (1) reviewing the present malaria surveillance system in light of current program goals and activities; (2) refining the system to better provide timely and accurate information for the purposed of decision-making; and (3) exploring the potential application of microcomputer technology to improving the flow, accuracy and timeliness of this information.

This activity could be carried out in one or more countries of the Sub-region (Honduras, El Salvador) with the support of a University. The Department of Biostatistics and Epidemiology, Tulane University, New Orleans, has the technical resources to support these studies.

It was agreed that a protocol should be prepared on this subject.

5.2.3 The activities listed above need to be supported by short term consultants, temporary advisors, duty travel of PAHO officers, contractual services, and grants. These inputs are included in each of the activities presented in Table 3.

6. SUPPLIES AND EQUIPMENT

Some laboratory equipment and other supplies are needed to supplement the resources already available in the local institutions which will be providing training.

Although limited support will be assigned to institutions located outside the Sub-region, emphasis will be placed in the strengthening of institutions located in countries of Central America and Panama.

7. ADVISORY COMMITTEE MEETING

The proposed budget includes provisions for two meetings of the Technical Advisory Committee, and one meeting of National Officers responsible for the Tropical Diseases Program in Countries of Central America and Panama. This item appears in table 4 under activities 7.1 and 7.2.

Table 4 also presents a summary of the estimated costs for the malaria program for Central America and Panama, within the context of the PAHO-AID Agreement.

Annexes: Tables 1, 2, 3 and 4.

NATIONAL MALARIA PROGRAMS - PERCEIVED TRAINING NEEDS - YEAR 1

Table 1

Name of the Course	Level	Approx. Duration	Guatemala	El Salvador	Honduras	Costa Rica	Panama	Belize	Total
1. Master of Public Health Emphasis on Malaria and other vector borne diseases	Phys. Eng.	10 months	0	1	1	1	3	1	7
2. Master of Science Emphasis on Medical Entomology	Phys. Biol. Vet. Agric. Eng.	24 months	1	0	1	1	1	-	4
3. Medical Entomology (Refresher)	Technical Offic.	3 weeks	1	0	1	3	2	10	17
4. Vector Control (Planning and Management)	Technical Offic.	6 weeks	2	3	-	4	1	-	10
5. Parasitological and Immunological diagnostic techniques	Phys. Biologist	4 weeks	1	0	0	2	5	-	8
6. Computing for the Health Sciences - Application to malaria vigilance	Technical Offic.	3 months	4	0	0	1	3	-	8
7. Management for Middle Level Personnel (District or Sector Chiefs)	Technical Offic.	3 months	4	0	25	10	2	3	44
8. Advances in Chemotherapy Monitoring of Susceptibility of parasites to drugs.	Phys. Biol. Tech. Offic.	3 weeks	1	0	0	2	14	2	19
TOTAL	-	-	14	4	28	24	31	16	117

ANNEX

RESEARCH AND TRAINING "CENTERS" - PERCEIVED TRAINING NEEDS - YEAR 1

Table 2

Type of Activity	Number of Participants per Country						Total	Approx. Duration
	Guatemala	El Salvador	Honduras	Belize	Costa Rica	Panama		
1. Short course Development of Educational Profiles	3	3	3	3	3	3	18	1 week
2. Short course Educational Technology	3	3	3	3	3	3	18	1 week
3. Short course Preparation and utilization of audiovisual material	3	3	3	3	3	3	18	1 week
4. Short course Research Methodology	3	3	3	3	3	3	18	1 week
5. Seminar Epidemiology and Control of malaria	5	5	5	2	3	3	23	1 week
6. Seminar Clinical, Parasitological and Immunological Diagnosis	5	5	5	2	3	3	23	1 week
TOTAL	22	22	22	16	18	18	118	---

TABLE 3. TENTATIVE BUDGET - THE SUPPORT OF PLANNED ACTIVITIES

Item No.	Activity No.	Component	No. of Participants	Local Costs	Consultants Temp. Advisors	Registration, Travel and Stipends of Participants	Supplies & Equipment	Total Estimated Cost
0	1.0	Preparation of 1st year Workplan & meetings Advisory Committee			STC 14.572 DT 11.742 26.314			
					26.314			26.314
1	1.1	Malariology & Environmental Health Maracay, Venezuela 10 mos. (Venezuela)	7	Not requested at this time	3 x 20d ea. (20d x $200) 2.000	Registration N/C Stipend (1) 3.634 Stipend (6) for ea of the 7 participants 9.000 Book allowance .300 Exc. baggage .100 Thesis .500 Travel 1.332 15.624	2.000	
		TOTAL			12.000	28.258	2.000	42.258
2	1.2	Master of Science course on Medical Entomology, Panama Course duration: 20 mos. This budget 1st. year	4	2.000	25 d x $200 = 5.000	For ea. of the 4 CA participants Registration 3.200 Stipend 11.100 Book allowance .300 Exc. baggage .100 Travel .666 15.366		
		TOTAL		2.000	5.000	61.464		68.464
3	2.1	Comprehensive Vector Control Short course, 6 weeks South Carolina	6		2 x 3d = 6 6d x $200 = 1.200	For ea. of the 6 CA participants Registration 1.200 Stipend 3.060 Book allowance .120 Job fees .100 Travel .660 Other travel .500 5.640		
		TOTAL			1.200	33.840		35.040

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Item No.	Activity No.	Component	No. of Participants	Local Costs	Consultants Temp. Advisors	Registration, Travel and Stipends of Participants	Supplies & Equipment	Total Estimated Cost
3	2.2	Insecticide Application Techniques Spraying equipment	6	2.000	20d x $200 4.000	For ea. of the 6 CA participants Per diem 1.152 Travel .666 1.818		
		TOTAL		2.000	4.000	10.908		16.908
4	2.3	Emergency Control of A. Aegypti	6	2.000	10d x $200 2.000	For ea. of the 6 CA participants Per diem .672 Travel .666 1.338		
		TOTAL		2.000	2.000	8.028		12.028
5	2.4	Refresher course on Medical Entomology	15	5.000	2 TA x 5 = 10d 10 x 200=2.000 DT 2.000 CS 5.000	For ea. of the 15 CA participants Per diem 3.315 Travel 1.332 4.647		
		TOTAL		5.000	9.000	69.705		83.705
6	2.5	Management - Middle level personnel (Planning only)			3 TA x 10 = 30d 30 x 200=6.000			
		TOTAL			6.000			6.000
7	3.1	Occupational profiles and educational technology	18	4.000	21d x $200 4.200	For ea. of the 18 CA participants Per diem 1.575 Travel .666 2.241		
		TOTAL		4.000	4.200	40.338		48.538

Item No.	Activity No.	Component	No. of Participants	Local Costs	Consultants Temp. Advisors	Registration, Travel and Stipends of Participants	Supplies & Equipment	Total Estimated Cost
8	3.2	Principles & Techniques for the preparation of teaching material, audiovisuals	18	3.000	15d x $200 3.000	For ea. of the 18 CA participants Per diem 1.125 Travel .666 1.791		
		TOTAL		3.000	3.000	32.238		38.238
9	3.3	Epidemiology & Control of Malaria 6 Natl. seminars x 20 participants ea.	20	2.000	Ea. course: 2 TA natl. 2x7x100 1.400 DT 1.500 2.900	For ea. of the 20 CA participants Per diem .350 Travel . 50 .400 8.000	.420	
		TOTAL	120	12.000	17.400	48.000	2.520	79.920
10	3.4.1	Updating voluntary collaborators in Malaria Control within the PHC Strategy (5 Workshops x ea. country x 6 countries)	ea.Work shop 20 x 30	400 x 30 12.000	STC (60d x 200) 12.000 DT 5.000 CS 5.000	Per diem .300 Travel (300 x 30) 9.000	Audiovisuals + projectors + reproductions of materials 25.000	
	3.4.2	Community participation in Malaria Control (10 courses x ea. country x 6 countries)	ea.Work shop 20 x 60	400 x 60 24.000		Per diem + travel (300 x 60) .300 18.000		
		TOTAL	1.800	36.000	22.000	27.000	25.000	110.000
11	4.1	Development of teaching aids and manuals "Comprehensive Vector Control"			CS 20.000			
		TOTAL			20.000			20.000

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Item No.	Activity No.	Component	No. of Participants	Local Costs	Consultants Temp. Advisors	Registration, Travel and Stipends of Participants	Supplies & Equipment	Total Estimated Cost
12	4.2	"Manual on Clinical Parasitological & immunological diagnosis of malaria"			CS 10.000			
		TOTAL			10.000			10.000
13	5.1	Project Coordinator University of Panama			STC (AUG 85-MAR 86) (250d x $150) (Travel included)			
		TOTAL			37.500			37.500
14	5.2.1	Management study (INAP Guatemala)	1.500		STC 15d x 200 = 3.000 DT 1.500 CS 4.000			
		TOTAL			8.500			10.000
15	5.2.2	Epidemiological Surveillance & Information System (Development of Protocols & Testing of Questionnaires)			2 STC 90d x $200 = 18.000 DT 3.500			
		TOTAL	1.500		21.500			21.500
16	6.1	Strengthening University of Panama					40.000	40.000
17	6.2	Strengthening PASSCAP					25.000	25.000

Item No.	Activity No.	Component	No. of Participants	Local Costs	Consultants Temp. Advisors	Registration, Travel and Stipends of Participants	Supplies & Equipment	Total Estimated Cost
18	6.3	Program support for regional activities					20.000	20.000
19	7	2 meetings Advisory Committee		2.000	TA 15.000 DT 4.500 6 Natl. Coord. Malaria Program 12.000 31.500			
		TOTAL						33.500

TOTAL	784.913
10% Contingencies	78.491.30
SUBTOTAL	863.404.30
13% Program Support Costs	112.242.55
GRAND TOTAL	975.646.85

CA = Central America
STC = Short Term Consultant
TA = Temporary Advisor
CS = Contractual Services
DT = Duty Travel

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Table No. 4

ESTIMATED COSTS FOR THE MALARIA PROGRAMME FOR CENTRAL AMERICA AND PANAMA

Item No.	Activity No.	Local Cost (030)	STC (040)	Duty Travel (230)	Sub-contracts (390)	Equipment (550)	Fellowships (810)	Grant-Training (820)	TOTAL
0	1.0	-	14,572.-	11,742.-					26,314.-
1	1.1	-	12,000.-	-	-	2,000.-	28,258.-	-	42,258.-
2	1.2	2,000.-	5,000.-	-	-	-	61,464.-	-	68,464.-
3	2.1	-	1,200.-	-	-	-	33,840.-	-	35,040.-
3	2.2	2,000.-	4,000.-	-	-	-	-	10,908.-	16,908.-
4	2.3	2,000.-	2,000.-	-	-	-	-	8,028.-	12,028.-
5	2.4	5,000.-	2,000.-	2,000.-	5,000.-	-	-	69,705.-	83,705.-
6	2.5	-	6,000.-	-	-	-	-	-	6,000.-
7	3.1	4,000.-	4,200.-	-	-	-	-	40,338.-	48,538.-
8	3.2	3,000.-	3,000.-	-	-	-	-	32,238.-	38,238.-
9	3.3	12,000.-	8,400.-	9,000.-	-	2,520.-	-	48,000.-	79,920.-
10	3.4.1	12,000.-	12,000.-	5,000.-	5,000.-	25,000.-	-	9,000.-	68,000.-
10	3.4.2	24,000.-	-	-	-	-	-	18,000.-	42,000.-
11	4.1	-	-	-	20,000.-	-	-	-	20,000.-
12	4.2	-	-	-	10,000.-	-	-	-	10,000.-
13	5.1	-	37,500.-	-	-	-	-	-	37,500.-
14	5.2.1	1,500.-	3,000.-	1,500.-	4,000.-	-	-	-	10,000.-
15	5.2.2	-	18,000.-	3,500.-	-	-	-	-	21,500.-
16	6.1	-	-	-	-	40,000.-	-	-	40,000.-
17	6.2	-	-	-	-	25,000.-	-	-	25,000.-
18	6.3	-	-	-	-	20,000.-	-	-	20,000.-
19	7 1	-	15,000.-	4,500.-	-	-	-	-	19,500.-
20	7.2	2,000.-	-	-	-	-	-	12,000.-	14,000.-
	Sub - Total	69,500.-	147,872.-	37,242.-	44,000.-	114,520.-	123,562.-	248,217.-	784,913.-

10% Contingencies	78,491.30
Sub-total	863,404.30
13% Program Support Costs	112,242.55
TOTAL	975,646.85

PROJECT 596-0136
U.S. AID/PAHO
ESSENTIAL DRUGS COMPONENT:
FIRST YEAR WORK PLAN

The attached first annual workplan is submitted as required under Grant number 596-0136 for the joint AID/PAHO Program For Malaria Control and Essential Drugs for Central America and Panama.

To facilitate a comprehensive and systematic approach to the development and implementation of the joint project during its first year, the activities to be carried out have been placed under one of the four following general headings:

A. General Project Activities

Includes planning, programming, coordination, monitoring and evaluations, as well as other "umbrella" activities

B. Technical and Scientific Subsystem

Includes scientific and technical activities required to support the establishment and operation of a national drug supply system

C. Drug Supply and Operational Subsystem

Includes activities related to management (planning, programming, control and evaluation), procurement, warehousing and distribution.

D. Information Subsystem

Includes manual or computerized data entry and retrieval mechanisms to support supply operations.

The last column of the Work Plan Summary page relates the activities listed to the objectives stated in the US AID/PAHO Agreement for the Essential Drugs Component.

The major part of the first year effort is aimed at strengthening existing national institutions so that they may, in turn, serve in subsequent years of the project as a source of technical cooperation to the countries of the Central American Isthmus. Thus, a significant portion of the activities will be concentrated in the more developed nations of the Subregion where such institutions are found. In subsequent Work Plans, this situation will gradually be reversed as more and more activities will be specifically targetted for the lesser developed countries.

Special emphasis will be given to coordinating the Subregional Project with on-going bilateral national projects, particularly those funded by U.S. AID, avoiding duplication of efforts and sharing resources and technical expertise.

ESSENTIAL DRUGS FOR CENTRAL AMERICA AND PANAMA
DRUG SUPPLY AND QUALITY SYSTEMS
AID/PAHO REGIONAL PROJECT 596-0136
FIRST YEAR WORK PLAN SUMMARY

AREA	TITLE		COST	ADDRESSES OBJECTIVE*
A.	GENERAL PROJECT ACTIVITIES		68.995	
B.	TECHNICAL AND SCIENTIFIC SUBSYSTEM		494.129	
	1. Selection	38.050		6, 4a, 1, 2a), 8, 5
	2. Quality			1, 2, 2c, 4d, n
	2.1 Management of quality in drug supply systems (the quality function)	36.630		
	2.2 Laboratory service	189.650		
	2.3 Drug registration service	19.180		
	2.4 Inspection service	49.320		
	3. Pharmaceutical and Pharmacological Information	24.694		6, 8, 4g
	4. Manpower Development	36.605		2
	5. Drug Utilization and Adverse Drug Reaction	100.000		8
C.	DRUG SUPPLY OPERATIONAL SUBSYSTEM		220.630	1, 2a, 2b, 4b, 4c, 4e, 4f, 7
	1. Management	9.220		
	2. Procurement	30.550		
	3. Storage and Distribution	96.220		
	4. Technical Assistance for Development/Improvement Comprehensive Drug Supply Systems	84.640		
D.	INFORMATION SUBSYSTEM		51.010	5
	TOTAL		834.764	

* See attached objectives list per PAHO/AID Agreement

ESSENTIAL DRUGS FOR CENTRAL AMERICA AND PANAMA
DRUG SUPPLY AND QUALITY SYSTEMS
AID/PAHO REGIONAL PROJECT 596-0136
FIRST YEAR WORK PLAN SUMMARY

AREA A

GENERAL PROJECT ACTIVITIES

Includes planning, programming, coordination, monitoring and evaluation of the project as well as other "umbrella" activities

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
1.	Development of work plan of Project No. 596-0136								
	- Regional Advisor	CF	30d		x				HQ staff
	- Consultant	STC	30d	6.220					
2.	Coordination, Project Manager								
	- Duty travel, 2 x 2 weeks ea.	CF	30d	3.450		x		x	HQ staff
3.	Coordination and general TA								Activities include coordination with national AID missions/PAHO CRs as requested and TA to national projects HQ staff
	- Regional Advisor Duty travel 3 x 2 weeks	CF	42d	8.855	x		x	x	
	- Consultant Duty travel and coordination 5 x 2 weeks	STC	90d	18.660	x	x	x	x	HQ, and countries Principal consultant Essential Drug Project
4.	Complete the identification of ongoing projects and institutional resources in 5 countries								
	- Consultant	STC	15d	3.110	x				Visits to two countries and preparation of report

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
5.	Interinstitutional coordination meeting (AID/PAHO/Min Health) (2d)						x		Site: Honduras
	- Document preparation	STC	15d	3.110		x			AP
		STC	21d	4.354		x			
		SM		2.000					
	- Participants								
	3 PAHO/HQ								PM, RA, STC
	2 AID/HQ								
	6 PAHO/Field								
	6 AID/Field								
	12 Nationals	CS	99d	17.800					
	1 consultant	STC	7d	1.436					AP

AREA B
TECHNICAL AND SCIENTIFIC SUBSYSTEM

Includes scientific and technical activities required to support the establishment and operation of a national drug supply system

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
1	SELECTION OF DRUGS								
	Analysis of existing national drug formularies, criteria and procedures for revision, "level of use" standards (six countries)	SC		15.000		x	x	x	SC to Comisión de Medicamentos, Caja del Seguro Social Panamá
	- Protocol design	STC	7d	1.450		x			U.S. consultant (ALR)
	- Performance of study					x	x	x	
	- Preparation of report	STC	7d	1.450				x	U.S. consultant (ALR)
	- Contract with local pharmacologist	SC	11 m	6.000		x	x	x	Panama
	- Coordination and organization of a regional workshop,(4 days)								Site: Panama
	2 Participants x 6 countries	CS	5d	9.800					
	1 Consultant	STC	7d	1.450					U.S. consultant (ALR)
	1 Consultant	STC	7d	1.450					AP
2.	TA to Guatemala for unification of drug formularies of the health sector and evaluation of PHC drug list								Guatemala
	- 1 Consultant	STC	7d	1.450		x			U.S. consultant (ALR)

NOTE: AID/PAHO Agreement in accordance to objectives 6, 4, 1, 2a), 8, 5

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
3.	QUALITY								
	Management of quality in the drug supply system								
	The quality function in the drug supply system								
	- Preparation of a working document								
	1 Consultant x 2 wks.	STC	15d	3.110		x			HQ
	1 Consultant x 2 wks.	STC	15d	3.110		x			HQ
	- Regional workshop (5 days)						x		Site: Panamá
	2 participants x 6 countries	CS	6d	9.800					
	1 Consultant x 10d	STC	10d	2.073					
	1 Consultant x 6d	STC	6d	2.000					
	1 Consultant x 10d	STC	10d	3.300					
	Preparation of report and final monograph, publication and distribution	SM		2.073				x	
	- TA for the implementation/ improvement of the quality function in two countries: preparation of work plan (1st phase)								
	1 Consultant	STC	30d	6.220				x	Costa Rica:CCSS Guatemala: IGSS-Droguería Nacional
4.	Update and publication of Guidelines for the Development of National Drug Control Systems								
	- Review, editing, translation and publication	SC		7.000		x			University of Minnesota

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
5.	Laboratory Services								
	Preparation of Guidelines for design, equipment and management of Drug Control Laboratory (Prototype)								
	Definition of terms of reference								
	- Consultant	STC	15d	3.110			x		
	Preparation of document								
	- Contractual Services	SC		45.000			x		
6.	Manual on Good Laboratory Practices								
	- Review, editing and publication	SC		5.000		x			LUCAM, Guatemala
7.	Participation of CAP in Regional Workshop on Laboratory Administration								Activity of the PAHO Latinamerican Network of Drug Quality Control Laboratories of the Health Sector. National Laboratory of Reference, Mexico
	- 6 participants x 2 weeks	CS	15d	10.800			x		
		SM		2.000					
8.	Training course on testing of antibiotics and other drugs with HPLC (3 weeks)						x		LUCAM-Guatemala This course will be repeated during 2nd year and following
	- Supplies and materials	SM		5.000					
	- 4 participants	CS	20d	7.500					
	- 1 consultant	TA	15d	3.110					U.S. FDA
9.	TA to develop /improve microbiological testing of drugs								Includes in-service training Costa Rica, Panamá, Guatemala, El Salvador, Honduras
	- 1 Consultant x 4 mos.	STC	120d	24.880			x		
10.	Feasibility studies for improving/ upgrading biological testing								Guatemala, Costa Rica and Panama
	- 1 Consultant x 2 mos.	STC	60d	12.440				x	
11.	TA for the design of new laboratory facilities in two countries								Costa Rica (MINSALUD & CCSS) El Salvador (MINSALUD) U.S. FDA
	- 1 Consultant x 45d	STC	45d	9.330		x		x	

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
12.	Course on Biopharmaceutical Evaluation. (2 wks)				x				University of Panamá
	- Supplies and materials	SM		3.000					
	- 1 Consultant	TA	7d	1.450					U.S. consultant (Hansson)
	- 6 Participants for CAP countries	CS	15d	10.900					
13.	Course on Quality Control of Immunological Reagents, (10d)						x		Costa Rica U.S. CDC
	- Materials	SM		5.000					
	- Equipment	SM		8.000					
	- Consultant 2 x 21d	STC	42d	8.700					
	- Local staff, 3 x 21d	SC	21d	1.500					
	- 5 participants x 12d	CS	12d	4.600					
14.	Course on Quality Control of Viral Vaccines (2 wks)							x	Honduras
	- 3 Consultants x 2 wks	STC	30d	6.220					
	- 6 participants 14 d	CS	14d	7.000					
	- Supplies and materials	SM		2.000					
15.	TA to INCIENSA for improving the testing of viral vaccines and program design	STC	15d	3.110				x	Costa Rica

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
16.	Drug Registration Service								
	Traveling group: Seminar on Drug Registration Practices						x		Site: Panama, Costa Rica, Guatemala
	- 1 participant/country x 16d	CS	16d	10.500					
	- 1 Consultant in Management of National Drug Control and Surveillance System	STC	16d	3.110					R.G.D.
	- 1 Expert in Drug Registration Programs	TA	16d	3.110					MV, PAHO/BRASIL
	- 1 Expert in Information Systems	CF	4d	460					CF, C.S.
	- Recommendations for the implementation and operation of Drug Registration Service	SM		2.000					To be followed by TA to specific countries during 2nd year

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
17.	Inspection Service								FDA/U.S. University
	Preparation of audiovisual materials for continuous education of inspectors at national level								
	- Contractual Services	SC		20.000			x		
18.	Basic course for inspectors (theory and practice), (4 wks)								Chile
	- Contract with Instituto de Salud Pública de Chile, Departamento de Control Nacional	SC		5.000			x		Note: Seminar to be repeated during 2nd year in Guatemala, 3rd year in El Salvador, 4th year in Honduras
	- 1 Consultant FDA	TA	30d	6.220					
	- 6 participants from CAP x 5d	CS	30d	18.100					

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	PHARMACEUTICAL AND PHARMACOLOGICAL INFORMATION								
19.	Selection of reference materials for national institutions (textbooks, journals, newsletter, microfiche, laboratory, etc.)	CF			x	x	x	x	HQ
		STC	4d	829					
	- Procurement and distribution	SM		15.000					HQ
20.	Participation in international WHO meeting for editors of bulletins on drug information								Comisión de Medicamentos, CSS, Panamá
	- 1 Fellowship, Panamá	B	5d	575	x				
21.	TA to Caja del Seguro Social de Panamá to develop the team for providing information to prescribers (equivalent to detail men)								Comisión de Medicamentos CSS, Panamá
	- 1 Consultant	STC	40d	8.290			x	x	

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	MANPOWER DEVELOPMENT								
22.	Continuing education of hospital pharmacist, auxiliary pharmacy personnel, pharmacists and health personnel in drug supply system								Caja Costarricense del Seguro Social
	- Definition of terms of reference for joint collaboration	CF	6d	690		x			Centro Nacional de Docencia e Investigación en Salud (CENDEISS)
	- Evaluation of on-going educational programs for hospital pharmacist and auxiliary pharmacy personnel								
	1 Consultant	STC	15d	3.110			x		University of Minnesota
	1 Consultant	STC	15d	3.110			x		University of Minnesota
	- Contract for preparation of teaching modules, 1st phase	SC		5.000			x	x	
23.	Contract for the development of training material in Drug Supply Management								Instituto Centroamericano de Administración Pública (ICAP), Costa Rica
	- Definition of terms of reference	STC	6d	1.244		x			
	- TA to ICAP	SC		12.000			x		U.S. institution (MSH)
	- Contract for preparation of teaching, modules for the continuing education of managers and line personnel of drug supply systems (1st phase)	SC		10.000			x	x	
	- TA to ICAP on the scientific and technical subsystem	STC	7d	1.451				x	

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	DRUG UTILIZATION AND ADVERSE DRUG REACTION								
24.	Evaluation of national capacities (6 countries) in these areas, development of appropriate methodology and implementation of drug utilization and adverse drug reaction program in two countries (1st phase)								U.S. institution
	- Contractual Services	SC	1yr	100.000		x	x	x	See terms of reference

AREA C
DRUG SUPPLY OPERATIONAL SUBSYSTEM

Includes activities related to management (planning, programming, control and evaluation), procurement, warehousing and distribution

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	MANAGEMENT								
1.	Preparation, publication and distribution of a manual on "Conceptual Basis of a Drug Supply System"								
	- 1 Consultant	STC	15d	3.110	x				HQ
	- 1 Consultant	STC	15d	3.110		x			HQ AP
		SM		3.000					

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	PROCUREMENT								
2.	Development of procurement criteria (working document)								Basis for workshop to be held on 2nd year
	- Technical consultation	SC	3d	2.000		x			
	- 1 Expert	STC	15d	3.110		x			
	- Preparation of working document	SC		10.000			x		
	- Translation and publication	SC		3.000				x	
3.	Evaluation of current procurement procedures, cycles and identification of restrictive practices (legal, administrative, fiscal) including importation and port clearance procedures (5 countries)								Basis for workshop to be held on 2nd year
	- 1 Consultant	STC	2mos.	12.440			x		

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
	STORAGE AND DISTRIBUTION								
4.	Preparation of guidelines for prototype warehouses: building, layout, equipment and management systems for three levels: central, regional and health center/post								
	- Technical consultation	CS		5.000					
	- Contractual Services	SC		85.000		x	x	x	U.S. institution
	- Monitoring and evaluation	STC	30d	6.220					

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
5.	Technical assistance for development/ improvement of comprehensive drug supply systems								
	- TA to Belize for the development of the national drug supply system	STC SM	6 m	37.320 10.000		x		x	Belize
6.	TA for development of the Drug Supply System for Primary Health Level								Droguería Nacional Guatemala
	- 1 Consultant	STC	2m	12.440					
	- 1 Consultant	STC	2m	12.440					
7.	TA for development of national drug supply system								
	- 1 Consultant	STC	2m	12.440					Caja del Seguro Social Panamá

AREA D
INFORMATION SUBSYSTEM

Includes manual or computerized data entry and retrieval mechanism to support supply operations

CODE	NAME AND DESCRIPTION	RESOURCES			DATE				OBSERVATIONS
		TYPE	DAYS	COST	1o.	2o.	3o.	4o.	
1.	Design and operation of an information system on drug prices/ suppliers					x			Caja Costarricense del Seguro Social
	Implementation of a pilot center								
	- Local service contracts	SC		12.000					
	- Supplies and materials	SM		13.000					
	- Data Base Design	SC		7.000					
	- Consultant x 2 wks	STC	15d	3.110					
	- Local service contract (focal point) in 6 countries	SC		12.000					
	- Training seminar (3d) 6 participants x 4d	CS	4d	3.900					Site: Costa Rica

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LISTING AND CODES OF PROJECT OBJECTIVES AS PER USAID/PAHO AGREEMENT FOR THE ESSENTIAL DRUGS COMPONENT

1. Improve essential drugs programs in Central American Ministries of Health and Social Security.

2. Establish and institutionalize Central American regional training programs in:

   a) procurement
   b) distribution
   c) quality control
   d) drugs utilization

3. 40 months of technical cooperation

4. Short term courses for technicians and managers with direct line responsibilities in:

   a) drug selection
   b) drug procurement
   c) inventory control
   d) quality assurance and control
   e) warehousing
   f) distribution and dispensing
   g) utilization

5. Develop a Central American pharmaceutical vendor/pricing information network.

6. Identify and furnish drug therapy information to several institutions within each participating country, including reference textbooks, journals, newsletters and microfiche libraries.

7. Prepare guidelines and standards for a prototype warehouse and prototype registration and inspection services.

   Analyses of drug utilization, linking patient specific pharmaceutical use to morbidity outcomes, to drug supply. U.S. software packages will be utilized.

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COURSES AND SEMINARS (total cost)

		Participants	Days	Cost
1.	Interinstitutional meeting	29	2	28,700
2.	Drug formularies	12	4	36,600
3.	Quality in the drug supply system	12	5	29,630
4.	Drug laboratory administration (participation only)	6	15	10,800
5.	Drug analysis by HPLC	4	21	15,610
6.	Biopharmacy	6	14	15,350
7.	Immuno-reagents	5	14	27,800
8.	Viral vaccines	6	14	15,220
9.	Drug registration	6	16	19,180
10.	Inspection	6	28	29,320
11.	Information system (participation only)	6	3	3,900
12.	Storage and distribution	3	3	5,000
	SUBTOTAL	101	139	237,120
Plus preparation of training materials (including those by ICAP and CENDEISS)				59,650
	T O T A L			296,770

CONTRACTUAL SERVICES (SC)

Analysis of drug formularies (Panama)	15,000
Local pharmacologist (Panama)	6,000
Guidelines for Drug Control Program (USA)	7,000
Prototype laboratory manual	45,000
Good Laboratory Practices (Guatemala)	5,000
Immunological Reagents (Costa Rica)	1,500
Audio-visual material for inspection (USA)	20,000
Inspection course (Chile)	5,000
Continuing education in pharmacy (Costa Rica)	5,000
Training in drug supply systems (Costa Rica)	10,000
Training in drug supply systems (USA)	12,000
Drug utilization studies	100,000
Procurement criteria - consultation	2,000
Procurement criteria - document	10,000
Procurement criteria - publication	3,000
Drug storage prototypes (USA)	85,000
Drug information system (Costa Rica)	12,000
National information officers (CAP)	12,000
Data base design	7,000
T O T A L	$362,500

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TECHNICAL ASSISTANCE

Drug formularies (Guatemala, Panama)	7,250
Drug quality in supply system (Costa Rica, Guatemala)	6,220
Microbiological drug analysis (CAP)	24,880
Biological drug analysis (Costa Rica, Guatemala, Panama)	12,440
Drug testing laboratory design (Costa Rica, El Salvador)	9,330
Vaccine control (Costa Rica)	3,110
Drug information (Panama)	8,290
Continuing education in pharmacy (Costa Rica)	6,220
Drug supply training (Costa Rica)	13,451
Procurement procedures (CAP)	15,000
Drug supply system (Belize)	37,320
Drug Supply system (Costa Rica, Panama)	37,320
Information system (Costa Rica)	3,110
T O T A L	163,050

CONSULTANTS

	Days	Cost
STC	1,237	$256,467
TA	68	14,098
T O T A L	1,305 (43.5 months)	$270,565

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ESTIMATED COSTS FOR THE ESSENTIAL DRUGS PROGRAMME FOR
CENTRAL AMERICA AND PANAMA

Area/ Activa	Actividades Generales	CF/Días	1 CP/AT(040) (*)	2 Contratos (390)	3 Viajes (230) (**)	4 Equipo (550)	5 Becas (810)	6 C&S (820) (**)	7 Subs(830)	8 Total
A 1		-	6.220.-	-	-	-	-	-	-	6.220.-
2		30	-	-	3.450.-	-	-	-	-	3.450.-
3		42	18.660.-	-	8.855.-	-	-	-	-	27.515.-
4		-	3.110.-	-	-	-	-	-	-	3.110.-
5		-	8.900.-	-	-	2.000.-	-	17.800.-	-	28.700.-
A	Total	72	36.890.-	-	12.305.-	2.000.-	-	17.800.-	-	68.995.-

(*)Sub.Cient/Técnico

B 1		-	5.800.-	21.000.-	-	-	-	9.800.-	-	36.600.-
2		-	1.450.-	-	-		-	-	-	1.450.-
3		-	17.830.-	-	-	2.000.-	-	9.800.-	-	29.630.-
4		-	-	7.000.-	-	-		-	-	7.000.-
5		-	3.110.-	45.000.-	-	-	-	-	-	48.110.-
6		-	-	5.000.-	-	-	-	-	-	5.000.-
7		-	-	-	-	2.000.-	-	10.800.-	-	12.800.-
8		.-	3.110.-	-	-	5.000.-	-	7.500.-	-	15.610.-
9		.-	24.880.-	-	-	-	-	-	-	24.880.-
10		.-	12.440.-	-	-	-	-	-	-	12.440.-
11		.-	9.330.-	-	-	-	-	-	-	9.330.-
12		.-	1 450.-	-	-	3.000.-	-	10.900.-	-	15.350.-
13		.-	8.700.-	1 500.-	-	13.000.-	-	4.600.-	-	27.800.-
14		.-	6.220.-	-	-	2.000.-	-	7.000.-	-	15.220.-
15		.-	3.110.-	-	-	-	-	-	-	3.110.-
16		4	6.220.-	-	460.-	2.000.-	-	10.500.-	-	19.180.-
17		-	-	20.000.-	-	-	-	-	-	20.000.-
18		.-	6.220.-	5.000.-	-	-	-	18.100.-	-	29.320.-
19		.-	829.-	-	-	15.000.-	-	-	-	15.829.-
20		.-	-	-	-	-	575.-	-	-	575.-
21		.	8.290.-	-	-	-	-	-	-	8.290.-
22		6	6.220.-	5.000.-	690.-	-	-	-	-	11.910.-
23			2.695.-	22.000.-	-	-	-	-	-	24.695.-
24			-	100.000.-	-	-	-	-	-	100.000.-
		10	127.904.-	231.500.-	1.150.-	44.000.-	575.-	89.000.-	-	494.129.-

Area/ Activa	Actividades Generales	CF/Dias	1 CP/AT(040) (*)	2 Contratos (390)	3 Viajes (230) (**)	4 Equipo (550)	5 Becas (810)	6 C&S (820) (**)	7 Subs(830)	8 Total
C.1		-	6.220.-	-	-	3.000.-	-	-	-	9.220.-
2		-	3.110.-	15.000.-	-	-	-	-	-	18.110.-
3		-	12.440.-	-	-	-	-	-	-	12.440.-
4		-	6.220.-	85.000.-	-	-	-	5.000.-	-	96.220.-
5		-	37.320.-	-	-	10.000.-	-	-	-	47.320.-
6		-	24.880.-	-	-	-	-	-	-	24.880.-
7		-	12.440.-	-	-	-	-	-	-	12.440.-
	Total	-	102.630.-	100.000.-	-	13.000.-	-	5.000.-	-	220.630.-
D.1	Subsistema de Información	-	3.100.-	31.000.-	-	13.000.-	-	3.900.-	-	51.010.-
	Total		3.110.-	31.000.-	-	13.000.-	-	3.900.-	-	51.010.-
	Total A - D	117.-	270.534.-	362.500.-	13.455.-	72.000.-	575.-	115.700.-		834.764.-
	10% contingencias									83.476.40
	Subtotal									918.240.40
	13% program support costs									108.519.32
	Gran total									1.026.759.72

(*) $207/dia consultor (STC) o Asesor (TA)
(**) $115/dia consultor

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