



# XVI Pan American Sanitary Conference

## XIV Regional Committee Meeting



Minneapolis, Minnesota, U.S.A.  
August-September 1962

Draft Agenda Item 3.10

CSP16/25 (Eng.)  
20 July 1962  
ORIGINAL: ENGLISH

### ESTIMATED REQUIREMENTS FOR THE SPECIAL MALARIA FUND OF THE PAN AMERICAN HEALTH ORGANIZATION

The XIII Meeting of the Directing Council of the Pan American Health Organization, held in Washington in October 1961, approved the Resolution XXVI, with reference to the "Estimated Requirements for the Special Malaria Fund of the Pan American Health Organization", which says:

"The Directing Council,

Having examined Document CD13/20, "Estimated Requirements for the PAHO Special Malaria Fund"; and

Having reviewed the requirements for individual program activities being developed or planned by the Pan American Health Organization,

#### RESOLVES:

1. To take note of the estimates for future requirements for the PAHO Special Malaria Fund (Document CD13/20).
2. To request the Director to prepare annual revisions of these estimates for study by the Directing Council.
3. To urge Member Governments to support the PAHO Special Malaria Fund so that eradication activities may proceed as rapidly as possible".

As was mentioned in the X Report of the Status of Malaria Eradication in the Americas (Document CSP16/20), the Organization is expanding its active participation in field research projects, in cooperation with some Member Governments, to determine the effectiveness of mass drug treatment, use of larvicides, etc., and to obtain experience in managing and costing of these complementary methods of attack in areas where the available insecticides alone cannot halt the transmission of malaria.

Simultaneously, almost all programs are intensifying their epidemiological activities to the maximum of their present financial resources to determine the extent of the disappearance of malaria from wide areas and to measure the limits and the magnitude of the remaining "hard core" problem areas.

During 1962, the supply of drugs from PAHO for both radical treatment of cases in areas of disappearing malaria and mass chemoprophylaxis projects, has been substantially increased. Moreover, a pilot project of larviciding is being furnished with special equipment and materials. A variety of larvicides, new and old such as Paris Green, and equipment for dusting by hand and air are among the items provided. These operations require that the PAHO Special Malaria Fund give increasing assistance to governments.

It is well known that mass drug treatment and larviciding cost more than house spraying with insecticides but, whenever the available insecticides alone cannot interrupt transmission in an area of refractory malaria there is no other alternative than to make an additional effort; areas already freed of the disease must be protected at all costs. In the light of present experience a mass drug treatment costs approximately \$2.65 per capita per year, of which \$0.65 is the price of drugs and \$2.00 the cost of distribution, including supervision, transportation, etc. Unless a new drug with long lasting effect becomes available, mass chemoprophylaxis must be made at intervals of 2 or 4 weeks, depending upon the prevalence of malaria in the area. Unfortunately we have not yet gained sufficient experience from which to estimate the cost per capita of larviciding.

In addition it is important to state that most of the present programs do not have an adequate program of epidemiological operations, as recommended by the WHO Expert Committee on Malaria.

The estimate of the Special Malaria Fund for 1963, as contained in Official Document No 40 (Program and Budget 1963-1964), is \$3,249,137. This sum will cover the present assistance to the Member Governments but may well need a substantial increase if the Organization is to be responsible for providing all drugs and/or equipment and larvicides required by problem areas even now known to exist in the hemisphere.

The possibility of discovery of new problem areas as the campaign presses forward must be kept in mind as a factor which could require future changes in program and budget.

*directing council*



PAN AMERICAN  
HEALTH  
ORGANIZATION

XIII Meeting

Washington, D. C.  
October 1961

*regional committee*

WORLD  
HEALTH  
ORGANIZATION

XIII Meeting



CD13/20 (Eng.)  
28 August 1961  
ORIGINAL: ENGLISH

Topic 33: ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

In November 1960, the staff of the Pan American Health Organization prepared a document entitled "Estimated Requirements for the PAHO Special Malaria Fund" as an aid in forecasting future program and budget requirements. The document analyzed the progress of malaria eradication in each program receiving assistance from the Organization, and forecast the manner in which such assistance was planned for the future. Regional supporting services were also analyzed.

The Fourteenth World Health Assembly, meeting in New Delhi in February 1961, as a result of its study of the status of the Malaria Eradication Special Account of the World Health Organization, recommended through Resolution WHA14.38 that estimates be prepared of the trends in the activities of the Organization in respect of malaria in the coming five years (refer to Topic 34, Resolution WHA14.38).

The Director, in the belief that the prior document of PAHO would serve the purpose requested by the World Health Assembly, had the honor to present it to the Executive Committee at its 43rd Meeting. The Committee examined Document CE43/5, and through Resolution XVII took note of the estimates for future requirements; requested that the material be presented to the Directing Council with revisions to bring it up to date; requested the Director to prepare annual revisions for future study; and requested Member Governments to continue their support of the Special Malaria Fund so that eradication activities may proceed as scheduled.

The Director has the honor to present herewith "Estimated Requirements for the PAHO Special Malaria Fund, Revision I" (Annex I), for consideration by the Directing Council. In the attached tables, there is shown, for each program in which the Pan American Health Organization is participating, the estimated requirements for personal services, supplies and equipment, fellowships, and/or grants and other expenditures. Regional activities are also listed. The standard method of budget estimates for PAHO has been used. A brief narrative of the status of each program is given, as well as the present plans of the Organization for future participation. Participation by UNICEF and by ICA in the programs is indicated where applicable. Estimates of costs of programs in which the Organization is not participating with advisory services --Venezuela, French Guiana and Guadeloupe-- are not included.

These revised estimates have been prepared in August 1961, and are based upon information regarding program development available at that time, and upon the best judgment as to the duration of activities in each individual case. It should be recognized, however, that in the twenty-nine individual programs, set-backs and delays may occur which cannot be foreseen at this time. The estimates should therefore be regarded as probable minimum estimates, based upon the evidence available at the time of their compilation. All figures are shown in U. S. dollars.

The figures differ from those presented to the Executive Committee as regards the total cost of the program, and the requirements for PAHO participation. Estimates regarding the total cost have increased, due principally to revised figures for Brazil, which program is to protect approximately thirty-five per cent of the population in the malarious areas of the Americas. An increase is also foreseen in terms of PAHO requirements, resulting from a significant increase in the amount of assistance to be given to the Brazil program, and an extension of the period of assistance to several other programs, such as Panama and Paraguay in which the development of activities has not proceeded in accordance with original plans.

In view of the foregoing, the Directing Council may wish to approve a resolution along the following lines:

Proposed Resolution

The Directing Council,

Having examined Document CD13/20, "Estimated Requirements for the PAHO Special Malaria Fund;" and

Having reviewed the requirements for individual program activities being developed or planned by the Pan American Health Organization,

RESOLVES:

1. To take note of the estimates for future requirements.
2. To request the Director to prepare annual revisions of these estimates for study by the Directing Council.
3. To request Member Governments to continue their support to the PAHO Special Malaria Fund so that eradication activities may proceed as rapidly as possible.

ESTIMATED REQUIREMENTS FOR THE  
PAHO SPECIAL MALARIA FUND  
(Revision I)

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION I

## SUMMARY OF ALL PROGRAMS

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b> ✓	32,778,888	36,149,456	36,255,564	31,219,392	24,088,300	21,218,000	18,040,400	199,750,000
<b>GOVT. AND OTHER SOURCES</b> ✓	30,012,000	33,378,000	33,508,000	29,132,000	22,787,000	20,380,000	17,460,000	186,657,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	2,187,323	2,160,470	2,215,905	1,720,292	1,116,500	749,200	510,800	10,660,490
Supplies and equipment	337,656	371,135	346,120	234,500	126,000	80,200	61,000	1,556,611
Fellowships	74,435	115,900	81,500	51,600	25,800	8,600	8,600	366,435
Grants and other	167,474	123,951	104,039	81,000	33,000	-	-	509,464
<b>SUB-TOTAL PAHO</b>	2,766,888	2,771,456	2,747,564	2,087,392	1,301,300	838,000	580,400	13,093,000

Malarious area: 5,125,000 Sq. Miles. Population at risk: 88,339,000

**Comments:** ✓ Estimated costs of malaria eradication programs in Venezuela, Guadeloupe and French Guiana are not included.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

ARGENTINA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	432,818	439,084	230,652	180,000	150,000	-	-	1,432,554
GOVT. AND OTHER SOURCES	400,000	400,000	200,000	175,000	150,000	-	-	1,325,000
PAHO PORTION:								
Personnel costs and travel	16,618	24,284	25,652	-	-	-	-	66,554
Supplies and equipment	6,200	6,200	5,000	5,000	-	-	-	22,400
Fellowships	10,000	8,600	-	-	-	-	-	18,600
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	32,818	39,084	30,652	5,000	-	-	-	107,554

Malarious area: 95,289 Sq. Miles. Population at risk: 2,134,000

Comments: The attack phase began in 1959, and is expected to end on schedule in 1962. The consolidation phase is expected to be completed in 1965.

PAHO has been requested to provide a medical officer and a sanitarian. Both will be required through the end of 1963. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission during the consolidation phase. Fellowships are provided for strengthening epidemiological evaluation services in preparation for the consolidation phase.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

**BOLIVIA**

**Country**

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	598,096	639,922	650,883	272,600	180,000	175,000	-	2,516,501
<b>GOVT. AND OTHER SOURCES</b>	500,000	540,000	550,000	220,000	175,000	175,000	-	2,160,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	90,064	90,622	95,883	47,600	-	-	-	324,169
Supplies and equipment	6,532	5,000	5,000	5,000	5,000	-	-	26,169
Fellowships	1,500	4,300	-	-	-	-	-	5,800
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	98,096	99,922	100,883	52,600	5,000	-	-	356,501

Malarious area: 313,279 Sq. Miles. Population at risk: 908,000

**Comments:** It is expected that the attack phase will end on schedule in 1962 in all areas except certain border regions in which the attack phase has not yet begun in neighboring territory. The consolidation phase is expected to terminate in 1966.

PAHO/WHO provides one medical officer (UN/TA), and from SMF a medical officer, an engineer, an entomologist, and four sanitarians. The engineer, the entomologist, and two sanitarians will be withdrawn at the end of 1963; the medical officer and two sanitarians at the end of 1964; the medical officer (UN/TA) at the end of 1965. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission during the consolidation phase. Fellowships are provided to strengthen the epidemiological evaluation services in preparation for the consolidation phase.

UNICEF and ICA collaborate in the program.



# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

BRAZIL (Except State of São Paulo)

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	6,137,189	10,268,200	14,402,400	15,396,300	15,374,500	15,355,400	15,335,600	92,269,589
GOVT. AND OTHER SOURCES	6,000,000	10,000,000	14,000,000	15,000,000	15,000,000	15,000,000	15,000,000	90,000,000
PAHO PORTION:								
Personnel costs and travel	16,889	169,900	299,100	308,400	311,600	296,800	277,000	1,679,689
Supplies and equipment	72,000	80,000	85,000	75,000	50,000	50,000	50,000	462,000
Fellowships	18,300	18,300	18,300	12,900	12,900	8,600	8,600	97,900
Grants and other	30,000	-	-	-	-	-	-	30,000
SUB-TOTAL PAHO	137,189	268,200	402,400	396,300	374,500	355,400	335,600	2,269,589

Malarious area: 2,759,793 Sq. Miles. Population at risk: 31,174,295

Comments: The program in Brazil has been carried out by stages in major geographical areas. In the Amazon Valley, choloquinized salt is being employed in the attack phase. Five states of the northeast are in the attack phase, employing DDT. Incorporation of additional areas into the attack phase had been delayed because of administrative difficulties.

On July 7, 1961, a Presidential Decree was signed which provides for the reorganization of the campaign. It is expected that there will be an accelerated development in field operations. The exact number of advisory personnel, supplies and equipment, and fellowships to be provided by PAHO are to be determined in a new project agreement with the Government. PAHO presently provides one engineer, but it is expected that many additional advisors will be required, and therefore the figures shown differ from those in Official Documents No. 35. A grant is provided in 1961, for a reconnaissance of the extension of a strain of P. falciparum, of increased tolerance to chloroquin, in the Amazon Valley.

ICA collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION I

BRAZIL - STATE OF SAO PAULO

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	1,537,488	1,750,541	1,512,775	548,700	500,000	500,000	-	6,349,504
GOVT. AND OTHER SOURCES	1,460,000	1,660,000	1,425,000	500,000	500,000	500,000	-	6,045,000
PAHO PORTION:								
Personnel costs and travel	46,120	52,699	48,475	33,700	-	-	-	180,994
Supplies and equipment	28,068	33,542	35,000	15,000	-	-	-	111,610
Fellowships	3,300	4,300	4,300	-	-	-	-	11,900
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	77,488	90,541	87,775	48,700	-	-	-	304,504

Malarious area: 88,037 Sq. Miles. Population at risk: 6,167,000

Comments: This program has been executed by the State of São Paulo, and coordinated with activities in the rest of Brazil in charge of the Federal Government. The attack phase, which began in 1960, is proceeding well, and is expected to terminate in 1963. The consolidation phase is expected to be completed in 1966.

PAHO provides an engineer and three sanitarians. It is expected that two sanitarians will be withdrawn at the end of 1963; the engineer and the third sanitarian at the end of 1964. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission during the consolidation phase. Fellowships are provided to strengthen epidemiological evaluation activities in preparation for the consolidation phase.

ICA collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

COLOMBIA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	4,214,873	4,072,553	3,687,581	1,482,600	1,390,300	1,207,000	-	16,054,907
GOVT. AND OTHER SOURCES	4,050,000	3,875,000	3,500,000	1,410,000	1,325,000	1,175,000	-	15,335,000
PAHO PORTION:								
Personnel costs and travel	151,447	151,753	154,681	54,000	56,000	32,000	-	599,881
Supplies and equipment	10,000	20,000	20,000	10,000	5,000	-	-	65,000
Fellowships	3,426	25,800	12,900	8,600	4,300	-	-	55,026
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	164,873	197,553	187,581	72,600	65,300	32,000	-	719,907

Malarious area: 396,306 Sq. Miles. Population at risk: 9,000,000

**Comments:** The attack phase will have to be prolonged beyond the original schedule, because in certain areas of civil unrest it has not yet been possible to achieve total coverage with insecticides. The attack phase is now expected to end in 1963, and the consolidation phase in 1966.

PAHO provides two medical officers, an engineer, an entomologist, a statistician, and six sanitarians. It is expected that the engineer, the entomologist, the statistician and four sanitarians may be withdrawn at the end of 1963; two sanitarians at the end of 1965; and the two medical officers at the end of 1966. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of infection during the consolidation phase. Fellowships are provided each year through 1965 in order to provide for replacement and strengthening of professional personnel in this large program.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION I

COSTA RICA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	412,277	376,572	314,718	164,700	110,000	-	-	1,378,267
GOVT. AND OTHER SOURCES	361,000	317,000	255,000	145,000	110,000	-	-	1,188,000
PAHO PORTION:								
Personnel costs and travel	47,434	55,677	55,818	17,700	-	-	-	176,624
Supplies and equipment	3,843	3,900	3,900	2,000	-	-	-	13,643
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	51,277	59,572	59,718	19,700	-	-	-	190,267

Malarious area: 12,172 Sq. Miles. Population at risk: 382,000

Comments: The attack phase should end on schedule at the end of 1961 in the region of the Caribbean coast, but will have to be prolonged until the end of 1962 in the Pacific coast region where transmission has not yet been entirely interrupted. The consolidation phase should terminate in 1965.

PAHO provides a medical officer, an entomologist and two sanitarians. It is expected that the entomologist and the sanitarians will be withdrawn at the end of 1963, and the medical officer at the end of 1964. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of infection during the consolidation phase.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION I"

CUBA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	866,052	676,956	678,199	678,600	292,800	279,800	283,200	3,755,607
<b>GOVT. AND OTHER SOURCES</b>	800,000	600,000	600,000	600,000	250,000	250,000	250,000	3,350,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	54,452	62,356	63,599	64,000	28,200	24,800	28,200	325,607
Supplies and equipment	10,300	10,300	10,300	10,300	10,300	5,000	5,000	61,500
Fellowships	1,300	4,300	4,300	4,300	4,300	-	-	18,500
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	66,052	76,956	78,199	78,600	42,800	29,800	33,200	405,607

Malarious area: 14,132 Sq. Miles. Population at risk: 2,105,000

**Comments:** Cuba is completing the preparatory phase of the campaign, and it is expected that the attack phase will begin in 1961. Although *A. albimanus* has been shown to be resistant to dieldrin, it remains susceptible to DDT. No special technical problems are foreseen. Should the program continue on schedule, the attack phase will be completed in 1964, and the consolidation phase in 1967.

PAHO provides a medical officer, an engineer, an entomologist and two sanitarians. The engineer, the entomologist and one sanitarian will be withdrawn at the end of 1964; the medical officer and the second sanitarian at the end of 1967. Supplies and equipment provide antimalarial drugs for the treatment of cases found, and for the elimination of residual foci of infection. Fellowships are provided for the training of national personnel.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION I

DOMINICAN REPUBLIC

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	811,644	988,554	974,676	943,800	364,000	310,500	280,000	4,673,174
GOVT. AND OTHER SOURCES	743,000	915,000	895,000	870,000	330,000	280,000	280,000	4,313,000
PAHO PORTION:								
Personnel costs and travel	66,644	65,754	71,876	66,000	30,500	30,500	-	331,274
Supplies and equipment	2,000	3,500	3,500	3,500	3,500	-	-	16,000
Fellowships	-	4,300	4,300	4,300	-	-	-	12,900
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	68,644	73,554	79,676	73,800	34,000	30,500	-	360,174

Malarious area: 15,142 Sq. Miles. Population at risk: 2,446,000

**Comments:** The attack phase of the program had to be suspended during 1960, when due to resistance by A. albimanus to dieldrin it was necessary to shift to DDT. It is expected that total coverage with DDT will be achieved during 1961, and that the attack phase will be prolonged through 1964. The consolidation phase is expected to last through 1967.

PAHO provides a medical officer, an engineer, and three sanitarians. The engineer and two sanitarians are expected to be withdrawn at the end of 1964; the medical officer and the third sanitarian at the end of 1966. Antimalarial drugs are supplied for the treatment of cases found, and for the elimination of residual foci of the infection. Fellowships are provided in each of three years for training in epidemiological evaluation techniques.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

ECUADOR

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	1,226,427	1,342,524	1,228,878	1,234,900	496,000	400,100	350,000	6,278,829
GOVT. AND OTHER SOURCES	1,132,000	1,230,000	1,120,000	1,120,000	450,000	350,000	350,000	5,752,000
PAHO PORTION:								
Personnel costs and travel	80,367	95,382	94,578	100,600	41,000	45,100	-	457,027
Supplies and equipment	14,060	12,842	10,000	10,000	5,000	5,000	-	56,902
Fellowships	-	4,300	4,300	4,300	-	-	-	12,900
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	94,427	112,524	108,878	114,900	46,000	50,100	-	526,829

Malarious area: 59,020 Sq. Miles. Population at risk: 2,405,000

Comments: During 1959 and 1960, there was evidence of resistance to dieldrin by A. albimanus in Ecuador, and it became necessary to change to DDT throughout the country. Financial administrative difficulties prevented a rapid changeover, but these have now been resolved, and the program is progressing satisfactorily. The attack phase is expected to end in 1964, and the consolidation phase in 1967.

PAHO/WHO provides a medical officer (UN/TA), and from SMF a medical officer, an engineer, an entomologist, and four sanitarians. It is expected that the engineer, the entomologist and two sanitarians will be withdrawn at the end of 1964; a medical officer and two sanitarians at the end of 1966; and a medical officer (UN/TA) at the end of 1967. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of infection during the consolidation phase. Fellowships are provided in each of three years to strengthen epidemiological evaluation services.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1"

EL SALVADOR

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	989,909	987,315	998,690	983,100	326,400	274,100	256,100	4,815,614
GOVT. AND OTHER SOURCES	870,000	900,000	900,000	900,000	290,000	240,000	240,000	4,340,000
PAHO PORTION:								
Personnel costs and travel	93,805	77,380	88,755	72,800	30,400	28,100	16,100	407,340
Supplies and equipment	2,304	5,635	5,635	6,000	6,000	6,000	-	31,574
Fellowships	1,800	4,300	4,300	4,300	-	-	-	14,700
Grants and other	22,000	-	-	-	-	-	-	22,000
SUB-TOTAL PAHO	119,909	87,315	98,690	83,100	36,400	34,100	16,100	475,614

Malarious area: 7,452 Sq. Miles. Population at risk: 1,900,000

Comments: The attack phase began in 1956. Resistance by *A. albimanus* to both dieldrin and DDT was discovered in 1958. Transmission of malaria continues throughout most of the coastal plain where resistance is more severe, although there is evidence that transmission has been greatly reduced and perhaps interrupted in the northern Departments in which the vector remains susceptible to DDT. Special epidemiological and entomological studies are underway, as well as field trials on collective drug treatment in several foci of transmission. No prediction can be made as to when the attack phase might terminate, although for budgetary purposes of this document it is assumed to continue through 1964.

PAHO provides a medical officer, an engineer, an entomologist, two sanitarians and an entomological aide. For budgetary purposes, it is assumed that the entomological aide will be withdrawn at the end of 1963; the engineer, the entomologist and one sanitarian at the end of 1964; the second sanitarian at the end of 1966; the medical officer at the end of 1967. Antimalarial drugs are provided for the treatment of cases. Fellowships are provided for training of national personnel. A grant is provided in 1961 for field trials on collective drug treatment.

UNICEF collaborates in the program.



# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

## GUATEMALA

### Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	1,369,266	1,382,777	667,574	468,800	430,200	-	-	4,318,617
<b>GOV'T. AND OTHER SOURCES</b>	1,274,000	1,270,000	550,000	400,000	400,000	-	-	3,894,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	82,666	96,477	105,574	56,800	30,200	-	-	371,717
Supplies and equipment	11,000	12,000	12,000	12,000	-	-	-	47,000
Fellowships	1,600	4,300	-	-	-	-	-	5,900
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	95,266	112,777	117,574	68,800	30,200	-	-	424,617

Malarious area: 31,035 Sq. Miles. Population at risk: 1,610,000

**Comments:** Resistance by A. albimanus to dieldrin was demonstrated in the third year of the attack phase in 1958, and a shift to DDT was required. Except for several well defined foci of resistance to DDT, the response has been satisfactory, and malaria is being greatly reduced. Larviciding and collective drug distribution are being employed in areas of continuing transmission. The attack phase is expected to continue through 1962, and the consolidation phase through 1965.

PAHO provides two medical officers, an engineer, an entomologist, and three sanitarians. The engineer, the entomologist and one sanitarian are expected to be withdrawn at the end of 1963; one medical officer and one sanitarian at the end of 1964; a medical officer and a sanitarian at the end of 1965. Antimalarial drugs are provided for treatment of cases found, and for the elimination of foci of continuing transmission. Fellowships are provided to strengthen the epidemiological evaluation aspects of the program.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

HAITI

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	1,097,690	1,314,346	1,324,773	1,313,800	1,326,300	566,100	573,900	7,516,909
GOVT. AND OTHER SOURCES	1,000,000	1,200,000	1,200,000	1,200,000	1,200,000	500,000	500,000	6,800,000
PAHO PORTION:								
Personnel costs and travel	84,890	101,746	112,173	99,500	112,000	61,100	68,900	640,309
Supplies and equipment	8,300	8,300	8,300	10,000	10,000	5,000	5,000	54,900
Fellowships	4,500	4,300	4,300	4,300	4,300	-	-	21,700
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	97,690	114,346	124,773	113,800	126,300	66,100	73,900	716,909

Malarious area: 7,374 Sq. Miles. Population at risk: 2,833,000

Comments: The program is now in the preparatory phase, with operations having been resumed in 1960. It is expected that the attack phase will begin in 1961, and will continue through 1965. The consolidation phase is expected to end in 1968.

PAHO provides two medical officers, an engineer, a health educator and four sanitarians. It is expected that the services of the engineer, the health educator and one of the sanitarians will be required through 1965; the remaining staff are expected to be withdrawn at the end of 1967. Antimalarial drugs are provided for the treatment of cases, and for the elimination of residual foci of transmission. Fellowships are provided during each of five years for preparation of national personnel.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

HONDURAS

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	861,633	1,001,560	929,347	364,000	300,600	280,000	-	3,737,140
GOVT. AND OTHER SOURCES	785,000	922,000	850,000	330,000	280,000	280,000	-	3,447,000
PAHO PORTION:								
Personnel costs and travel	68,346	68,370	74,347	29,000	20,600	-	-	260,663
Supplies and equipment	6,346	6,890	5,000	5,000	-	-	-	23,642
Fellowships	1,535	4,300	-	-	-	-	-	5,835
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	76,633	79,560	79,347	34,000	20,600	-	-	290,140

Malarious area: 33,741 Sq. Miles. Population at risk: 1,359,000

Comments: Resistance by *A. albimanus* to dieldrin required a shift to DDT in 1959. Although the vector is resistant to DDT also in certain limited areas, these are so far confined. The attack phase is expected to continue through 1963, and the consolidation phase through 1966.

PAHO provides a medical officer, an engineer, an entomologist and two sanitarians. The engineer, the entomologist and one sanitarian are expected to be withdrawn at the end of 1963; the second sanitarian at the end of 1964; the medical officer at the end of 1965. Antimalarial drugs are provided for the treatment of cases discovered, and for the elimination of residual foci of transmission during the consolidation phase. Fellowships are provided for strengthening epidemiological evaluation services.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

JAMAICA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	622,155	392,261	214,881	150,000	150,000	-	-	1,529,297
GOVT. AND OTHER SOURCES	561,000	345,000	200,000	150,000	150,000	-	-	1,406,000
PAHO PORTION:								
Personnel costs and travel	55,203	44,261	14,881	-	-	-	-	114,345
Supplies and equipment	1,750	3,000	-	-	-	-	-	4,750
Fellowships	4,202	-	-	-	-	-	-	4,202
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	61,155	47,261	14,881	-	-	-	-	123,297

Malarious area: 4,360 Sq. Miles. Population at risk: 1,017,000

**Comments:** Spraying has been withdrawn in advance of schedule from areas with approximately 60% of the population of the originally malarious areas. There are several small foci of transmission along the south coast of the island. It is expected that these will be eliminated, and that the attack phase will end in 1961. The consolidation phase will be in force throughout the island in 1962.

PAHO provides a medical officer, a health educator and two sanitarians. The health educator will be withdrawn in 1961; the two sanitarians at the end of 1962; the medical officer at the end of 1963. Antimalarial drugs are provided for treatment of cases, and for the elimination of remaining foci of transmission. Fellowships are provided in 1961.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

MEXICO

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	5,897,256	4,885,184	3,072,222	3,000,000	-	-	-	16,854,662
GOVT. AND OTHER SOURCES	5,800,000	4,800,000	3,000,000	3,000,000	-	-	-	16,600,000
PAHO PORTION:								
Personnel costs and travel	45,853	33,759	20,797	-	-	-	-	100,409
Supplies and equipment	48,403	48,425	48,425	-	-	-	-	145,253
Fellowships	3,000	3,000	3,000	-	-	-	-	9,000
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	97,256	85,184	72,222	-	-	-	-	254,662

Malarious area: 377,677 Sq. Miles. Population at risk: 17,994,000

Comments: The consolidation phase began in 1961 in Mexico in areas with 62% of the population of the originally malarious area. The attack phase continues in the remaining areas, but more of these are expected to enter the consolidation phase during 1961. This phase of the program is expected to be completed at the end of 1964.

PAHO/WHO provides an entomologist, a medical officer, an engineer and a sanitarian (UN/TA), and from SMF a medical officer, a health educator and a sanitarian. It is expected that the engineer and one sanitarian will be withdrawn at the end of 1961; the entomologist and the health educator at the end of 1962; the remaining personnel at the end of 1963. Antimalarial drugs are provided for the elimination of residual foci of infection during the consolidation phase.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

NICARAGUA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	919,307	823,911	812,661	363,100	317,900	300,000	-	3,536,879
GOVT. AND OTHER SOURCES	840,000	750,000	735,000	330,000	300,000	300,000	-	3,255,000
PAHO PORTION:								
Personnel costs and travel	72,800	68,011	71,661	29,100	15,900	-	-	257,472
Supplies and equipment	6,507	5,900	6,000	4,000	2,000	-	-	24,407
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	79,307	73,911	77,661	33,100	17,900	-	-	281,879

Malarious area: 50,579 Sq. Miles. Population at risk: 1,411,000

Comments: Resistance by *A. albimanus* to dieltrin required a shift to DDT in 1959, together with an administrative re-organization. The program is progressing well except in four well defined areas of resistance to DDT; supplementary measures including larviciding and collective drug treatment are required in these. It is expected that the attack phase will terminate at the end of 1963, and the consolidation phase at the end of 1966.

PAHO provides a medical officer, an engineer, two sanitarians and an entomological aide. A short-term consultant is provided during 1961 to assist in the organization of anti-larval measures. It is expected that the engineer, one sanitarian and the entomological aide will be withdrawn at the end of 1963; the second sanitarian at the end of 1964; the medical officer at the end of 1965. Antimalarial drugs are provided for the treatment of cases found, and for collective treatment in limited foci.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

PANAMA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	992,776	921,272	998,390	986,000	583,300	534,400	415,300	5,431,438
GOVT. AND OTHER SOURCES	903,000	833,000	908,000	907,000	550,000	500,000	400,000	5,001,000
PAHO PORTION:								
Personnel costs and travel	80,896	71,532	75,790	73,000	30,300	31,400	15,300	378,218
Supplies and equipment	8,880	8,140	6,000	6,000	3,000	3,000	-	35,020
Fellowships	-	8,600	8,600	-	-	-	-	17,200
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	89,776	88,272	90,390	79,000	33,300	34,400	15,300	430,438

Malarious area: 26,447 Sq. Miles. Population at risk: 969,000

Comments: The spraying cycles have not been completed on schedule so far during the attack phase, and the service is being reorganized. The attack phase will have to be prolonged at least through 1964, and the consolidation phase at least through 1967.

PAHO provides a medical officer, an engineer, an entomologist, and two sanitarians. At present, the engineer, the entomologist and one sanitarian are being budgeted through 1964; the second sanitarian through 1966; the medical officer through 1967. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission. Fellowships are provided for strengthening epidemiological evaluation services.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

PARAGUAY

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	576,834	981,664	960,872	956,500	964,400	460,400	429,300	5,329,970
GOVT AND OTHER SOURCES	500,000	900,000	875,000	875,000	875,000	400,000	400,000	4,825,000
PAHO PORTION:								
Personnel costs and travel	63,646	69,876	74,272	74,200	86,400	57,400	29,300	455,094
Supplies and equipment	3,188	3,188	3,000	3,000	3,000	3,000	-	18,376
Fellowships	10,000	8,600	8,600	4,300	-	-	-	31,500
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	76,834	81,664	85,872	81,500	89,400	60,400	29,300	504,970

Malarious area: 157,047 Sq. Miles. Population at risk: 1,768,000

Comments: The attack phase began in 1957, using dieltrin. In 1960 and 1961, it was found necessary to include additional areas, and the attack phase has been interrupted while preparatory measures are taken in these areas, and additional financial resources are sought for continuation of the campaign. The attack phase is expected to be reinitiated in 1962, and the consolidation phase is expected to begin in 1966.

PAHO provides a medical officer, an engineer, an entomologist and three sanitarians. The engineer and the entomologist are expected to be withdrawn at the end of 1965; two sanitarians at the end of 1966; the medical officer and the third sanitarian at the end of 1967. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission during the consolidation phase. Fellowships are provided to meet increased personnel requirements for the new plan, and to provide strengthened epidemiological evaluation services for the consolidation phase.

UNICEF and ICA collaborate in the program.



# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

PERU

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	1,231,524	1,225,629	1,193,857	438,300	356,000	350,000	-	4,795,310
<b>GOVT. AND OTHER SOURCES</b>	1,153,000	1,147,000	1,112,000	400,000	350,000	350,000	-	4,512,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	64,626	63,986	67,557	28,000	-	-	-	224,169
Supplies and equipment	11,398	10,343	10,000	6,000	6,000	-	-	43,741
Fellowships	2,500	4,300	4,300	4,300	-	-	-	15,400
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	78,524	78,629	81,857	38,300	6,000	-	-	283,310

Malarious area: 364,180 Sq. Miles. Population at risk: 3,131,000

**Comments:** The attack phase has been carried out in stages, beginning in 1957 in the coastal region, and incorporating the Amazon basin in 1959. The program has suffered a temporary interruption of spraying activities in 1961 due to financial difficulties. It is expected that the attack phase will be completed in the western portion of the country in 1962, and in the eastern portion in 1963. The consolidation phase is expected to terminate in the country in 1966. The Department of Tacna has already entered the consolidation phase.

PAHO/WHO provides a medical officer and a sanitarian (UN/TA), and from SMF an engineer and four sanitarians. It is expected that the engineer and two sanitarians will be withdrawn at the end of 1963; two sanitarians at the end of 1964; the medical officer and sanitarian (UN/TA) at the end of 1966. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of infection during the consolidation phase. Fellowships are provided to strengthen epidemiological evaluation activities.

UNICEF and ICA collaborate in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

BRITISH GULANA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	117,432	122,741	123,907	108,500	40,000	40,000	40,000	592,580
<b>GOVT. AND OTHER SOURCES</b>	108,000	102,000	102,000	92,000	40,000	40,000	40,000	524,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	6,089	10,741	11,907	11,500	-	-	-	40,237
Supplies and equipment	2,583	10,000	10,000	5,000	-	-	-	27,583
Fellowships	760	-	-	-	-	-	-	760
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	9,432	20,741	21,907	16,500	-	-	-	68,580

Malarious area: 81,000 Sq. Miles. Population at risk: 65,000

Comments: Malaria has been eradicated from the heavily populated coastal region of British Guiana. In the interior, due to dispersion of the population and difficulties of travel, the addition of chloroquin to common salt is being employed during the attack phase which began in 1961. In addition, limited use is being made of DDT house spraying at strategic points along the rivers leading to the coast, to prevent penetration of A. darlingi. The consolidation phase is expected to begin in 1965.

PAHO provides a sanitarian to assist in the development of the program. It is anticipated that he will be withdrawn at the end of 1964. Provision is also made for short-term consultants to visit the program and advise on methods. A fellowship is provided during 1961 to observe eradication activities in the Amazon basin in Brazil and Peru. Supplies include the drug to be added to salt, as well as drugs for the radical cure of confirmed cases.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1"

BRITISH HONDURAS

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	95,764	98,715	55,632	38,200	20,000	-	-	308,311
GOVT. AND OTHER SOURCES	68,000	68,000	25,000	20,000	20,000	-	-	201,000
PAHO PORTION:								
Personnel costs and travel	26,701	29,385	29,272	17,200	-	-	-	102,558
Supplies and equipment	1,063	1,330	1,360	1,000	-	-	-	4,753
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	27,764	30,715	30,632	18,200	-	-	-	107,311

Malarious area: 8,866 Sq. Miles. Population at risk: 90,000

Comments: The attack phase is proceeding satisfactorily, after a change from dieldrin to DDT in 1959. The consolidation phase is scheduled to begin in 1963, and to terminate in 1965.

PAHO provides a medical officer (required through 1964), and a sanitarian (required through 1963). Antimalarial drugs are provided for the treatment of cases found, and for the elimination of residual foci of transmission during the consolidation phase.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 1"

DOMINICA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	11,560	11,000	8,000	3,000	2,000	-	-	35,560
<b>GOVT. AND OTHER SOURCES</b>	10,000	8,000	5,000	3,000	2,000	-	-	28,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	-	-	-	-	-	-	-	-
Supplies and equipment	1,560	3,000	3,000	-	-	-	-	7,560
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	1,560	3,000	3,000	-	-	-	-	7,560

Malarious area: 59 Sq. Miles. Population at risk: 10,000

**Comments:** The attack phase should end on schedule in 1962, and the consolidation phase in 1965.

PAHO provides technical advice to the program from personnel stationed in St. Lucia and Grenada, and from Zone Office and Headquarters staff. Antimalarial drugs are provided for the treatment of cases found, and for the elimination of any residual foci.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION 1

GRENADA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	30,639	24,512	-	-	-	-	-	55,151
<b>GOVT. AND OTHER SOURCES</b>	18,000	10,000	-	-	-	-	-	28,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	12,639	14,512	-	-	-	-	-	27,151
Supplies and equipment	-	-	-	-	-	-	-	-
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	12,639	14,512	-	-	-	-	-	27,151

Malarious area: 71.5 Sq. Miles. Population at risk: 36,000

Comments: The attack phase terminated on schedule in 1960, and no more cases of malaria have been found during the consolidation phase. It is expected that the maintenance phase will begin in 1963.

PAHO provides a sanitarian, who will continue through 1962. Antimalarial drugs have already been provided in an amount sufficient for any eventuality.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION I"

ST. LUCIA

Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	20,933	21,863	14,529	-	-	-	-	57,325
<b>GOVT. AND OTHER SOURCES</b>	12,000	12,000	6,000	-	-	-	-	30,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	8,933	9,863	8,529	-	-	-	-	27,325
Supplies and equipment	-	-	-	-	-	-	-	-
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	8,933	9,863	8,529	-	-	-	-	27,325

Malarious area: 224 Sq. Miles. Population at risk: 72,000

**Comments:** The attack phase was completed in 1959, and no cases of malaria have been found so far during the consolidation phase which is expected to terminate in 1962.

PAHO provides one sanitarian, through 1962, to assist the St. Lucia and the Dominica programs. Anti-malarial drugs have already been provided.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION I"

## SURINAM

### Country

	1961	1962	1963	1964	1965	1966	1967	Total
<b>TOTAL COST</b>	260,155	204,242	156,279	147,000	97,000	40,000	-	904,676
<b>GOVT. AND OTHER SOURCES</b>	200,000	149,000	100,000	90,000	40,000	40,000	-	619,000
<b>PAHO PORTION:</b>								
Personnel costs and travel	48,032	51,742	52,779	53,500	53,500	-	-	259,553
Supplies and equipment	5,411	3,500	3,500	3,500	3,500	-	-	19,411
Fellowships	6,712	-	-	-	-	-	-	6,712
Grants and other	-	-	-	-	-	-	-	-
<b>SUB-TOTAL PAHO</b>	60,155	55,242	56,279	57,000	57,000	-	-	285,676

Malarious area: 55,378 Sq. Miles. Population at risk: 202,000

**Comments:** The coastal region of Surinam was placed in the consolidation phase in January, 1961, in advance of schedule. Surveillance is organized around both active and passive measures. In the interior, special efforts will be required beyond the original plan, due principally to the living habits of the population. A change in insecticide, more frequent application, and increased health education measures are contemplated. It is expected that the attack phase will continue through 1963 in the interior.

PAHO provides a medical officer and three sanitarians. One sanitarian is expected to terminate at the end of 1963; the other personnel at the end of 1965. Antimalarial drugs are provided for the treatment of cases and for the elimination of residual foci. Followships are provided in 1961 to strengthen surveillance operations.

UNICEF collaborates in the program.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

REVISION I

TRINIDAD AND TOBAGO

Country

	1961	1962	1963	1964	1965	1966	1967	Total
TOTAL COST	470,035	435,000	395,000	395,000	-	-	-	1,695,035
GOVT. AND OTHER SOURCES	464,000	425,000	395,000	395,000	-	-	-	1,679,000
PAHO PORTION:								
Personnel costs and travel	-	-	-	-	-	-	-	-
Supplies and equipment	6,035	10,000	-	-	-	-	-	16,035
Fellowships	-	-	-	-	-	-	-	-
Grants and other	-	-	-	-	-	-	-	-
SUB-TOTAL PAHO	6,035	10,000	-	-	-	-	-	16,035

Malarious area: 1,862 Sq. Miles. Population at risk: 805,000

Comments: Malaria is considered eradicated from Tobago. Part of the population of Trinidad is already in the consolidation phase, and the attack phase in the remaining portion is expected to end on schedule in 1961. The consolidation phase is expected to be completed in 1964.

PAHO provides technical assistance through Zone Office and Headquarters staff. Antimalarial drugs are provided for treatment of cases and for elimination of residual foci, and also for the mass treatment program being carried out in the area in which A. bellator is the vector.

UNICEF collaborates in the program.



# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND INTERCOUNTRY AND REGIONAL ACTIVITIES

REVISION I

Project title: AMRO-90, Malaria Technical Advisory Services (Regional)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	89,053	55,323	56,903	58,000	-	-	-	259,279
Supplies and equipment	2,500	2,500	2,500	2,500	-	-	-	10,000
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL PAHO:</b>	<b>91,553</b>	<b>57,823</b>	<b>59,403</b>	<b>60,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>269,279</b>

Description of activity: The purpose of this project is to provide advisory services to Governments in several special-  
ties, and to provide supervision of the activities of the international personnel assigned to  
countries to work in these specialties. A parasitologist, an entomologist, and a specialist in motor vehicle management  
and maintenance are provided. For flexibility and economy, the group is based in Bogotá, Colombia. Laboratory and office  
supplies, and common services are provided.

During 1961, two medical officers and an engineer have been assigned to the project to provide  
a pool of qualified personnel for additional consultative services to certain projects, particularly the larger ones, and  
to substitute personnel in country projects to cover periods of home leave or illness of project staff.

Schedule of activity: At the end of 1961, it is expected to assign each member of the pool of consultants to the  
country project in which he is employed. In accordance with the expected development of the  
malaria eradication campaign in the Americas, it is expected that the regional consultants will be withdrawn at the end  
of 1964.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-114, Training Center for Malaria Eradication (Mexico)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-	-	-
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	12,937	13,026	13,114	-	-	-	-	39,077
TOTAL, PAHO:	12,937	13,026	13,114	-	-	-	-	39,077

Description of activity: This project provides a grant to the National Commission for Malaria Eradication of Mexico, to carry out training activities in malaria eradication. The grant permits the Department of Training to supplement its staff for teaching national personnel, so that personnel from other countries may be trained as well. Bilingual personnel are available for assistance in field training of English speaking personnel.

Schedule of activity: This project is expected to terminate in 1963.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

"REVISION I"

Project title: AMRO-117, Malaria Technical Advisory Services, Zone I

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	92,418	75,135	84,201	57,500	43,900	-	-	353,154
Supplies and equipment	2,550	2,000	2,000	2,000	2,000	-	-	10,550
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>94,968</b>	<b>77,135</b>	<b>86,201</b>	<b>59,500</b>	<b>45,900</b>	<b>-</b>	<b>-</b>	<b>363,704</b>

Description of activity:

This project provides for a Zone Advisory Team for the malaria eradication activities in the Caribbean to advise and assist international personnel assigned to country projects, as well as give assistance in the widely scattered islands which individually are to small to require full-time international personnel. The staff consists of two medical officers, an entomologist, a laboratory adviser and a secretary. Provision is made for laboratory and office supplies, and for common services.

Schedule of activity:

In accordance with the estimated time-table for the country projects of Zone I, as previously described, personnel for this project will be withdrawn as follows: the sanitarian at the end of 1961; the entomologist at the end of 1963; one medical officer at the end of 1964; and the remaining staff at the end of 1965. By that time it is expected that all programs will be either in the maintenance phase, or well advanced into the consolidation phase, so that no international staff will be necessary.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-118, Malaria Technical Advisory Services (Zone III)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	81,816	46,527	42,238	23,600	18,000	18,000	-	230,181
Supplies and equipment	363	1,200	1,200	1,200	1,200	1,200	-	6,363
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>82,179</b>	<b>47,727</b>	<b>43,438</b>	<b>24,800</b>	<b>19,200</b>	<b>19,200</b>	<b>-</b>	<b>236,544</b>

Description of activity: The purpose of this project is to supplement the technical advice and assistance given to the countries of Zone III, and, at the same time, make possible a more direct and intensive supervision over the work carried out by the international personnel assigned to the different countries. It also provides specialized advisory services in certain fields in which a consultant for each country is not required. Included in the personnel are a medical officer, an engineer, an entomologist, a consultant in administrative methods, an entomological aide and a secretary. Office supplies are provided.

Schedule of activity: In accordance with the estimated time-table for the country programs in Zone III, as previously described, it is anticipated that personnel engaged on this project will be withdrawn as follows: the engineer and the entomologist at the end of 1961; the entomological aide at the end of 1962; the consultant in administrative methods at the end of 1963; the secretary at the end of 1964; the medical officer at the end of 1966.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION I

Project title: AMRO-119, Malaria Technical Advisory Services (Zone IV)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	65,862	68,793	34,396	18,000	18,000	-	-	205,051
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>65,862</b>	<b>68,793</b>	<b>34,396</b>	<b>18,000</b>	<b>18,000</b>	<b>-</b>	<b>-</b>	<b>205,051</b>

Description of activity: The purpose of this project is to supplement the technical advisory services provided to the countries of Zone IV and, at the same time, make possible a more direct and intensive supervision over the work carried out by the international personnel assigned to the country programs. It also provides specialized advisory services in certain fields in which a consultant for each country is not required. Included are a medical officer, an engineer, an entomologist, two advisers in administrative methods, and a secretary.

Schedule of activity: In accordance with the estimated time-table for the country projects of Zone IV, as previously described, personnel for this project are expected to be withdrawn as follows: the two advisers in administrative methods at the end of 1962; the engineer, the entomologist and the secretary at the end of 1963; the medical officer at the end of 1965.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-L21, Malaria Eradication Evaluation Teams

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	47,804	52,121	56,169	102,000	104,000	106,000	58,000	526,094
Supplies and equipment	1,000	1,000	1,000	2,000	2,000	2,000	1,000	10,000
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>48,804</b>	<b>53,121</b>	<b>57,169</b>	<b>104,000</b>	<b>106,000</b>	<b>108,000</b>	<b>59,000</b>	<b>536,094</b>

Description of activity: The project provides initially for one evaluation team, to be supplemented with a second in 1964-1966. The functions of the teams are to study carefully all evaluation and surveillance evidence, and eventually to certify the eradication of malaria from a country. The PAHO has been charged with the establishment and maintenance of a "Registry of Areas where Malaria is Eradicated"; the teams will perform the necessary investigations and studies for this purpose.

Schedule of activity:

One team is expected to function until 1967. A second team is expected to function in the period 1964-1966.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1"

Project title: AMRO-122, Research and Development of Insecticide Application Equipment

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-	-	-
Supplies and equipment	1,500	-	-	-	-	-	-	1,500
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>1,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,500</b>

Description of activity: This project provides for the acquisition of new and improved insecticide application equipment, for field testing prior to recommended use. An amount is budgeted in 1961 for this purpose.

Schedule of activity: No specific plans are made beyond 1961.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-134, Training Center for Malaria Eradication (Kingston)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	52,789	62,868	58,679	60,000	-	-	-	234,336
Supplies and equipment	4,450	3,000	3,000	3,000	-	-	-	13,450
Grants and others	9,981	8,000	8,000	8,000	-	-	-	33,981
TOTAL, PAHO:	67,220	73,868	69,679	71,000	-	-	-	281,767

Description of activity: This is a collaborative project with the Government of Jamaica and the International Cooperation Administration of the United States. It is the only training center in the Americas which provides instruction in English. In addition to personnel from the Americas, training has been given and is planned for personnel from other Regions. The ICA utilizes the Center to train its own staff, as does the World Health Organization. The Ministry of Health of Jamaica provides space and laboratory facilities; ICA provides an entomologist, an engineer, and a sanitarian. PAHO provides a medical officer, a sanitarian, an administrative officer, and clerical and service staff. Provision is also made by PAHO for short-term consultants to teach in their specialities.

Schedule of activity:

Due to ICA and WHO requirements in other Regions of the world, it is planned to continue activities at the Training Center through 1964.



**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-135, Malaria Eradication Trainees

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	30,000	30,000	-	-	-	-	-	60,000
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>30,000</b>	<b>30,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60,000</b>

Description of activity:

Owing to the shortage of experienced workers in malaria eradication in the Americas, the Organization has been forced to train its staff members in malaria eradication techniques. In order to carry out its function of providing technical advisory services in this field.

Schedule of activity:

Provision is made for training one physician and one engineer in each of 1961 and 1962. In 1963 and beyond, it should be possible to meet additional needs for staff through re-assignment of personnel from projects being terminated.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

"REVISION 1"

Project title: AMRO-137, Training Center for Malaria Eradication (São Paulo)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-	-	-
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	7,868	10,000	10,000	-	-	-	-	27,868
<b>TOTAL, PAHO:</b>	<b>7,868</b>	<b>10,000</b>	<b>10,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27,868</b>

Description of activity:

The project provides a grant to the Faculty of Hygiene of the University of São Paulo for additional personnel needed in carrying out courses in malaria eradication techniques. Both national personnel and PAHO-sponsored fellows from other countries are trained at São Paulo.

Schedule of activity:

This project is planned to be carried through 1963. By that time it is expected that the majority of personnel required for the Brazilian malaria eradication program will have been trained.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1"

Project title: AMRO-139, Malaria Technical Advisory Services (Zones V and VI)

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	14,906	15,924	17,311	18,000	18,000	18,000	18,000	120,141
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>14,906</b>	<b>15,924</b>	<b>17,311</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>120,141</b>

Description of activity: The purpose of the project is to provide supervision over the work carried out by the international personnel assigned to the country programs of Zones V and VI. A medical officer is provided.

Schedule of activity: In view of the time-table of activities in Brazil and Paraguay, this project is expected to continue through 1967.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

"REVISION 1"

Project title: AMRO-196, Insecticide Testing Teams

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	63,028	69,885	65,482	70,000	-	-	-	268,395
Supplies and equipment	18,000	18,000	18,000	18,000	-	-	-	72,000
Grants and others	16,482	40,000	40,000	40,000	-	-	-	136,482
<b>TOTAL, PAHO:</b>	<b>97,510</b>	<b>127,885</b>	<b>123,482</b>	<b>128,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>476,877</b>

Description of activity: This project provides two field teams for field studies of insecticides. Since resistance has appeared in a number of mosquitoes in the Americas, both the insecticides currently in use, and alternate insecticides will be tested. In the field, the studies will determine the effectiveness and residual life of insecticides, as well as obtain information about the habits of malaria transmitting mosquitoes in Central and South America. Provision is made for a senior entomologist as Project Leader, and for two field teams each staffed by an entomologist, an auxiliary entomologist, and field and laboratory personnel. Provision is made for supplies and equipment, and for common services where required. Grants are provided for payment of local personnel as required for these studies.

Schedule of activity:

One team functions in El Salvador, the other in Bolivia. It is planned to continue these studies through 1964.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

"REVISION 1"

Project title: AMRO-197, Research on the Resistance of Anophelines to Insecticides

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-	-	-
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	20,000	20,000	-	-	-	-	-	40,000
<b>TOTAL, PAHO:</b>	<b>20,000</b>	<b>20,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>40,000</b>

Description of activity: This project provides a grant to the Johns Hopkins University, School of Hygiene and Public Health, and permits the maintenance of susceptible and resistant colonies of Anophelines. Basic studies of the genetics of these strains are carried on. The insect colonies are available for use by workers in other scientific centers.

Schedule of activity: It is planned to continue the grant through 1962.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION 1

Project title: AMRO-199, Anopheleine Susceptibility Testing

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-	-	-
Supplies and equipment	10,000	10,000	10,000	-	-	-	-	30,000
Grants and others	-	-	-	-	-	-	-	-
<b>TOTAL, PAHO:</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>30,000</b>

Description of activity: The project provides the supplies and equipment for all susceptibility testing being carried out in the Americas. For administrative simplicity, purchases are made by Headquarters and furnished to programs as required.

Schedule of activity: This project will continue through 1963. It is expected that requirements for supplies will be reduced a great deal in 1964 and beyond, as a number of countries finish the attack phase. Any additional requirements may be met from individual project funds.

**ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND  
INTERCOUNTRY AND REGIONAL ACTIVITIES**

REVISION I

Project title: AMRO-220, Malaria Eradication Epidemiology Teams

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	91,195	65,044	66,361	67,000	68,000	-	-	357,600
Supplies and equipment	19,156	18,500	8,500	8,500	8,500	-	-	63,156
Grants and others	22,925	22,925	22,925	23,000	23,000	-	-	114,775
<b>TOTAL, PAHO:</b>	<b>133,276</b>	<b>106,469</b>	<b>97,786</b>	<b>98,500</b>	<b>99,500</b>	<b>-</b>	<b>-</b>	<b>535,531</b>

Description of activity: This project provides for epidemiology teams which are charged with the following functions: to determine the causes of persisting transmission of the disease in areas where the attack phase has been properly carried out; to study and perfect methods for elimination of such transmission; to train national and international personnel in these epidemiological techniques. Studies have been carried out in Costa Rica and El Salvador. Each team will be composed of a medical epidemiologist, a parasitologist and an entomologist. Provision is made for supplies and equipment, including vehicles for necessary field work. Grants are provided for cases in which the national personnel must be reinforced by special staff for the studies.

Schedule of activity:

One team is now established in Central America, and a second team is being organized during 1961. Both teams will continue to function through 1965.

# ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND INTERCOUNTRY AND REGIONAL ACTIVITIES

REVISION I

Project title: Headquarters operations and Zone Office supporting services

PAHO REQUIREMENTS	1961	1962	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	173,292	38,787	16,209	9,592	-	-	-	237,880
Supplies and equipment	-	-	-	-	-	-	-	-
Grants and others	25,281	10,000	10,000	10,000	10,000	-	-	65,281
TOTAL, PAHO:	198,573	48,787	26,209	19,592	10,000	-	-	303,161

Description of activity: In addition to the posts financed at Headquarters from the Regular Budget of the PAHO, a number of posts have been established from the Special Malaria Fund to provide supporting technical and administrative services for the hemisphere-wide program. A proportional amount of common service costs at Headquarters is borne by the Special Malaria Fund. Provision is made for special publications. Also, administrative supporting services in Zone Offices are provided.

Schedule of activity: At the end of 1961, it is expected that the majority of posts financed by the Special Malaria Fund at Headquarters, as well as common service costs, will be taken up by the World Health Organization as its Malaria Eradication Program begins to be financed from regular budget funds in 1962. The remaining posts at Headquarters in fellowships and training will be withdrawn at the end of 1962. Administrative supporting posts in Zone Offices will be gradually decreased in 1963 and withdrawn at the end of 1964. It is planned to maintain the fund for special publications through 1965.