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XIV Meeting

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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 Resolution XXVI, with reference to the "Estimated Requirements for the Special Malaria Fund of the Pan American Health Organization". This Resolution reads:

"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".

In November 1960 a document entitled "Estimated Requirements for the PAHO Special Malaria Fund" was prepared as an aid in forecasting the 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. At the XIV Regional Committee Meeting in September 1962, the Director presented "Estimated Requirements for the PAHO Special Malaria Fund, Revision I," for consideration by the Directing Council.

The Director has the honor now to present herewith "Estimated Requirements for the PAHO Special Malaria Fund, Revision 2." In the attached tables there is shown, for each program in which the Pan American Health Organization is participating, the estimated requirements for personnel, 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 AID in the programs is indicated where applicable. Estimates of cost of programs in which the Organization is not participating with advisory services - Venezuela, and Trinidad and Tobago - are not included. These revised estimates have been prepared in July 1963, and are based upon information regarding program development available at that time, and upon the best judgement as to the duration of activities in each individual case. It should be recognized, however, that in programs such as these, set-backs and delays may occur which cannot be foreseen at this time. The estimate should therefore be regarded as the probable minimum of requirements based upon the evidence available at the time of their compilation. All figures are shown in U.S. dollars.

There are several problems confronting malaria eradication in the Americas at the present time. One of these is that of administration. By its very nature a malaria eradication program requires the creation of a well organized and skilled service which is given great administrative flexibility and whose funds are assured priority. Malaria services without good administration, which find themselves unable to reduce the overall incidence of the disease, are unable to determine whether purely technical problems exist or not.

Among the technical problems which have emerged during the past eight years, two have been related to the use of dieldrin. In 1958 physiological resistance to dieldrin by A. albimanus was demonstrated in El Salvador. Such resistance has now been demonstrated in an additional sixteen countries and involves seven other anophelines as well.

Another difficulty with the use of dieldrin is the long period between its successive applications when cycles of twelve months are used. Too many things happen to the insecticidal barrier in the interim. New and unprotected houses are built, existing surfaces are modified, or they are substituted entirely in rustic housing. Physical attrition by dust, smoke, or people rubbing against protected surfaces nullifies the insecticidal potential.

The solution to these problems has been to change from dieldrin to DDT with more frequent cycles of application. In six programs the national resources have been able to meet the increased costs alone, although with some sacrifice of epidemiological services, while in nine the assistance of AID has been sought to solve the problem. In four of the latter cases the malaria eradication service has been reorganized within the administrative frame work of the Interamerican Cooperative Health Service (SCISP) in each country.

Other technical problems have presented themselves at different times and places. It was known in advance that there would be areas in which would arise the problem of anophelines, that would not be controlled by residual house spraying alone because they bite out of doors and have small opportunity for coming into contact with the insecticide. Similarly, in areas of intense migration or rapid agricultural development housing is constructed so rapidly or is of such a rudimentary nature that house spraying alone cannot afford full protection, even on six month cycles. Also, in some areas anophelines have become resistant to DDT as well as to dieldrin - five countries report such resistance by A. albimanus, the only important species to show it. Some evidence has been found of excito-repellency in A. albimanus and A. pseudopunctipennis in limited areas. This enables it to avoid long contact with DDT deposits even after biting inside well constructed houses. Measures supplementary to residual house spraying are indicated for these areas.

One cannot predict where problems will occur nor speculate with any accuracy on their extent. Only after several years of a properly executed residual house-spray program will problem areas become well defined, and then only if epidemiological evaluation operations are efficiently organized and executed. Only after this stage is reached can the necessary additional measures be designed effectively for the problem areas.

The unit costs of such additional measures - either mass distribution of drugs, larviciding, elimination of anopheline breeding areas or other means - are always more costly per capita protected than residual houses spraying itself. If the malaria eradication program in the Western Hemisphere is to be prosecuted to a successful conclusion ways must be found to make available such additional budgetary support as will be required to finance these supplementary methods of attack. The support must in many cases be generous and in all cases timely.

In so far as costs are concerned, experience has supplied the base from which to project costs for the attack phase. For problem areas the assumption has been made, in most instances, that a program of mass drug administration will be required for two consecutive years although other measures may be applied in some problem areas. It is felt that mass chemoprophylaxis will best serve for budgetary projection. The cost of drugs for such a campaign is estimated at \$0.65 per capita per year, based upon experience in pilot projects.

The estimated requirements for PAHO contributions are detailed in the tables and are summarized within the tables of overall costs. In general it is felt that advisory services in engineering and entomology may be withdrawn when the last areas of the country program enter the consolidation phase whereas advisory services for medical officers and sanitarians should continue through the consolidation phase. The increased requirements for supplies and equipment in a number of countries reflect the need for furnishing materials for measures dealing with continued transmission in problem areas. Where fellowships are required for the training of national personnel abroad at international centers for malaria eradication this cost becomes a charge on PAHO.

Finally, costs are given for the inter-country projects conducted by PAHO, the majority of which provide advisory services, supervision of personnel engaged in country-project activities and training, as well as engaging in research. The cost estimates refer only to Special Malaria Fund requirements. Those costs to PAHO and WHO which are born by the Regular Budgets, or by UN/TA funds are not shown.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

SUMMARY OF ALL PROGRAMS

	1963	1964	1965	1966	1967	Total
TOTAL COST ^{1/}	54,972,000	56,280,093	54,385,187	41,165,610	34,561,950	241,364,840
GOVT. AND OTHER SOURCES ^{1/}	51,972,000	52,747,000	50,762,000	38,496,000	32,601,000	226,578,000
PAHO PORTION:						
Personnel costs and travel	2,198,998	2,242,723	2,102,417	1,514,610	1,111,550	9,170,298
Supplies and equipment	596,594	1,184,700	1,452,150	1,138,300	844,000	5,215,744
Fellowships	80,348	47,900	32,300	13,600	5,100	179,248
Grants and others	124,060	57,770	36,320	3,100	300	221,550
SUB-TOTAL PAHO	3,000,000	3,533,093	3,623,187	2,669,610	1,960,950	14,786,840

Comments: ^{1/} Estimated Costs for Venezuela and Trinidad and Tobago not included.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

ARGENTINA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,098,910	1,101,000	1,060,850	759,500	559,300	4,579,560
GOVT. AND OTHER SOURCES	1,060,000	1,060,000	1,020,000	720,000	520,000	4,380,000
PAHO PORTION:						
Personnel costs and travel	32,810	33,800	35,650	36,500	37,300	176,060
Supplies and equipment	100	3,500	3,500	3,000	2,000	12,100
Fellowships	6,000	3,700	1,700	-	-	11,400
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	38,910	41,000	40,850	39,500	39,300	199,560

Comments: The attack phase began in 1959 and it is expected to end in 1965, except for Chaco and Formosa, which are not started. The consolidation phase is expected to be completed in 1968, except for Chaco and Formosa.

PAHO has been requested to provide a medical officer and sanitarian; both will be required through the end of 1969. 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 2"

BOLIVIA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	694,790	649,895	608,315	285,600	240,000	2,478,600
GOVT. AND OTHER SOURCES	622,000	582,000	557,000	265,000	220,000	2,246,000
PAHO PORTION:						
Personnel costs and travel	65,490	62,895	46,315	18,600	19,000	212,300
Supplies and equipment	7,300	5,000	5,000	2,000	1,000	20,300
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	72,790	67,895	51,315	20,600	20,000	232,600

Comments: It is expected that the attack phase will end in 1965 in all areas except certain border regions in which attack phase has not yet begun in neighboring territory. The consolidation phase should be terminated in 1967, except for border areas. It is estimated that approximately 20,000 persons will require additional measures of protection in several foot hill areas where transmission persists.

PAHO/WHO provides one medical officer (UN/TA) and from the Special Malaria Fund a sanitary engineer and four sanitarians. In 1964 the medical officer will be funded from SMF and two sanitarians will be withdrawn from the project. In 1965 the sanitary engineer and 2 sanitarians will be withdrawn. Antimalarial drugs are provided for the treatment of positive cases and for the elimination of residual-foci transmission during the consolidation phase. Fellowships are provided to strengthen the epidemiological evaluation services.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

BRAZIL - STATE OF SAO PAULO

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	2,064,616	1,050,290	544,650	549,700	-	4,209,256
GOVT. AND OTHER SOURCES	2,000,000	1,000,000	500,000	500,000	-	4,000,000
PAHO PORTION:						
Personnel costs and travel	52,680	41,890	37,950	45,700	-	178,220
Supplies and equipment	7,636	5,000	5,000	4,000	-	21,636
Fellowships	4,300	3,400	1,700	-	-	9,400
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	64,616	50,290	44,650	49,700	-	209,256

Comments: This program has been executed by the State of São Paulo and coordinated with activities in the rest of Brazil which are in charge of the Federal Government. The attack phase, which began in 1960, is proceeding well and is expected to terminate in 1964. The consolidation phase should be completed in 1967. PAHO provides a sanitary engineer and three sanitarians. It is expected that in 1964 one sanitarian will be withdrawn and in 1965 the sanitary engineer will be withdrawn to be replaced by a medical officer. PAHO also supplies drugs for the treatment of cases and the elimination of residual foci of transmission during the consolidation phase, and fellowships to strengthen epidemiological evaluation activities.

AID collaborates in this program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

BRAZIL (EXCEPT STATE OF SAO PAULO)

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	14,247,726	15,259,970	15,288,600	15,301,400	15,301,900	75,399,596
GOVT. AND OTHER SOURCES	14,000,000	15,000,000	15,000,000	15,000,000	15,000,000	74,000,000
PAHO PORTION:						
Personnel costs and travel	182,920	201,470	210,100	224,600	228,500	1,047,590
Supplies and equipment	46,106	50,000	70,000	70,000	70,000	306,106
Fellowships	18,700	8,500	8,500	6,800	3,400	45,900
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	247,726	259,970	288,600	301,400	301,900	1,399,596

Comments: The program in Brazil is being carried out by stages in major geographical areas. In July, 1961, a presidential decree was signed which provided for the reorganization of the campaign and there has been accelerated development in field operations. PAHO provides 5 medical officers, 3 sanitary engineers, 1 administrative methods consultant and 3 sanitarians. It is expected that an additional sanitarian will be assigned in 1964.

AID collaborates in this program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

BRITISH GUIANA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	84,159	110,120	86,090	54,600	25,000	359,969
GOVT. AND OTHER SOURCES	58,000	58,000	58,000	40,000	25,000	239,000
PAHO PORTION:						
Personnel costs and travel	22,692	28,720	27,590	14,100	-	93,102
Supplies and equipment	1,319	20,000	500	500	-	22,319
Fellowships	2,148	3,400	-	-	-	5,548
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	26,159	52,120	28,090	14,600	-	120,969

Comments: Prior to 1959 the country had a very successful malaria control program which eradicated the vector A. darlingi, and the disease, from the coastal area where 89.6% of the population of the original malarious area lives. A barrier of localities between the area from which the vector was eradicated and the interior, where A. darlingi still exists, is being sprayed every six months with DDT to prevent reinfestation of the clean area. In January 1961, the attack phase was carried to the interior using the method of distribution of chloroquinized salt. This has been phenomenally successful in two districts, but in a third one adjoining Brazil, a large outbreak occurred in 1962, presenting a strain of P. falciparum tolerant to chloroquine. This district is now being sprayed with DDT, and will probably continue so until 1967.

During 1961 an outbreak of malaria was discovered in the coastal area along the Demerara River. The epidemiological investigation revealed that A. darlingi was not present but A. aquasalis was abundant in the area. This species was not effective as a vector ten years earlier because it fed freely on cattle. The number of cattle however had decreased and A. aquasalis turned to man for food, and eventually an imported case started an outbreak. At present the situation is completely under control.

PAHO provides two sanitarians, one working with the development of the attack phase in the interior and the other working with the surveillance operations in the coastal area. It is anticipated that both will be required until the end of 1965, and one until 1966. Provision is made for a short term consultant to visit the program in 1964 to advise on methods and procedures. Supplies include the drug to be added to the salt as well as drugs for radical cure of confirmed cases. Fellowships are also provided.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

BRITISH HONDURAS

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	61,401	62,430	49,380	-	-	173,211
GOVT. AND OTHER SOURCES	43,000	43,000	30,000	-	-	116,000
PAHO PORTION:						
Personnel costs and travel	18,240	18,530	18,880	-	-	55,650
Supplies and equipment	161	900	500	-	-	1,561
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	18,401	19,430	19,380	-	-	57,211

Comments: The attack phase began in February 1957 using dieldrin in annual cycles. By mid-1958 evidence of resistance by A. albimanus was found and a change over was made to DDT on six month cycles. There was a dramatic fall in the incidence of malaria, and since October 1961 no autochthonous case of malaria was found except one small focus which may not have been well sprayed. The program suffered an interruption due to the hurricane Hattie in 1961, but in view of the fact that no cases of malaria were registered it was decided to suspend spraying in August 1962, and enter the consolidation phase.

PAHO provides a medical officer to assist in the work of consolidation. It is expected that the medical officer will be required through 1965. Antimalarial drugs are also provided for treatment of cases.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

COLOMBIA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	3,612,550	3,483,060	3,451,580	2,335,000	1,651,100	14,533,290
GOVT. AND OTHER SOURCES	3,434,000	3,334,000	3,309,000	2,234,000	1,550,000	13,861,000
PAHO PORTION:						
Personnel costs and travel	158,550	137,960	131,480	93,100	94,900	615,990
Supplies and equipment	14,900	6,000	6,000	4,500	4,500	35,900
Fellowships	5,100	5,100	5,100	3,400	1,700	20,400
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	178,550	149,060	142,580	101,000	101,100	672,290

Comments: The attack phase in September 1958 following a year of preparation in which geographical reconnaissance was completed and personnel trained. At the end of 1962, 3 million people had been placed in the consolidation phase and it is estimated that an additional 5 million will be placed in consolidation in 1964. Since there are some areas where total coverage has not been possible it will be necessary to prolong the attack phase in contiguous areas until it is possible to eliminate transmission completely in all areas. It is expected that special measures will be required in an area whose population is approximately 500,000.

PAHO provides two medical officers, a sanitary engineer, a statistician an entomologist and six sanitarians for the project. It is anticipated that two sanitarians will be withdrawn in 1964 and an additional one in 1965. The sanitary engineer and the entomologist will be withdrawn at the end of 1965 also. Other staff will remain to 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 each year in order to provide for replacement and strengthening of professional personnel in this large program.

UNICEF collaborates in this program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

COSTA RICA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	484,474	471,570	269,088	172,000	150,000	1,547,132
GOVT. AND OTHER SOURCES	412,000	397,000	200,000	172,000	150,000	1,331,000
PAHO PORTION:						
Personnel costs and travel	60,193	57,870	59,088	-	-	177,151
Supplies and equipment	11,681	15,000	10,000	-	-	36,681
Fellowships	600	1,700	-	-	-	2,300
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	72,474	74,570	69,088	-	-	216,132

Comments: The attack phase began in 1957 and excellent results have been achieved throughout most of the country. It has been possible to withdraw spraying on the entire Caribbean coast and part of the Pacific coast. Two hundred thirty thousand people have been placed in the consolidation phase. However, transmission continues in two provinces along the Pacific coast. These areas are undergoing rapid colonization and there is considerable house construction between visits of the spraying squads. Some evidence of outdoor transmission has also been shown. Population of these areas is estimated at 17,000 people.

PAHO provides a medical officer, an entomologist and three sanitarians. It is expected that the entomologist will be withdrawn at the end of 1963 and the others continued until the end of 1965. Antimalarial drugs are provided for treatment of cases found and for the elimination of residual foci of infection during the consolidation phase. Fellowships are also provided in 1963 and 1964.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

CUBA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,702,000	1,702,000	1,702,000	800,000	800,000	6,706,000
GOVT. AND OTHER SOURCES	1,702,000	1,702,000	1,702,000	800,000	800,000	6,706,000
PAHO PORTION:						
Personnel costs and travel	-	-	-	-	-	-
Supplies and equipment	-	-	-	-	-	-
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	-	-	-	-	-	-

Comments: The attack phase was begun in mid-1962. There was considerable delay in the development of field operations but it is expected that the attack phase will be completed in 1965, and the consolidation phase in 1968.

WHO, from the Malaria Eradication Special Account, provides one medical officer, one sanitary engineer, one entomologist and two sanitarians for this project. Supplies and equipment provided are antimalarial drugs as well as spraying equipment. Fellowships are being provided for the training of professional staff.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

DOMINICAN REPUBLIC

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,688,624	1,705,761	1,710,471	1,416,500	1,084,600	7,605,956
GOVT. AND OTHER SOURCES	1,600,000	1,600,000	1,600,000	1,300,000	1,050,000	7,150,000
PAHO PORTION:						
Personnel costs and travel	83,245	98,861	103,571	111,300	33,600	430,577
Supplies and equipment	1,079	3,500	3,500	3,500	1,000	12,579
Fellowships	4,300	3,400	3,400	1,700	-	12,800
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	88,624	105,761	110,471	116,500	34,600	455,956

Comments: The attack phase began in 1958 using dieldrin in annual cycles. In 1959 resistance was discovered in A. albimanus and it was necessary to shift to DDT. The Government proposed applying DDT in nine month cycles but financial difficulties made it impossible to complete even those cycles on time. Then political disturbances caused an almost complete suspension of activities, so the program now may be considered to have started in 1962 in the attack phase operations. Additional budget support is required during the early years of the campaign to assure that adequate numbers of personnel can be employed for spraying and evaluation operations.

PAHO supplies two medical officers, one sanitary engineer and three sanitarians, and it is expected to add an administrative methods officer in 1964. One medical officer, the sanitary engineer, the administrative methods officer and two sanitarians will be withdrawn at the end of 1966. Antimalaria drugs are planned for the treatment of cases found and for the elimination of residual foci of infection. Fellowships were provided for the training of epidemiological evaluation personnel.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

ECUADOR

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	2,031,472	1,781,668	1,321,918	811,500	531,700	6,478,258
GOVT. AND OTHER SOURCES	1,916,000	1,667,000	1,220,000	761,000	500,000	6,064,000
PAHO PORTION:						
Personnel costs and travel	104,808	106,968	95,918	48,000	29,700	385,394
Supplies and equipment	6,364	6,000	6,000	2,500	2,000	22,864
Fellowships	4,300	1,700	-	-	-	6,000
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	115,472	114,668	101,918	50,500	31,700	414,258

Comments: The attack phase began in Ecuador in 1957. Initially both dieldrin and DDT were employed as residual insecticides, dieldrin being used in approximately 70% of the malarious area. In 1959, however, resistance of A. albimanus to dieldrin was demonstrated and it became necessary to convert the program to DDT alone. This required additional financial support for the expanded operations and assistance was requested from AID. At the same time a reorganization was carried out. This has provided firmer administration and fiscal support for the program.

With the reorganization the attack phase began in January of 1961 and may be expected to continue until 1964 throughout most of the country. By 1965 it should be possible to withdraw spraying operations from two thirds of the area and completely by 1967. It is expected that special measures will be required in some areas. The population is estimated at 100,000 people.

PAHO provides one medical officer from UN/TA funds and one from the Special Malaria Fund. Other staff provided from the Special Malaria Fund includes one sanitary engineer, one entomologist and four sanitarians. It is expected that one sanitarian will be withdrawn at the end of 1964 and the sanitary engineer, the entomologist, and two sanitarians will be withdrawn at the end of 1965. One medical officer will be withdrawn at the end of 1966, and one medical officer and two sanitarians will remain until the end of 1967.

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ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

EL SALVADOR

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,327,060	1,496,270	1,533,140	983,500	729,900	6,069,870
GOVT. AND OTHER SOURCES	1,165,000	1,365,000	1,400,000	850,000	596,000	5,376,000
PAHO PORTION:						
Personnel costs and travel	111,360	117,870	121,440	123,500	125,900	600,070
Supplies and equipment	46,400	10,000	10,000	10,000	8,000	84,400
Fellowships	4,300	3,400	1,700	-	-	9,400
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	162,060	131,270	133,140	133,500	133,900	693,870

Comments: The attack phase began in El Salvador in 1956. In 1958 resistance of A. albimanus to dieldrin was demonstrated, and shortly after to DDT as well. Double resistance has now been found over a wide area of the country, especially related to the use of insecticides for cotton production in the coastal plain. The attack phase continues because DDT has halted transmission in most parts of the country outside the area of resistance, and reduced it considerably even within the same area.

In addition to the problem of anopheline resistance there is intense migration throughout the coastal plains during the cotton cultivation and harvest. Only rudimentary shelters exist for almost 80,000 migratory workers. The total area comprises some 6,000 Km.² from La Libertad on the west to the Gulf of Fonseca, on the east and an estimated 500,000 people live in the area. Trials of mass distribution of drugs and of larviciding have been carried out in order to determine their effectiveness and cost. For budgetary purposes it is assumed mass distribution of drugs will be required for two consecutive years for a population of 500,000 and for a third year for 200,000 people.

PAHO provides two medical officers, one sanitary engineer, one entomologist, three sanitarians and one entomological aide. It is expected that this staff will be required through 1969 in order to deal with the problems which have arisen. Antimalarial drugs are provided for the treatment of cases. Fellowships are provided for the training of national personnel.

UNICEF collaborates in this program and in 1963 AID is also participating.

AUG -1963

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

GUATEMALA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,793,460	1,716,040	1,218,750	786,000	735,300	6,249,550
GOVT. AND OTHER SOURCES	1,680,000	1,600,000	1,100,000	750,000	700,000	5,830,000
PAHO PORTION:						
Personnel costs and travel	97,000	104,340	108,750	33,500	34,300	377,890
Supplies and equipment	16,460	10,000	10,000	2,500	1,000	39,960
Fellowships	-	1,700	-	-	-	1,700
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	113,460	116,040	118,750	36,000	35,300	419,550

Comments: The attack phase began in Guatemala in 1956 and dieldrin was the insecticide of choice. By 1958 evidence pointed to rather spread resistance to dieldrin by A. albimanus, the principal malaria vector. The program was changed to DDT in six months cycles. This required a reorganization of activities and an increased number of personnel plus additional funding. The assistance of AID was sought for financing, and incorporation of the malaria service into the Interamerican Cooperative Health Service, a joint operation of the Governments of Guatemala and the United States. By the end of 1962, 581,000 people had been placed in the consolidation phase.

There are three problem areas in Guatemala. On the Pacific coast, the Nueva Concepción area of agrarian reform produced 30% of the cases of the country in 1961. It is an area, characterized by intensive migration and very rudimentary housing, in which A. albimanus is resistant to both dieldrin and DDT. A second problem area is located in Alta Verapaz. The reasons for continued transmission here are still under study. A third area, in the Nenton region of Huehuetenango, is heavily influenced by migration from Nueva Concepción and it is felt that if that problem is solved the Nenton transmission will be eliminated as well. A program of mass chemotherapy is expected for some 160,000 people during the years 1964/65. In addition to this, larviciding operations are planned for part of the Nueva Concepción area.

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GUATEMALA

- 2 -

COMMENTS:

Cont'd.

PAHO provides two medical officers, one sanitary engineer and four sanitarians for the program. It is expected that one medical officer, a sanitary engineer and three sanitarians will be withdrawn at the end of 1965, and that the second medical officer and remaining sanitarian will continue through 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 in 1964 for the preparation of national personnel.

UNICEF and AID collaborate in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

HAITI

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	2,063,884	2,067,923	2,071,916	1,389,900	1,011,600	8,605,223
GOVT. AND OTHER SOURCES	1,960,000	1,960,000	1,960,000	1,350,000	990,000	8,220,000
PAHO PORTION:						
Personnel costs and travel	96,263	100,723	104,716	37,900	20,600	360,202
Supplies and equipment	3,321	5,500	5,500	2,000	1,000	17,321
Fellowships	4,300	1,700	1,700	-	-	7,700
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	103,884	107,923	111,916	39,900	21,600	385,223

Comments: The malaria eradication program began in Haiti with preparatory activities in 1958. The attack phase using DDT began in 1958, but was suspended after three months because of the lack of funds. During 1961 the Government requested assistance from AID and a memorandum of understanding was signed by the Government, AID, UNICEF and PAHO, which forms the basis for the present program. The administration of the program is supervised by AID personnel. Both AID and PAHO provide technical advisors and the chief PAHO adviser serves as co-director of the service. Research activities, including tests on the effectiveness of insecticidal vapor compounds, were carried out in 1962 and 1963.

PAHO provides one medical officer, one epidemiologist, one sanitary engineer, one health educator and three sanitarians for the project. If suitable progress is made it is anticipated that all staff except the medical officer and the epidemiologist can be withdrawn at the end of 1965. The epidemiologist is expected to remain until the end of 1966, and the medical officer to the end of 1967. 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 the strengthening of epidemiological evaluation services.

UNICEF and AID collaborate in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

HONDURAS

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,249,966	1,284,801	960,261	755,900	495,300	4,746,228
GOVT. AND OTHER SOURCES	1,149,000	1,190,000	864,000	735,000	475,000	4,413,000
PAHO PORTION:						
Personnel costs and travel	81,352	87,101	90,261	18,900	19,300	296,914
Supplies and equipment	17,614	6,000	6,000	2,000	1,000	32,614
Fellowships	2,000	1,700	-	-	-	3,700
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	100,966	94,801	96,261	20,900	20,300	333,228

Comments: The attack phase utilizing dieldrin began in Honduras in 1958 but before the end of the first cycle resistance to dieldrin by A. albimanus had been demonstrated. It was necessary to reorganize the campaign and employ DDT. This was done beginning in July, 1959. By January 1963, large areas with a population of 480,000 people had been placed in the consolidation phase and by May 1963, 526,000. Resistance by A. albimanus to both dieldrin and DDT has been demonstrated in a few localities along the south coast and one municipality in the interior. Furthermore, in two departments, extensive agrarian development is attracting rural colonizers and many houses are built in the intervals between sprayings. It is estimated that some 50,000 people live in these problem areas and, for these, special measures will be required to interrupt transmission. A further problem is the persistence of transmission in El Salvador, from which many immigrants enter Honduras. This will require extension of the attack phase activities in border areas and areas of inter-country migration, until El Salvador is cleared up.

PAHO provides one medical officer, one sanitary engineer, one entomologist and three sanitarians for the project. It is expected that all the staff will continue through the end of 1965, and the medical officer through 1968. Fellowships are provided in 1963 and 1964 to strengthen the epidemiological evaluation services. Antimalarial drugs are provided for the treatment of cases discovered and the elimination of residual foci of transmission during the consolidation phase.

UNICEF and AID collaborate in the program.

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ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

JAMAICA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	379,071	358,270	351,000	175,000	80,000	1,343,341
GOVT. AND OTHER SOURCES	351,000	351,000	351,000	175,000	80,000	1,308,000
PAHO PORTION:						
Personnel costs and travel	27,820	6,920	-	-	-	34,740
Supplies and equipment	251	350	-	-	-	601
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	28,071	7,270	-	-	-	35,341

Comments: The attack phase using dieldrin began in Jamaica in January 1958. Resistance of *A. albimanus* to dieldrin was demonstrated in 1958; a shift was made to DDT in semi-annual cycles early in 1959, and excellent results have been obtained. The entire population has been placed in the consolidation phase.

PAHO provided a medical officer and a sanitarian in 1963 and continues a sanitarian through 1964.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

MEXICO

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	13,241,292	13,968,560	14,469,880	8,541,000	7,239,600	57,460,332
GOVT. AND OTHER SOURCES	13,100,000	13,891,000	14,391,000	8,500,000	7,200,000	57,082,000
PAHO PORTION:						
Personnel costs and travel	48,550	45,140	46,460	31,000	31,600	202,750
Supplies and equipment	90,322	30,000	30,000	10,000	8,000	168,322
Fellowships	1,700	1,700	1,700	-	-	5,100
Grants and others	720	720	720	-	-	2,160
SUB-TOTAL PAHO	141,292	77,560	78,880	41,000	39,600	378,332

Comments: The Malaria Eradication Campaign in Mexico was the first large program organized following the resolutions of the XIV Pan American Sanitary Conference and the VIII World Health Assembly. In 1956 the preparatory phase was carried out and geographical reconnaissance completed. In 1957 the attack phase began, giving direct protection to 3.3 million houses and 14 million people each semester. An evaluation network of over 36,000 notification posts has been established. At present approximately 75% of the originally malarious population has been placed in consolidation phase, inasmuch as the evidence indicates interruption of transmission. Transmission persists in the remaining 25% of the area. The principal problem areas in Mexico are located along the Pacific coast in the states of Oaxaca, Guerrero, Michoacan and Sinaloa, where in spite of five years of residual spraying, it has not been possible to interrupt transmission. Rudimentary dwellings, migratory labor and difficulty in reaching isolated communities contribute to the problem. It will be necessary to carry out a program of mass drug distribution for some 2.5 million persons living in problem areas, in addition to the continuation of spraying. Larviciding may be preferable in special instances.

A chief Country Malaria Adviser, one medical officer, one sanitary engineer, and one sanitarian, are provided from UN/TA funds. From SMF are provided one medical officer, one health educator, and one assistant engineer in 1963 and a sanitarian in 1964 and 1965. One medical officer will be withdrawn in 1965 and the rest of the staff in 1967.

UNICEF collaborates in the program.

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ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

NICARAGUA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	2,102,882	2,131,823	1,525,761	1,088,300	708,800	7,557,566
GOVT. AND OTHER SOURCES	1,950,000	2,008,000	1,400,000	989,000	650,000	6,997,000
PAHO PORTION:						
Personnel costs and travel	102,107	117,823	119,761	95,300	56,800	491,791
Supplies and equipment	50,775	6,000	6,000	4,000	2,000	68,775
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	152,882	123,823	125,761	99,300	58,800	560,566

Comments: The malaria eradication campaign began at the end of 1957 using dieldrin. In 1958 resistance on the part of *A. albimanus* was found, and a shift to DDT became necessary. With the economic assistance of the Government of the United States, through AID, money was available to meet the cost of spraying operations at six month intervals, which began in November of 1958. By the end of 1962 approximately 1/3 of the originally malarious population had been withdrawn from spraying and placed in the consolidation phase. In spite of the success that is being achieved on the Atlantic side, Nicaragua is facing very serious technical difficulties on the Pacific slopes, with persistence of transmission in five departments covering over 700,000 inhabitants. In most of this area the vector, *A. albimanus*, is resistant to both the presently available insecticides. It is also considered that the migration of population, precarious shelters and habits of people resting outside of houses during hours of activity of the vector early at night further reduce the effectiveness of residual spraying. Supplementary measures, including larviciding and mass drug administration, will be required to deal with these problem areas. The development of a good substitute for DDT would solve the problem. It is expected however that 4 or 5 years may elapse before the entire population will be in the consolidation phase.

PAHO provides two medical officers, one sanitary engineer, one entomologist, two sanitarians and one entomological aide, and is planning to add an additional sanitarian in 1964. At the end of 1965 the entomologist, and one sanitarian will be withdrawn. Two sanitarians and the entomological aide will be withdrawn in 1967. The sanitary

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NICARAGUA

COMMENTS: (Cont.)

engineer will be withdrawn at the end of 1966, as well as one medical officer, with one medical officer and one sanitarian remaining through the end of 1968. Antimalarial drugs are provided for the treatment of cases found and for collective treatment in eliminating foci of transmission.

UNICEF and AID collaborate in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

PANAMA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,265,312	1,350,289	1,432,579	1,385,700	785,800	6,219,680
GOVT. AND OTHER SOURCES	1,165,000	1,250,000	1,330,000	1,300,000	750,000	5,795,000
PAHO PORTION:						
Personnel costs and travel	86,473	92,589	94,879	81,700	33,800	389,441
Supplies and equipment	5,239	6,000	6,000	4,000	2,000	23,239
Fellowships	8,600	1,700	1,700	-	-	12,000
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	100,312	100,289	102,579	85,700	35,800	424,680

Comments: The attack phase began in Panama in August 1957 using dieldrin. Total coverage was not achieved due to deficiencies in organization and administration. Additionally, it was felt that twelve month intervals between spraying was too long and did not permit complete protection. The program has now been reorganized and DDT is being employed in six month cycles. The first cycle of DDT began in May 1962. Present budget is not sufficient to assure total coverage and provide the epidemiological evaluation at the intensity required. No particular technical problems are foreseen.

PAHO provides one medical officer, one sanitary engineer, one entomologist and three sanitarians. It is expected that the entomologist will be withdrawn at the end of 1965, the sanitary engineer and 2 sanitarians will be withdrawn at the end of 1966 and the medical officer and 1 sanitarian at the end of 1967. Antimalarial drugs provided for the treatment of cases found for the elimination of residual foci of transmission. Fellowships were provided for the strengthening of epidemiological evaluation services.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

PARAGUAY

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	898,310	988,050	1,069,550	1,080,550	580,850	4,617,310
GOVT. AND OTHER SOURCES	850,000	900,000	975,000	1,000,000	500,000	4,225,000
PAHO PORTION:						
Personnel costs and travel	39,610	82,850	89,350	76,850	78,850	367,510
Supplies and equipment	100	3,500	3,500	2,000	2,000	11,100
Fellowships	8,600	1,700	1,700	1,700	-	13,700
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	48,310	88,050	94,550	80,550	80,850	392,310

Comments: The attack phase began in October 1957, with dieldrin to be sprayed at twelve month intervals. At the end of the first year it is found that malaria was present in other areas not scheduled to be sprayed. The same thing happened at the end of the second cycle. It has been observed that, in spite of the low prevalence of malaria in Paraguay, cases have been discovered in a very wide area of the country. During 1959 an evaluation was made and it was found that dieldrin was not capable of halting transmission in any area due mainly to the very long interval between applications. In addition it was considered necessary to extend the attack to new areas of low endemicity previously considered non-malarious. The need was recognized to extend spraying operations to the whole country at six month intervals, but lack of financing and inadequate geographical reconnaissance caused the program to be placed again in the preparatory phase. The attack phase has been suspended since March of 1961. The limited funds made available by the Government up until now are being used to maintain a network of case-finding throughout the country and for geographical reconnaissance of the new areas that have to be included in the spraying operations.

PAHO provides one malariologist, one sanitary engineer, one entomologist and three sanitarians. It is expected that the entomologist will be withdrawn in 1965, and the sanitary engineer and two sanitarians will be withdrawn 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 program, and to provide for strengthening epidemiological evaluation services for the consolidation phase.

UNICEF collaborates in this program.

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ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

PERU

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	1,404,144	1,434,791	1,447,411	914,600	700,000	5,900,946
GOVT. AND OTHER SOURCES	1,277,000	1,310,000	1,350,000	875,000	700,000	5,512,000
PAHO PORTION:						
Personnel costs and travel	105,531	108,091	80,711	35,600	-	329,933
Supplies and equipment	17,313	15,000	15,000	4,000	-	51,313
Fellowships	4,300	1,700	1,700	-	-	7,700
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	127,144	124,791	97,411	39,600	-	388,946

Comments: The program in Peru has been planned and executed by stages. Consolidation phase activities alone were begun in the department of Tacna in 1957. At the same time the attack phase began in the rest of the malarious area on the Pacific slope of the Andes. In 1958 the attack phase was extended to the inter-Andean valleys and to the southeastern portion of the country, and in 1959 to the Amazonas region. The entire coast of Peru has now entered into consolidation phase except for a portion of the northernmost departments where transmission continues. The attack phase will have to be prolonged in the northern part of the coast and special measures taken in the areas with a population of some 200,000 people. Rudimentary housing construction and agricultural migration in the area appear to be the main causes of continuing transmission.

PAHO provides one medical officer, one sanitary engineer, and five sanitarians. It is expected that two sanitarians will be withdrawn at the end of 1964 and that the sanitary engineer and two sanitarians will be withdrawn at the end of 1965. The medical officer and 1 sanitarian will remain through 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 collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

SURINAM

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	300,589	324,357	302,017	185,300	173,400	1,285,663
GOVT. AND OTHER SOURCES	211,000	224,000	216,000	100,000	100,000	851,000
PAHO PORTION:						
Personnel costs and travel	87,798	94,157	79,817	81,800	70,900	414,472
Supplies and equipment	1,791	4,500	4,500	3,500	2,500	16,791
Fellowships	-	1,700	1,700	-	-	3,400
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	89,589	100,357	86,017	85,300	73,400	434,663

Comments: The program began the attack phase in May, 1958, employing DDT in semi-annual cycles in the coastal and savannah region and dieldrin in annual cycles in the interior. By January, 1961, it was possible to place the coastal region in the consolidation phase, since transmission had been successfully interrupted. In the interior additional effort was required and a change to DDT in six months cycles was made but acceptance of spraying has been poor in some areas. The attack phase will have to be prolonged there and it is estimated to terminate at the end of 1966. The problem of continuing transmission of malaria in Surinam is confined to the interior inhabited by Bush-negroes and Amer-indians. The customs of the people make it difficult to spray all dwellings on time. An intensive campaign of health education is being carried out in order to secure the cooperation of all the inhabitants in the interior. This has been well received so far.

PAHO provides one medical officer, one health educator, two malaria specialists, one entomologist, and one sanitarian. It is expected that the entomologist will be withdrawn at the end of 1964, the sanitarian in 1966, and the remaining staff at the end of 1968. Antimalarial drugs are provided and fellowships are provided to strengthen the epidemiological evaluation activities.

UNICEF collaborates in the program.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

FRENCH ANTILLES AND FRENCH GUIANA

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	233,100	223,000	201,000	80,000	45,000	782,100
GOVT. AND OTHER SOURCES	222,000	222,000	200,000	80,000	45,000	769,000
PAHO PORTION:						
Personnel costs and travel	-	-	-	-	-	-
Supplies and equipment	10,000	1,000	1,000	-	-	12,000
Fellowships	1,100	-	-	-	-	1,100
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	11,100	1,000	1,000	-	-	13,100

Comments: Eradication from a part of the island of Guadeloupe has been claimed following the initiation of the program in 1957. It is expected that the interruption of transmission in the remaining portion of the island will have been achieved by the end of 1963, and the consolidation phase will be completed at the end of 1965.

The eradication of malaria has been claimed for French Guiana following the program organized in 1948. However the attack phase was begun again in 1954 following reimportation of the disease. It is expected that when transmission is interrupted in the neighboring countries similar results will be obtained in French Guiana. The last remaining areas in the interior are expected to be in the consolidation phase in 1965.

In 1963 one fellowship is provided in epidemiological procedures. Supplies are provided during 1963, 1964 and 1965. These supplies include drugs for the treatment of cases found and for the reduction of residual foci if and when they develop.

ESTIMATED REQUIREMENTS FOR THE PAHO SPECIAL MALARIA FUND

"REVISION 2"

WEST INDIES (Grenada, St. Lucia and Dominica)

Country

	1963	1964	1965	1966	1967	Total
TOTAL COST	57,474	46,585	29,350	-	-	133,409
GOVT. AND OTHER SOURCES	45,000	33,000	29,000	-	-	107,000
PAHO PORTION:						
Personnel costs and travel	12,364	12,935	-	-	-	25,299
Supplies and equipment	110	650	350	-	-	1,110
Fellowships	-	-	-	-	-	-
Grants and others	-	-	-	-	-	-
SUB-TOTAL PAHO	12,474	13,585	350	-	-	26,409

Comments: In Dominica the attack phase began in 1959 and no technical problems have arisen, spraying operations have been suspended and the program is now in the consolidation phase. The consolidation phase should be complete in 1965.

Grenada has been certified as being malaria free by PAHO and is now in the maintenance phase.

St. Lucia has also been certified as being malaria free and is also in the maintenance phase.

PAHO provides one sanitarian for the West Indies, posted in Dominica. It is expected the sanitarian will be withdrawn at the end of 1964.

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

"REVISION 2"

Project title: HEADQUARTERS OPERATION AND ZONE OFFICE SUPPORTING SERVICES

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	18,824	14,966	11,431	9,000	7,000	61,221
Supplies and equipment	-	-	-	-	-	-
Grants and others	10,000	-	-	-	-	10,000
TOTAL, PAHO:	28,824	14,966	11,431	9,000	7,000	71,221

Description of activity: In addition to the post financed by Headquarters Regular Budget/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 and administrative supporting services in the Zone Offices.

Schedule of activity: Administrative Supporting posts in Zone Offices will be maintained at reduced levels.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	104,830	123,970	128,880	77,900	79,100	514,680
Supplies and equipment	2,000	1,000	1,000	1,000	1,000	6,000
Grants and others	300	300	300	300	300	1,500
TOTAL, PAHO:	107,130	125,270	130,180	79,200	80,400	522,180

Description of activity: The purposes of this project is to provide advisory services to Governments in several specialties and supervision of the activities of the international personnel assigned to country projects with responsibilities falling within these specialties.

Schedule of activity: A medical officer, an entomologist, a parasitologist and administrative officer, an administrative methods consultant, a translator and one clerk typist were provided from SMF funds. At the end of 1965 an additional administrative officer for vehicle management and maintenance will be added, and the medical officer, and the administrative methods consultant, the translator and the clerk will be withdrawn. The entomologist, the administrative officer, the administrative officer for vehicle management and maintenance and the parasitologist will be maintained through 1967.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	2,780	-	-	-	-	2,780
Supplies and equipment	-	-	-	-	-	-
Grants and others	10,615	-	-	-	-	10,615
TOTAL, PAHO:	13,395	-	-	-	-	13,395

Description of activity: This project provides a grant to the National Commission for Malaria Eradication in Mexico, carrying out training activities in malaria eradication. The grant permits the department of training to supplement its staff for teaching 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 at the end of 1963.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	54,234	35,027	35,377	-	-	124,638
Supplies and equipment	600	600	600	-	-	1,800
Grants and others	1,680	-	-	-	-	1,680
TOTAL, PAHO:	56,514	35,627	35,977	-	-	128,118

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-project, as well as give assistance in the widely scattered islands which individually are too small to require full time international personnel.

Schedule of activity: The staff consists of one medical officer, one epidemiologist, one laboratory advisor, and one secretary. At the end of 1963 the epidemiologist and the secretary will be withdrawn and the Zone malaria advisor (medical officer) and the laboratory advisor will be maintained through 1965.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	43,070	44,098	44,098	45,300	46,500	233,066
Supplies and equipment	1,200	1,200	1,200	1,000	1,000	5,600
Grants and others	-	-	-	-	-	-
TOTAL, PAHO:	44,270	45,298	45,298	46,300	47,500	228,666

Description of activity: Purpose of this project is to supplement the technical advisory assistance given to countries in 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 consultant for each country is not required. Included in the personnel are a malaria advisor, an administrative methods officer and one secretary.

Schedule of activity: In accordance with the estimated time table for the country programs of Zone III, and in view of the problems of continuing transmission, it is anticipated that personnel engaged in this project will be needed through 1967.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	53,504	54,454	20,884	24,400	24,700	177,942
Supplies and equipment	-	-	-	1,000	1,000	2,000
Grants and others	-	-	-	-	-	-
TOTAL, PAHO:	53,504	54,454	20,884	25,400	25,700	179,942

Description of activity: Purpose of this project is to supplement technical advisory services provided in 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 where consultants for each country is not required. Included are a chief zone malaria advisor, a sanitary engineer and the administrative methods officer.

Schedule of activity: It is anticipated that the sanitary engineer and the administrative methods officer will be withdrawn at the end of 1964 and that the medical officer will continue through the end of 1967.

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

"REVISION 2"

Project title: AMRO-121, Malaria Eradication Evaluation Teams

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	14,440	19,320	20,540	77,200	39,200	170,700
Supplies and equipment	1,000	200	200	1,000	8,000	10,400
Grants and others	-	-	-	-	-	-
TOTAL, PAHO:	15,440	19,520	20,740	78,200	47,200	181,100

Description of activity: The functions of the malaria eradication evaluation team are to give careful and impartial study to all epidemiological evaluation and surveillance evidence from countries concluding the consolidation phase and eventually to recommend a certification of malaria eradication in a country. The Pan American Health Organization has been charged with the establishment and maintenance of a registry of areas where malaria is eradicated and this team will perform the necessary investigations and studies for this purpose.

Schedule of activity: It is expected that as this activity increases the composition of the team will be increased to include a parasitologist and that by 1966 two teams composed of one medical officer and one parasitologist each will be required. One such team will be required in 1967.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	49,086	-	-	-	-	49,086
Supplies and equipment	112	-	-	-	-	112
Grants and others	8,350	-	-	-	-	8,350
TOTAL, PAHO:	57,548	-	-	-	-	57,548

Description of activity: This is a joint project shared with the Government of Jamaica and the Agency for International Development of the United States Government. 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. AID utilizes the center to train its staff as does the World Health Organization. The Ministry of Health of Jamaica provides space and laboratory facilities; the Agency for International Development provides an entomologist, an engineer and a sanitarian. PAHO provides a medical officer, who is the chief of the training center, an administrative officer, an administrative assistant, two secretaries and one cleaner-messenger. Provision is also made by PAHO for short term consultants to teach in the specialties.

Schedule of activity: As the need for this kind of training is virtually satisfied in the Americas, it is planned to discontinue the activities of the Training Center at the end of 1963.

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

"REVISION 2"

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

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-
Supplies and equipment	-	-	-	-	-	-
Grants and others	3,780	5,000	5,000	-	-	13,780
TOTAL, PAHO:	3,780	5,000	5,000	-	-	13,780

Description of activity: The project provides a grant to the Faculty of Hygiene, in 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 in São Paulo.

Schedule of activity: It is estimated that by the end of 1965 this training facility will have served its purpose and will at that time be terminated.

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

"REVISION 2"

Project title: AMRO-196, Insecticide Testing Teams

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	99,900	101,320	67,260	-	-	268,480
Supplies and equipment	9,700	6,000	6,000	-	-	21,700
Grants and others	28,000	27,500	27,500	-	-	83,000
TOTAL, PAHO:	137,600	134,820	100,760	-	-	373,180

Description of activity: The purpose of this project is to determine the effectiveness of residual insecticides and obtain information about the habits of malaria vectors. The team tests presently available insecticides under wide variety of environmental conditions and on different types of services, varying dosages of insecticides that are employed. As new insecticides become available, and show promise after having passed the screening process established by WHO, these are given rigorous tests under field conditions. An important function of the team is applied research into the methods of employing insecticides and in these it has the responsibility for pilot projects in larviciding, both as to choice of insecticides, methods of application and evaluation of effectiveness and costs. Provision is made for one senior entomologist, one sanitary engineer and entomologist, one assistant entomologist and two entomological aides.

Schedule of activity: It is expected that at the end of 1964, the sanitary engineer will be withdrawn and a number of entomological aides will be reduced to one. It is expected that the project will be terminated by the end of 1965.

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

"REVISION 2"

Project title: AMRO-220, Malaria Eradication Epidemiology Teams

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	69,594	78,690	71,260	72,860	-	292,404
Supplies and equipment	2,300	2,300	2,300	2,300	-	9,200
Grants and others	48,920	2,800	2,800	2,800	-	57,320
TOTAL, PAHO:	120,814	83,790	76,360	77,960	-	358,924

Description of activity: The purpose of this activity is to provide skilled epidemiological personnel for the study of problems of continuing transmission of malaria in areas in which the attack phase has been properly carried out and where transmission has not been stopped. The team is charged with determining the causes of persisting transmission, the study and perfection of methods for the elimination of these causes and the development of the epidemiological measurements for evaluation of the results. An important activity assigned to the team is the training of epidemiological personnel, both national and international in the employment of these techniques. Provision is made for one senior epidemiologist, one medical officer, one entomologist, and one auxiliary entomologist.

Schedule of activity: In 1964 it is expected to add an additional entomologist for that year. It is expected that the project will be terminated at the end of 1966.

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

"REVISION 2"

Project title: AMRO-344, Seminars on Role of Public Health Services in ME Programs

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	10,880	11,375	-	-	-	22,255
Supplies and equipment	-	-	-	-	-	-
Grants and others	11,695	21,450	-	-	-	33,145
TOTAL, PAHO:	22,575	32,825	-	-	-	55,400

Description of activity: As malaria eradication campaigns progress it is increasingly important to assure the active participation of the various general health services in the continuous surveillance of malaria, particularly with regard to the epidemiological aspects. In order to analyze problems and develop better coordination between these health services and the malaria eradication services, two seminars are planned, one for middle America and the Caribbean and another for South America.

Schedule of activity: Provision is made in 1963 and 1964 for Short Term Consultants, participants, and seminar costs.

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

"REVISION 2"

Project title: AMRO-366, Malaria Eradication in Problem Areas

PAHO REQUIREMENTS	1963	1964	1965	1966	1967	Total
Personnel, incl. travel	-	-	-	-	-	-
Supplies and equipment	223,340	960,000	1,233,000	998,000	725,000	4,139,340
Grants and others	-	-	-	-	-	-
TOTAL, PAHO:	223,340	960,000	1,233,000	998,000	725,000	4,139,340

Description of activity: In those areas where technical problems have been encountered whose solutions call for major supplementary attack methods in addition to residual spraying, or for the use of more expensive alternate insecticide, additional assistance will be required. Such additional assistance is being furnished on an experimental basis in some countries through the administration of drugs in densely populated areas. These supplementary measures will be needed in certain well defined areas only. The present budget estimate for assistance by the Organization is based on an expected increase in budgets for local costs to be borne by the various governments involved even though the proposed budget for the Organization is lower than the total requirements for drugs if the campaign were to be pressed simultaneously in all countries. As the campaigns develop there will be continuous consultation with the Governments, other international agencies, and AID with regard to program developments and the need for additional assistance. Provision is made in the estimate for the cost of imported supplies, chiefly drugs or insecticides, for these problem areas in the terminal years of the campaign.

Schedule of activity: